International Journal of Business Management and Processes (IJBMP)
Vol 6. Issue No.2. October, 2024. PP 170-181. ISSN 2616-3209

EFFECT OF INTERNAL CONTROL SYSTEMS ON MANAGEMENT OF REVENUE FUNDS IN COUNTY GOVERNMENT OF NAKURU, KENYA

Agnes Machora and Robert Mugo
Department of Accounting, Finance and Management Science, Egerton University, Kenya
Correspondence Authors Email: akmachora@gmail.com

Abstract

An Internal Control System (ICS) is a structured framework designed to monitor and evaluate an organization's processes and operations, ensuring alignment with established objectives. This system is essential for safeguarding assets, enhancing the reliability of financial reporting, and ensuring compliance with relevant laws and regulations. By systematically assessing the effectiveness and efficiency of operations, the ICS facilitates the achievement of strategic goals and mitigates risks associated with operational inefficiencies and potential fraud. This study aimed to investigate the impact of internal control systems on the management of revenue funds in the County Government of Nakuru, Kenya. Employing a descriptive research design, the research targeted a population of 504 employees from the Nakuru County Treasury Department. A simple random sampling technique was utilized to select a sample of 84 employees, with sample size determined using the Nassiuma (2000) formula. Primary data were collected through closed questionnaires administered via a drop-and-pick method. Data analysis was conducted using SPSS (Version 23), employing descriptive statistics, correlation analysis, and both simple and multiple regression analyses. The findings indicated that the internal control systems significantly affects revenue management in the County Government of Nakuru. Based on these results, the study recommends that the County Government of Nakuru invest in robust monitoring procedures. This involves dedicating resources to systematic reviews of financial processes, transactions, and compliance, thereby ensuring effective and efficient management of revenue funds. The significance of this study lies in its potential to inform governance structures, providing valuable insights for improving financial management practices within the county government.

***Keyword**: Internal Control Systems, Revenue Management, County Revenue Funds, County Governments*

Introduction

Organizations worldwide encounter operational risks that may hinder them from achieving both financial and non-financial objectives. Effective resource management often requires a control system that directs decisions and actions towards a defined goal (Onsindu et al., 2022). Kenya has been struggling to address various socio- economic injustices and low development levels through the initiation of various reforms mainly focusing on devolving funds. The reforms aim to transform the country into a middle-income nation by 2030. Public Finance Management principal purpose and objective is to ensure that both National and the County Levels of Government manage the public finances as well as the set of principles in accordance to the Constitution, which facilitates effective and efficient use of the limited resources. The public officers who are given the mandate of managing the finances are accountable to the public and effective controls are critical in achieving the long-term goal and objectives of financial institutions (Kabue & Aduda, 2017).

Internal controls in accounting and auditing is a term referred to the assurance of the organization's objectives attained in its efficiency and law compliance, regulations and policies. Internal controls are regulations that govern the firm's assets, ensure reliable financial reporting, enhance compliance with regulations, and improve operational efficiency. These systems also integrate with the organization's communication processes, both internally and externally, and include procedures for managing funds received and expended by the organization, along with reporting to the County Executive Committee. Furthermore, they support audits conducted by the Auditor General and help maintain inventory records of tangible and other assets (Ahmed & Nganga, 2019).

Resource mobilization is essential for enhancing service delivery and performance in government, yet significant issues in fund allocation and utilization have negatively impacted public perception. The Auditor General's report for the financial year 2021/2022 highlights serious financial irregularities in Nakuru County, revealing that Kshs 45.5 million in approved payments was voided and redirected to unapproved payees, raising concerns about compliance with financial protocols. Additionally, a Kshs 12.1 billion discrepancy between financial statements and IFMIS ledger balances further emphasizes the county's financial management challenges. These issues underscore the need for a comprehensive review of financial governance to ensure effective resource mobilization and accountability, ultimately aiming to restore public trust in government institutions. (Auditor General, 2021/2022)

The occurrence of financial scandals involving the misappropriation and waste of public resources, coupled with government ministries' inability to meet their budgetary obligations in a timely manner, raises significant concerns about the adequacy and effectiveness of financial regulations. Both businesses and the public expect that governments and regulatory bodies can demonstrate that these regulatory systems are designed to be effective. Achieving this requires close monitoring of compliance levels and trends. However, in Kenya, the state of compliance remains unclear due to the lack of empirical evaluations on the impact and performance of regulatory systems. This uncertainty also raises concerns regarding the effectiveness of internal control systems in managing revenue funds within the County Government of Nakuru, Kenya.

Research Objective

To identify the effect of internal control systems on the management of revenue funds in County Government of Nakuru, Kenya.

Methodology

This study adopted a descriptive research design. The target population for this study was the employees who hold financial and accounting positions in the county government. The study used stratified random sampling technique to select staff from each category to participate. The population was divided into five strata based on the staff working in different directorates under department of the County Treasury. The sample size of 84 employees was obtained by use of Nassiuma (2000) formulae as indicated below:

n = NC2
= C2 + (N-1) e2

Where:
n= Sample size
N= Population
Cv= Coefficient of variation (take 0.5)
e= Tolerance at desired level of confidence, take 0.05 at 95% confidence level.

n = 504 x.52
= 52+ (504-1).052
= 84 respondents

Therefore, the sample distribution across strata obtained proportionately as follows:

$ni = (n/ N)Ni$

Where:
n= Sample size
N= Population
ni=Sample of strata i
Ni=Population of Strata 1
This allocated proportionately as shown in Table 1.

Table 1 Sample Distribution

Directorates under Treasury	**Target Population**	**Sample Size**
Internal Audit and Risk Services	30	5
Accounting and Reporting	108	18
Supply Chain Management	78	13
Budget and Economic Planning	99	16
Administrative Services and Revenue Management	189	32
Total	**504**	**84**

The collected data underwent a thorough validation process to identify and rectify any errors, ensuring that it was complete, uniform, and accurate prior to analysis. Descriptive statistics yielded valuable insights into the characteristics of the respondents. To explore the relationships among the variables of interest, both correlation analysis and regression analysis were conducted. Diagnostic tests for multicollinearity and autocorrelation were performed to assess the robustness and accuracy of the statistical results obtained from the regression analysis.

Results and Discussion

The main objective of the study was to identify the effect of internal control systems in the management of revenue funds in County Government of Nakuru, Kenya. To evaluate multicollinearity, Variance Inflation Factors (VIFs) were calculated for each independent variable, along with their reciprocals (tolerances). A common rule of thumb is that VIFs should not exceed 10. In this case, all calculated VIFs are below 5, indicating that none of the independent variables examined violate this assumption (Atieno & Kiganda, 2020). The Durbin-Watson statistic is a tool commonly employed in regression analysis to assess the presence of consistent patterns or correlations within residuals, which are the discrepancies between predicted and actual values. In the provided model summary, the Durbin-Watson value is reported as 1.935, which indicates lack of auto correlation challenges.

Table 2 Durbin Watson

Model Summary[b]					
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**	**Durbin-Watson**
1	.838[a]	.703	.684	.48339	1.935

a. Predictors: (Constant), Monitoring, Control activities, Risk assessment, Control environment, Information and communication sharing

b. Dependent Variable: Management of county revenue

A five point Likert scale was used to determine the extent of internal control systems on the management of revenue funds in County Government of Nakuru, Kenya. The responses are indicated in Table 3

Table 3. Internal Control Systems and Management of County Revenue

	Statement on Management of County Revenue Funds	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**	**Mean**	**Std. Dev**
1	There is improved service delivery	7.1%	14.3%	13.1%	44.0%	21.4%	3.58	1.184

2	There is effective financial management	8.3%	14.3%	25.0%	40.5%	11.9%	3.33	1.123
3	There is reduction in pending bills	14.3%	15.5%	34.5%	28.6%	7.1%	2.99	1.146
4	Release of devolved revenue fund from national government are always delayed	11.9%	17.9%	17.9%	32.1%	20.2%	3.31	1.308
5	The budget allocation always is used for intendent expenditure	10.7%	17.9%	31.0%	25.0%	15.5%	3.17	1.211
6	Devolved funds are always audited internally	7.1%	17.9%	26.2%	32.1%	16.7%	3.33	1.165
7	All departments are involved in the discussion of the recommendations in the internal audit	9.5%	21.4%	29.8%	20.2%	19.0%	3.18	1.243

The study evaluated perceptions of improved service delivery within the County Government. Table 3 exhibited considerable diversity, with 7.1% of participants strongly disagreeing, 14.3% disagreeing, 13.1% remaining neutral, 44.0% agreeing, and 21.4% strongly agreeing. The mean response of 3.58 indicates a moderate level of agreement, while the standard deviation of 1.184 reflects a wide range of perspectives, suggesting the necessity for continuous efforts to enhance service delivery.

In terms of perceptions regarding effective financial management, opinions also varied. Approximately 8.3% strongly disagreed, 14.3% disagreed, 25.0% remained neutral, 40.5% agreed, and 11.9% strongly agreed. The mean response of 3.33 signifies a moderate level of agreement; however, the standard deviation of 1.123 highlights diverse viewpoints. This underscores the importance of sustained efforts to improve financial management practices.

The study also examined perceptions regarding the reduction of pending bills within the County Government. Approximately 14.3% of respondents strongly disagreed, 15.5% disagreed, 34.5% remained neutral, 28.6% agreed, and 7.1% strongly agreed. The mean response of 2.99 indicates a moderate level of agreement, while the standard deviation of 1.146 reflects diverse perspectives, suggesting the need for more effective measures to address pending bills.

Regarding delays in the release of devolved revenue funds from the national government, opinions varied considerably. About 11.9% strongly disagreed, 17.9% disagreed, 17.9% remained neutral, 32.1% agreed, and 20.2% strongly agreed. The mean response of 3.31 suggests a moderate level of agreement; however, the standard deviation of 1.308 highlights a wide range of viewpoints, underscoring the challenges associated with addressing delays in fund disbursements.

The study also evaluated perceptions regarding the appropriate use of budget allocations for intended expenditures. Responses varied, with 10.7% strongly disagreeing, 17.9% disagreeing, 31.0% remaining neutral, 25.0% agreeing, and 15.5% strongly agreeing. The mean response of 3.17 suggests a moderate level of agreement, while the standard deviation of 1.211 indicates diverse viewpoints. This underscores the importance of ensuring that budget allocations are aligned with intended expenditures.

In terms of internal auditing of devolved funds, opinions similarly varied. Approximately 7.1% strongly disagreed, 17.9% disagreed, 26.2% remained neutral, 32.1% agreed, and 16.7% strongly agreed. The mean response of 3.33 reflects a moderate level of agreement, while the standard deviation of 1.165 highlights a range of perspectives. This emphasizes the necessity for robust internal auditing practices.

Finally, the study evaluated the extent to which all departments participate in discussions concerning recommendations from internal audits. Approximately 9.5% of respondents strongly disagreed, 21.4% disagreed, 29.8% remained neutral, 20.2% agreed, and 19.0% strongly agreed. The mean response of 3.18 suggests a moderate level of agreement; however, the standard deviation of 1.243 indicates a range of perspectives. This highlights the importance of ensuring that all departments are engaged in discussions related to internal audit recommendations.

Correlation analysis between internal control systems and management of county revenue

In this study a correlation analysis was conducted to establish the strength of the relationship between management of revenue of funds as the dependent variable and the internal control systems as the independent variables. In this study, the Pearson correlation was conducted which varies between -1.00 to +1. The negative values indicate negative relations while the positive values indicate positive relations among the variables under study. The results are as indicated in table 4 below:

Table 4 Pearson Correlations Matrix

		Control Activities	Risk Assessment	Control Environment	Information and Communicati	Monitoring	Management of county revenue
Control Activities	Pearson Correlation	1	.508**	.685**	.724**	.681**	.656**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	84	84	84	84	84	84
Risk Assessment	Pearson Correlation	.508**	1	.756**	.741**	.733**	.669**
	Sig. (2-tailed)	.000		.000	.000	.000	.000
	N	84	84	84	84	84	84
Control Environment	Pearson Correlation	.685**	.756**	1	.835**	.775**	.694**
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	84	84	84	84	84	84
Information and Communication Sharing	Pearson Correlation	.724**	.741**	.835**	1	.818**	.736**
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	84	84	84	84	84	84
Monitoring	Pearson Correlation	.681**	.733**	.775**	.818**	1	.822**
	Sig. (2-tailed)	.000	.000	.000	.000		.000
	N	84	84	84	84	84	84

Management of county revenue	Pearson Correlation	.656**	.669**	.694**	.736**	.822**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	84	84	84	84	84	84

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

The presented correlation matrix illustrates the statistical relationships among various variables, including control activities, risk assessment, control environment, information and communication sharing, monitoring, and the management of county revenue. The Pearson correlation coefficients were used to measure these associations. Significant positive correlations were observed between control activities and risk assessment ($r = 0.508$, $p < 0.01$), control environment ($r = 0.685$, $p < 0.01$), information and communication sharing ($r = 0.724$, $p < 0.01$), monitoring ($r = 0.681$, $p < 0.01$), and the management of county revenue ($r = 0.656$, $p < 0.01$). This implies that as control activities increase, there is a corresponding increase in these other aspects.

Similarly, risk assessment showed significant positive correlations with control environment ($r = 0.756$, $p < 0.01$), information and communication sharing ($r = 0.741$, $p < 0.01$), monitoring ($r = 0.733$, $p < 0.01$), and the management of county revenue ($r = 0.669$, $p < 0.01$). This suggests that improvements in risk assessment are associated with improvements in these other areas. The control environment exhibited significant positive correlations with information and communication sharing ($r = 0.835$, $p < 0.01$), monitoring ($r = 0.775$, $p < 0.01$), and the management of county revenue ($r = 0.694$, $p < 0.01$), indicating a strong positive relationship.

Furthermore, information and communication sharing showed significant positive correlations with monitoring ($r = 0.818$, $p < 0.01$) and the management of county revenue ($r = 0.736$, $p < 0.01$). This implies that effective information and communication sharing are associated with improved monitoring and successful management of county revenue. Finally, a significant positive correlation was found between monitoring and the management of county revenue ($r = 0.822$, $p < 0.01$), highlighting a strong positive association between the effectiveness of monitoring and successful management of county revenue.

In conclusion, these statistically significant positive correlations suggest interconnectedness among these variables. Organizations and decision-makers can use this information to make informed decisions and enhance control mechanisms and management practices related to county revenue.

Hypothesis testing

A regression analysis was performed to clarify the relationship between the dependent variable and the independent variable. A multiple regression analysis was performed to evaluate the

influence of internal control systems on the management of county revenue funds in Nakuru. The study focused on five key variables representing the internal control systems: control activities, risk assessment, control environment, information and communication, and monitoring activities. The regression analysis was utilized to test the hypothesis. The F-statistic and the corresponding p-values were employed in the study to evaluate the model's fit. The decision to reject or accept the null hypothesis was based on p-values at a significance level of 0.05. The results are as indicated in Table 5 to Table 7

Table 5 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.838[a]	.703	.684	.48339

a. Predictors: (Constant), Information and Communication Sharing, Control Activities, Risk Assessment, Monitoring, Control Environment

The Model Summary in Table 5 provides crucial insights into the overall fit of the model. The high R value of 0.838 signifies a robust positive correlation between the predictors and the dependent variable. The R Square value of 0.703 indicates that approximately 70.3% of the variability in the management of county revenue can be explained by the model. The Adjusted R Square, accounting for the number of predictors, remains substantial at 0.684. The standard error of the estimate (0.48339) suggests the accuracy of predictions made by the model.

Table 6 ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	43.122	5	8.624	36.908	.000[b]
	Residual	18.226	78	.234		
	Total	61.348	83			

a. Dependent Variable: Management of county revenue funds

b. Predictors: (Constant), Information and Communication Sharing, Control Activities, Risk Assessment, Monitoring, Control Environment

Moving to the ANOVA results in Table 6, the statistical significance of the F-statistic ($F(5, 78) = 36.908$, $p < 0.001$) underscores the overall significance of the regression model in predicting the dependent variable. This implies that, collectively, the selected predictors

contribute significantly to explaining the variations in the management of county revenue funds.

Table 7 Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.516	.228		2.264	.026
	Monitoring	.516	.106	.577	4.861	.000
	Control Activities	.151	.090	.160	1.682	.097
	Risk Assessment	.117	.098	.126	1.202	.233
	Control Environment	-.011	.117	-.012	-.096	.924
	Information and Communication Sharing	.061	.128	.065	.477	.635

a. Dependent Variable: Management of county revenue funds

Table 7 delves into the specific coefficients associated with each predictor in the model, shedding light on their individual contributions. The unstandardized coefficient for the constant is 0.516 (SE = 0.228, p = 0.026), representing the estimated intercept when all predictor variables are zero.

Monitoring emerges as a significant predictor with a positive unstandardized coefficient of 0.516 (SE = 0.106, $p < 0.001$). This suggests that, for every one-unit increase in Monitoring, the management of county revenue is expected to increase by 0.516 units. The positive coefficient aligns with expectations, implying that increased attention to monitoring activities positively influences the management of county revenue.

Control Activities exhibit a positive but no significant impact, with an unstandardized coefficient of 0.151 (SE = 0.090, p = 0.097). Although the coefficient is positive, suggesting a potential positive effect on the dependent variable, the lack of statistical significance indicates that the relationship may not be reliably distinguished from random chance.

Similarly, Risk Assessment shows a positive but no significant association, with an unstandardized coefficient of 0.117 (SE = 0.098, p = 0.233). The coefficient implies a positive

impact, but the lack of significance suggests caution in attributing meaningful influence to Risk Assessment in predicting the management of county revenue.

Control Environment, on the other hand, exhibits an unstandardized coefficient of -0.011 (SE = 0.117, p = 0.924), rendering it non-significant. The negative sign indicates a potential negative impact on the dependent variable, but the lack of statistical significance challenges the robustness of this relationship.

Information and Communication Sharing, with an unstandardized coefficient of 0.061 (SE = 0.128, p = 0.635), also fails to reach statistical significance. This implies that, within the confines of this study, Information and Communication Sharing may not exert a reliably discernible impact on the management of county revenue.

The multiple regression is summarized as indicated below:

$$\mathbf{Y = .516+.151X_1+.117X_2 - 011X_3 +.061X_4+.516X_5+ \varepsilon}$$

The results imply that when all variables are held at a constant zero management of revenue funds in the County Government of Nakuru, Kenya will be at .516. Taking all other independent variables at zero a unit increase in the level of Control Activities, Risk Assessment, information and communication and monitoring will lead to .151, .117, .061 and .516 respectively increase in the management of revenue funds. Lastly a unit of increase in control environment will lead to .011 decrease in the management of revenue funds in the County Government of Nakuru, Kenya. The study found that when the five practices have a significant effect in the management of revenue funds in the County Government of Nakuru, Kenya. The study therefore rejected the null hypothesis.

Conclusion and Recommendation

In summary, this study underscores the vital role of internal control systems in enhancing revenue management within Nakuru County government. The findings demonstrate that control activities, risk assessment, information and communication, and monitoring significantly influence the effectiveness of revenue management practices. These results highlight the necessity for strong internal control mechanisms to optimize revenue collection and management processes at the county level.

This finding aligns with existing literature. Maphalla (2015) emphasized that efficient government expenditure is vital for promoting economic development and fulfilling its vision. Similarly, Sihaloho (2018) noted that the effectiveness of county government spending serves as a mechanism to ensure that expenditures remain within revenue limits. Furthermore, Lowndes and Gardner (2016) stated that government efficiency is assessed by the ratio of output to input, specifically comparing revenue to expenditure. These conclusions may also be applicable to other counties.

To strengthen these internal control systems, it is essential for the county government to implement comprehensive control activities, including regular audits and the establishment of clear policies and procedures. This approach will help mitigate risks and enhance accountability in revenue management. Furthermore, Nakuru County should develop a systematic approach to risk assessment that identifies potential revenue risks and establishes effective mitigation strategies. Investing in advanced information technology systems is also recommended to facilitate real-time data sharing and communication among departments, ensuring transparency and timely decision-making in revenue management.

Additionally, the county government should institutionalize continuous monitoring of revenue management processes, allowing for periodic evaluations and adjustments based on performance metrics and feedback. Finally, implementing training programs for county staff focused on internal control practices and revenue management strategies will enhance their skills and knowledge, thereby improving overall effectiveness. Future research could further explore the specific implementation strategies of these recommendations to bolster revenue management practices within county governments.

References

Ahmed, S. O., & Nganga, P. (2019). Internal Control Practices and Financial Performance of County Governments in the Coastal Region of Kenya. *International Journal of Current Aspects, 3*(5), 28 - 41.

Atieno, M., & Kiganda, E. (2020). Internal Control Systems on Financial Accountability in National Public Schools in Kenya. *European Journal of Economic and Financial Research, 4*(3), 76 - 100. https://doi.org/http://dx.doi.org/10.46827/ejefr.v4i3.831

Auditor General. (2021/2022). *County Revenue Funds Audit Reports FY 2022/2023.* Nairobi: Government of Kenya Printer.

Kabue, L. N., & Aduda, J. (2017). Effect of Internal Controls on Fraud Detection and Prevention among Commercial Banks in Kenya. *European Journal of Business and Strategic Management, 2*(1), 52 - 68.

Lowndes, V., & Gardner, A. (2016). Local Governance under the Conservative: Super austerity, devolution and the Smarter state. *Local Government Studies, 42*(3), 357 - 375.

Maphalla, S. T. (2015). Financial Performance of Local Government: Evidence from South Africa Doctoral dissertation, Stellenbosch University.

Nassiuma, D. K. (2000). *Survey Sampling. Theory and Methods.*

Onsindu, A. E., Muturi, P. W., & Kanali, P. C. (2022). Effect of Risk Assessment and Monitoring Activities Internal Control Systems on Management of Local Revenue by County Governments of Kenya. *International Research Journal of Economies and Finance, 4*(3), 323 - 338.

Sihaloho, M. H. (2018). Efficiency Analysis of Local Government of Regencies and Cities in West Java, 2001 - 2010. *Review of Indonesian Economic and Business Studies,* 111 - 126.