Assessing the interaction between internal control and financial management in local government

Chanchal Chawla | Shalini R. | Ranjana Singh

Abstract A well-designed internal control (IC) system should reveal how well the government manages its finances and how effectively they employ its resources. This study studied the interaction between the local government's effectiveness in IC and its financial management. Some issues with IC practice include insufficient accountability, when everyday interactions are not reported for, and inefficient mechanisms are taken into action to catch perpetrators who interfere with the money. The method used in the study depends on a survey research strategy. The research's statistical data were gathered by distributing 250 questionnaires to employees of the ten (10) local governments that were taken into consideration. Selective sampling was used to choose these respondents, and regression analysis was used to examine the questionnaire's results. The analysis's findings demonstrate that IC and financial management are significantly correlated, with a p value = (0 < 0.05). Because of this conclusion, the research recommends that the management of local governments develop more robust ways for internal control. These approaches will ensure that IC is practical and efficient, allowing for the successful management of financial problems.

Keywords: Internal control, local government, finances, accountability, financial management.

1. Introduction

IC is a vital part of any organization, which includes local government. A system of IC is the collection of rules, processes, and policies that it has put in place to secure its assets, guarantee that its financial reports are accurate, and ensure that the business complies with all applicable laws and regulations (Hajawiyah and Mahera 2020). In local government, IC is essential for promoting transparency, accountability, and good governance. Local governments are responsible for providing critical services to their communities, such as public safety, infrastructure development, and social services. These services require significant financial resources, and practical financial management is necessary to ensure that these resources are utilized effectively and efficiently. IC systems play an essential role in achieving this objective by providing a framework for monitoring financial transactions and preventing fraud, errors, and other irregularities (Sujana et al 2020).

Effective IC systems can help local governments to identify and prevent financial fraud, errors, and other irregularities. By establishing clear policies and procedures for financial transactions, local governments can minimize the risk of misappropriation of funds and other financial improprieties. Moreover, IC systems can help local governments to identify areas where financial management practices can be improved and develop strategies for enhancing those practices (Handoyo and Bayunitri 2021). Despite the importance of IC in promoting effective financial management in local government, local governments need help implementing effective IC systems. One of the most significant challenges is resource constraints. Local governments often need more financial resources to invest in developing and implementing comprehensive IC systems. Moreover, the regulatory environment governing financial transactions is complex, making it challenging for local governments to keep up with regulation changes and ensure compliance (Dagiliené et al 2021).

1.1. Local government’s IC concept

An essential component of financial management in local government is IC. Following the "Government Finance Officers Association, "IC is defined as "a process, affected by an entity's governing body, management, and other personnel, designed to provide reasonable assurance regarding the achievement of objectives in the following categories: effectiveness and efficiency of operations, reliability of financial reporting, and compliance with applicable laws and regulations" (Park and Maher 2020).
Effective IC systems can help local governments to identify and prevent financial fraud, errors, and other irregularities. IC systems provide a framework for monitoring financial transactions and preventing misappropriation of funds and other financial improprieties. Additionally, IC systems may assist local governments in determining areas of their financial management practices that can be enhanced and developing plans for improving those practices. It is a significant benefit to local governments (Shonhadj and Maulidi 2022).

The GFOA identifies the five essential elements constituting an efficient IC system: “risk assessment, monitoring, information and communication, the control environment, control activities, information, and communication.” Risk assessment involves identifying and analyzing the risks that may affect the achievement of the organization’s objectives. Control activities consist of the procedures and guidelines put into place to minimize the chances discovered during the risk assessment process. The term “monitoring” refers to the continuous evaluation of the efficiency of the IC system. The control environment refers to the tone at the top of the company, which is set by the governing body and management. This tone encompasses the moral principles and integrity of the organization. Information and communication involve collecting, processing, and disseminating information related to financial transactions (Gabrini 2021).

The interaction between IC and financial performance management has been investigated in several studies. Mardiana and Rahim (2022) sought to ascertain the degree to which the IC system and information technology implementation impacted the credibility of the financial reports of that local government’s problem. Multiple linear regression was utilized to analyze the data, and “Statistical Product and Service Solutions” was employed as the software for performance.

Dewi et al (2019) evaluated the relation between establishing an efficient IC system and the level of financial transparency and accountability in local governments. The data is analysed using the t-test and Path Analysis in SPSS 20.00. The outcome demonstrates that the IC system and human resource competency favorably impacted the quality of local government financial statement information.

Okiror (2022) analyzed how PDGL’s IC mechanisms impacted their financial management. A descriptive study was conducted using quantitative methods of data collection and analysis. The data analysis and statistical displays employed descriptive statistics. The connection between ICS and FM was investigated using correlations and linear regression analysis.

Afiah et al (2020) aimed to offer concrete evidence of an interaction between employee competency, the IC system, and the reliability of accounting data. Each local government sent out six research questionnaires, while the “SKPD, PPKD, and Regional Inspectorate on Local Government” all participated as respondents. It was determined using “structural equation modeling (SEM)” to analyze the data. As the data reveal, a combination of employee competence and IC system concurrently had a substantial impact on accounting information quality.

Yuliza et al (2021) designed to evaluated the effectiveness of the Nagari machinery in ensuring responsibility in the administration of village funds, as well as the impact that accounting information technology has on this process. The data in this study were gathered by a questionnaire and analysed through multiple regression techniques.

Wibowo et al (2023) investigated the performance and accountability of government agencies’ organizational structures, as well as their internal controls and financial information systems. The present quantitative research collected primary data from Regional Financial and Asset Management Agency employees in Sumatera via questionnaires. The software SPSS version 20 was utilized for the data analysis process.

Basmur and Rosihan (2022) determine whether or not regional government managers in the GOWA district SKPD are impacted by the IC System and Organizational Commitment. The data were analysed using a “multiple linear regression approach.” According to the research findings, local governments’ managerial performance was affected by both the IC system and organizational commitment. According to the results of this investigation, the R square test is relatively high.

Bernard Kabweine (2022) analysed the connection between Kabale Municipal Council’s IC System and the district’s financial results. Descriptive research methods were employed, emphasizing finding patterns in the data. Questionnaires and personal interviews were used to compile the data, then analysed with SPSS.

This study tackle these issues and aims to assess the interaction between efficient IC and effective financial management in local government. The rest of the paper is structured as follows: Part 2 provides an explanation of the methods and a description of the model; part 3 presents the results, part 4 discuss about the findings; and part 5 provides a conclusion to the paper.

2. Materials and Methods

2.1. Sample

This study used a questionnaire research design as its methodology. Thirty (30) Local Government Councils in Lagos State comprise the study’s sample. Based on their past performance as important divisions of administration in the LCDA of Lagos State, ten (10) of these Local Governments were explicitly chosen. Lagos State was selected because it is an important financial centre for Nigeria and has a well-functioning local government structure. In this stage, we employ a selective sampling technique.
A non-probability sampling technique, selective sampling, involves selecting individuals or cases for a study based on particular criteria pertinent to the research question being investigated. Unlike probability sampling, selective sampling does not include randomly selecting participants from a larger population. Instead, researchers use their judgment to choose participants most likely to provide relevant and valuable information. Using this technique, three hundred (300) questionnaires were given out to the local government staff selected, encompassing all relevant departments such as IC and financing, accounting, and procurement. Of the three hundred (300) questionnaires, 250 were returned and considered for this research.

2.2. Description of the model

2.2.1. Regression model

The statistical method known as regression analysis may be utilized to evaluate the degree of interaction that exists between two or more variables. A regression model may be utilized in the context of determining whether or not there is a significant association between these two variables, as well as to quantify the strength and direction of that interaction. In the context of local government, this may be done in the context of conducting an examination of the interaction that is present between IC and the management of finances. The regression equation for the IC in local government is as follows:

\[ Z = \beta_0 + \beta_1 Y_1 + \varepsilon \]  

Where,
\[ Z = \text{Financial management: This is the dependent variable (Predictor). In this case, it is the degree to which local government is able to manage its finance, which is influenced by the quality of its IC system.} \]
\[ \beta_0 = \text{constant: This is the intercept term, which represents the value of the variable which is dependent (financial control) when the variable which is not depended (IC environment) is zero. It is the expected financial control when there is no IC environment in place.} \]
\[ \beta_1 = \text{parameter to be estimated: This is the slope coefficient, which measures an alteration in financial management for the change in units in the environment of internal control. It refers to the magnitude of the influence that the variable, which is not a dependent variable, has on the variable that is being measured.} \]
\[ Y_1 = \text{IC environment: In this context, it relates to the effectiveness of the IC system in local government, which can be evaluated with the use of a number of different indicators such as the “compliance with laws and regulations, dependability of financial reporting and efficiency of risk management.”} \]

3. Results

3.1. Response percentage

The response percentage of the study is important since it shows if the approach was effective. The study’s sample of 300 questionnaires, which were given to local government employees in Lagos State, had a response rate of 90% and a non-response rate of 10%. Table 1 displays the distribution and proportion of respondents who answered the survey.

<table>
<thead>
<tr>
<th>Table 1 Outcome of response rate.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Response</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>Percent</td>
</tr>
</tbody>
</table>

3.2. Regression analysis

Objective: Local government financial oversight in Lagos State is impacted by the IC environment.

The results of the regression connection research between the IC environment and the financial management environment are presented in Table 2. The interaction between R and \( R^2 \) in the regression analysis is \( R=0.622 \) and \( R^2=0.572 \). This indicates that a change in the IC environment might account for 57.2% of the variation in financial management. 42.8% of the rest of the number can be determined by elements that are lacking in the equation.

<table>
<thead>
<tr>
<th>Table 2 Result of regression analysis.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parameter</td>
</tr>
<tr>
<td>R</td>
</tr>
<tr>
<td>( R^2 )</td>
</tr>
</tbody>
</table>

3.2.1. Predictors: (Constant), IC Environment

An F-test was utilized in order to evaluate the zero hypothesis that there is no association between the IC environment and the management of finances. This hypothesis states that there is no connection between them. The
significance of the F-statistic 0 is lesser than 0.05, indicates that the zero hypothesis can be excluded and that there is an interaction between the IC environment and the management of finances, as shown by the results of the ANOVA test in Table 3, which suggest that the zero hypothesis may be rejected. Figure 1 (a) and (b) depicts the outcome of ANOVA.

![Figure 1 Outcome of ANOVA](image1)

**Table 3 ANOVA value for Financial Management and the IC Environment.**

<table>
<thead>
<tr>
<th></th>
<th>Regression</th>
<th>Residual</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sum of squares</td>
<td>3168.231</td>
<td>4380.210</td>
<td>7548.441</td>
</tr>
<tr>
<td>Df</td>
<td>1</td>
<td>190</td>
<td>191</td>
</tr>
<tr>
<td>Mean square</td>
<td>3168.231</td>
<td>9.815</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>294.442</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sig.</td>
<td>0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

T-test was used to examine the zero hypothesis that the value of the coefficient is 0, suggesting the existence of a statistically significant regression between the IC environment and the management of finances. Regression coefficients ($\beta$), the intercept ($\alpha$), and the statistically significant value of each coefficient in the statistical model were evaluated using a t-test. The zero hypothesis maintains that there is no statistically significant interaction between the IC environment and financial management if the slope of the variable (beta) is 0 (i.e., there is no link between the two variables). This is often referred to as the hypothesis that there is no link between the two variables. The p-value is lesser than 0.05 because the constant value is 13.104 is significantly different from 0, as demonstrated by the values for the beta coefficient of the resulting model in Table 4 and Figure 2. With a p-value of 0, which is lower than 0.05, the coefficient is 0.721 in the equation is also substantially different from 0. This is due to the fact that the p-value is 0.

![Figure 2 Interaction with coefficient among IC Environment and Financial management.](image2)

This means that the equation $Y=13.104 +0.721FI$ (IC environment) is significantly fit, and the alternative hypothesis $\beta_1 \neq 0$ is accepted, thereby rejecting the zero hypothesis$\beta_1 = 0$. The aforementioned analysis suggests that the model, financial management = $\alpha + \beta$(IC environment), is valid. This proves that a strong IC environment directly correlates to well-managed finances.
3.3. **Hypothesis test**

H1: IC environments do not significantly affect local government financial management in Lagos State. Standard beta coefficients on the line of greatest fitting were utilized to first build regression equations that could be used to analyze the significance of the regression interaction with the IC environment and financial management. This was done so in order to determine whether or not the regression association is significant.

Each beta coefficient in the resulting regression models was also subjected to a t-test as part of the research. According to Table 4, there is a strong and favourable correlation between the quality of the environment for IC and the amount of financial oversight performed by the local governments in Lagos State ($\beta =0.721$, p-value =$0.000 < 0.05$). It means that a 0.721-unit improvement in financial management may be anticipated for every unit enhancement in the quality of the organization’s IC environment.

| Table 4 Interaction with coefficient among IC Environment and Financial management. |
|---------------------------------|-----------------|------------------|
| Coefficients                   | Constant        | IC Environment   |
| Unstandardized (B and Std. Error) | 13.104 and 1.148 | 0.721 and 0.058  |
| Standardized ($\beta$)          |                 | 0.622            |
| T                               | 10.805          | 12.711           |
| Sig.                            | 0               | 0                |

4. Discussion

A regression study reveals a correlation between IC and financial management ($R^2 =0.552$). This suggests that an individual adjustment in the quality of internal controls might account for 57.2% of the variance in financial management. The remaining 42.8% of the overall variation is due to the presence of extraneous factors. To determine whether or not there is a statistically significant regression between the IC environment and financial management, T-tests were conducted on the regression coefficients (beta ($\beta$)), the intercept (alpha ($\alpha$)), and the statistical significance of all coefficients in the model. The goal of these tests was to determine whether or not there is a correlation between the two variables. The zero hypothesis claims that there is no significant correlation between the IC environment and the management of finances if the slope (beta) equals 0 (i.e., there is no interaction between the two variables). This is referred to as the “no link between the two variables."

As can be seen in Table 4 results for the beta coefficient of the outcome model, the constant = 13.104 deviates considerably from zero, with a p-value of 0.000 being less than 0.05. A p-value of 0.000, which is lesser than 0.05, indicates that the coefficient is 0.721, which is similarly significantly different from 0. This indicates that the zero hypothesis, which states that there is no significant association between the IC environment and financial management, has been disproved, and the alternative hypothesis, which states that the IC environment is significantly fit, has been validated. In other words, the IC environment and financial management are linked in a way that favors a linearly favourable interaction.

5. Conclusion

The study’s goal was to determine whether IC methods affected the local government’s ability to manage its finances in Nigeria. The regression analysis estimates demonstrate that IC techniques have an influence on the management of finance, which suggests that these practices have a significant favorable effect on the management of finance in Local Governments that were surveyed and investigated. It is suggested that any inconsistencies in finance be thoroughly explored in order to guarantee that the finances have been executed properly. In addition, suitable procedures should be implemented for situations in which management is discovered to have interfered with finance statistics in order to activate the alarm and avoid identical procedures. This will allow for an even greater reduction in the amount of financial mismanagement that occurs within the Local Government. At the moment, there are not enough standardized evaluation methods available to conduct an analysis of the connection that exists in local governments among IC and financial management. The development of evaluation tools that are also thorough and standardized can assist in determining the areas of IC and financial management that require improvement, as well as make it possible to make meaningful comparisons between the various local governments.

**Ethical considerations**

Not applicable.

**Declaration of interest**

The authors declare no conflicts of interest.
**Funding**

This research did not receive any financial support.

**Reference**


Basmar NA, Rosihan MZ (2022) INTERNAL CONTROL SYSTEM ORGANIZATIONAL COMMITMENT TO REGIONAL GOVERNMENT MANAGERIAL PERFORMANCE Contemporary Journal on Business Accounting 2:56-69.


Hajawiyah A, Mahera YL (2020) Factors influencing the weaknesses of internal control of local governments in Indonesia Humanities Social Sciences Reviews 8:122-129.


Okiror I (2022) Internal control system financial management of district local government (Doctoral dissertation, Busitema University.).


Sujana E, Saputra KAK, Manurung DT (2020) Internal control systems good village governance to achieve quality village financial reports International Journal of Innovation, Creativity and Change 12.


https://www.malque.pub/ojs/index.php/msj