The Effect of Internal Control Systems on Public Sector Financial Accountability in Eswatini

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Abstract:

Public sector financial accountability is fundamental to good governance, transparency and efficient use of public money. Weak monitoring, poor money management, and poor governance in Eswatini have raised concerns about the need to strengthen accountability frameworks in public institutions. The study investigated the effects of internal control systems on financial accountability of the government ministries in Eswatini with particular reference to control activities, control environment, monitoring controls, risk assessment and information and communication systems. The study employed a quantitative technique by using a cross-sectional research design to measure the effect of internal control systems on financial accountability in government ministries. The results showed that the control environment was the significant predictor of financial accountability. The results of the study established the importance of ethical leadership, institutional culture, and governance frameworks in promoting transparency and effective financial accountability. Other components of the internal control system have also been found to positively affect public sector financial accountability, but the effects were insignificant, mainly because of implementation, monitoring capability, technological constraints and poor integration into operational procedures. The study indicates that to strengthen financial accountability in the public sector in Eswatini, there is a need for an integrated, well-established, and coordinated internal control system, which should be supported by strong leadership commitment. Based on the findings, it is recommended that government ministries should give priority to enhancing the control environment by supporting ethical leadership, establishing standards of responsibility, and developing a culture of transparency and compliance across public institutions.

Keywords: *Financial Accountability, Control activities, Control Environment, Monitoring Controls, Risk Assessment, Information and Communication*

1. Introduction

Public sector financial accountability is increasingly being recognized as one of the pillars of good governance as it increases transparency, efficient use of resources and public trust in public sector organizations. Public sector institutions are required to manage public resources on behalf of citizens and are expected to provide quality services in accordance with legal and regulatory requirements. Hence, robust internal control systems are required to avoid mismanagement of resources and facilitate reliable financial management and reporting. As a result, internal control systems continue to feature a central priority within governments policy discussion to ensure accountability.

Internal control systems consist of policies, procedures, and institutional arrangements intended to provide reasonable assurance that organisational objectives are achieved, financial information is reliable, assets are protected, and laws and regulations are followed (Dangi, Nawawi, and Salin, 2020). The COSO (Committee of Sponsoring Organizations of the Treadway Commission) Framework is one of the most widely adopted models for the evaluation of the effectiveness of internal control. The COSO model comprises five interconnected components, namely control environment, control activities, risk assessment, monitoring controls and information and communication (Djasuli, Triyuwono, Purwanti and Roekhudin, 2022; Yuwono and Ellitan, 2024). These elements foster an organizational climate of accountability, enhance governance and strengthen financial accountability. Despite the importance of internal control systems, many public institutions particularly in developing countries still have frequent issues such as financial irregularities, lack of oversight, inefficient utilization of resources and poor adherence to financial management regulations. The challenges have increased the pressure on governments to strengthen the governance systems to promote accountability and restore public confidence. Empirical evidence has revealed that effective internal controls enhance accountability through increased transparency, reduced opportunities for fraud and improved compliance with financial procedures (Choongwa, 2018; Al Kindy, Shah & Jusoh, 2016). In Eswatini, the Government has implemented a number of public financial management reforms that aim to improve transparency, improve oversight and promote responsible management of public resources. However, financial accountability still remain a concern, particularly where weaknesses persist in internal controls, governance practices, and institutional implementation capacity. As much as internal control policies exist across the different ministries in Eswatini, it remains uncertainty about how effective they contribute to accountability in practice. A clear understanding of how each internal control component affects financial accountability is therefore important for policy reform and stronger public sector financial governance.

Empirical literature provides considerable evidence on the relationship between internal control systems and financial accountability. In Uganda, Nigeria, South Africa and the Netherlands, empirical literature indicates that financial accountability is improved by effective control activities, ethical organisational environments, ongoing monitoring, systematic risk assessment and dependable information and communication (Adeyemi and Olarewaju, 2019; Eton, Mwos, Ogwel, 2022; Soares, Baridwan and Hasim, 2023). However, these findings cannot be directly applied to Eswatini without caution, as governance structures, institutional capacity, administrative arrangements and public financial management frameworks vary across countries (Mamba and Dlamini, 2023; Van der Meer, 2018). In addition, much of the existing work examines internal control components separately, leaving limited evidence on their combined effect within Eswatini's public sector.

Hence, this study examines the effect of internal control systems on public sector financial accountability in Eswatini. The analysis considers control activities, the control environment, monitoring controls, risk assessment, and information and communication within a single empirical model. The study was conducted in Eswatini Government ministries, featuring financial controllers, principal accountants, senior accountants, and accountants across government ministries, providing direct insight into the internal control components most closely associated with financial accountability. The study has both theoretical and practical contributions. At the theoretical level, it extends evidence on internal control systems and financial accountability in a developing-country context where empirical work remains limited. Its simultaneous assessment of the five COSO components provides a broader understanding of internal control effectiveness in public sector organisations. At the practical level, the findings provide evidence-based guidance for policymakers, government ministries, and financial managers seeking to strengthen governance systems, improve institutional accountability, and support more effective management of public resources in Eswatini.

2. Literature review

2.1. Theoretical review

There are many theories that explain how internal control systems relate to financial accountability in the public sector. This study is based on Stewardship Theory, Agency Theory, the COSO Framework, and the COBIT Framework. Each theory helps to show how good governance, ethical leadership, proper oversight, and reliable information systems can improve the way public institutions account for public funds.

Stewardship Theory suggests that managers and public officials can act in the best interests of their organisations and the people they serve, instead of focusing only on personal gain (Torfing & Bentzen, 2020). The theory sees public officials as people who may value responsibility, honest conduct, and the achievement of institutional goals. In the public sector, this means financial accountability is likely to improve when officials act with integrity, professionalism, and care for public resources. Internal control systems should therefore not only enforce rules, but also encourage honest behaviour, openness, and responsible use of public funds (Surjono, 2022). One weakness of this theory is that it assumes a high level of trust and commitment from officials. In practice, such commitment may be difficult to maintain where oversight is weak, political pressure exists, or personal gain becomes possible. This weakness makes it necessary to also consider theories that explain self-interest and misuse of authority.

Agency Theory deals with this problem by explaining the possible conflict between principals and agents. In this study, citizens and government are the principals, while public officials who manage public resources are the agents (Linder & Foss, 2013). The theory argues that public officials may follow their own interests when monitoring and accountability systems are weak. Internal control systems help reduce this risk by improving supervision, transparency, and compliance with financial rules (Manginte, 2024). In the public sector, the theory highlights the importance of monitoring, segregation of duties, approval procedures, and institutional checks in reducing fraud, poor financial management, and misuse of public funds.

The COSO Framework gives a practical way of understanding and assessing internal control systems. Mat Dangi, Nawawi and Salin (2020), as well as Djasuli, Triyuwono, Purwanti, and Roekhudin (2022), identify five main parts of an effective internal control system: the control environment, control activities, risk assessment, monitoring controls, and information and communication. When these parts work well, institutions are better able to meet their goals, produce reliable financial reports, protect assets, and follow laws and regulations. The framework is useful for this study because it guides how the independent variables are defined and measured when assessing internal control effectiveness in Eswatini's public sector.

The COBIT Framework adds another important angle to the study because it focuses on information technology governance and the management of information systems in organisations (Ilori, Nwosu, & Naiho, 2024). As governments rely more on digital financial systems, strong IT governance has become important for keeping financial information reliable, secure, and accurate. COBIT helps organisations link information technology to their goals while improving risk management, internal controls, and governance processes (Talab & Flayyih, 2023). Evidence from the National Bank of Angola shows that COBIT can improve governance, risk management, and institutional accountability when it is properly applied (dos Santos, 2017). However, Ndlovu and Kyobe (2016), together with Modisane and Kruger (2023), warn that COBIT must be adjusted to suit local institutional conditions. This point matters for developing countries because limited capacity and weak technology infrastructure can affect how well the framework works. The theories reviewed in this section support the view that well-designed and properly applied internal control systems can improve financial accountability in Eswatini's public sector.

2.2. Conceptual framework

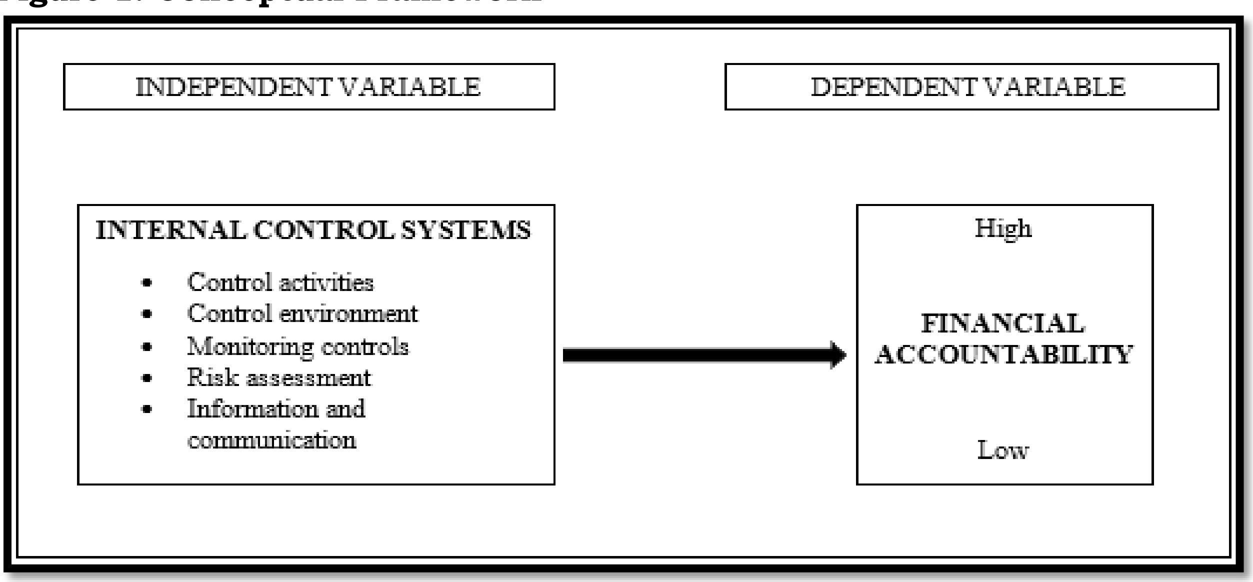
This study used a conceptual framework guided by the COSO Internal Control-Integrated Framework (COSO, 2013), which is widely applied in public governance literature to explain public sector financial accountability. The framework connects financial accountability in the public sector to five main internal control components: control activities, the control environment, monitoring controls, risk assessment, and information and communication.

Financial accountability is the dependent variable in this study. It means that public institutions must manage, report, and explain how public funds are used in a clear, lawful, and responsible way. It covers reliable financial reports, compliance with financial rules, efficient use of resources, risk management, and openness in the handling of public money. When financial accountability is strong, public trust improves, service delivery is supported, and government institutions are better able to meet their duty to citizens.

The framework suggests that control activities help reduce mistakes and misuse of funds through approvals, separation of duties, reconciliations, and checks. A strong control environment supports honest leadership, good governance, and shared values that guide responsible financial management. Monitoring controls help institutions check whether internal controls are working as expected through regular reviews, internal audits, and corrective action. Risk assessment helps institutions identify, assess, and manage risks that may affect financial management goals. Information and communication help ensure that reliable financial information is prepared, shared, and used on time to support decisions and improve transparency.

The framework assumes that improvement in all five areas of internal control can strengthen financial accountability in the public sector. Weakness in any one area can reduce transparency, weaken governance, and increase the risk of poor financial management and waste of public resources. For this reason, the study tests how each internal control component contributes to financial accountability in government ministries in Eswatini.

Figure 1: Conceptual Framework



Source: *Adapted from COSO, 2013.*

The conceptual framework provides the analytical foundation for the study by illustrating the hypothesised relationship between internal control systems and public sector financial accountability. It further guides the development of the study hypotheses and the regression model used to examine the effects of the five internal control components on financial accountability in Eswatini's public sector.

2.3. Empirical review and hypothesis development

Previous studies show that strong internal control systems can improve financial accountability in the public sector. However, the strength of each internal control component differs from one institution to another, depending on the governance setting and how controls are applied. For this reason, it is important to examine each component within Eswatini's public sector in order to understand how internal controls support better financial accountability.

Control activities are the day-to-day procedures that help ensure management instructions are followed. They include approvals, authorisations, reconciliations, separation of duties, and verification checks. These procedures help reduce errors, limit chances for fraud, and support compliance with financial rules. Soares, Baridwan, and Hasim (2023) found that organisations with strong control activities had better financial performance and fewer budget differences. Eton et al. (2022) also found that clear approval procedures and regular reconciliations improved financial accountability in Ugandan local governments. In Nigeria, Adeyemi and Olarewaju (2019) reported that strong control activities helped reduce the misuse of public funds. On the other hand, Lintsen (2017) and Donelson, Ege, and McInnis (2017) found that weak control activities increased the risk of financial reporting fraud. Based on these findings, effective control activities are expected to improve financial accountability in the public sector.

H1: *Control activities have a significant positive effect on public sector financial accountability in Eswatini.*

The control environment sets the tone for how public officials carry out their duties. It includes leadership commitment, organisational values, governance structures, and accountability systems that guide staff behaviour and compliance with financial rules. Eton et al. (2022) found that ethical leadership and good governance improved accountability in Ugandan local governments. Ortega-Rodríguez et al. (2020) also reported that transparency and effective supervision increased public confidence in government financial management. Soares et al. (2023) further found that organisations with strong governance cultures performed better financially. In contrast, Lintsen (2017) and Donelson et al. (2017) observed that weak governance environments allowed managers to bypass internal controls, which created more opportunities for financial misconduct. A strong control environment is therefore expected to improve financial accountability in the public sector.

H2: *The control environment has a significant positive effect on public sector financial accountability in Eswatini.*

Monitoring controls help institutions check whether internal controls are still working as intended. They include regular supervision, internal audits, compliance reviews, and ongoing checks of financial processes. Good monitoring helps organisations identify weaknesses early and correct them before they lead to serious financial problems. Soares et al. (2023) noted that continuous monitoring protects the quality of financial reporting. Adeyemi and Olarewaju (2019) also found that internal audits improved financial discipline in Nigerian public institutions. Eton et al. (2022) and the OECD (2023) further concluded that regular monitoring improves accountability by encouraging compliance and discouraging fraud. These findings suggest that effective monitoring controls are likely to improve financial accountability.

H3: *Monitoring controls have a significant positive effect on public sector financial accountability in Eswatini.*

Risk assessment helps organisations identify, assess, and manage threats that may affect the achievement of their goals. In financial management, it helps institutions recognise possible losses, weaknesses, or irregularities before they become serious. Whittle and Nel-Sanders (2022) found that proper risk assessment improved financial accountability in South African local governments. Bernard (2024) reported similar findings in Uganda. Vadasi, Bekiaris, and Andrikopoulos (2020) also showed that effective risk assessment reduced financial irregularities in public institutions. In contrast, Eton et al. (2022) found that weak risk assessment contributed to poor financial management. These studies suggest that institutions with stronger risk assessment practices are more likely to show better financial accountability.

H4: *Risk assessment has a significant positive effect on public sector financial accountability in Eswatini.*

Effective information and communication systems are an essential part of the COSO internal control framework because they help public institutions produce, share, and use financial information on time. When communication systems work well, they improve decision-making, transparency, compliance with financial rules, and the overall quality of financial reporting. Prior studies have shown that strong information and communication practices are positively linked to financial accountability (Ortega-Rodríguez, Licerán-Gutiérrez, & Moreno-Albarracín, 2020). However, much of this evidence comes from countries such as Uganda, Nigeria, South Africa, and the Netherlands, where governance structures and public financial management systems differ from those of Eswatini (Eton, Mwesigwa, & Ogwel, 2022; Djasuli, Triyuwono, Purwanti, & Roekhudin, 2022). Existing research also tends to treat information and communication as part of broader governance studies, leaving limited evidence on its specific contribution within a full COSO-based model. Given the continued challenges in Eswatini relating to financial reporting, transparency, coordination, and information management (IMF, 2023; PEFA, 2023; World Bank, 2025), this study therefore proposes that information and communication have a significant positive effect on public sector financial accountability in Eswatini.

H5: *Information and communication have a significant positive effect on public sector financial accountability in Eswatini.*

Although most studies report a positive link between internal control systems and financial accountability, some gaps remain. Much of the available evidence comes from Uganda, Nigeria, South Africa, and the Netherlands. These countries have governance structures, institutional capacities, and public financial management systems that differ from those of Eswatini. Many studies also look at internal control components separately, which gives limited evidence on how the components work together in one model. As a result, there is still limited knowledge on how much each COSO internal control component contributes to financial accountability in Eswatini's public sector. This study addresses this gap by examining the combined effects of control activities, the control environment, monitoring controls, risk assessment, and information and communication on financial accountability in government ministries in Eswatini.

3. Methodology

The study used a cross-sectional research design and a quantitative approach to assess the effects of internal control systems on public sector financial accountability. The target population for this study was 16 government ministries in Eswatini namely: Ministry of Agriculture, Ministry of Commerce, Industry and Trade, Ministry of Education and Training, Ministry of Environment, Forestry and Fisheries, Ministry of Finance, Ministry of Health, Ministry of Home Affairs, Ministry of Housing and Urban Development, Ministry of Information, Communication and Technology, Ministry of Justice and Constitutional Affairs, Ministry of Labor and Social Security, Ministry of Natural Resources and Energy, Ministry of Public Works and Transport, Ministry of Sports, Culture and Youth Affairs, Ministry of Tinkhundla Administration and Development, and the Ministry of Tourism and Environmental Affairs. The study adopted a complete enumeration sampling technique whereby all government ministries, where all financial controllers, principal accountants, as well as other account personal available in the different ministries. The study operationalized 5 internal control system variables adapted from literature (Chongwe, 2018; AI Kindy et al., 2016). The framework defines financial accountability as a function of control activities, control environment, monitoring controls, risk assessment, and information and communication. Data collection was done using a 5-point Likert-scale structured questionnaire consisting of 5 constructs under each variable. Data collection procedure involved a self-administered online survey whereby a questionnaire link to the digital questionnaire was emailed directly to the respondents. The study ensured content validity through expert review which enhance assessing where the variables construct was appropriately created. Moreover, to ensure contract validity the study conducted a pilot survey using 10 participants outside the inherent study target population. Exploratory factor analysis was also computed to measure validity of the constructs. The study also adopted Cronbach's alpha coefficient to assess internal consistency of the responses. An OLS regression model was used to estimate the effects of internal control practices on public sector financial accountability. The study adhered to ethical consideration through an informed consent form to study participant, sought University of Eswatini approval to conducts the study, anonymity and confidentiality was ensured.

4. Results

4.1. Respondents' demographic profiles

Forty-eight questionnaires were distributed to financial controllers, principal accountants, senior accountants, accountants, and assistant accountants across the sixteen government ministries in Eswatini. All questionnaires were completed and returned, producing a response rate of 100 percent. This response rate reduces the likelihood of non-response bias and strengthens the reliability of the study because the views of all targeted financial management personnel were represented.

Table 4.1: Age and Gender Distribution of Respondents (N = 48)

Variable	Frequency	Percentage (%)
Age		
Under 25 years	1	2.1
31–41 years	5	10.4
42–52 years	26	54.2
53–60 years	16	33.3
Gender		
Male	13	27.1
Female	35	72.9

Source: *Field Survey Data (2026).*

Table 4.1 shows that the respondents were predominantly experienced professionals, with the majority (54.2%) aged between 42 and 52 years, followed by those aged 53–60 years (33.3%). This age profile suggests that most respondents had accumulated considerable professional experience within the public sector and were therefore well positioned to provide informed assessments of internal control systems and financial accountability. Gordon and Langmaid (2022) argue that respondents with substantial professional experience are generally more capable of providing reliable evaluations of organisational governance and management practices because of their prolonged exposure to institutional processes.

The results further indicate that female respondents constituted 72.9% of the sample, while males accounted for 27.1%. Although gender was not examined as an explanatory variable in this study, the distribution reflects the demographic composition of accounting personnel within the participating ministries. Consequently, the findings should be interpreted as representing the views of the financial management workforce rather than suggesting gender-based differences in perceptions of internal control systems or financial accountability.

Table 4.2: Professional Characteristics of Respondents (N = 48)

Variable	Frequency	Percentage (%)
Position		
Financial Controller	10	20.8
Principal Accountant	17	35.4
Senior Accountant	13	27.1
Accountant	7	14.6
Assistant Accountant	1	2.1
Educational Qualification		
Diploma/AAT	3	6.3
Bachelor's Degree	29	60.4
Honours Degree	5	10.4
Master's Degree	10	20.8
Other	1	2.1

Source: *Field Survey Data (2026).*

Table 4.2 demonstrates that the professional positions, principal accountants (35.4%), senior accountants (27.1%), and financial controllers (20.8%) constituted over four-fifths of the respondents. These officers play central roles in budgeting, financial reporting, internal control implementation, and compliance with public financial management regulations. Their participation therefore provided informed insights into the operation and effectiveness of internal control systems within government ministries. In terms of educational attainment, over 91% of respondents possessed at least a bachelor's degree, with one-fifth holding master's degrees. This high level of academic qualification suggests that respondents possessed the technical competencies necessary to evaluate internal control systems and financial accountability, further enhancing the reliability and credibility of the study findings.

4.2. Descriptive statistics

Descriptive statistics were used to examine respondents' perceptions of the effectiveness of internal control systems within government ministries in Eswatini. Table 3 presents the overall mean and standard deviation for each construct measured in the study. Responses were measured on a five-point Likert scale, where higher mean scores indicate stronger agreement regarding the existence and effectiveness of the respective internal control component.

Table 4.3: Descriptive Statistics of the Study Variables (N = 48)

Variable	Mean	Standard Deviation
Control Activities	3.56	0.97
Control Environment	3.55	0.90
Monitoring Controls	3.23	0.96
Risk Assessment	2.99	0.86
Information and Communication	3.29	0.98

Source: *Field Survey Data (2026).*

Table 4.3 indicates that respondents generally perceived the internal control systems implemented across government ministries to be moderately effective. Control Activities recorded the highest mean score (M = 3.56), closely followed by the Control Environment (M = 3.55), suggesting that respondents viewed financial procedures, segregation of duties, authorisation mechanisms, ethical leadership, and governance structures as reasonably well established within their respective ministries. These findings are consistent with Djasuli et al. (2022) and Yuwono and Ellitan (2024), who argue that effective control activities and a strong control environment provide the foundation for sound financial management and improved organizational accountability. Furthermore, the relatively low standard deviations indicate a high level of consensus among the respondents regarding the consistent implementation of these internal controls across the evaluated public institutions.

Information and Communication recorded a positive mean score (M = 3.29), indicating that respondents generally agreed that financial data and internal control procedures are communicated effectively within government ministries. Nevertheless, this moderate score suggests that opportunities remain to strengthen institutional communication channels, particularly concerning structured staff training and organizational awareness of compliance protocols. Previous studies have similarly emphasized that effective communication paths enhance fiscal transparency, facilitate informed strategic decision-making, and reinforce public accountability by ensuring that employees thoroughly comprehend their financial management responsibilities (Eton et al., 2022; International Federation of Accountants [IFAC], 2013). Monitoring Activities recorded a relatively modest mean score (M = 3.23), while Risk Assessment registered the lowest score (M = 2.99), falling marginally below the study's established decision threshold. These findings suggest that although supervisory mechanisms are broadly present, ministries encounter persistent challenges in continuously evaluating internal controls and dynamically identifying emerging financial threats. The depressed perception of risk assessment practices likely reflects systematic weaknesses in formal risk identification, internal reporting, and proactive mitigation processes. Similar observations were reported by Chalam and Ng'eni (2017) and Mukyala et al. (2017), who demonstrated that inadequate risk management protocols sharply diminish the overall operational efficacy of internal control systems, thereby exposing public institutions to preventable financial irregularities. Cumulatively, these descriptive metrics suggest that while foundational internal control components are established within Eswatini's public sector, targeted optimization of monitoring and risk assessment frameworks is required to maximize public financial accountability.

4.3. Regression diagnostics

The study computed diagnostic tests to assess whether the data satisfied the assumptions underlying Ordinary Least Squares (OLS) regression analysis. Specifically, the study assessed multicollinearity among the independent variables, the normality of the residuals, and the linearity of the relationships between the predictor variables and financial accountability. Meeting these assumptions is essential for ensuring that the estimated regression coefficients are unbiased, efficient, and suitable for statistical inference.

Table 4.5: Variance Inflation Factor (VIF) statistics result

	Collinearity Statistics	
	Tolerance	**VIF**
Control activities	.455	2.197
Control environment	.346	2.890
Monitoring controls	.246	4.060
Risk assessment	.384	2.603
Information and communication	.291	3.441

Source: *Authors Analysis (2026)*

The multicollinearity diagnostics indicate that the independent variables do not exhibit problematic levels of intercorrelation. All Variance Inflation Factor (VIF) values fall below the commonly accepted threshold of 5, while the corresponding tolerance values exceed the minimum acceptable level of 0.10. These findings suggest that each internal control component contributes unique explanatory information to the regression model and that multicollinearity is unlikely to distort the estimated coefficients or compromise the interpretation of the regression results.

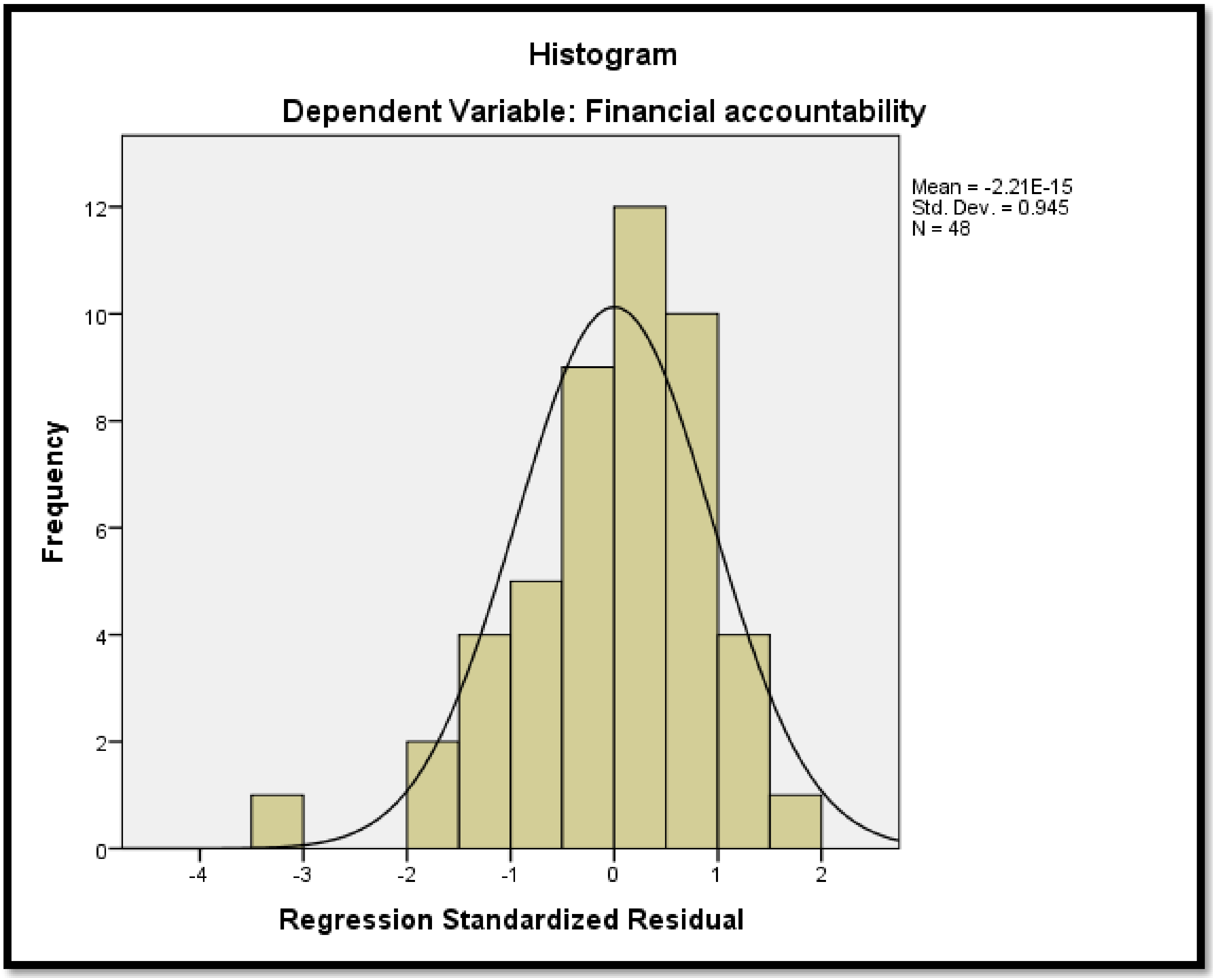


Figure 4.1: Histogram of Standardised Residuals (Normality Test)
Source: Authors Analysis (2026)

The normality assessment further demonstrates that the residuals are approximately normally distributed. The histogram exhibits a bell-shaped distribution centred around the mean, indicating that the residuals closely approximate a normal distribution. This finding confirms that the normality assumption is satisfied, thereby supporting the application of parametric statistical techniques and enhancing the reliability of the regression estimates.

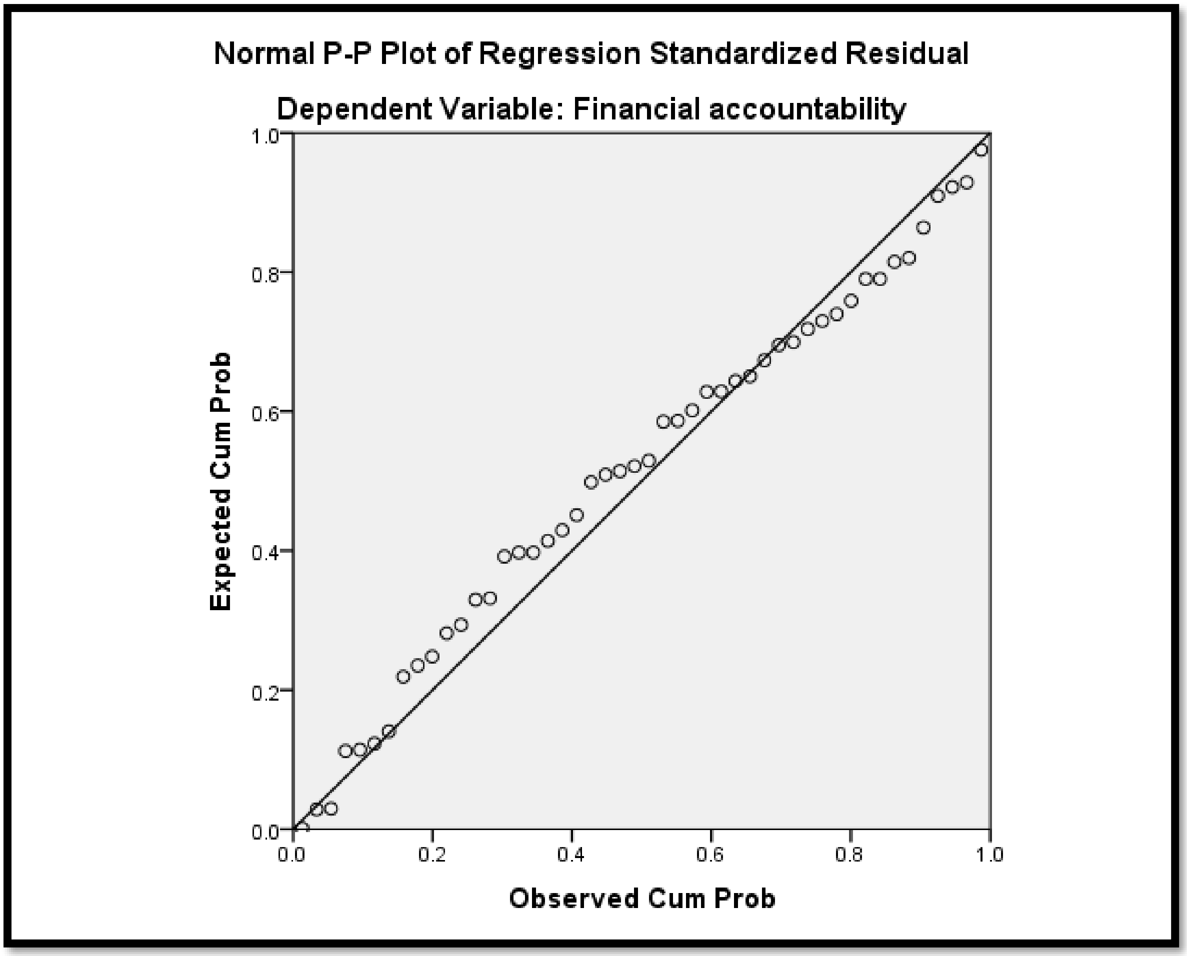


Figure 4.2: Normal P–P Plot of Standardised Residuals (Linearity Test)
Source: Authors Analysis (2026)

The Normal P–P Plot shows that the observed residuals closely follow the expected diagonal line, indicating that the relationships between the independent variables and financial accountability are adequately linear. The absence of substantial deviations from the reference line suggests that the linearity assumption is met, supporting the appropriateness of the OLS regression model for analysing the influence of internal control systems on public sector financial accountability.

Overall, the diagnostic results confirm that the data satisfy the principal assumptions of OLS regression. Consequently, the regression model provides an appropriate and statistically reliable basis for examining the effects of control activities, control environment, monitoring controls, risk assessment, and information and communication on public sector financial accountability.

4.4. Inferential statistics

Following confirmation of the regression assumptions, Pearson correlation analysis was conducted to examine the strength and direction of the relationships between the study variables.

Table 4.6: Pearson Correlation Matrix

		1	2	3	4	5	6
Financial accountability	Pearson Correlation	1					
	Sig. (1-tailed)						
	N	48					
Control activities	Pearson Correlation	.572	1				
	Sig. (1-tailed)	.000					
	N	48	48				
Control environment	Pearson Correlation	.709	.653	1			
	Sig. (1-tailed)	.000	.000				
	N	48	48	48			
Monitoring controls	Pearson Correlation	.718	.703	.775	1		
	Sig. (1-tailed)	.000	.000	.000			
	N	48	48	48	48		
Risk assessment	Pearson Correlation	.566	.626	.628	.725	1	
	Sig. (1-tailed)	.000	.000	.000	.000		
	N	48	48	48	48	48	
Information and communication	Pearson Correlation	.612	.616	.732	.793	.740	1
	Sig. (1-tailed)	.000	.000	.000	.000	.000	
	N	48	48	48	48	48	48

Source: Authors Analysis (2026)

According to Table 4.6, the correlation results indicate positive associations between all components of the internal control system and financial accountability. Control environment and monitoring controls exhibited the strongest positive relationships with financial accountability, while control activities, risk assessment, and information and communication also demonstrated positive and statistically significant associations. The positive correlations provide preliminary evidence that improvements in internal control systems are associated with higher levels of financial accountability. Furthermore, although the independent variables were positively correlated with one another, the diagnostic tests confirmed that these relationships were not sufficiently strong to create multicollinearity concerns.

In this study, to determine the combined effect of the internal control system components on financial accountability, multiple regression analysis was performed.

Table 4.7: Model Summary

Model	R	R Square	Adjusted R-Square	Std. Error of the Estimate
1	.759[a]	.576	.525	.40977
a. Predictors: (Constant), Information and communication, Control activities, Risk assessment, Control environment, Monitoring controls				
b. Dependent Variable: Financial accountability				

Source: Authors Analysis (2026)

The model summary in Table 4.7 indicates that the regression model explains a substantial proportion of the variation in public sector financial accountability. The coefficient of determination (R^2) demonstrates that the five internal control components jointly account for a considerable percentage of the observed variation in financial accountability, suggesting that internal control systems constitute important predictors of accountability within government ministries.

Table 4.8: ANOVA Results

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.567	5	1.913	11.395	**.000[b]**
	Residual	7.052	42	.168		
	Total	16.619	47			
a. Dependent Variable: Financial accountability						
b. Predictors: (Constant), Information and communication, Control activities, Risk assessment, Control environment, Monitoring controls						

Source: Authors Analysis (2026)

The Analysis of Variance (ANOVA) in Table 4.8 established that the overall regression model is statistically significant, indicating that the five internal control components collectively provide a meaningful explanation of variations in financial accountability. These findings support the suitability of the estimated model for testing the proposed hypotheses.

Table 4.9: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.082	.357		3.029	.004
	Control activities	.040	.126	.047	.315	.755
	Control environment	.344	.158	.372	2.174	.035
	Monitoring controls	.334	.174	.389	1.918	.062
	Risk assessment	.036	.134	.044	.271	.788
	Information and communication	-.022	.139	-.030	-.160	.874
a. Dependent Variable: Financial accountability						

Source: Authors' Analysis (2026)

Table 4.9 shows the distribution of the study regression coefficients, revealing that the influence of the individual internal control systems varied across the model. Among the predictors, the control environment emerged as the only variable with a statistically significant positive effect on financial accountability. Monitoring controls also exhibited a positive relationship, however the effect was only marginally significant. In contrast, control activities and risk assessment showed positive but statistically insignificant effects, while information and communication demonstrated a negative but insignificant relationship with financial accountability. These findings suggest that although internal control systems collectively contribute to improving financial accountability, not all components exert the same level of influence when considered simultaneously.

The findings of the study established that the proposed regression model is statistically valid and that internal control systems play an important role in explaining financial accountability within Eswatini's public sector. The regression results further provide the empirical basis for evaluating the study hypotheses and form the foundation for the discussion of the findings presented in the subsequent section.

4.5. Hypothesis testing

H1: Control activities have a significant positive effect on public sector financial accountability in Eswatini.

The null hypothesis that control activities have no significant effect on public sector financial accountability was not rejected, as the results revealed a positive but statistically insignificant relationship ($\beta = 0.047$, $p = 0.755$). Although the coefficient suggests that improvements in control activities are associated with higher levels of financial accountability, the relationship is not sufficiently strong to conclude that control activities independently influence financial accountability outcomes within the Eswatini government ministries. This finding indicates that the existence of procedures such as authorisations, reconciliations, segregation of duties, and access controls may not necessarily translate into measurable improvements in accountability unless supported by broader organisational and governance mechanisms.

H2: The control environment has a significant positive effect on public sector financial accountability in Eswatini.

The null hypothesis that the control environment has no significant effect on public sector financial accountability was rejected, as the results indicate a statistically significant positive relationship ($\beta = 0.372$, $p = 0.035$). The findings suggest that improvements in ethical leadership, organisational values, accountability structures, and governance practices contribute significantly to enhanced financial accountability within government ministries. Among all the internal control components examined, the control environment emerged as the strongest statistically significant predictor of financial accountability.

H3: Monitoring controls have a significant positive effect on public sector financial accountability in Eswatini.

The null hypothesis that monitoring controls have no significant effect on public sector financial accountability was not rejected at the 5 percent significance level, although the results indicate a positive relationship ($\beta = 0.389$, $p = 0.062$). The findings suggest that stronger monitoring mechanisms, including internal audits, supervision, and continuous evaluation of financial processes, are associated with improved financial accountability outcomes. However, the relationship does not attain conventional levels of statistical significance, indicating that the effect of monitoring controls may not be sufficiently robust when considered alongside the other internal control components.

H4: Risk assessment has a significant positive effect on public sector financial accountability in Eswatini.

The alternative hypothesis that risk assessment has significant effect on public sector financial accountability was rejected, as the results revealed a positive but statistically insignificant relationship ($\beta = 0.044$, $p = 0.788$). This finding suggests that although risk identification and mitigation practices may contribute to financial accountability, their independent effects is relatively weak within the context of the government ministries in Eswatini. The results imply that risk assessment processes may not be effectively integrated into financial practices to exert a measurable impact on accountability outcomes.

H5: Information and communication have a significant positive effect on public sector financial accountability in Eswatini.

The null hypothesis that information and communication have no significant effect on public sector financial accountability was not rejected, as the results indicate a negative and statistically insignificant relationship ($\beta = -0.030$, $p = 0.874$). The findings suggest that existing information and communication mechanisms do not independently contribute to improvements in financial accountability within the participating ministries. The negative coefficient further indicates that variations in communication systems are not associated with meaningful changes in accountability outcomes when the effects of the other internal control components are taken into consideration.

4.6. Regression equation

The estimated regression model for the study is expressed as follows:

$$FA = 1.082 + 0.040CA + 0.344CE + 0.334MC + 0.036RA - 0.022IC$$

The regression results indicate that the control environment is the only internal control component with a statistically significant positive effect on public sector financial accountability. Monitoring controls also demonstrate a positive influence, although the effect falls slightly below the conventional significance threshold. In contrast, control activities, risk assessment, and information and communication do not significantly predict financial accountability when considered simultaneously within the model. The findings suggest that strengthening ethical leadership, governance structures, and organisational accountability mechanisms may yield greater improvements in financial accountability than focusing solely on procedural or administrative control measures.

4.7. Discussion

The study found that internal control systems affect public sector financial accountability in Eswatini, although the contribution of each component differs. The null hypothesis relating to the control environment was rejected because the regression results showed a statistically significant positive relationship ($\beta = 0.372$, $p = 0.035$). This result indicates that ministries with ethical leadership, clear organisational values, effective governance structures, and a well-defined internal control environment strategy are more likely to achieve stronger financial accountability. A sound control environment shapes the organisational culture within which financial management takes place and encourages compliance with financial regulations and public sector standards. The result is consistent with Eton et al. (2022), who found that ethical leadership and governance improved financial accountability in Ugandan local governments. Ortega-Rodríguez, Licerán-Gutiérrez, and Moreno-Albarracín (2020) also reported that transparent leadership and effective governance strengthened accountability and public confidence in government financial management, while Soares, Baridwan, and Hasim (2023) concluded that strong governance cultures support better financial management performance. Strengthening the control environment should therefore remain a priority for improving accountability across government ministries in Eswatini.

Control activities did not have a statistically significant effect on public sector financial accountability ($\beta = 0.047$, $p = 0.755$), which led to failure to reject the null hypothesis. Although ministries use authorisation procedures, segregation of duties, reconciliations, and access controls, the presence of such procedures alone appears insufficient to produce measurable improvements in accountability. The result suggests that formal controls may not always be implemented consistently or enforced effectively across ministries. Eton et al. (2022) reported similar evidence, showing that documented control procedures did not necessarily improve accountability where enforcement was weak. Arellano, Meuer, and Netland (2021) also observed that control activities depend heavily on management commitment and consistent implementation rather than formal existence alone. The implication is that stronger compliance, enforcement, and follow-through may matter more than simply having procedures in place.

Monitoring controls showed a positive relationship with financial accountability and approached statistical significance ($\beta = 0.389$, $p = 0.062$). Stronger monitoring mechanisms, including internal audits, supervisory reviews, and continuous evaluation of financial controls, are therefore associated with improved accountability, although the evidence did not reach the conventional five percent significance level. This result suggests that monitoring contributes positively to accountability but may need further institutional support before its effect becomes clearly measurable. Adeyemi and Olarewaju (2019) similarly found that effective internal audit functions improved financial discipline in Nigerian public institutions, while the OECD (2023) emphasised that continuous monitoring strengthens transparency and reduces opportunities for financial irregularities. The marginal result in this study may reflect resource constraints or uneven monitoring practices across ministries.

The results further indicate that risk assessment does not exert a statistically significant effects on public sector financial accountability ($\beta = 0.044$, $p = 0.788$), failing to reject the null hypothesis. This finding suggests that although financial risks are identified within government ministries, existing risk management practices may not be sufficiently systematic or integrated into decision-making processes to improve accountability outcomes. The descriptive findings similarly indicated weaknesses in risk identification, evaluation, and communication, supporting this conclusion. While Asnawi, Larasati, Syahrir (2023) found that comprehensive risk management significantly improves accountability in public institutions, the present findings suggest that risk assessment practices within Eswatini's public sector may still be at a developmental stage and therefore have not yet translated into measurable accountability improvements.

Similarly, information and communication were found to have no statistically significant effect on public sector financial accountability and unexpectedly exhibited a small negative regression coefficient ($\beta = -0.030$, $p = 0.874$). Consequently, the null hypothesis could not be rejected. Although government ministries generally reported the existence of formal communication systems, the findings suggest that these mechanisms may not effectively facilitate the timely dissemination and utilisation of financial information necessary to strengthen accountability. The negative coefficient should not be interpreted as evidence that communication reduces accountability but rather that, after controlling for the other internal control components, information and communication do not independently explain variations in financial accountability. Similar observations were made by Donelson, Matthew, and McInnis (2017), who noted that communication systems alone are insufficient to improve accountability unless supported by strong governance structures and effective implementation. Likewise, IFAC (2013) emphasised that information systems contribute to accountability only when they are integrated with broader public financial management reforms and institutional capacity development.

The findings show that internal control systems collectively explain a substantial proportion of variation in public sector financial accountability, but the control environment is the only statistically significant predictor in the regression model. Organisational culture, ethical leadership, governance, and accountability structures therefore appear to provide the strongest foundation for improving financial accountability in Eswatini's public sector. The remaining internal control components displayed positive or weak relationships with accountability, but their individual effects were not statistically significant. Strengthening internal controls therefore requires a holistic approach in which sound governance is supported by consistent implementation of operational controls, continuous monitoring, systematic risk management, and effective communication.

5. Conclusion

This study examined the influence of internal control systems on public sector financial accountability within government ministries in Eswatini. The findings show that the internal control components jointly explain a substantial share of variation in financial accountability, showing the importance of internal control systems in strengthening public sector financial resource management. Among the five dimensions examined, the control environment emerged as the only statistically significant predictor. This result supports the view that ethical culture, effective leadership, clear organisational structures, and strong governance arrangements significantly improve accountability in public financial management. Control activities, monitoring controls, risk assessment, and information and communication showed positive effects on financial accountability, but their individual effects were not statistically significant.

The results suggest that financial accountability in Eswatini's public sector depends less on isolated control systems and more on the institutional environment in which those controls operate. The significance of the control environment shows that ethical leadership, management commitment, accountability structures, and organisational culture provide the foundation for effective financial management. The non-significance of the remaining components does not mean that they are unimportant. Rather, operational controls are unlikely to improve accountability unless they are supported by effective governance, leadership commitment, and institutional oversight. Improved financial accountability therefore requires an integrated approach that combines sound governance with consistent implementation of internal control practices across all levels of government ministries.

The study contributes to the literature on internal control systems in developing countries by showing that formal procedures alone do not guarantee financial accountability. Internal controls are more effective when supported by ethical leadership, institutional discipline, and strong governance. For Eswatini, the findings provide empirical evidence that strengthening organisational governance may produce greater gains in financial accountability than adding procedural controls without corresponding institutional reforms.

6. Recommendations

6.1. Recommendations for action

Government ministries should strengthen control activities through standardised financial procedures, better documentation, and consistent routine checks that improve accuracy, compliance, and reliability in financial reporting.

Senior leadership should reinforce the control environment by promoting ethical conduct, integrity, accountability, and transparency in all financial management processes.

Ministries should institutionalise monitoring through regular internal and external audits, performance reviews, and supervisory checks that provide continuous oversight and early detection of irregularities.

Risk assessment should become a routine management practice, with clear processes for identifying, evaluating, mitigating, updating, and communicating financial risks across departments.

Information and communication systems should be improved so that financial data are shared accurately, promptly, and transparently, supported by staff training on internal control procedures and accountability requirements.

6.2. Recommendations for further research

Future studies should employ larger sample sizes across multiple government departments within the ministries to improve the generalisability and statistical robustness of findings on internal control systems and financial accountability.

Research should be extended to other public sector institutions in Eswatini, including local authorities, parastatals, and public enterprises, to determine whether similar internal control challenges and accountability patterns exist across different institutional settings.

Longitudinal research designs should be adopted and align with each ministry's strategic plan to examine the long-term effects of internal control systems on financial accountability and to capture changes over time.

Further studies should also explore additional explanatory factors such as governance quality, external audit effectiveness, enforcement of financial regulations, and staff capacity, which may interact with internal control systems to influence financial accountability outcomes.

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