

Internal Controls and the Sustainability of Technical Education, Vocational and Entrepreneurship Training Institutions in Zambia: Evidence from Selected Institutions in Lusaka District

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Abstract: The effectiveness of financial management systems and internal controls contributes to the long-term viability of Technical Education, Vocational, and Entrepreneurship Training (TEVET) institutions. This study examined the effect of internal controls in strengthening the sustainability of selected public TEVET institutions in Zambia's Lusaka District. A quantitative research approach and a correlational study design were used. Structured questionnaires were used to collect data from 150 respondents, 30 of whom were administrators and 120 academics. The data was evaluated using descriptive statistics, exploratory factor analysis, Chi-square testing, and multiple regression analysis. The multiple regression findings revealed a statistically significant overall model: $R = 0.618$, $R^2 = 0.381$, adjusted $R^2 = 0.369$, $F(3,146) = 30.007$, $p < 0.05$. Thus, the three internal control factors accounted for 38.1% of the variation in institutional sustainability. Reconciliation was the best single predictor of sustainability ($\beta = 0.600$, $p < 0.05$), but budgetary controls and payment approval and authorisation were not statistically significant unique predictors in the multiple regression model. Nevertheless, chi-square tests revealed statistically significant relationships between sustainability and budgetary controls, payment approval and authorisation, and reconciliation. The study shows that internal controls have a significant impact on the sustainability of public TEVET organisations, with reconciliation emerging as the biggest distinctive predictor. The findings emphasise the importance of improving the adoption, monitoring, and enforcement of internal control systems.

Keywords: Approval and Authorization; Budgetary Controls; Internal Controls; Reconciliation; Sustainability; TEVET Institutions; Zambia.

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I. INTRODUCTION

Technical Education, Vocational, and Entrepreneurship Training (TEVET) institutions play a significant role in human capital development as well as offering technical and vocational skills needed for economic growth and development. Zambia's public TEVET institutes provide skills and qualifications for persons seeking work, self-employment, and professional growth. Their capacity to carry out this task is dependent not just on infrastructure and qualified personnel, but also on sound financial management and institutional governance.

Internal controls are measures that protect institutional resources, ensure compliance with established procedures,

improve the reliability of financial information, and reduce potential for financial misconduct. According to the COSO Internal Control Framework, an effective internal control system consists of interrelated components such as the control environment, risk assessment, control activities, information and communication, and monitoring.

The importance of internal controls can also be illustrated using Agency Theory. Jensen and Meckling suggest that organisational ties can lead to conflicts of interest when managers control resources on behalf of owners or other stakeholders [2]. Management in public institutions is entrusted with resources that are supposed to benefit the public. Effective controls can thereby reduce

knowledge asymmetry, increase responsibility, and restrict potential for resource misuse.

Stewardship Theory offers a complementary viewpoint, arguing that managers can behave as stewards of organisational resources and pursue institutional rather than solely personal goals [3]. Internal controls, according to this approach, create frameworks that enable responsible decision-making, transparency, and institutional performance.

Despite the significance of TEVET institutions in national development, public educational institutions continue to suffer financial management issues. Unsupported expenditure, inadequate documentation, ineffective planning, and deficiencies in financial reporting can all have an impact on institutional performance and sustainability. The existence of internal control policies does not ensure effective control; their success is determined by implementation, monitoring, communication, and enforcement.

Previous research has proven the significance of internal controls in financial management and organisational effectiveness [4–8]. However, there is limited empirical information on the extent to which various internal control systems contribute to the sustainability of public TEVET institutions in Zambia, notably in the Lusaka District. As a result, this study looked at how budgetary constraints, payment approval and authorisation, and reconciliation might help improve institutional sustainability.

➤ *Statement of the Problem*

Sound financial management systems are required by public TEVET institutions to continue operations, meet financial responsibilities, offer training, and sustain educational facilities and services. Weak internal controls may expose institutions to financial inefficiencies, inappropriate spending, untrustworthy financial information, and poor resource allocation, jeopardising sustainability.

Although public TEVET institutions adhere to defined financial procedures, the existence of procedures does not guarantee that they are constantly followed. The study thus addressed the empirical gap of whether specific internal control mechanisms have a substantial impact on the sustainability of public TEVET institutions in Lusaka District.

➤ *Purpose of the Study*

The purpose of the study was to assess the effectiveness of internal controls in enhancing the sustainability of selected public TEVET institutions in Lusaka District, Zambia.

➤ *Research Objectives*

The study aimed to (1) investigate the relationship between budgetary controls and institutional sustainability; (2) evaluate the relationship between payment approval and authorisation and institutional sustainability; and (3)

determine the relationship between reconciliation and institutional sustainability.

➤ *Research Hypotheses*

- H0₁: There is no statistically significant relationship between budgetary controls and institutional sustainability.
- H0₂: There is no statistically significant relationship between approval and authorization of payments and institutional sustainability.
- H0₃: There is no statistically significant relationship between reconciliation and institutional sustainability.

II. METHODOLOGY

The study employed a quantitative research approach using a correlational research design. The correlational approach was appropriate since the study wanted to investigate whether changes in budgetary controls, payment approval and authorisation, and reconciliation were related to variations in institutional sustainability. The study was undertaken at three public TEVET institutions in Lusaka District: Evelyn Hone College, Lusaka Business and Technical College, and Lusaka Vocational and Technical College. The study included 150 respondents: 30 administrators and 120 academics.

Primary data were gathered utilising structured questionnaires. The questionnaire evaluated budgetary controls, payment approval and authorisation, reconciliation, and institutional sustainability. The data was evaluated using descriptive statistics, exploratory factor analysis, Chi-square testing, and multiple regression analysis. The hypotheses were tested using a significance level of 5%.

The multiple regression model was specified as:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Where:

Y = Institutional sustainability
 X₁ = Budgetary control
 X₂ = Approval and authorization
 X₃ = Reconciliation
 β₀ = Constant
 β₁–β₃ = Regression coefficients
 ε = Error term

III. RESULTS

The study received replies from 150 individuals. Of these, 118 (79%) were men and 32 (21%) were women. In terms of age, 65 respondents (43.3 percent) were over 50 years old, 43 (28.7 percent) were between the ages of 31 and 40, and 42 (28.0 percent) were between the ages of 41 and 50.

The findings revealed that annual budgets were routinely established, with department heads participating in

the budgeting process. However, weaknesses were discovered in budget execution, monitoring, and review. Management enforcement of compliance with approved budgets had a factor loading of 0.850.

About 58.0 percent of respondents strongly agreed that payments needed prior authorisation. Furthermore, 52.7 percent agreed, with 37.3 percent strongly agreeing that supporting documentation were required prior to payment acceptance. Approximately 50.7 percent agreed, with 22.0 percent strongly agreeing that payment duties were split. Supporting documentation prior to payment approval had a factor loading of 0.880.

Approximately 45.3 percent agreed, with 16.0 percent strongly agreeing that frequent bank reconciliations were carried out. Approximately 46.0% agreed that cashbooks were updated promptly. Approximately 44.7 percent strongly agreed that reconciliation increases financial-record accuracy, whereas 34.7 percent agreed and 29.3 percent strongly agreed that proper reconciliation promotes

sustainability. Weaknesses remained in the timely investigation of discrepancies and periodic cash-flow reporting.

Regarding institutional sustainability, 46.0 percent agreed, with 18.0 percent strongly agreeing that institutions had steady financial reserves. However, just 18.7 percent agreed and 6.7 percent strongly agreed that financial responsibilities were satisfied on schedule, while 29.3 percent agreed and 5.3 percent strongly agreed that sufficient financing was available for operational tasks. Internal controls help to financial sustainability, according to around 43.3 percent of respondents, with 26.7 percent strongly agreeing.

➤ Multiple Regression Results

The purpose of the multiple regression study was to investigate how much variation in institutional sustainability is explained by budgetary constraints, approval and authorisation, and reconciliation.

Table 1 Model Summary

Model	R	R ²	Adjusted R ²	Std. Error of the Estimate
1	.618 ^a	.381	.369	1.06219
a. Predictors: (Constant), Reconciliation enhances accuracy of financial records, Management enforces compliance with approved budgets, and Supporting documents are required before payment approval.				

The model yielded R values of 0.618 and R² of 0.381. Budgetary controls, approval and authorisation, and reconciliation account for 38.1% of the variation in

institutional sustainability. The remaining 61.9% is explained by variables not included in the model.

Table 2 ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	101.568	3	33.856	30.007	.000
Residual	164.725	146	1.128		
Total	266.293	149			
a. Dependent Variable: The institution can sustain its Programs long-term.					

The F-statistic was 30.007, with 3 and 146 degrees of freedom, and a p-value of < 0.05. The regression model was thus statistically significant. This suggests that the three internal control variables, when combined, have a significant predictive value for institutional sustainability.

• Interpretation of R²

The R² value of 0.381 indicates that the model explains 38.1% of the observed variation in institutional sustainability. In practical terms, the internal controls addressed in this work contribute significantly to explaining institutional sustainability, while they are not the sole elements impacting it. Other factors outside of the model account for around 61.9% of the variation, including funding levels, management methods, institutional governance, economic conditions, infrastructure, enrolment, and other operational factors.

• Interpretation of F-test

The F-test score of 30.007 determines if the regression model as a whole offers a statistically significant explanation for institutional sustainability. With p < 0.05, the null hypothesis that the regression model lacks significant explanatory power is rejected. Consequently, there is a statistically significant correlation between institutional sustainability and the three internal control variables taken together.

➤ *Regression Coefficients*Table 3 Regression Coefficients^a

	Model	Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	sig
1	(Constant)	.218	.578		.377	.707
	Management enforces compliance with approved budgets.	.043	.088	.032	.483	.630
	Supporting documents are required before payment approval.	.052	.128	.030	.407	.684
	Reconciliation enhances accuracy of financial records.	.672	.082	.600		
a. Dependent Variable: The institution can sustain its programs long-term.						

The study found that reconciliation was the most significant predictor of institutional sustainability, with a standardised coefficient of $\beta = 0.600$ and $p < 0.05$.

Budgetary controls showed a positive coefficient ($\beta = 0.032$), but were not statistically significant ($p = 0.630$). Approval and authorisation exhibited a positive relationship ($\beta = 0.030$) but were not statistically significant ($p = 0.684$) when all three factors were analysed together.

The implication is that reconciliation contributes the most distinct contribution to explaining sustainability in the multiple regression model.

➤ *Chi-Square Results*

The Chi-square analysis revealed statistically significant associations between the three internal control characteristics and institutional sustainability.

Table 4 Chi-Square Results

Hypothesis variable	Pearson χ^2	df	p-value	Decision
Budgetary control	69.646	12	< 0.05	Reject H_0
Approval/authorization	96.810	12	< 0.05	Reject H_0
Reconciliation	147.849	16	< 0.05	Reject H_0

Budgetary controls had a statistically significant relationship with sustainability ($\chi^2 = 69.646$, $p < 0.05$). Approval and authorization also showed a statistically significant association ($\chi^2 = 96.810$, $p < 0.05$). Reconciliation had the most significant Chi-square association with sustainability ($\chi^2 = 147.849$, $p < 0.05$). When all three internal control aspects are considered separately, these findings show that they are all connected with institutional sustainability. As a result, all three null hypotheses were rejected.

IV. DISCUSSION

The findings show that internal controls are important for the sustainability of public TEVET organisations. The total regression model was statistically significant and accounted for 38.1% of the variation in institutional sustainability. This suggests that internal controls are an important component of institutional sustainability, however they do not fully explain sustainability results.

The fact that 61.9 percent of the variation remained unexplained suggests that other institutional and environmental factors, such as funding levels, governance, management practices, infrastructure, enrolment, income-generating activities, and overall economic conditions, may have an impact on sustainability.

The Chi-square value for budgetary controls is chi-square (12) = 69.646, $p < 0.05$, indicating a statistically significant relationship with institutional sustainability. However, budgetary controls were not found to be a

significant predictor in the multiple regression model ($\beta = 0.032$, Sig = 0.630). This gap shows the distinction between bivariate association and the estimated unique contribution after adjusting for the other factors. Approval and authorisation likewise had a statistically significant Chi-square correlation, chi-square (12) = 96.810, $p < 0.05$. However, its unique contribution to the regression model was not statistically significant ($\beta = 0.030$, Sig = 0.684). The findings imply that authorisation procedures are important for accountability, but their unique statistical contribution is limited when additional controls are examined concurrently.

Reconciliation was the strongest finding. The Chi-square result was statistically significant, chi-square (16) = 147.849, $p < 0.05$, and reconciliation was the most powerful unique predictor in the regression model, $\beta = 0.600$, $p < 0.05$. Regular reconciliation can assist discover discrepancies between accounting records and bank statements, improve financial information accuracy, and strengthen cash-flow management.

The findings are compatible with Agency Theory logic, as internal controls can reduce information asymmetry and improve resource monitoring [2]. They also support Stewardship Theory because controls can provide structures through which managers and staff responsibly manage institutional resources [3]. Because budgeting, authorisation, and reconciliation are control tasks that support the larger internal control system, the COSO framework is pertinent [1].

V. CONCLUSION

The study shows that internal controls contribute significantly to the long-term viability of public TEVET institutions in Lusaka District. The three internal control factors together accounted for 38.1 percent of the variation in institutional sustainability, and the total regression model was statistically significant. With a standardised regression coefficient of $\beta = 0.600$ and $p < 0.05$, reconciliation was found to be the most significant internal control mechanism. Although neither was a statistically significant unique predictor in the multiple regression model, budgetary control and authorisation of payments were substantially correlated with sustainability in the Chi-square analysis. The results show that having internal controls is insufficient on its own. Their effectiveness depends on consistent implementation, monitoring, communication, enforcement and timely corrective action. Institutional sustainability should be viewed as a multifaceted outcome influenced by factors outside of internal controls, as 61.9 percent of the variation remained unexplained.

VI. RECOMMENDATIONS

TEVET institutions should strengthen their reconciliation procedures by ensuring that bank reconciliations are completed on a regular basis and that reconciling items are immediately investigated and addressed.

Management should improve budget monitoring and enforcement to ensure that expenditures remain in line with approved institutional budgets.

Payment authorisation methods should be regularly enforced, particularly the criteria for supporting documents and the separation of financial responsibility.

Management should improve monitoring of internal controls by conducting regular assessments and following up on identified deficiencies.

To facilitate prompt financial decision-making and lessen issues with liquidity, organisations should enhance their cash-flow reporting.

TEVET management should give ongoing training to staff in charge of budgeting, payment processing, accounting, and financial reporting.

Further research should look at other factors of institutional sustainability, as the three internal control variables examined did not explain 61.9 percent of the variation.

VII. LIMITATIONS

The results may not necessarily apply to all TEVET institutions in Zambia because the study was restricted to a few public TEVET institutes in the Lusaka District. Additionally, the study employed questionnaire-based data

that was based on respondents' opinions about institutional procedures. Furthermore, the correlational research design identifies statistical associations without establishing definitive causal relationships.

CONTRIBUTION OF THE STUDY

The study presents empirical information addressing the relationship between internal controls and sustainability in public TEVET institutions in Zambia. It shows that reconciliation has the highest unique predictive effect, even though a number of internal controls are linked to institutional sustainability. The results could help increase institutional sustainability and accountability for TEVET managers, policymakers, accountants, internal auditors, and other stakeholders.

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REFERENCES

- [1]. Committee of Sponsoring Organizations of the Treadway Commission (COSO), Internal Control — Integrated Framework, COSO, 2013.
- [2]. M. C. Jensen and W. H. Meckling, "Theory of the firm: Managerial behavior, agency costs and ownership structure," *Journal of Financial Economics*, vol. 3, no. 4, pp. 305–360, 1976.
- [3]. J. H. Davis, F. D. Schoorman, and L. Donaldson, "Toward a stewardship theory of management," *Academy of Management Review*, vol. 22, no. 1, pp. 20–47, 1997.
- [4]. W. S. Albrecht, C. O. Albrecht, C. C. Albrecht, and M. F. Zimbelman, *Fraud Examination*, Cengage Learning, 2018.
- [5]. K. M. Eisenhardt, "Agency theory: An assessment and review," *Academy of Management Review*, vol. 14, no. 1, pp. 57–74, 1989.
- [6]. D. K. Kombo and D. L. A. Tromp, *Proposal and Thesis Writing: An Introduction*, Pauline's Publications Africa, 2006.
- [7]. C. Palfi and M. Muresan, "Survey on weaknesses of bank internal control systems," *Annals of the University of Oradea, Economic Science Series*, 2009.

- [8]. B. Dlamini and E. Ngwenya, 2022. Resource Mismanagement in Vocational Centres. Southern Africa Journal of Economics.
- [9]. A. Khamis, 2013. Internal Controls and Financial Performance of Technical Colleges. Tanzania Journal of Management.
- [10]. B. Kalema and E. Mukiibi, 2021. Governance and financial sustainability of TVET institutions in East Africa.
- [11]. A. Matei and M. Antonie, 2021. Internal controls and sustainability in higher education institutions.
- [12]. J. Phiri, 2017. The Role of Internal Controls in Preventing and Detecting Fraud in TEVET Colleges in Zambia. University of Zambia Press.
- [13]. J. Phiri, 2021. Internal Controls and Sustainability of Tertiary Institutions. AJAAF, 9(1), 1–19.
- [14]. D. Simiyu, 2011. Effectiveness of internal control systems in middle-level institutions in Kenya.
- [15]. T. Waweru and M. Kisavi, 2020. Procurement Challenges in TEVET Institutions in Zambia. African Journal of Public Sector Management.



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