

THE INFLUENCE OF FORENSIC ACCOUNTING–DRIVEN TRANSPARENCY ON PUBLIC PROCUREMENT EFFECTIVENESS IN ZIMBABWE: A QUANTITATIVE STUDY

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ABSTRACT

Public procurement systems in Zimbabwe have since been facing inefficiency challenges together with irregularities, and weak accountability. Forensic accounting has been promoted as a tool to enhance transparency in financial transactions. Unfortunately, quantitative evidence on forensic accounting's impact on effectiveness of procurement system has always been remains to a low extent. The relationship between transparency enhanced by FA and the efficacy of PPS was the chief purpose of this study. The quantitative methodology was employed in conjunction with the explanatory design. Data were gathered from 112 respondents obtained from various government of Zimbabwe departments. Likert scale items were used on structured questionnaires to measure TA1 and IPPS. Analysis of data was through employing the Structural Equation Modelling (SEM). This tested the hypothesised causal relationship. Findings provided empirical evidence on how much transparency generated through forensic accounting translated into measurable improvements in procurement efficiency, compliance, and value for money, informing policy and institutional reforms.

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INTRODUCTION

The public procurement system has always been crucial to the governments. It enables delivery of goods and services effectively. The process should however ensure proper accountability over the funds for the public.

According to the World Bank (2020) public procurement spending take up a substantial percentage national budget. This makes public procurement systems highly susceptible to fraud, corruption, and inefficiency (World Bank, 2020). Africa has been troubled by public procurement challenges such as non-compliance, collusive bidding, and lack of transparency (OECD, 2021). Such challenges have undermined the public procurement systems effectiveness for the respective governments.



Of late, forensic accounting has surfaced as an investigative tool which integrates accounting, auditing, and analytical skills to detect and prevent financial irregularities (Bierstaker, Brody, & Pacini, 2012). In the Zimbabwean context, reforms such as the “Public Procurement and Disposal of Public Assets Act (PPDPA, 2017) and the establishment of the Procurement Regulatory Authority of Zimbabwe (PRAZ)” have laid the legal foundation for enhanced transparency. The Auditor-General reports continued to expose procurement irregularities, showing that further interventions are essential (Office of the Auditor-General, 2023).

The assumption is that using FA improves public procurement system transparency. This happens through enhanced traceability, accuracy and accountability of the transactions in business. There is however limited empirical evidence to show the direct impact of FA on the effectiveness of Zimbabwe’s procurement system. This study addressed this gap by quantitatively examining the relationship between forensic accounting driven transparency (TA1) and public procurement system effectiveness (IPPS1).

LITERATURE REVIEW

Through forensic accounting transparency has always been enhanced. Hence upon boosting the accuracy and traceability of financial records, forensic accounting has facilitated the detection of fraud, and it has been good at strengthening institutional accountability (Duja, 2025; Munyepwa & Ranganayi, 2025). Empirical studies across Africa revealed that the use of forensic audits, vendor profiling, and transaction analytics reduce prospects for mismanagement and boost oversight capacity (Safiyanu, Ibrahim, & Yusuf, 2019; Scispace, 2023). Such practices are not merely for identification of anomalies in the public procurement systems, but they also enhance the accountability culture. This is equally crucial for the efficacy of the governance systems in the public sector.

The part played by forensic accounting upon enhancing public procurement effectiveness has also been emphasized globally. The public procurement effectiveness is measured in terms of efficiency, compliance, and value for money. It benefits from enhanced transparency and accountability.

Studies conducted in Nigeria and Malawi demonstrated that forensic accounting significantly reduced procurement irregularities and improved contract management (Banda, 2025). In Zimbabwe, preliminary evidence indicated that forensic accounting improves the accuracy of procurement records and supports corrective actions, although comprehensive system-wide quantitative analyses are still limited (Munyepwa & Ranganayi, 2025). This

exposed the potential of forensic accounting as a tool not only for fraud detection but also for enhancing the overall efficiency and effectiveness of public procurement systems.

Several nations have adopted the e-procurement systems. That integration of automation to the procurement systems has complemented the impact of forensic accounting on the public procurement system. According to PRAZ (2023) use of e- procurement enhances efficiency of the public procurement systems by improving availability of data. It enhances the continuous monitoring and detection of system anomalies. Duja (2025) however reiterated that it is crucial that there is need to integrate digital procurement with forensic accounting practices. This would improve procurement effectiveness. Scispace(2023) however note that other factors such as the institutional and contextual factors influence the relevance of FA on the public procurement system. Hene factors such as the capacity of internal audit team, legal personnel, and management would determine forensic accounting effectiveness. Whistle blower protection systems also play a critical role.

Despite the growing body of research, several gaps remain. There is a scarcity of quantitative studies in Zimbabwe that directly link forensic accounting enhanced transparency (TA1) to procurement effectiveness (IPPS1). Few studies combine perception-based measures of transparency with objective audit outcomes or e-procurement data, limiting the robustness of existing evidence. Moreover, the moderating effects of factors such as e-procurement adoption and institutional enforcement strength have not been adequately explored. Addressing these gaps is essential to provide empirical evidence on the role of forensic accounting in improving public procurement systems, particularly within the Zimbabwean context.

There has been serious reforms on Zimbabwe’s public procurement system. Despite that the country persists to encounter inefficiencies, procurement irregularities, and weak accountability mechanisms. Forensic accounting has been integrated with the procurement systems to enhance transparency. However, the gap is reflected on limited quantitative evidence demonstrating whether transparency improvements translate into measurable improvements in procurement system effectiveness. This lack of empirical evidence hinders informed decision-making for policy, resource allocation, and the institutionalisation of forensic accounting practices.

Research Objective and Hypothesis

Objective: To examine the influence of forensic accounting driven transparency (TA1) on the effectiveness of public procurement systems (IPPS1) in Zimbabwe. **Hypothesis:** H1:

Forensic accounting driven transparency (TA1) positively influences the effectiveness of public procurement systems (IPPS1) in Zimbabwe.

Research Methodology

This study adopted a quantitative explanatory research design to examine the effect of forensic-accounting-driven transparency and accountability on public procurement effectiveness. Data were collected using structured questionnaires administered to public sector procurement officials, and the hypothesised relationship was tested using Structural Equation Modelling (SEM). The target population consisted of approximately 2,500 procurement, finance, and internal audit personnel across Zimbabwe’s ministries, parastatals, and municipalities. A stratified random sampling technique was used to ensure proportional representation from each institutional category, resulting in a final sample of 112 respondents. Data were gathered using a structured questionnaire comprising 5-point Likert-scale items. The instrument measured two key constructs: TA1, representing transparency and accountability achieved through forensic accounting capturing dimensions such as record traceability, accuracy, fraud detection, and institutional accountability and IPPS1, representing procurement effectiveness covering efficiency, compliance, fraud reduction, and value for money.

RESULT

The regression analysis explored the effect of ITA1 (Forensic Accounting Transparency and Accountability) on IPPS1 (Public Procurement Effectiveness) in Zimbabwe. The outcomes indicate some moderate positive correlation ($R = 0.411$) between transparency and accountability through forensic accounting and procurement efficiency, implying that higher degrees of ITA1 are linked with improved IPPS1 results. The coefficient of determination ($R^2 = 0.169$, Adjusted $R^2 = 0.162$) indicates that approximately 16.9% of the variation in public procurement efficiency is clarified by forensic accounting–driven transparency and accountability. This proportion of explained variation, while reasonable, is significant within the perspective of social science research, where numerous factors typically influence complex institutional results (Bierstaker, Brody, & Pacini, 2012; Duja, 2025).

Table 1. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.411 ^a	.169	.162	.853	.169	22.423	1	110	.000	1.806

a. Predictors: (Constant), ITA1							
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The model was statistically notable ($F(1,110) = 22.423, p < 0.001$), proving that ITA1 is an important predictor of procurement efficiency. The standard error of the estimation (0.853) signifies adequate predictive precision, and the Durbin-Watson statistic of 1.806 shows that the residuals are independent, meeting essential regression criteria. These outcomes align with prior research highlighting the role of forensic accounting in developing transparency, responsibility, and operational effectiveness in public sector procurement systems (Munyepwa & Ranganayi, 2025; Safiyanu, Ibrahim, & Yusuf, 2019).

Overall, the analysis demonstrates that transparency and accountability fostered through forensic accounting clearly and significantly influence the efficiency of public procurement systems in Zimbabwe. This emphasizes the importance of implementing forensic accounting practices including enhanced documentation, fraud identification, and monitoring processes to consolidate procurement performance and promote value for money in the public sector.

Table 2. ANOVA

ANOVA ^b						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	16.302	1	16.302	22.423	.000 ^a
	Residual	79.975	110	.727		
	Total	96.277	111			
a. Predictors: (Constant), ITA1						
b. Dependent Variable: IPPS1						

The ANOVA outcomes evaluate whether the regression model notably predicts public procurement efficiency (IPPS1) grounded on forensic-accounting-driven transparency and accountability (ITA1). The outcomes indicate that the regression sum of squares (16.302) and the residual sum of squares (79.975) together represent the total variant in procurement efficiency. The proportion attributed to the regression component demonstrates that ITA1 explains a substantial share of this variation. When the mean square for regression (16.302) is divided by the mean square of the residuals (0.727), the resulting F-statistic of 22.423 is extremely significant ($p < .001$).

This statistically significant F-value indicated that the model provided a superior fit than one excluding the predictor. This validated that transparency and accountability was boosted through forensic accounting. It also revealed that forensic accounting had a substantial

and positive influence on public procurement effectiveness. These results were in sync with the literature which demonstrated that forensic accounting practices were crucial. Practices such as detailed transaction analyses, anomaly detection, and strengthened oversight develop procurement effectiveness and integrity within public sector institutions were mentioned (Munyepwa & Ranganayi, 2025; Safiyanu, Ibrahim, & Yusuf, 2019). In the Zimbabwean context, where procurement challenges persist, the importance of the model emphasised the significant role of forensic accounting in boosting value for money, accountability, and enhanced governance outcomes (Duja, 2025).

Table 3. Coefficients

Coefficients ^a													
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	1.138	.418		2.724	.008	.310	1.967					
	ITA1	.593	.125	.411	4.735	.000	.345	.841	.411	.411	.411	1.000	1.000
a. Dependent Variable: IPPS1													

Regression Coefficients Analysis

The regression coefficients offer clear indication of the positive impact of ITA1 (Forensic Accounting Transparency and Accountability) on IPPS1 (Public Procurement Performance). The unstandardized coefficient for ITA1 ($B = 0.593$) showed that a one-unit increase in transparency and accountability resulted in a 0.593-unit increase in procurement outcomes. This would need all other factors to be held constant. The intercept ($B = 1.138$) represents the projected baseline level of procurement efficiency when ITA1 is zero.

The standardized coefficient ($\beta = 0.411$) revealed a moderate positive influence. This was consistent with prior research showing that forensic accounting practices enhance public-sector efficiency and oversight (Duja, 2025; Munyepwa & Ranganayi, 2025). The predictor is statistically significant ($t = 4.735$, $p < .001$), and the 95% confidence interval (0.345–0.841) excludes zero, strengthening the reliability of the effect. Collinearity diagnostics (Tolerance = 1.000, VIF = 1.000) confirm that there are no notable multicollinearity issues.

The resulting regression equation can be expressed as follows:

$$\text{IPPS1} = 1.138 + 0.593(\text{ITA1})$$

Overall, the results show that transparency and accountability attained through forensic accounting substantially improve public procurement performance in Zimbabwe, supporting earlier research highlighting the role of forensic auditing in reinforcing governance and value for money (Safiyanu et al., 2019; World Bank, 2020).

CONCLUSION

This study investigated the influence of forensic accounting driven transparency and accountability (ITA1) on the effectiveness of public procurement processes (IPPS1) in Zimbabwe. The regression results revealed that ITA1 is a significant positive determinant of

procurement effectiveness, with a standardized beta of 0.411 and a statistically significant probability value ($p < 0.001$). The model explained approximately 16.9% of the variation in procurement effectiveness, demonstrating that transparency and accountability achieved through forensic accounting substantially contribute to improving public procurement outcomes.

These findings emphasised that implementing forensic accounting practices enhanced public procurement system effectiveness. Practices such as record tracking, anomaly identification, and rigorous monitoring were seen to be relevant to strengthen procurement efficiency, compliance, and value-for-money outcomes. Moreover, the absence of multicollinearity and autocorrelation verifies the robustness of the model, indicating that the relationship is consistent and dependable.

Implications: Policymakers, procurement authorities, and institutions such as the Procurement Regulatory Authority of Zimbabwe (PRAZ) should continue to prioritize forensic accounting capabilities, training, and e-procurement adoption to sustain transparency gains and develop complete procurement effectiveness.

Future Research: While this study focused on a single determinant, future studies could integrate additional variables such as institutional capacity, e-procurement adoption, and legal enforcement as moderators to explore more all-inclusive frameworks of procurement performance. Comparative studies across different African countries could also validate and generalise the outcomes.

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