

# The Role of Internal Controls Systems in Preventing Fraud in Public Finance: A Case Study of Ministry of Finance Afghanistan

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## Abstract

This study examines the role of internal control systems in preventing fraud in public finance, using the Ministry of Finance (MoF) of Afghanistan as a case study. It aims to assess how the five components of internal control such Environment, Risk Assessment, Control Activities, Information and Communication, and Monitoring Activities influence fraud prevention within public sector financial management. The research adopted a case study design and a deductive approach. A stratified random sampling technique was used to select 354 employees from various departments within the Afghanistan Ministry of Finance. Primary data was collected through structured questionnaires, and the data was analyzed using descriptive statistics and multiple regression analysis to test the relationship between internal control components and fraud prevention.

The findings reveal that internal control systems collectively have a significant effect on fraud prevention in public finance. Among the five components, Control Activities demonstrated the strongest influence ( $t = 5.516$ ), indicating that well-defined policies, approval hierarchies, and segregation of duties are the most critical factors in reducing fraudulent practices. The other components—Control Environment, Risk Assessment, Information and Communication, and Monitoring Activities—also showed positive but comparatively lower effects. The regression model was significant ( $F = 9.602$ ,  $p < 0.05$ ), with an adjusted  $R^2$  of 0.621, indicating that 62% of the variation in fraud prevention is explained by the five internal control components. Descriptive analysis further revealed that while employees acknowledged the importance of internal controls, a significant proportion expressed uncertainty about their practical effectiveness, highlighting gaps between formal policies and actual implementation. The study underscores the need for the Ministry of Finance to strengthen the practical implementation of internal controls, particularly by reinforcing segregation of duties, enhancing internal audit functions, institutionalizing structured risk assessment processes, and improving communication and training on fraud awareness. Management commitment and a transparent organizational culture are essential to translating formal controls into effective fraud prevention.

**Keywords:** Internal Control Systems, Fraud Prevention, Public Finance, Control Activities, Risk Assessment, Ministry of Finance, Afghanistan

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## Problem Statement

Fraud in public finance poses a serious challenge to effective public financial management and the proper use of government resources. Weak or poorly implemented internal control systems increase the risk of misappropriation, errors, and corruption, which undermine transparency, accountability, and public trust (Murti & Kurniawan, 2020). Although internal control systems are designed to prevent and detect fraud, gaps in their

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implementation, such as inadequate segregation of duties, weak oversight, and limited monitoring, reduce their effectiveness in practice (Rahman & Karim, 2023). This study examines the role of internal control systems in preventing fraud in public finance and seeks to identify how strengthening these controls can improve accountability and reduce fraud risks.

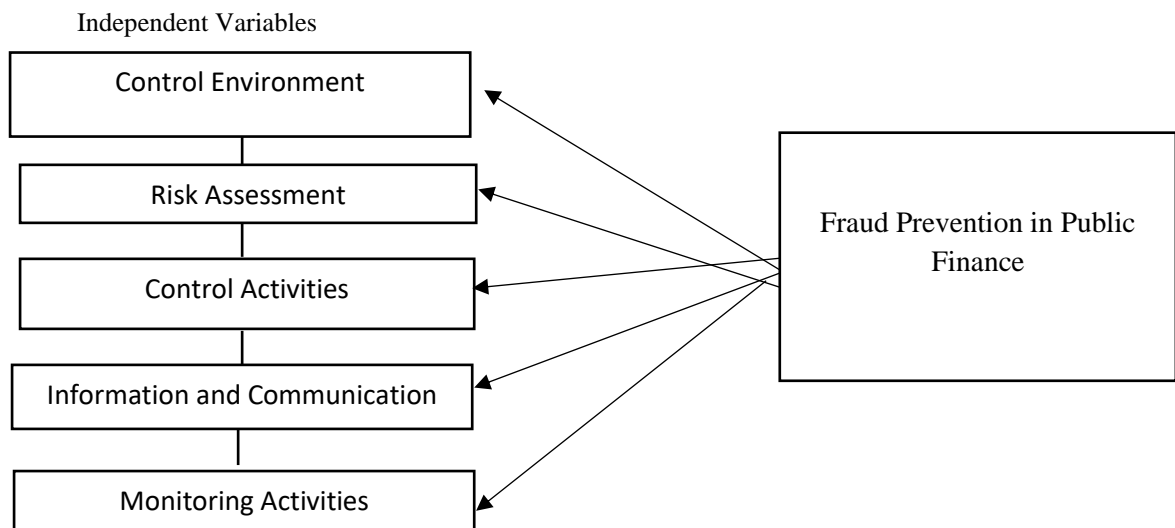
### Organizational Performance Status

The organizational performance of the Afghanistan Ministry of Finance is closely linked to the effectiveness of its internal control systems. While formal policies and procedures for budgeting, revenue collection, and expenditure control exist, performance is often constrained by weak implementation of controls, limited monitoring capacity, and inadequate segregation of duties. These weaknesses increase exposure to fraud, errors, and misuse of public funds, which in turn affect transparency, accountability, and efficient service delivery (Rani & Kumar, 2022). Strengthening internal control mechanisms is therefore essential for improving financial discipline and overall organizational performance within the Ministry of Finance.

### Importance of the Problem

The problem of weak internal control systems in the Ministry of Finance of Afghanistan is critically important because it directly affects the protection of public resources, the credibility of public financial management, and public trust in government institutions. Ineffective controls increase the risk of fraud and financial mismanagement, leading to budget losses and inefficient allocation of scarce resources (Zeinaba et al, 2022). Addressing this problem is essential for strengthening accountability, improving organizational performance, supporting donor confidence, and ensuring that public funds are used effectively to achieve national development objectives.

### Conceptual Framework



### Research Objectives

1. To assess effect of internal control systems on the prevention of fraud in public finance.

### Hypothesis

H1: There is a significant effect of internal control systems on the prevention of fraud in public finance.

H01: There is no effect of internal control systems on the prevention of fraud in public finance.

### Literature Review

McCafferty (2020), mentioned internal control systems play a critical role in safeguarding public finance by preventing and detecting fraud. This study explores the mechanisms and effectiveness of these systems within public sector organizations. By analyzing various case studies and existing literature, it is evident that robust internal control frameworks, which include segregation of duties, regular audits, and comprehensive training for staff, significantly reduce the risk of fraudulent activities. The findings suggest that the implementation of

technology-driven solutions, such as automated monitoring systems, enhances transparency and accountability in financial transactions. Additionally, fostering a culture of ethics and integrity within public institutions is essential for reinforcing the impact of internal controls. Overall, this research underscores the necessity for continuous evaluation and improvement of internal control systems to combat the evolving challenges of fraud in public finance. Also Rani & Kumar (2022), stated the increasing prevalence of fraud in public finance poses significant risks to government integrity and public trust. This paper examines the role of internal control systems as a vital mechanism for fraud prevention in public sector financial management. Through a comprehensive review of empirical studies and theoretical frameworks, the research identifies key components of effective internal controls, including risk assessment, control activities, information and communication, and monitoring. Case studies from various countries illustrate the practical application of these controls and their impact on reducing fraudulent activities. The analysis highlights the importance of a proactive organizational culture that prioritizes ethical behavior and compliance. Furthermore, the integration of advanced technologies, such as data analytics and artificial intelligence, is discussed as a means to enhance the efficiency and effectiveness of internal control systems. This study concludes that a multifaceted approach incorporating both traditional and innovative strategies is essential for strengthening public finance integrity against fraud. Further, KPMG (2018), discussed fraud in public finance remains a pervasive challenge that undermines institutional integrity and public confidence. This paper investigates the critical role of internal control systems in mitigating fraud within public sector organizations. By synthesizing literature and analyzing case studies, the research highlights essential elements of effective internal controls, such as risk management frameworks, robust auditing processes, and employee training programs. The findings reveal that an effective internal control environment not only deters fraudulent behavior but also fosters transparency and accountability in financial operations. Furthermore, the study emphasizes the need for continuous improvement and adaptation of control systems in response to emerging fraud techniques. The integration of technology, including block chain and real-time monitoring, is proposed as a forward-looking strategy to enhance the effectiveness of internal controls. Ultimately, this research advocates for a holistic approach that combines strong internal controls with a culture of ethical governance to effectively combat fraud in public finance.

Kranacher (2016), mentioned the integrity of public finance is increasingly threatened by fraud, necessitating the implementation of robust internal control systems. This paper explores the multifaceted role of these systems in preventing fraudulent activities within governmental financial operations. By examining theoretical frameworks and real-world case studies, the research identifies critical components such as risk assessment, transaction monitoring, and compliance checks that contribute to effective internal controls. The findings indicate that a well-structured internal control environment not only deters fraud but also promotes ethical behavior and enhances public trust. Additionally, the paper discusses the importance of leadership commitment and employee engagement in fostering a culture of accountability. The integration of innovative technologies, such as artificial intelligence and data analytics, is highlighted as a transformative approach to strengthen internal controls further. This research underscores that a proactive and adaptive internal control system is essential for safeguarding public resources against fraud. Similarly, Albrecht (2015), discussed fraudulent activities in public finance pose significant threats to economic stability and public trust. This paper examines the essential role of internal control systems in preventing fraud within public sector organizations. Through a comprehensive analysis of existing literature and empirical studies, the research identifies key elements that contribute to effective internal controls, including clear governance structures, continuous monitoring, and employee training. The study highlights how a strong internal control framework can deter fraudulent behavior by establishing accountability and enhancing transparency in financial processes. Additionally, the paper discusses the impact of organizational culture on the effectiveness of these controls, emphasizing the importance of ethical leadership and a commitment to integrity. The integration of digital tools, such as automated compliance checks and data analytics, is also explored as a means to strengthen internal controls further. Ultimately, this research advocates for a holistic approach that combines traditional internal control practices with innovative solutions to effectively combat fraud in public finance. Moreover, Beasley & Carcello (2019), said the incidence of fraud in public finance has significant implications for governance and public trust, making the effectiveness of internal control systems a critical area of study. This paper investigates the mechanisms through which internal controls can mitigate fraudulent activities within public sector organizations. Drawing on a review of relevant literature and case studies, the research identifies several key components of effective internal control systems, including risk assessment protocols, stringent auditing practices, and comprehensive training programs for employees. The findings demonstrate that a proactive approach to internal controls not only deters fraud but also promotes a culture of transparency and accountability. Furthermore, the paper highlights the role of technology in enhancing internal controls, with innovations such as real-time data monitoring and predictive analytics showing promise in detecting anomalies and potential fraud. Ultimately, this research underscores the importance of a multifaceted strategy that combines strong internal controls with ethical leadership to safeguard public resources effectively. Albrecht & Albrecht (2019), stated fraud in public finance presents a major challenge to government accountability and resource

management. This paper explores the pivotal role of internal control systems in preventing and detecting fraudulent activities within public sector entities. Through a systematic review of literature and analysis of case studies, the research identifies critical components that contribute to effective internal controls, including segregation of duties, regular audits, and the establishment of clear reporting channels. The findings indicate that a robust internal control framework not only serves as a deterrent to fraud but also enhances operational efficiency and fosters a culture of ethical behavior. Furthermore, the paper discusses the importance of ongoing training and awareness programs for employees, as well as the integration of modern technologies such as block chain and artificial intelligence to strengthen control mechanisms. This research advocates for a comprehensive approach that combines traditional internal control practices with innovative solutions to effectively combat fraud in public finance. Kranacher (2021), discussed the increasing complexity of public finance management has heightened the risks of fraud, necessitating effective internal control systems. This paper investigates the essential functions of these systems in preventing fraud within public sector organizations. By conducting a comprehensive literature review and analyzing various case studies, the research identifies key factors contributing to the effectiveness of internal controls, such as risk assessment, control activities, and information dissemination. The findings highlight that a well-designed internal control framework not only deters fraudulent actions but also enhances transparency and accountability in financial operations. Moreover, the study emphasizes the importance of leadership commitment and organizational culture in fostering an environment conducive to ethical behavior. The integration of advanced technologies, including artificial intelligence and data analytics, is proposed as a transformative strategy to enhance internal controls further. This research concludes that a multifaceted approach that combines traditional controls with innovative practices is essential for safeguarding public financial resources against fraud.

Beasley & Carcello (2018), mentioned the integrity of public finance is increasingly threatened by fraudulent activities, making effective internal control systems essential for safeguarding public resources. This paper examines the role of internal controls in preventing fraud within public sector organizations. Through a detailed analysis of existing research and case studies, the study identifies critical components of effective internal control systems, including risk management, regular audits, and employee training. The findings indicate that a strong internal control environment not only deters fraud but also promotes transparency and accountability in financial transactions. Additionally, the paper explores the influence of organizational culture and leadership on the effectiveness of internal controls, emphasizing the need for a commitment to ethical practices. The integration of modern technologies, such as machine learning and data analytics, is discussed as a means to enhance the detection and prevention of fraud. This research advocates for a comprehensive approach that combines traditional internal control measures with innovative strategies to effectively address the challenges of fraud in public finance. Later, Albrecht & Albrecht (2020), mentioned public finance is increasingly vulnerable to fraudulent activities, necessitating the implementation of effective internal control systems. This paper explores the critical functions of these systems in mitigating fraud risks within public sector organizations. By conducting a thorough review of contemporary literature and analyzing various case studies, the research identifies vital components of successful internal controls, such as clear policy frameworks, effective communication channels, and regular performance evaluations. The findings suggest that a proactive approach to internal controls not only deters fraud but also enhances operational efficiency and public trust. Additionally, the study highlights the significance of leadership commitment in fostering an ethical culture and ensuring compliance with established policies. The potential of emerging technologies, such as machine learning and predictive analytics, is examined as a means to bolster the effectiveness of internal controls. This research advocates for a dynamic and integrated approach to internal control systems, combining traditional practices with innovative solutions to address the evolving challenges of fraud in public finance. Beasley & Carcello (2020), discussed the prevalence of fraud in public finance poses significant challenges to governance and resource allocation, making the effectiveness of internal control systems crucial. This paper investigates how internal control frameworks can be optimized to prevent and detect fraudulent activities within public sector organizations. Through an analysis of recent studies and empirical case examples, key attributes of effective internal controls are identified, including risk management processes, comprehensive fraud awareness training, and the establishment of whistleblower protections. The findings reveal that a culture of accountability, supported by strong leadership, is essential for the success of these controls. Furthermore, the research highlights the potential of digital tools, such as automated monitoring systems and block chain technology, to enhance transparency and improve fraud detection capabilities. This study advocates for a holistic approach that integrates traditional internal control measures with innovative technologies and a commitment to ethical standards, thereby reinforcing the integrity of public finance management.

Albrecht & Albrecht (2021), said fraudulent activities in public finance not only squander resources but also erode trust in government institutions. This paper examines the critical role of internal control systems in safeguarding public funds against fraud. Through a comprehensive review of current literature and specific case studies, the research identifies essential elements of effective internal controls, such as risk assessment, transparency in reporting, and the importance of a whistleblower framework. The findings suggest that an organizational culture

that prioritizes ethical behavior and accountability significantly enhances the effectiveness of these controls. Moreover, the paper explores the impact of technological advancements, including artificial intelligence and data analytics, in detecting and preventing fraudulent activities. By integrating traditional control mechanisms with innovative technological solutions, this study advocates for a proactive and dynamic approach to internal controls in the public sector, ultimately aiming to improve financial integrity and public trust. Hanlon, T.M. (2025), mentioned in an era defined by increasingly sophisticated fraudulent schemes, public finance faces unprecedented challenges that demand innovative approaches to internal control. This paper examines how integrating cutting-edge technologies, such as Artificial Intelligence (AI) and machine learning (ML), can revolutionize fraud detection and prevention in public sector financial systems. By analyzing real-world applications and empirical data, the research identifies key benefits of AI-driven systems, including real-time anomaly detection, enhanced pattern recognition, and reduced administrative burdens. The study also addresses the importance of explainable AI (XAI) to ensure transparency and accountability in automated decision-making processes. Furthermore, it explores how these advanced technologies can be seamlessly integrated with existing Enterprise Risk Management (ERM) frameworks to provide a more proactive and resilient defense against financial fraud. Ultimately, this research advocates for a strategic shift towards leveraging AI and ML to safeguard public funds, improve public trust, and ensure efficient governance in an evolving threat landscape.

**Research Design**

In this research the case study, research design and deductive approach are used. The aim of this research is to determine the role of internal control systems in preventing fraud in public finance in Afghanistan Ministry of Finance (MoF). Descriptive Research is trying to describe what is happening in more detail, filling in the missing parts and expanding our understanding, to expand understanding about existing knowledge.

**Sampling Technique**

Sample is a subset of a population, the process of picking a portion of the population to represent the whole population is known as sampling (Biondo et al, 1998). The stratified random sampling technique has been acquired for this research. The different general directorates, departments along with units have been identified keeping in mind the availability and reach.

In the first step a formal permission was obtained through personal visit with heads of departments. In the second stage in a process the questionnaires were distributed personally to pre-selected employees already informed about the purpose of the questionnaire filling. Afghanistan Ministry of Finance employees were taken as a population of the study because the study used a case study design. A total number of 354 employees out of 4135 (Krejcie & Morgan, 1970) of different departments of the Afghanistan Ministry of Finance were selected that would give the in-depth coverage and analysis of the results or the findings.

**Data Analysis**

<b>Table 1: Shows distribution of respondents “Gender” wise</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	290	81.9	81.9	81.9
	Female	64	18.1	18.1	100.0
	Total	354	100.0	100.0	

Table 1 indicates gender wise distribution of the respondents. Gender of the respondents has been classified into two sub-categories i.e., Male and Female. The results revealed that out of 354 respondents, 290 respondents i.e., 81.9% are male and 64 respondents i.e., 18.1% are female.

Hence, it is concluded from the results of the above table that majority of respondents belongs to Male category of gender.

<b>Table 2: Shows distribution of respondents “Education status” Wise</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Diploma or technically certified	93	26.3	26.3	26.3
	Graduate	250	70.6	70.6	96.9
	Post-graduate	11	3.1	3.1	100.0

	Total	354	100.0	100.0	
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Table 2 indicates education status wise distribution of the respondents. Education status of the respondents has been classified into three sub-categories i.e., Diploma or technically certified, Graduate, and post graduate. The results revealed that out of 354 respondents, 93 respondents i.e., 26.3% are diploma or technically certified, 250 respondents i.e., 70.6% are graduate and 11 respondents i.e., 3.1% are post graduate.

Hence, it is concluded from the results of the above table that majority of respondents belongs to graduate category of education status.

Table 3: Shows distribution of respondents "Job Position" Wise					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Junior Staff	113	31.9	31.9	31.9
	Senior Staff	95	26.8	26.8	58.8
	Manager	66	18.6	18.6	77.4
	Department Head	34	9.6	9.6	87.0
	Director	46	13.0	13.0	100.0
	Total	354	100.0	100.0	

Table 3 indicate the job position-wise distribution of the respondents. The job positions of the respondents were classified into five categories, namely Junior Staff, Senior Staff, Manager, Department Head, and Director. The results reveal that out of a total of 354 respondents, 113 respondents (31.9%) are Junior Staff, 95 respondents (26.8%) are Senior Staff, 66 respondents (18.6%) are Managers, 34 respondents (9.6%) are Department Heads, and 46 respondents (13.0%) are Directors.

Hence, it can be concluded from the results of the above table that the majority of respondents hold Junior Staff positions within the organization.

Table 4: Shows distribution of respondents "Department" Wise					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Finance / Accounting	50	14.1	14.1	14.1
	Audit / Internal Control	99	28.0	28.0	42.1
	Procurement, Supply	79	22.3	22.3	64.4
	Human Resources	62	17.5	17.5	81.9
	Administrative	64	18.1	18.1	100.0
	Total	354	100.0	100.0	

Table 4 show the department-wise distribution of the respondents. The departments of the respondents were classified into five categories, namely Finance / Accounting, Audit / Internal Control, Procurement and Supply, Human Resources, and Administrative. The results reveal that out of a total of 354 respondents, 50 respondents (14.1%) belong to Finance / Accounting, 99 respondents (28.0%) are from Audit / Internal Control, 79 respondents (22.3%) are from Procurement and Supply, 62 respondents (17.5%) belong to Human Resources, and 64 respondents (18.1%) are from administrative departments.

Hence, it is concluded from the results of the above table that the majority of respondents belong to the Audit / Internal Control department.

Table 5: Shows distribution of respondents "Years of Experience" Wise					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-5	72	20.3	20.3	20.3
	6-10	94	26.6	26.6	46.9
	11-15	81	22.9	22.9	69.8
	16-20	64	18.1	18.1	87.9
	More than 20 years	43	12.1	12.1	100.0

	Total	354	100.0	100.0
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Table 5 show the distribution of respondents according to their years of experience. The years of experience of the respondents were classified into five categories, namely 1–5 years, 6–10 years, 11–15 years, 16–20 years, and more than 20 years. The results reveal that out of a total of 354 respondents, 72 respondents (20.3%) have 1–5 years of experience, 94 respondents (26.6%) have 6–10 years of experience, 81 respondents (22.9%) have 11–15 years of experience, 64 respondents (18.1%) have 16–20 years of experience, and 43 respondents (12.1%) have more than 20 years of experience.

Hence, it is concluded from the results of the above table that the majority of respondents have 6–10 years of work experience.

**To assess effect of internal control systems on the prevention of fraud in public finance:**

$$\text{FPIPF} = \text{B0} + \text{B1 (CE)} + \text{B2 (RA)} + \text{B3 (CA)} + \text{B4 (I\&C)} + \text{B5 (MA)}$$

$$\text{EPIPE} = 9.054 + 0.005 \text{ (CE)} + 0.033 \text{ (RA)} + 0.248 \text{ (CA)} + 0.035 \text{ (I\&C)} + 0.029 \text{ (MA)}$$

This can be interpreted as 1 unit change in CE, RA, CA, I&C and MA will bring about 9.054, 0.005, 0.033, 0.248, 0.035-, and 0.029-units' positive changes in FPIPE respectively.

The dependency effects of Understanding levels of fraud prevention in public finance on dimensions like Control Environment, Risk Assessment, Control Activities, Information and Communication and Monitoring Activities among employee of Ministry of Finance is defined in hypothesis-1 (Alternative) and hypothesis 01 (Null hypothesis), taken up and its results are shown in the table-5, as an outcome of multiple regression model conceptualized. From the results, it can be inferred that the F value of 9.602 is found to be significant at 5 percent level and hence, the null hypothesis is rejected and alternative hypothesis is accepted. These results suggest that Fraud Prevention in Public Finance depends on the group of 5 independent variables in Employee of Ministry of Finance. Further, the adjusted R square value of 0.621 from table-5 indicate that 62 percent of Understanding levels factor effecting Fraud Prevention in Public Finance depend on these group of 5 independent variables in Ministry of Finance. Also, the 't' values of 1.193, 0.546, 5.516, 0.989 and 0.860, corresponding Fraud Prevention in Public Finance such as control environment, risk assessment, control activities, information and communication, monitoring activities are found to be having significant effects on the model conceived.

The findings indicate that fraud prevention in public finance among employees of the Ministry of Finance is most strongly influenced by control activities, which recorded the highest statistical value (5.516). This result demonstrates that control activities play a significant and superior role compared to other internal control components in reducing fraudulent practices. This strong effect confirms that the existence and effective implementation of well-defined organizational controls greatly enhance fraud prevention. Specifically, the organization has clearly established policies and procedures governing all major financial and operational processes. These policies provide standardized guidance for employees, ensuring consistency, transparency, and compliance with financial regulations. Moreover, the presence of a clear approval hierarchy for financial and operational transactions ensures that no single individual has unchecked authority. This layered approval system strengthens oversight, reduces the possibility of unauthorized actions, and increases accountability across all levels of the organization.

Similarly, Fraud Prevention in Public Finance among employees of the ministry of Finance significantly good effect on control environment with the next higher t value of 1.193. Similarly, the implementation of fraud prevention measures among employees of the Ministry of Finance has a significant positive impact on the control environment, with the next highest t-value recorded at 1.193. This finding indicates that employees' adherence to anti-fraud policies, ethical practices, and internal control procedures strengthens the overall organizational culture and enhances accountability. The control environment, which forms the foundation of an effective internal control system, benefits from clear roles and responsibilities, management oversight, and staff awareness of fraud risks. Although the t-value of 1.193 is lower than the highest observed in the study, it still demonstrates a notable and reliable relationship, suggesting that even incremental improvements in fraud prevention practices can meaningfully reinforce the organization's control environment. In essence, these results highlight that proactive engagement by employees in fraud prevention not only safeguards public resources but also promotes transparency, compliance, and ethical conduct across financial operations within the Ministry.

<b>Table 5: Model Summary</b>						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.648 <sup>a</sup>	0.621	0.609	3.14901		
a. Predictors: (Constant), Monitoring Activities , Control Activities, Control Environment, Information and Communication, Risk Assessment						
<b>ANOVA<sup>a</sup></b>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	476.075	5	95.215	9.602	.000 <sup>b</sup>
	Residual	3450.865	348	9.916		
	Total	3926.941	353			
a. Dependent Variable: Fraud Prevention in Public Finance						
b. Predictors: (Constant), Monitoring Activities, Control Activities, Control Environment, Information and Communication, Risk Assessment						
<b>Coefficients<sup>a</sup></b>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	9.054	1.131		8.005	0.000
	Control Environment	0.005	0.042	0.066	1.193	0.000
	Risk Assessment	0.033	0.061	0.031	0.546	0.000
	Control Activities	0.248	0.045	0.302	5.516	0.000
	Information and Communication	0.0365	0.036	0.054	0.989	0.000
	Monitoring Activities	0.029	0.034	0.044	0.860	0.000
a. Dependent Variable: Fraud Prevention in Public Finance						

The 't' value of 0.989 obtained for the information and communication among employees of the ministry of finance causes considerable housing shortage. The t-value of 0.989 observed for the relationship between information and communication among employees of the Ministry of Finance indicates a moderate and positive influence on internal control effectiveness. This suggests that effective communication channels, timely sharing of financial information, and proper reporting mechanisms contribute to the overall efficiency of internal controls and support fraud prevention measures. Although the t-value is lower compared to other control components, it still reflects a meaningful relationship, highlighting the importance of clear information flow and open communication in promoting accountability and transparency within public financial management. In practice, when employees are well-informed and communication is structured, it strengthens compliance with control procedures, reduces errors, and enhances the organization's ability to detect and prevent fraudulent activities.

The monitoring activities with 't' value of 0.860 also causes significant fraud prevention among employees of the ministry of finance. The monitoring activities, with a t-value of 0.860, also demonstrate a significant positive impact on fraud prevention among employees of the Ministry of Finance. This finding indicates that regular oversight, periodic reviews, and continuous evaluation of financial transactions and operational activities enhance the organization's ability to detect and prevent fraudulent behavior. Although the t-value is lower than some other components, it still shows a meaningful relationship, highlighting the importance of systematic monitoring in reinforcing internal controls. By ensuring that policies and procedures are consistently followed, monitoring

activities contribute to accountability, transparency, and the overall effectiveness of fraud prevention measures within the Ministry.

More specifically risk assessment among employees of the ministry of finance is found to be having significant superior effect on fraud prevention with least high value of 0.546. More specifically, risk assessment among employees of the Ministry of Finance has been found to have a significant and superior effect on fraud prevention, with a t-value of 0.546. This indicates that evaluating potential risks, identifying vulnerabilities, and implementing proactive measures to mitigate those risks play a critical role in reducing opportunities for fraudulent activities. Although the t-value is lower compared to other control components, it still demonstrates a meaningful relationship, showing that even modest improvements in risk assessment practices can substantially strengthen fraud prevention efforts. By systematically analyzing risks and taking preventive actions, employees enhance the organization's internal control framework, ensuring greater accountability, transparency, and protection of public financial resources.

### **List of findings**

1. The main finding of this study suggest that Fraud Prevention in Public Finance depends on the group of 5 independent variables such as Control Environment, Risk Assessment, Control Activities, Information and Communication, Monitoring Activities in Employee of Ministry of Finance.
2. The findings indicate that fraud prevention in public finance among employees of the Ministry of Finance is most strongly influenced by control activities, this result demonstrates that control activities play a significant and superior role compared to other internal control components in reducing fraudulent practices. This strong effect confirms that the existence and effective implementation of well-defined organizational controls greatly enhance fraud prevention. Specifically, the organization has clearly established policies and procedures governing all major financial and operational processes. These policies provide standardized guidance for employees, ensuring consistency, transparency, and compliance with financial regulations. Moreover, the presence of a clear approval hierarchy for financial and operational transactions ensures that no single individual has unchecked authority. This layered approval system strengthens oversight, reduces the possibility of unauthorized actions, and increases accountability across all levels of the organization.
3. The findings indicate that risk assessment has a significant influence on fraud prevention in public finance within the Ministry of Finance. This result highlights that the identification, analysis, and evaluation of financial and operational risks are essential in minimizing fraud exposure. Effective risk assessment enables management to recognize potential vulnerabilities, anticipate fraudulent behavior, and implement preventive measures in a timely manner. The results further show that management awareness of risks and an organizational culture that supports open discussion of control weaknesses contribute to improved fraud prevention. However, the high level of uncertainty among respondents suggests that risk assessment practices are not consistently communicated or systematically applied across departments. Strengthening structured risk assessment procedures would therefore enhance the Ministry's ability to prevent fraud more effectively.
4. The findings demonstrate that information and communication systems play a significant role in fraud prevention among Ministry of Finance. This result confirms that timely, accurate, and reliable financial information is crucial for informed decision-making and effective oversight. Clear communication of internal control policies and procedures ensures that employees understand their roles, responsibilities, and compliance requirements. The existence of formal communication channels enhances transparency and reduces the likelihood of errors or fraudulent actions arising from misinformation or ambiguity. Nevertheless, the high number of neutral responses indicates weaknesses in the effectiveness of communication mechanisms. Improving internal communication and ensuring consistent dissemination of control-related information would substantially strengthen fraud prevention efforts.
5. The findings indicate that monitoring activities have a significant influence on fraud prevention in public finance. This result demonstrates that continuous supervision, regular reviews, and internal audits are essential tools for detecting control weaknesses and preventing fraud before it escalates. Effective monitoring ensures that internal control systems remain operational, relevant, and responsive to emerging risks. The study further shows that corrective actions based on audit findings enhance accountability and reinforce compliance with established controls. However, the presence of uncertainty among respondents suggests that monitoring activities are not consistently visible or systematically followed up. Strengthening monitoring mechanisms and ensuring regular management reviews would further improve the effectiveness of fraud prevention within the Ministry.
6. The overall findings confirm that internal control systems play a significant role in preventing fraud in public finance within the Ministry of Finance. Among the five components, control activities exert the

strongest influence, followed by risk assessment, information and communication, monitoring activities, and the control environment. This indicates that while all components are interrelated and essential, their effectiveness depends largely on proper implementation and management commitment. The results clearly support the view that strengthening internal control systems enhances transparency, accountability, and integrity in public financial management, thereby significantly reducing the risk of fraud.

7. The findings from the descriptive bar charts related to fraud prevention reveal that employees generally acknowledge the importance of internal controls in reducing fraud; however, a significant proportion of respondents remain uncertain about their effectiveness. Across most fraud-related statements such as segregation of duties, internal audits, and digital financial systems the highest response category was “Not Sure.” This pattern indicates limited awareness, inconsistent application, or weak communication of fraud prevention mechanisms. While a considerable number of respondents agreed that these controls help reduce fraud, the persistent uncertainty highlights gaps between formal control structures and their practical implementation.

### **Recommendations**

1. The Ministry of Finance should strengthen the segregation of duties by clearly separating authorization, recording, custody, and reconciliation functions, particularly in high-risk financial operations, to minimize opportunities for fraud and errors.
2. Senior management should demonstrate stronger commitment to internal control systems by actively enforcing control policies, regularly reviewing financial activities, and ensuring accountability through consistent disciplinary actions where control violations occur.
3. The internal audit function should be strengthened by enhancing its independence, capacity, and scope, with greater emphasis on timely follow-up and implementation of audit recommendations to improve fraud prevention and control effectiveness.
4. Continuous and structured training programs on internal controls, ethical standards, and fraud awareness should be provided to employees at all levels to improve understanding and compliance with control procedures.
5. The Ministry should institutionalize formal risk assessment processes, including periodic fraud risk assessments, to identify, analyze, and mitigate financial risks before they materialize.
6. An organizational culture that promotes transparency and open communication should be encouraged by establishing safe channels for reporting control weaknesses and suspected fraud without fear of retaliation.

### **Conflict of Interest**

The authors affirm that no conflicts of interest are linked with this publication. The research was conducted autonomously without financial or non-financial assistance from external entities.

### **Author Contribution Statement**

The author meticulously crafted the study, devised the methodology, executed the investigation and data analysis, composed the original manuscript, and undertook the review and editing of the document. The author autonomously executed every aspect of the research and the development of the manuscript.

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### **Appendix**

#### **1**

#### **Fraud Prevention in Public Finance**

- A Segregation of duties reduces the likelihood of fraud in public finance operations.
- B Weak internal controls are a major cause of fraud in public financial management.
- C Regular internal audits improve transparency and accountability.
- D The use of digital financial systems reduces opportunities for fraud.
- E Segregation of duties reduces the likelihood of fraud in public finance operations.

#### **2**

#### **Control Environment**

- A The organization has a clear code of conduct that guides employee behavior.
- B Management demonstrates commitment to internal control and accountability.
- C Decision-making processes in this organization are transparent and consistent.
- D Employees receive adequate training on internal control and ethics.
- E Lines of authority and reporting relationships are well established.

#### **3**

#### **Risk Assessment**

- A The organization regularly identifies potential risks that could affect its objectives.
- B Identified risks are properly analyzed to determine their impact and likelihood.
- C Management demonstrates strong awareness of potential risks affecting the organization.
- D The organization's culture supports open discussion of risks and control weaknesses.

#### **E**

- Corrective actions are taken based on past incidents or audit findings.

#### **4**

#### **Control Activities**

- A The organization has clear policies and procedures for all key operations.
- B There is a clear approval hierarchy for financial and operational activities.
- C Key duties are divided among employees to reduce the risk of errors or fraud.
- D Responsibilities are assigned based on skills and accountability.
- E Employees receive feedback on compliance with control procedures.

#### **5**

#### **Information and Communication**

- A The organization provides accurate and reliable information for decision-making.
- B Information related to operations and finances is timely and up-to-date.

- C There are formal channels for communicating policies and procedures within the organization.
- D Internal control policies are effectively communicated to all relevant employees.
- E Weak communication of internal controls increases the risk of errors or fraud.

**6** *Monitoring Activities*

- A The organization continuously monitors the effectiveness of its internal control systems.
- B Management regularly reviews operational and financial activities for compliance.
- C Internal audits are conducted regularly to assess the effectiveness of controls.
- D Weaknesses identified through monitoring are addressed promptly.
- E Monitoring activities prevent errors and irregularities before they escalate.