

Attributes of Whistleblowing System and Detection of Occupational Frauds with the Moderating Role of Audit Committee

Amer Shakeel¹, Hamza Shahbaz Ahmad² and Esha Nisar³

^{1&3}University of Management & Technology, Lahore, Pakistan.

²University of Missouri, Kansas City, United States.

Correspondence:

Amer Shakeel: amer.shakeel@umt.edu.pk

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Amer Shakeel (Corresponding Author), University of Management and Technology, Lahore, Pakistan.

Email: amer.shakeel@umt.edu.pk

Hamza Shahbaz Ahmad, University of Missouri, Kansas City, United States.

Esha Nisar, University of Management and Technology, Lahore, Pakistan

ABSTRACT

This study aims to investigate the effect of the attributes of the whistleblowing system, i.e., anonymous reporting channel (ARC), job security (JS) for the whistleblowers, and previous outcome of the whistleblowing (PWB), on the detection of occupational fraud (DOF), and the moderating role of the audit committee (AC) in the relationship between these attributes and DOF. A data sample of 413 individuals working in the accounts, finance, and audit departments of companies listed on the Pakistan Stock Exchange (PSX) was collected. For data analysis, the PLS-SEM technique was chosen by using Smart PLS software. The findings of the study showed that ARC, JS for the whistleblowers, and PWB positively and significantly affect the DOF in the organization. The AC also plays a significant role as a moderator in the relationship between these attributes and DOF. The current study highlights the implications and guidelines for managers, audit firms, investors, policymakers, and regulatory authorities to understand the crucial role and significance of the whistleblowing system in detecting occupational fraud and to identify ways to enhance its effectiveness and efficiency.

Keywords: Occupational Fraud, Corporate Governance, Whistleblowing System, Audit Committee.

JEL Classification Codes: G34, M42

1. INTRODUCTION

Whistleblowing is considered one of the most effective tools for the detection of fraud in organizations (Sari, 2024; Maulida & Bayunitri, [2021](#)). It is defined as a tip from an outsider or insider of an organization regarding any wrongdoing or unethical practices being performed by employees or management (Mustapha et al., [2024](#)). A whistleblower believes that the reported activity is an unethical practice, fraud, or a violation of any law, regulation, or policy. Employee frauds,

denoted as occupational frauds, have become a serious problem for management (Kalovya, [2023](#)). Organizations of every type and size are victims of occupational fraud (Kagias, [2022](#); Cheliatsidou et al., [2023](#)). Employees within organizations are involved in misappropriation of assets, fraudulent financial reporting, and different forms of corruption (Thomas & Indriaty, 2023).

According to the latest report published by the Association of Certified Fraud Examiners (ACFE), which analyzed 1,921 cases across 138 countries, total losses caused by occupational fraud amounted to 3.1 billion USD, with an average loss per case of 1.7 million USD (ACFE, 2024). According to the study, 39% of employee perpetrators are at the lowest level, 39% are managers, and 19% are executives of the victim organizations (ACFE, 2024). Occupational fraud poses a threat to the financial and operational efficiency of organizations (Othman & Ameer, 2023). Employees at every level are involved in different types of unethical practices and seek personal benefits at the cost of the organization's resources (Thomas & Indriaty, 2023). Sometimes, it leads to business closure or severe damage to the organization's reputation (Lin et al., [2022](#)). It is very difficult to eliminate this type of fraud completely from organizations (Mandal, [2024](#)). Organizations adopt many policies and tools to detect these types of frauds, which include internal audit, external audit, forensic audit, internal control system, and fraud risk management system, etc. (Cheliatsidou et al., [2023](#)).

The whistleblowing system is also one of these tools that helps control the evil of occupational fraud (Hari, Sabrina, & Meratia, [2025](#)). Internal and external people report wrongdoing and unethical practices to organizational management for necessary action (Maulida & Bayunitri, [2021](#); Marota et al., [2024](#)). A whistleblower is most often understood as a person who first discloses or reports to internal authorities or a public monitoring institution an illegal action that took place in the workplace (Meitasir et al., [2022](#); Gibbs, [2025](#)). The report given by a whistleblower is not always based on the good faith of the reporter, but the aim is to reveal a crime or any irregularities that they know (Teichmann & Falker, 2021; Nugroho, 2024). It is not easy for a whistleblower to decide whether to reveal or report the fraudulent actions that they know; they must first understand the risks that will occur if they proceed (Maulida & Bayunitri, [2021](#); Tutton & Brand, 2024). For the purpose of smooth and easy reporting by whistleblowers, organizations should eliminate all risks and adverse consequences for the whistleblower (Mustapha et al., [2024](#); Saluja & Sandhu, 2023). In the absence of security that should be provided to the whistleblower, this system cannot perform appropriately (Yunia & Mutmainah, 2024). Organizations should ensure these prerequisites are met (Saluja & Sandhu, 2023).

Whistleblowing promotes an ethical culture in organizations by helping them to face the challenges of fraud (Shonhadji & Irwandi, 2024). As per many studies, by making the whistleblowing system more effective and result-oriented, organizations can reduce the incidence of fraud (Meitasir et al., 2022; Nugroho, 2024). If whistleblowers are supported and protected, it encourages other employees to report wrongdoing to top management with confidence. Participation of all internal and external stakeholders is inevitable for the success of the whistleblowing system (Gibbs, 2025). The intention of whistleblowers to report fraud depends on many factors, like retaliation, financial rewards, and the outcome of previous whistleblowing incidents (Nwakeze, et al., 2023; Hari et al., 2025). Management should show a strong response to any fraud reported by whistleblowers. Sometimes, employees do not report wrongdoing because of many reasons (Ramadhani & Trisnaningsih, 2023). Management should explore the reasons and develop a system through which it is convenient to report fraud. Many organizations have established an anonymous reporting channel for the confidential reporting of wrongdoing (Mrowiec, 2022; Gibbs, 2025). Through this method, retaliation, which is a big obstacle in the way of whistleblowing, can be eliminated. People use these channels to report fraud and unethical practices without disclosing their identity (Mrowiec, 2022).

Whistleblowing ensures the exposing of wrongdoing, promotes accountability, encourages ethical behavior, legal and regulatory compliance, and empowers individuals to play a role in the betterment of organizational governance (Ramadhani & Trisnaningsih, 2023). It can save organizations from losses due to fraud, wrongdoing, and non-compliance with laws and regulations (Yunia & Mutmainah, 2024; Hari et al., 2025). Because of the existence of this system, it becomes difficult for fraudsters to commit unethical practices. It creates threats for them to be caught, disclosed, and punished (Sari, 2024). Prior studies have shown a strong effect of the whistleblowing system on the prevention and detection of fraud (Wang et al., 2024). A strong culture of whistleblowing should prevail in organizations to combat fraud (Saluja & Sandhu, 2023). Implementing the whistleblowing system can accelerate the process of integrity growth in the company. The whistleblowing system can also support good corporate governance practices by fostering transparency within the company (Hogic, 2023; Kenny & Fotaki, 2023). In addition, the company should have a whistleblowing system that supports and protects employees in reporting acts of fraud, so that this will lead to efforts to prevent and detect fraudulent acts within the company. This can work well because the whistleblowing system has been structured as a fraud and crime prevention effort (Saluja & Sandhu, 2023; Yunia & Mutmainah, 2024).

Reporting is a complicated decision, especially concerning the potential repercussions that it could have on the whistleblower's personal and professional

life (Sari, 2024). To ensure follow-up, it requires a strategic approach to whistleblower protection rights, whereby an act of whistleblowing shall not be detrimental to the whistleblower (Marota et al., 2024; Mandal, 2025). The importance of investigating whistleblower reports and thereafter taking measures such as penalties or sanctions can hardly be downplayed. Weak law enforcement erodes the efforts of whistleblowers. Sometimes, employees don't report fraud to management (Hari et al., 2025). Several researchers have studied and examined the threats and risks that arise due to whistleblowing actions. It has been found that the reporter or whistleblower is threatened in many ways—from being fired, to threats on their life and family's safety, and even counter-accusations for revealing facts of fraud or violations (Ebaid, 2023; Mustapha et al., 2024). There should also be some reward, in terms of finance or other incentives, for whistleblowers to encourage fraud reporting (Marota et al., 2024). The current study is a complete analysis of factors that influence the adoption and effectiveness of whistleblowing systems, which ultimately affect the DOF in organizations. This study offers novel insights into the enhancement of transparency and responsibility as principles of corporate governance.

1.1 Problem Statement

Organizational reputation is seriously compromised by occupational frauds, which can destroy an organization's capacity to operate as a profitable and stable entity (Kagias, 2022). Managers will inevitably choose and use any tools and methods that help companies avoid the negative consequences of fraud (Nakitende et al., 2021). Fraudsters of this sort always try to locate fresh, secure channels to commit their crimes, and businesses are always working to stop them (Kalovya, 2023). This issue should be tackled, and the methods used in businesses to solve it should be reviewed.

1.2 Significance and Contribution of Study

Particularly through the whistleblowing system, this research seeks to provide value by identifying attributes of the whistleblowing system which are helpful in the detection of occupational fraud (DOF) in companies. These attributes include an anonymous reporting channel, job security for whistleblowers, and the previous outcome of whistleblowing. In this research, the role of the Audit Committee (AC) as a moderator was also investigated. Organizations will come to value the role of this function in fighting occupational fraud based on the advice and results of this research.

1.3 Objectives of Study

To investigate the effect of the previous outcome of whistleblowing (PWB) on the detection of occupational fraud (DOF).

- To investigate the effect of job security (JS) on whistleblowers on DOF.
- To investigate the effect of whistleblowing incentives (WBI) on DOF.
- To investigate the effect of an anonymous reporting channel (ARC) on DOF.
- To evaluate the moderating role of the audit committee (AC) in the relationship between PWB and DOF.
- To evaluate the moderating role of AC in the relationship between JS and DOF.
- To evaluate the moderating role of AC in the relationship between WBI and DOF.
- To evaluate the moderating role of AC in the relationship between ARC and DOF.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Individual, group, and organizational factors in the whistleblowing system consistently influence decisions to blow the whistle (Kenny & Fotaki, [2023](#)). Non-monetary factors, as well as cost-benefit analysis, are also considered in whistleblowing decisions. A whistleblower also wants to obtain protection prior to whistleblowing due to both internal and external risks (Hari et al., 2025). A fruitful whistleblowing system depends upon different attributes, like a strong anonymous reporting system, financial rewards for whistleblowers, protection of whistleblowers from retaliation, and outcomes of previously reported frauds, etc. (Handajani et al., [2023](#); Manurung & Kristanti, [2024](#)). By ensuring these attributes, whistleblowing can result in the detection of occupational fraud. Many researchers have found a strong relationship between these attributes and the detection of occupational fraud in organizations (Maulida & Bayunitri, [2021](#)). These attributes contribute significantly to the effective implementation of the whistleblowing system (Mustapha et al., [2024](#)).

In previous studies, only one or two variables were studied and explored. There is a need to study the effect of the key attributes of the whistleblowing system on the detection of occupational fraud in the local context. The current study is an effort to fulfill this need.

Here, we will discuss the relevant studies on these attributes of an effective whistleblowing system.

2.1 Previous Outcome of Whistleblowing

It has been reported in different studies that the organizational reaction in past cases, payment to whistleblowers, and organizational justice can help foster whistleblowing activities (Kang, [2023](#)). Before engaging in any whistleblowing (WB) activities, employees weigh the results of past events, particularly noting a

lack of feedback and subsequently concluding that whistleblowing is useless (Brough, [2021](#)). People reported weaker motivation to report fraud occurring within the organization when management's response to prior unethical behavior had been vague and lenient (Scheetz & Fogarty, 2020). If management does not respond to fraud incidents reported by whistleblowers, it will not only demotivate employees from reporting fraud, but it will also encourage fraudsters (Yunia & Mutmainah, 2024). Every reported fraud requires strict action by management to set an example for others. The results and consequences of actions taken against fraudsters should also be propagated within the organization to demonstrate management's firm stance against fraudulent activities (Nugroho, 2024). There should be a strong message prevailing in the organization that management does not leave any reported fraud unattended.

H₁: The previous outcome of whistleblowing affects the detection of occupational fraud.

2.2 Job Security of Whistleblowers

The whistleblower system will be more efficient if there is a relevant procedure in place to evaluate whistleblowers and the organization's performance systematically (Sallaberry & Flach, 2022). Cases of non-disclosure of misconduct are predominantly caused by organizational revenge (Prysmakova & Evans, 2022). Whistleblowing retaliation is defined as an action taken against an employee who reports wrongdoing, involving undesirable consequences in the workplace (Hennequin, [2023](#)). Examples of retaliation can include demotion or job loss, harassment in the workplace, or salary cuts (Kenny & Fotaki, [2023](#)). Some scholars have found that fear of retaliation negatively influences the willingness to blow the whistle (Otchere et al., 2023). A few employees consider several factors when deciding whether to report wrongdoing before taking such a drastic step. As a form of retaliation, losing one's job is a possibility, and employees should be able to expect protection when they take action (Bolarinwa et al., [2023](#); Wang et al., 2024). Even though low-ranked employees tend to abstain from reporting incidents of misconduct due to fear of retaliation, job loss, and threats to their career prospects, they recognize that the best way to uncover occupational fraud is by using whistleblowing (ACFE, 2024).

H₂: Job security of whistleblowers affects the detection of occupational fraud.

2.3 Whistleblowing Incentives

Providing financial incentives to whistleblowers aligns with their motivations, as these rewards can encourage individuals to come forward (Hogic, [2023](#)). Research indicates that financial incentives are a key factor in the decision to report misconduct (Gaydon & Boyle, [2023](#); Buccirosi et al., 2021). Rewards in the form

of money, recognition, or promotion consistently create an environment that encourages whistleblowing. Many studies have concluded that implementing financial and other incentive programs for whistleblowers can enhance their willingness to report issues and improve the overall effectiveness of the whistleblowing system (Buccirossi et al., 2021; Tutton & Brand, 2024). Organizations should create a reward system for employees to encourage whistleblowing (Teichmann & Falker, 2021). This reward system will stimulate individuals to blow the whistle in case any fraudulent activity occurs and comes to their attention (Mrowiec, 2022). In the absence of any reward system, people may lack personal motivation to report fraud (Marota et al., 2024).

H₃: Whistleblowing incentives affect the detection of occupational fraud.

2.4 Anonymous Reporting Channel

In fact, during their research, Hayes et al. (2021) revealed that an anonymous channel for reporting occupational fraud should exist, so that reporting will be easy and risk-free for whistleblowers. The dimensions of anonymous and non-anonymous avenues for reporting have a significant impact on whistleblowing intention (Daffa et al., 2022). The presence of additional channels or hotlines can further facilitate the anonymous reporting of fraudulent acts (Hayes et al., 2021; Oelrich & Erlebach, 2021; Ebaid, 2023). An employee may feel encouraged to report wrongdoing via anonymous channels because they may report any fraudulent activity without the fear of any kind of retaliation (Gao, 2020; Mrowiec, 2022; Gibbs, 2025). According to ACFE (2024), if an effective and sustainable support system exists, then this would be the most effective instrument for fraud detection. The worst and largest frauds in history were detected by whistleblowing (Gibbs, 2025). As per the Listed Companies (Code of Corporate Governance) Regulations, the Board of Directors (BoD) of every company must develop a formal mechanism to receive and handle complaints fairly and transparently, while protecting the complainant against victimization.

H₄: Anonymous reporting channel affects the detection of occupational fraud.

2.5 Audit Committee (AC)

The audit committee (AC) is set up to oversee companies' financial, audit, and reporting matters. It is made up of independent, non-executive company directors with specific terms of reference (Cahyani et al., 2024). The audit committee should also advise on improving the current governance system and actively engage in resolving problems likely to arise from a governance perspective (Reskino & Puteri, 2023). An organization's economic and operational efficiency will

significantly improve with the installation of an audit committee as an independent oversight body (Purwani et al., 2024). The AC is vital in helping companies implement a more efficient and objective corporate governance program. Furthermore, it assesses the whistleblowing system to ensure appropriate support and attention. Having an audit committee reminds other stakeholders, regulators, and shareholders that the company values governance and accountability. The AC applies control mechanisms and policies over the whistleblowing system, internal controls, internal audits, and external audits within the organization (Krishnamoorthy et al., 2023). Members of the AC typically possess strong knowledge of audit, finance, and accounting. An active and independent AC can carry out its tasks effectively. According to Corporate Governance rules in Pakistan, the chairman of the AC must be an independent director, and the members should be non-executive directors.

Because of the significance of the audit committee's role, the present research considers the AC's function as a moderating variable.

H₅: The Audit committee moderates the relationship between the previous outcome of whistleblowing and the detection of occupational frauds.

H₆: Audit committee moderates the relationship between Job security of whistleblowers and the detection of occupational frauds.

H₇: The audit committee moderates the relationship between whistleblowing incentives and the detection of occupational frauds.

H₈: The audit committee moderates the relationship between anonymous reporting channels and the detection of occupational frauds.

3. THE MODEL

The following is the model of the study:

$$DOF = \beta_0 + \beta_1 PWB + \beta_2 JS + \beta_3 WBI + \beta_4 ARC + \beta_5 (PWB * AC) + \beta_6 (JS * AC) + \beta_7 (WBI * AC) + \beta_8 (ARC * AC) + \varepsilon$$

In Table 1, variables and their measurement with the reference of the relevant studies are given.

Table 1: Definition and Measurement of Variables

Variables	Measured by	Source
Detection of occupational frauds (DOF)	Measured by questions related to the detection of occupational frauds in the organization at Likert scale of five	Lukman & Chariri, 2023; Wahidahwati & Asyik, 2022)

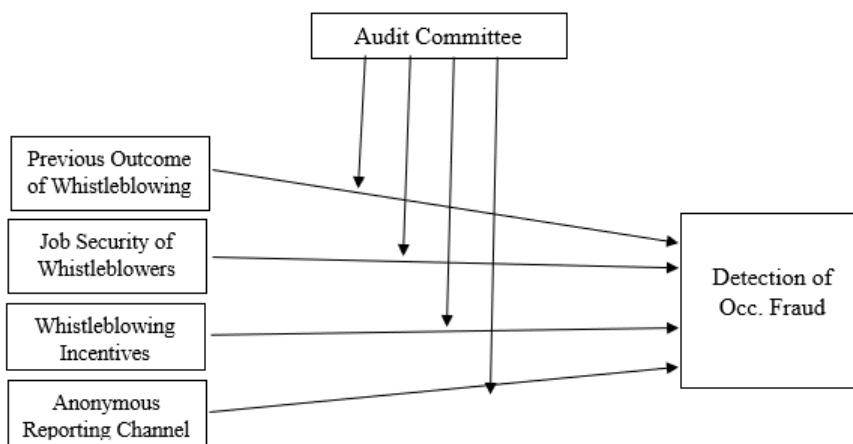
	(1=strongly disagree, 5= strongly agree).	
Previous Outcome of Whistleblowing (PWB)	Measured by questions related to the previous outcome of the whistleblowing events at Likert scale of five (1=strongly disagree, 5= strongly agree).	Lukman & Chariri, 2023; Wahidahwati & Asyik, 2022)
Job Security of Whistleblowers (JS)	Measured by questions related to the job security of the whistleblowers at Likert scale of five (1=strongly disagree, 5= strongly agree).	Lukman & Chariri, 2023; Wahidahwati & Asyik, 2022)
Whistleblowing Incentives (WBI)	Measured by questions related to the whistleblowing incentives at Likert scale of five (1=strongly disagree, 5= strongly agree).	Lukman & Chariri, 2023; Wahidahwati & Asyik, 2022)
Anonymous Reporting Channel (ARC)	Measured by questions related to the anonymous reporting channel at Likert scale of five (1=strongly disagree, 5= strongly agree).	Lukman & Chariri, 2023; Wahidahwati & Asyik, 2022)
Audit Committee (AC)	Measured by questions related to the effectiveness of the audit committee at Likert scale of five (1=strongly disagree, 5= strongly agree).	Krishnamoorthy et al., 2023; Sari et al., 2022)

Source: Authors own compilation

4. DATA AND METHODOLOGY

Selecting a small part of the population that contains the characteristics of the whole population is called sampling. The researcher selected respondents based on a purposive sampling technique and then sent the questionnaires to the relevant personnel. Data was gathered from individuals working in the accounting, audit, and finance functions of listed organizations in Pakistan. A structured questionnaire, derived from previous research, was used to collect data. The statements in the questionnaire used in this study were taken from different relevant studies on the effect of whistleblowing and the detection of fraud (Drogalas et al., 2019). According to Krejcie and Morgan (1970), if the population is more than 100,000, then the minimum sample size should be 384. In the current study, 424 respondents were reached; 11 were discarded as invalid because they were incomplete, and a total of 413 questionnaires were used in the analysis. Table 2 contains the demographic statistics of the respondents.

The conceptual model of the study is presented below.

Figure 1: Conceptual Framework

Source: Authors own compilation

Table 2: Demographics

N= 413	Frequency	Percentage
<i>Gender:</i>		
Male	355	86%
Female	58	14%
<i>Field:</i>		
Accounting	206	50%
Audit	112	27%
Finance	95	23%
<i>Experience:</i>		
Less than 5 years	17	4%
5 -10	54	13%
11- 15	161	39%
16 – 20	132	32%
More than 20 years	49	12%
<i>Sector:</i>		
Financial	153	37%
Manufacturing	235	57%
Others	45	11%

<i>Age of firm:(In years)</i>		
Less than 5 years	0	0%
5 -10	4	1%
11- 15	25	6%
16 – 20	186	45%
More than 20 years	198	48%

Source: Authors' calculations using Smart-PLS

As per the demographic statistics presented in Table 2, the majority of the companies whose employees participated in the data collection are more than fifteen years old. More than fifty percent of the companies are manufacturing concerns. Over 80% of the respondents have practical experience of more than eleven years and are well aware of the questions given to them regarding the detection of fraud. Fifty percent of the respondents work in accounting, while the remaining are employed in the finance and audit functions of the organizations. Forty-eight percent of the firms are more than twenty years old, which indicates that they are mature organizations in terms of their systems and experience in handling incidents of employee fraud.

3.2 Data Analysis Techniques

The researchers used SmartPLS software for data analysis, employing the Partial Least Squares Structural Equation Modeling (PLS-SEM) technique. In this type of study, PLS-SEM is the most updated and suitable method for analyzing data (Shakeel et al., 2023). This approach has been adopted by researchers in studies focusing on the detection of fraud.

3.3 Reliability and Validity

For the quality of the instruments used in the study, the validation and reliability of the data must be ensured. This assures that the outcomes of the study are not erroneous due to flaws in the data collected through the instrument (Algozzine & Hancock, 2017). According to Taherdoost (2022), to measure the internal consistency and reliability of the scale items, Cronbach's alpha should be computed. There is a standard benchmark that the value of Cronbach's alpha must exceed 0.70.

In this study, the reliability and validity of the survey questionnaire were evaluated using factor loadings, Cronbach's alpha, composite reliability (CR), and average

variance extracted (AVE), all of which were found to be acceptable. The findings are presented in Table 3.

Table 3: Reliability and Validity

Constructs	Items	Loadings	Cronbach's Alpha	CR	AVE
Detection of Occupational Fraud (DOF)	DOF1	0.582	0.824	0.862	0.563
	DOF2	0.525			
	DOF3	0.631			
	DOF4	0.551			
	DOF5	0.619			
	DOF6	0.584			
	DOF7	0.606			
	DOF8	0.583			
	DOF9	0.629			
Previous Outcome of Whistleblowing (PWB)	PWB1	0.756	0.728	0.785	0.572
	PWB2	0.817			
	PWB3	0.678			
	PWB4	0.819			
Job Security of Whistleblowers (JS)	JS1	0.685	0.713	0.770	0.535
	JS2	0.645			
	JS3	0.710			
	JS4	0.702			
	JS5	0.709			
Whistleblowing Incentives (WBI)	WBI1	0.740	0.768	0.771	0.548
	WBI2	0.708			
	WBI3	0.760			
	WBI4	0.751			
	WBI5	0.769			
Anonymous Reporting Channel (ARC)	ARC1	0.644	0.754	0.797	0.579
	ARC2	0.721			
	ARC3	0.718			
	ARC4	0.695			
Audit Committee (AC)	AC1	0.828	0.778	0.812	0.624
	AC2	0.799			
	AC3	0.795			

	AC4	0.745			
	AC5	0.739			

Source: Authors calculations using Smart-PLS

Table 3 shows the loadings of all items for each variable. The cutoff to retain or delete items based on Cronbach's alpha is 0.70, and the acceptable threshold for Average Variance Extracted (AVE) is 0.50. Therefore, all the items in the model were retained as their factor loadings were above 0.50 (Hair & Alamer, [2022](#)). Thus, we ensured that all our items were included in the measurement model.

The convergent validity of this study was evaluated using AVE. Table 3 presents its values, all of which exceed 0.50 and are therefore acceptable (Magno et al., [2024](#)). Composite Reliability (CR) values are also presented in Table 3 and fall within the acceptable range of 0.70 to 0.90 (Hair & Alamer, [2022](#)). VIF values are computed for independent variables to confirm the multicollinearity problem. These values should be below 10 which indicates the absence of multicollinearity concern. Hence, there is no such issue in independent variables as all value of VIF < 10.

Table IV: Collinearity Statistics

Construct	VIF
Previous Outcome of Whistleblowing (PWB)	2.130
Job Security of Whistleblowers (JS)	1.445
Whistleblowing Incentives (WBI)	1.496
Anonymous Reporting Channel (ARC)	2.051

Source: Authors calculations using Smart-PLS

We used the Fornell–Larcker criterion to assess discriminant validity, which requires that the square root of the Average Variance Extracted (AVE) for each construct must be greater than its highest correlation with any other construct (Hair & Alamer, [2022](#)). As shown in Table 5, the square root values of each construct are displayed in bold and italics, indicating that these values are higher than the correlations with all other constructs. Hence, we can confirm that discriminant validity has been established.

Table 5: Discriminant Validity (Fornell-Larcker Criterion)

Variables	Mean	Standard Dev.	DOF	PWB	JS	WBI	ARC	AC
DOF	3.983	0.441	<i>0.750</i>					

PWB	4.178	0.493	0.412**	0.756				
JS	4.340	0.442	0.475**	0.437**	0.731			
WBI	4.271	0.458	0.403**	0.449**	0.411**	0.740		
ARC	4.191	0.487	0.519**	0.488**	0.507**	0.503**	0.760	
AC	4.209	0.393	0.574**	0.643**	0.406**	0.455**	0.575**	0.790

Source: Authors calculations using Smart-PLS

4. RESULTS

Table 6 presents the results of hypothesis testing, including the variables' coefficients and their significance levels, using the PLS-SEM technique. PWB and DOF have a positive and significant relationship ($\beta = 0.163$, $p = 0.015$), which suggests that when an individual perceives the outcome of previous actions as positive, they are more likely to detect and report such activities in the future. In other words, if PWB increases by one percent, DOF will increase by 16.3%.

JS and DOF also exhibit a positive and significant relationship ($\beta = 0.178$, $p = 0.019$), indicating that if JS increases by one percent, DOF will increase by 17.8%. This means that when a whistleblower feels secure in their job, they are more likely to report fraudulent activities.

WBI and DOF show a positive and significant relationship ($\beta = 0.112$, $p = 0.012$), implying that a one percent increase in WBI will lead to an 11.2% increase in DOF. In other words, when individuals are rewarded through incentives, they are more likely to detect and report fraud in the future.

ARC and DOF also have a positive and significant relationship ($\beta = 0.291$, $p = 0.006$), indicating that a one percent increase in ARC leads to a 29.1% increase in DOF. This demonstrates that ARC has the strongest positive influence on DOF among all the independent variables. It suggests that when individuals feel assured about reporting anonymously, they are significantly more likely to do so.

The results show that the audit committee (AC) has a positive and significant moderating effect on DOF. The moderating effect of AC on PWB and DOF indicates that if an individual perceives the previous outcomes to be positive, and a strong accountability system is in place, then they are more likely to report any fraud in the future ($\beta = 0.166$, $p = 0.018$). Similarly, the AC has a positive and significant moderating effect on the relationship between JS and DOF ($\beta = 0.143$, $p = 0.036$), which suggests that if an individual feels secure in their job and a strong audit committee exists, they will be more likely to detect or report issues in the future.

The AC also has a strong and significant moderating effect on the relationship between WBI and DOF ($\beta = 0.137$, $p = 0.031$). Lastly, ARC and AC show a positive and significant moderating effect on DOF ($\beta = 0.141$, $p = 0.028$), indicating the presence of moderation. In other words, when anonymous reporting channels are available and strong policies are in place, whistleblowers are more likely to detect and report fraudulent activity.

Hence, all the study hypotheses are supported by the results.

Table 6: Hypothesis Testing

Hypothesis	Variables (Relationships)	Beta	t-value	p-value	Decision
H ₁	<i>PWB</i> → <i>DOF</i>	0.163	2.299	0.015	Supported
H ₂	<i>JS</i> → <i>DOF</i>	0.178	2.371	0.019	Supported
H ₃	<i>WBI</i> → <i>DOF</i>	0.112	2.517	0.012	Supported
H ₄	<i>ARC</i> → <i>DOF</i>	0.291	4.178	0.006	Supported
H ₅	<i>PWB*AC</i> → <i>DOF</i>	0.166	2.389	0.018	Supported
H ₆	<i>JS*AC</i> → <i>DOF</i>	0.143	2.882	0.036	Supported
H ₇	<i>WBI*AC</i> → <i>DOF</i>	0.137	2.607	0.031	Supported
H ₈	<i>ARC*AC</i> → <i>DOF</i>	0.141	2.522	0.028	Supported

Source: Authors' calculations using Smart-PLS

5. DISCUSSION OF THE RESULTS

The purpose of this study was to investigate the effect of the attributes of the whistleblowing system on the detection of occupational fraud (DOF). The role of the audit committee (AC) as a moderator was also assessed. Data were analyzed using the PLS-SEM technique through SmartPLS software. According to Hair and Alamer (2022), this technique is commonly applied by researchers in studies involving the use of primary data. After assessing validity and reliability, the structural model was evaluated to determine the relationships among the variables.

Based on the results, it is evident that all attributes of the whistleblowing system, anonymous reporting channels (ARC), job security (JS) for whistleblowers, previous outcomes of whistleblowing (PWB), and whistleblowing incentives (WBI), have a positive and significant effect on DOF. Among these, ARC emerged as the most effective tool in the whistleblowing system. Through this channel, whistleblowers can conceal their identity and protect themselves from retaliation, which is one of the biggest obstacles to reporting fraud (Gibbs, 2025). If a whistleblower's job is at risk, it is unlikely they will report any fraudulent activity.

Financial incentives are widely regarded as a powerful motivator for whistleblowers (Gaydon & Boyle, [2023](#)). Similarly, the management's response to previously reported fraud cases sets the tone for how seriously the organization treats fraud detection. All the examined attributes play a critical role in helping organizations combat fraud. These findings support the conclusions of previous studies on the subject.

Fraud theories emphasize that increasing the likelihood of perpetrators being caught, especially through whistleblowing systems, serves as the most effective deterrent against committing fraud.

The audit committee (AC) emerged as an effective entity in moderating the relationship between the whistleblowing system's attributes and the detection of occupational fraud (DOF). Its positive role can enhance the effectiveness of these attributes, resulting in a stronger whistleblowing system. The AC should actively promote an ethical culture within the organization. By strengthening the whistleblowing system, it must ensure that no instance of fraud remains unfolded or undetected (Reskino & Puteri, 2023). All reported cases of fraud should be thoroughly investigated, and detailed reports must be submitted to the AC for further action.

6. CONCLUSION

For detecting occupational fraud, organizations use various techniques, tools, and procedures. These include internal audits, external audits, internal control systems, forensic audits, etc. Whistleblowing is considered one of the most effective tools for fraud detection. A whistleblowing system consists of several components, such as anonymous reporting channels (ARC), job security (JS) for whistleblowers, previous outcomes of reported whistleblowing events (PWB), and whistleblowing incentives (WBI). These attributes play a significant role in making the system more effective and result oriented.

The results of our study support this claim by showing a positive and significant effect of these attributes on the detection of occupational frauds (DOF). The existence and efficient functioning of these attributes will help organizations detect fraud more effectively. The Board of Directors and Audit Committee should sincerely oversee these attributes and implement policies to strengthen them.

Whistleblowing is now a recognized component of the modern corporate governance framework. A well-organized and effective whistleblowing system improves the overall governance and ethical culture of an organization. Top management should acknowledge this and strive to strengthen the system to ensure it delivers the desired outcomes.

The Audit Committee plays a key role in this regard, as demonstrated in the findings of this study. It moderates the relationship between the attributes of the whistleblowing system and the detection of occupational fraud. The Audit Committee should further strengthen its moderating role. Occupational fraud can cause severe financial disruption to companies, but by improving the whistleblowing system, management can fulfill its responsibility to safeguard the financial stability of the organization. For this purpose, whistleblowing should be recognized and utilized as one of the most effective tools for detecting occupational fraud.

7. MANAGERIAL IMPLICATIONS

Companies' management views occupational fraud as a significant threat and considers its prevention and detection to be quite challenging (Thomas & Indriaty, 2023). The present research may help management better understand and manage this menace. Organizations can reduce the frequency of occupational fraud by developing a strong whistleblowing mechanism. An effective whistleblowing system is more likely to uncover potential fraud or unethical actions (Sari, 2024; Yunia & Mutmainah, 2024).

Effective corporate governance depends on the Audit Committee (AC) fulfilling its oversight responsibilities diligently. Occupational fraud often results from weaknesses in corporate governance. Therefore, a robust corporate governance model is essential for both the prevention and detection of fraud within companies. The Audit Committee plays a critical role in streamlining corporate governance policies within the organization. The whistleblowing system is a vital component of this governance framework (Marota et al., [2024](#)).

8. LIMITATIONS TO STUDY AND FUTURE RESEARCH

In the current study, the effects of whistleblowing system attributes—such as anonymous reporting channels (ARC), job security (JS) of whistleblowers, outcomes of previous whistleblowing (PWB), and incentives for whistleblowers (WBI) on the detection of occupational fraud (DOF) were measured. However, there are many other factors within the whistleblowing system that should be explored as tools for detecting occupational fraud. Other important components of corporate governance—such as internal audits, external audits, forensic audits, and internal control systems—can also be examined in this context.

In the present study, the Audit Committee (AC) was used to assess its moderating effect on the relationship between independent variables and DOF. Future research could explore the moderating roles of other corporate governance attributes, such as risk management, Board of Directors, and control activities. Additionally, qualitative studies could provide deeper insights into how various corporate

governance mechanisms contribute to the detection and prevention of occupational fraud.

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