

Motivating Whistleblowers: The Role of Protection Motivation Theory and Organizational Commitment and Mandatoriness in Shaping Intent

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Introduction

High-profile cases of fraud have had a significant impact on the corporate governance landscape, resulting in an enhanced understanding of the critical role of whistleblowing in organizational monitoring. According to the ACFE annual report to the nations, insider tips from within the organization are shown to be most effective in detecting fraud or wrongdoing (ACFE, 2024). However, many employees who witness misconduct choose not to report it (Miceli et al., 2008). This gap between instances of observed misconduct and reports made reveals the challenges organizations face in the development of efficient and effective reporting systems.

In recent times, there has been increasing regulation to enhance the protection of whistleblower rights and processes. The Sarbanes-Oxley Act of 2002 made it compulsory for publicly traded companies to establish anonymous reporting channels, while the Dodd-Frank Act of 2010 enhanced the protection of reporters of securities fraud and introduced financial incentives to encourage tips (Wilson and Nelson, 2022). However, even with the availability of financial rewards, organizations are still struggling to create reporting mechanisms that employees can trust and are willing to use, indicating that additional steps are necessary to foster whistleblowing behavior.

Research on whistleblowing's effectiveness identifies a number of issues. First, organizations face a dilemma: while internal reporting helps them deal with problems before they become more severe, many employees prefer to report through external channels or remain silent (Kaplan et al., 2015; Near and Miceli, 1985). Second, it is possible that even well-designed fraud reporting procedures will fail if employees do not trust the organization's response or if they are afraid of being punished (Y. Liu and Xu, 2021; Near and Miceli, 1985). Third, power dynamics between potential whistleblowers and wrongdoers have a considerable impact on the reporting decisions of the whistleblower (Taylor and Curtis, 2013; Yunyue, 2021).

The public accounting profession provides salient illustrations of these issues. These issues were evident in the cases of WorldCom and Enron, where individual or small-group misconduct within accounting firms could have catastrophic consequences when reporting mechanisms fail (Beenen and Pinto, 2009). The growth of professional misconduct, such as in cases like Enron, has been enabled by the hierarchical structure of the public accounting profession, with power struggles between accounting firms' partners and professional standards organizations rendering internal reporting processes ineffective (Moore et al., 2006). It is common for organizations to prefer internal whistleblowing because it allows them to address such issues under the radar before they become a subject of external attention or regulatory inquiry. Internal reporting allows companies to control the investigation and resolution processes while safeguarding their brand image. To be successful internal fraud reporting systems, however, it is essential to take into account the numerous factors that can affect the decisions of would-be whistleblowers (Dworkin and Baucus, 1998; Mesmer-Magnus and Viswesvaran, 2005).

Some of the studies have identified organizational justice as an important factor influencing whistleblower behavior. (Seifert et al., 2010) identified three key justice dimensions that influence internal reporting likelihood: procedural justice (alignment between formal policies and actual practices), distributive justice (appropriate organizational response to reported wrongdoing), and interactional justice (supervisor treatment during reporting processes). Their findings indicate that all these dimensions of justice have to be achieved by organizations in order to foster a strong fraud reporting culture. Trust appears as a critical mediator between justice views and whistleblower decisions (Colquitt and Rodell, 2011). Employees who trust their organization and their immediate superiors are more likely to report issues internally. Such confidence is developed by frequent practices in which the organization deals with complaints in a non-biased manner and ensures that whistleblowers are protected. Fear of retaliation is still one of the major factors that prevents whistleblowing (Wainberg and

Perreault, 2016). Historical cases of whistleblowing have revealed that many people who reported corruption were subjected to adverse consequences such as job loss, financial dilemma, stained reputation, and physical and psychological assaults (Ahmad et al., 2014; Dozier and Miceli, 1985; Latan et al., 2019; S. Liu et al., 2015; Mesmer-Magnus and Viswesvaran, 2005; Parmerlee et al., 1982). As a result, employees frequently choose to remain silent (Taylor and Curtis, 2013).

Organizations have attempted to reduce fears of reprisal through the use of anonymous reporting techniques and official anti-retaliation policies (Wilson and Nelson, 2022). However, it has been found that such measures may lead to several unintended consequences. Wainberg and Perreault (2016) found that strict anti-retaliation policies can heighten employees' awareness of potential retaliation, ironically making the threat of retaliation feel more salient and thereby reducing willingness to report misconduct. Similarly, (Kaplan et al., 2009) documented that the measures to ensure anonymity in whistleblowing are not always effective in encouraging whistleblowing, perhaps because employees believe that complete anonymity cannot be guaranteed.

The organizational response to previous whistleblowing cases also impacts future reporting behavior. According to (Miceli et al., 2008) Prosocial Organizational Behavior theory, employees observe how management deals with whistleblower complaints and use the information to guide their future reporting decisions. When companies do not respond appropriately to valid reports, it results in a perception that future whistleblowing will not be helpful, which thus creates a cycle in which past organizational shortcomings discourage whistleblowing. Power relations between wrongdoers and potential whistleblowers provide an extra element of complexity (Taylor and Curtis, 2013). Common sense suggests that employees may be more hesitant to report influential organizational members. However, research on this link has yielded mixed finding (Miceli et al., 2012; Near and Miceli, 2016). Accountants' experience with whistleblowing also provides valuable insights. Internal auditors and management accountants are frequently faced with difficult reporting issues due to their professional commitments and organizational positions (Brink et al., 2022). Research on these professionals' reporting decisions demonstrates the importance of both organizational support and professional identity in whistleblowing decisions (Ahmad et al., 2013; Arnold and Ponemon, 1991; Taylor and Curtis, 2010).

The findings also reveal that the effectiveness of fraud reporting hotlines is highly dependent on implementation factors. Kaplan and Schultz (2006) found that although firms have policies and procedures that outline how whistleblower complaints are to be made and how those reports are to be handled, the policies are often vague and offer much discretion to the investigators. This discretion can make the handling of reports inconsistent and, therefore, erode employees' confidence in the reporting system. Current research is beginning to examine how organizational culture affects whistleblower effectiveness (Berry, 2004; Zhang et al., 2009). Organizations that demonstrate a strong commitment to ethical behavior through actions, as opposed to only through policies, are more likely to receive internal reports of misconduct (Berry, 2004; Zhang et al., 2009). Therefore, in order to create effective reporting systems, attention must be paid to the broader corporate culture in addition to specialized reporting procedures.

Several critical concerns surrounding whistleblowing remain unanswered despite substantial research. First, there have been no studies that explore how mandating the reporting of fraud through company policies can affect whistleblowing behavior. While it may seem like such mandated practice would place an extra burden on employees, it may help companies to entice employees to whistleblow. (Boss et al., (2009) explored how perceived mandatoriness influenced the behavioral intention of employees to comply with information security policies. A similar approach can be used to explore how mandatoriness may influence whistleblower intentions. Second, while some studies have demonstrated a positive correlation between whistleblowing intentions and organizational commitment, which is an individual's psychological attachment to their organization, the results have been inconsistent (C.-P. Chen and Lai, 2014; Somers and Casal, 1994). Third, there is a significant research gap in how fear appeals may influence employees to blow the whistle (Malimage, 2019). Fear appeals are persuasive messages that emphasize threats or adverse consequences to motivate behavior change. For example, emphasizing that fraud within the organization may lead to detrimental results not only for the company but also for employees may lead more employees to whistleblow. Protection Motivation Theory (PMT), developed by Rogers in 1975, explains how people process fear appeals and decide to adopt protective behaviors. PMT can be used to fill the research gap by exploring if threat appraisals and coping appraisals influence whistleblowing intentions. PMT is discussed later in this article. Organizational commitment may enhance the PMT variables because employees are protective of the company for which they work when they have organizational commitment.

Organizations are under increased pressure to discover and handle misconduct early, making effective whistleblowing mechanisms more important than ever (ACFE, 2024). Developing such systems requires the identification of several factors

that affect the reporting decision-making process, such as organizational fairness, organizational commitment, mandatoriness of reporting, fear appeals, trust, protection from retaliation, and consistency of organizational response to complaints. Understanding these components and their interconnections is critical for businesses looking to promote ethical behavior and protect themselves from the repercussions of undiscovered misbehavior. Therefore, we explore how PMT, mandatoriness, and organizational commitment may affect employees' intentions to whistleblow. We also test the moderating roles of organizational commitment on the relationship between threat appraisal and coping appraisal with whistleblowing intention.

Literature Review and Hypothesis Development

The rate of organizational fraud is still on the rise, which continues to worry both practitioners and researchers. The ACFE's 2024 Report to the Nations states that the amount of fraud losses has reached \$3.1 billion, and this figure is expected to be only the tip of the iceberg (ACFE, 2024). The ACFE report's finding that organizations are likely to lose about 5% of their revenue to fraud gives a rather dismal view of the true cost of fraud. While corporations invest extensively in formal internal control methods, human voices make the most difference: Whistleblower tips from employees, customers, and vendors account for 43% of fraud detection, which significantly exceeds internal audit (14%) and management review (13%) (ACFE, 2024). These figures paint a clear picture of where our most effective fraud detection originates from: whistleblowing. Maybe the most shocking finding is how long fraud schemes last. On average, fraud scams generally last about 12 months before they are uncovered (ACFE, 2024). The longer a fraud goes undiscovered, the more costly it is to the organization. This finding offers a compelling case for fostering an environment in which individuals feel empowered to speak up when they see something wrong. Finally, since tips are the most effective instrument for detecting fraud, if companies enhance their ways of motivating and protecting whistleblowers, then such actions may prove useful in combating fraud. For employers to encourage whistleblowers, they need to understand the antecedents that drive individuals to whistleblow in different contexts (Nicholls et al., 2021).

Whistleblowing literature has identified various factors that can affect an individual's decision to report misconduct. Scholars have extensively examined various antecedents to whistleblowing intentions, such as moral reasoning, rationalization processes, perceived retaliation threats, organizational ethical climate, institutional trust, personality characteristics, and personal belief systems. While these research studies have provided valuable insights into which factors influence whistleblowing, a significant theoretical gap remains unexplored: the potential role of Protection Motivation Theory (PMT) in explaining whistleblowing behavior (Malimage, 2019). It is quite surprising given the fact that PMT has been found to be capable of predicting different kinds of protective behaviors by human beings (Johnston and Warkentin, 2010; Menard et al., 2017). Whistleblowing is a form of protective behavior through which individuals seek to protect both themselves and their organization. PMT is especially well-suited for explaining whistleblowing behavior because it directly addresses threat and coping appraisals—key psychological processes when employees discover fraud. Unlike the Theory of Planned Behavior, which focuses on behavioral intentions broadly, PMT specifically examines how individuals evaluate threats and their ability to respond, mirroring the risk assessment whistleblowers undertake. PMT also provides a structured framework for understanding how organizational factors (response efficacy) interact with individual factors (self-efficacy), offering a more comprehensive approach than ethical decision-making models that primarily focus on moral reasoning. Therefore, exploring PMT as an antecedent is highly applicable. In addition, despite the numerous research studies that have been performed on organizational commitment as a determinant of employee behavior, no research has been conducted on whether organizational commitment has a moderating role in the relationship between PMT variables and whistleblowing intentions. This unexplored moderating effect presents another avenue to advance our understanding of the psychological mechanisms behind whistleblowing intentions. In this article, we attempt to close this research gap.

Protection Motivation Theory (PMT)

Originally proposed by (Rogers, 1975), Protection Motivation Theory (PMT) posits that individuals engage in protective behaviors when they perceive a threat with which they believe they can effectively cope. The theory consists of two main cognitive processes: threat appraisal and coping appraisal. The theory's initial applications were mainly focused on health-related behaviors and the responses to risk factors such as smoking, cancer, and infectious diseases. These early studies were analyzed in a meta-analysis by (Floyd et al., 2000), which confirmed the substantial role of both threat and coping appraisal components in the prediction of protective behaviors. This meta-analysis offered significant empirical support for the PMT framework, which helped establish the validity of the theory in numerous behavioral situations such as marketing (Milne et al., 2002; Prentice-Dunn et al., 2009), information security (Crossler, 2010; Crossler et al., 2014; Johnston and

Warkentin, 2010; Menard et al., 2017; Woon et al., 2005), disaster mitigation (Grothmann and Reusswig, 2006; Martin et al., 2007; Westcott et al., 2017), and environmental issues (M.-F. Chen, 2016; Kim et al., 2013; Rainear and Christensen, 2017).

The threat appraisal is composed of two subcomponents: perceived threat severity and perceived threat vulnerability. Perceived threat severity is an individual's evaluation of the severity of the potential consequences of a threat, whereas perceived threat vulnerability is their assessment of the probability of experiencing the threat. In the context of this study, the threat is a fraudulent act or wrongdoing. Perceived severity refers to how serious the damage from fraud/wrongdoing would be to the organization, and perceived vulnerability refers to how likely the organization is to experience the fraud/wrongdoing. These variables are particularly relevant when applied in the whistleblowing setting. Individuals who become aware of fraud/wrongful behavior are likely to evaluate its severity, which includes an evaluation of the potential harm to stakeholders, the sustainability of the organization, and the broader societal implications. At the same time, employees may assess their organization's vulnerability to fraudulent activities by taking into account factors such as organizational culture, prior incidents, and control environments (Alleyne et al., 2013; Berger et al., 2017; MacGregor and Stuebs, 2014). Based on this theoretical framework, we propose that employees who perceive fraud as a significant threat to their organization and acknowledge the susceptibility of their workplace to fraudulent activities will exhibit more robust whistleblowing intentions. This relationship implies that the cognitive assessment of both threat dimensions is essential for the motivation of protective reporting behaviors. Therefore, we hypothesize:

***H1:** Perceived Threat Severity will positively influence whistleblowing intentions.*

***H2:** Perceived Threat Vulnerability will positively influence whistleblowing intentions.*

The coping appraisal dimension of Protection Motivation Theory includes three subcomponents that influence an individual's evaluation of his/her ability to deal with threats. Perceived self-efficacy refers to an individual's confidence in his/her capability to execute protective actions. In the whistleblowing context, perceived self-efficacy reflects an employee's belief in his/her ability to report fraudulent activities effectively through appropriate channels. Perceived response efficacy captures the individual's assessment of whether the protective action will successfully address the threat. For potential whistleblowers, this assessment manifests as their belief that reporting fraud will actually lead to meaningful organizational intervention and fraud prevention. The third variable, perceived response costs, consists of the anticipated personal, professional, and psychological burdens associated with taking protective action which whistleblowers must weigh against the benefits of reporting, such as potential retaliation, career damage, ostracism, and emotional stress (Festa et al., 2024; Lowe and Reckers, 2024). Consistent with PMT, we theorize that individuals who possess high confidence in their ability to report fraud (self-efficacy), believe their reports will lead to corrective action (response efficacy), and perceive costs associated with whistleblowing are manageable (response costs), will exhibit stronger whistleblowing intentions. This relationship suggests that the collective assessment of these coping variables significantly influences an individual's decision to engage in protective reporting behavior. Therefore, we hypothesize:

***H3:** Perceived Self-Efficacy will positively influence whistleblowing intentions.*

***H4:** Perceived Response Efficacy will positively influence whistleblowing intentions.*

***H5:** Perceived Response Cost will negatively influence whistleblowing intentions.*

Mandatoriness

Mandatoriness is the degree to which individuals perceive that they must comply with a particular policy, procedure, or behavior due to formal rules or expectations from their organization. In the context of this study, companies can mandate reporting of fraudulent behavior by including that requirement in the company's code of ethics or company policies. This mandated reporting often carries implications for employee accountability, where organizations may impose sanctions on employees who fail to report fraud they observed or should have observed while performing their duties. Once individuals perceive that it is mandatory to report fraud or wrongdoing, and that non-compliance could lead to negative consequences, they are more likely to create intentions to whistleblow. Four authors (Boss et al., 2009) explored mandatoriness on Information Systems (IS) adoption and usage. There has been little empirical work on this construct, and yet it is highly relevant in the context of whistleblowing. Boss et al. (2009) found that perceived mandatoriness has a significant influence on intentions to comply with security policy. We similarly hypothesize that mandatory reporting has a beneficial impact on whistleblower intentions, particularly when the perceived risks of not reporting fraud exceed the perceived risks of reporting it:

H6: Mandatoriness will positively influence whistleblowing intentions.

Organizational Commitment

Organizational commitment reflects an individual's psychological attachment to their organization and has been shown to influence a wide range of work-related behaviors, including whistleblowing (Meyer and Allen, 1991). There are three primary components of organizational commitment: affective commitment (emotional attachment to the organization), continuance commitment (perceived costs of leaving), and normative commitment (felt obligation to remain). While each of these dimensions can uniquely influence an individual's propensity to report organizational wrongdoing through internal channels, this study only focuses on affective commitment in this study based on several reasons. First, affective commitment represents emotional attachment to the organization which is particularly relevant to this study. Employees with high effective commitment are more likely to worry about the long-term wellbeing of their organization and view whistleblowing as a way to protect it. Second, exploring only affective commitment reduces the complexity of our research design and allows us to focus more on one specific dimension. Third, it reduces the chances of the respondents being confused about the similar scales of the three components and introducing multicollinearity issues. Several prior studies that show that organizational commitment as a variable is positively associated with whistleblowing intentions, which makes it highly applicable in this research (Alleyne et al., 2013, 2018; C.-P. Chen and Lai, 2014; Latan et al., 2018).

Affective commitment refers to employees' emotional attachment to, identification with, and involvement in their organization, and it is known to play a very specific part in shaping whistleblowing intentions. When employees develop strong emotional bonds with their organization, they feel that the organization's goals are aligned with their own goals, fostering a sense of psychological ownership that extends beyond just employment. This level of psychological connection may play a significant role in determining how people are likely to behave when they are faced with unethical behavior within the organization. The literature shows that employees with a high level of affective commitment may experience a specific psychological process when they become aware of fraudulent activities within the organization. Their emotional investment in the organization's well-being often translates into a stronger drive to protect it from harm, viewing internal whistleblowing as an act of organizational stewardship rather than betrayal. (Near and Miceli, 1985) reveals that such emotionally attached employees usually prefer using the internal reporting systems because of their desire to afford the organization the chance to address and solve problems before they become a subject of reporting to outside agitators. Therefore, we hypothesize:

H7: Organizational Commitment (Affective) will positively influence whistleblowing intentions.

Some research studies have also started to explore how organizational commitment works together with other variables in determining whistleblowing intentions. For example, (Miceli et al., 2008) found that the relationship between commitment and actual reporting behavior is conditioned by employees' perceptions of how their organization will respond to the reports. This interaction suggests that organizations might enhance the protective benefits of employee commitment by demonstrating consistent, appropriate responses to reported wrongdoing.

The moderating role of organizational commitment in the relationship between Protection Motivation Theory variables and whistleblowing intentions presents an intriguing theoretical intersection. With regard to the threat appraisal variables, it is expected that organizational commitment would likely positively affect how employees evaluate severity and vulnerability. Employees with strong organizational commitment may demonstrate a heightened sensitivity to threats against their organization, possibly strengthening the impact of perceived severity on whistleblowing intentions. Similarly, their commitment may enhance their awareness of the vulnerabilities of the organization, making the relationship between perceived vulnerability and whistleblowing intentions even more pronounced. Therefore, we hypothesize:

H7a: Organizational Commitment (Affective) will positively moderate the relationship between Perceived Threat Severity whistleblowing intentions.

H7b: Organizational Commitment (Affective) will positively moderate the relationship between Perceived Threat Vulnerability and whistleblowing intentions.

In terms of coping appraisal variables, organizational commitment is likely to significantly modify their influence on whistleblowing intentions. For example, the most committed employees may have even more pronounced correlations between self-efficacy and intentions to report, as their commitment to the organization will make them more likely to overcome the barriers to reporting. The relationship between response efficacy and whistleblowing intentions could also be

higher when organizational commitment is high since committed employees are usually more knowledgeable about how organizations work and may have higher levels of faith in the ability of internal channels to address issues. On the other hand, the negative influence of response costs on whistleblowing intentions could be reduced for highly committed employees because they are likely to be more willing to take such risks for the organization. Therefore, we hypothesize:

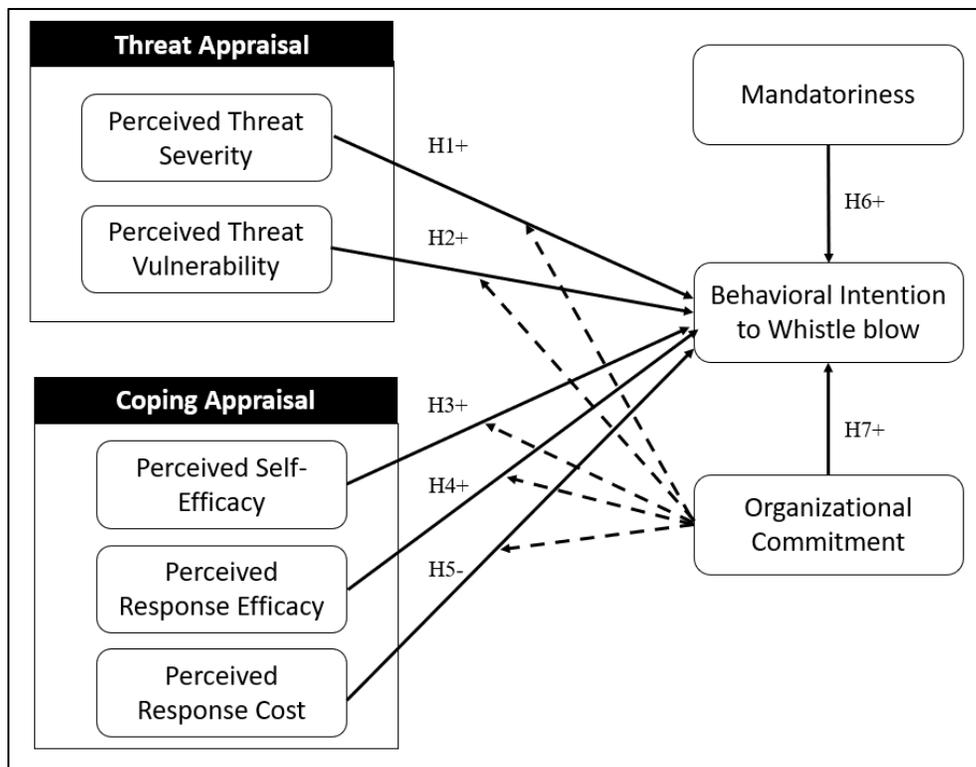
H7c: *Organizational Commitment (Affective) will positively moderate the relationship between Perceived Self-Efficacy and whistleblowing intentions.*

H7d: *Organizational Commitment (Affective) will positively moderate the relationship between Perceived Response Efficacy and whistleblowing intentions.*

H7e: *Organizational Commitment (Affective) will negatively moderate the relationship between Perceived Response Cost and whistleblowing intentions.*

The conceptual model depicting these relationships is shown below.

Figure I: Conceptual Model



Method

To test our conceptual model, we used a Qualtrics survey with eight constructs that contained 26 pre-validated scales. All items employed seven-point Likert scales ranging from 1 (Strongly Disagree) to 7 (Strongly Agree). To test construct and item reliability, we conducted a pilot test. The survey was administered to MBA students of an on-campus program. The results indicated that the items loaded in their intended constructs and demonstrated reliability.

The main investigation of this study was conducted subsequent to the pilot study after ensuring the validity and reliability of the measures. For the main study, we administered the survey to MBA students in an online program in three separate sections totaling 355 students. Extra credit was awarded for completing the survey. This sample was selected for several reasons. First, the majority of the students are employed full-time across the US in diverse industries. Second, they are likely to have several years of work experience, which may have exposed them to a fraudulent situation at their companies. Third, student data may be more reliable than collecting data from survey panels with paid incentives. Students completed the surveys voluntarily and anonymously. The 315 students completed the survey and, after deleting incomplete responses and responses with failed manipulation checks, 269 usable responses were used for the data analysis.

Similar to the pilot study, construct reliability and validity tests were conducted, followed by CMV tests. SPSS and Structural Equation Modeling (SEM) software tool SmartPLS4 were used to analyze the data as they provided tools to conduct confirmatory factor and path analysis and provided the ability to measure structural and measurement models simultaneously (Chin, 1998). PLS-SEM was employed in this research to assess the relationships among latent variables due to its capacity to handle complex models with small sample sizes as well as its known ability to handle moderation effects better than other methods (Hair et al., 2019).

Results

As shown in Table 1, the final sample consisted of 269 respondents (n = 269) from diverse organizational settings. The gender distribution was approximately balanced, with females representing 52.4% (n = 141) and males 47.6% (n = 128) of the sample. Respondents' mean age was 30.08 years, and they reported an average work experience of 4.18 years, suggesting a relatively early-career professional sample of the MBA student sample.

Educational levels were mostly at the undergraduate level, with 76.2% (n = 205) holding bachelor's degrees, followed by 23.4% (n = 63) with graduate degrees. A negligible proportion (0.4%, n = 1) reported other educational qualifications. This distribution indicates a highly educated sample, which is consistent with the professional nature of the target population.

The occupational composition revealed substantial heterogeneity. Managerial positions constituted 27.1% (n = 73) of the sample, while accounting professionals represented 13.4% (n = 36). Information technology specialists and clerical/administrative staff comprised 8.2% (n = 22) and 7.8% (n = 21), respectively, with technical positions representing 2.2% (n = 6). A substantial proportion (41.3%, n = 111) identified their roles as "Other," suggesting diverse job functions not captured by the primary categories.

Table 1: Demographics

Demographic	Category	Frequency
Gender	Male	128
	Female	141
Age		30.08 yrs
Education	Bachelor's degree	205
	Graduate degree	63
	Other	1
Current Position	Accounting	36
	Clerical/Administrative	21
	Technician	6
	Managerial	73
	Information Technology	22
	Other	111
Average Work Experience (yrs)		4.18 yrs

Measurement Model Assessment

Table 2 presents the construct of reliability and validity values. Response Efficacy Item 1 failed the construct and reliability tests and was removed from the analysis. Items 2 and 3 were retained. The measurement model demonstrated strong psychometric properties across all constructs. Reliability assessments revealed excellent internal consistency, with Cronbach's alpha (C-Alpha) values ranging from 0.786 to 0.959, exceeding the recommended threshold of 0.70 (Nunnally and Bernstein, 1994). The composite reliability (C-Rel) values ranged from 0.884 to 0.975, higher than the threshold of 0.80, therefore indicating robust construct reliability. Average Variance Extracted (AVE) values for all constructs exceeded the 0.80 threshold (ranging from 0.818 to 0.906), demonstrating strong convergent validity. The construct means ranged

from 3.103 to 5.556 on a 7-point scale, with standard deviations between 0.959 and 1.448, indicating adequate variance in responses.

Discriminant validity was supported by the Variance Inflation Factor (VIF) analysis, with values ranging from 1.034 to 1.121 for the main effects, well below the conservative threshold of 3.3 (Petter et al., 2007). The moderation terms (ORGC × REFF, ORGC × RCST, ORGC × SEFF, ORGC × PVUL) also exhibited acceptable VIF values (1.070, 1.101, 1.034, and 1.041, respectively), indicating no concerning levels of multicollinearity.

The moderate VIF values for the interaction terms suggest that the inclusion of moderation effects in the structural model is statistically appropriate and unlikely to produce estimation issues due to multicollinearity. These values are particularly important for the organizational commitment (ORGC) interactions, which showed consistent VIF values across all moderating relationships.

These results collectively indicate that the measurement model meets or exceeds recommended thresholds for reliability and validity in organizational research, providing a robust foundation for subsequent structural model analysis and hypothesis testing.

Table 2: Reliability and Discriminant Validity

Construct		Ave	C-Alpha	C-Rel	Mean (St.dev)	VIF
BINT	Behavioral Intention	0.894	0.941	0.941	5.041 (1.064)	
MAND	Mandatoriness	0.890	0.959	0.965	4.764 (1.038)	1.118
ORGC	Org. Commitment	0.884	0.957	0.963	4.989 (1.068)	1.090
PSEV	Threat Severity	0.903	0.947	0.972	4.971 (1.033)	1.041
PVUL	Threat Vulnerability	0.906	0.948	0.951	4.482 (1.099)	1.061
RCST	Response Cost	0.892	0.940	0.975	3.103 (1.086)	1.050
REFF	Response Efficacy	0.818	0.786	0.884	5.552 (1.448)	1.059
SEFF	Self-Efficacy	0.886	0.936	0.942	5.556 (0.959)	1.042
ORGC x PSEV	Moderation	Not Applicable				1.121
ORGC x REFF						1.070
ORGC x RCST						1.101
ORGC x SEFF						1.034
ORGC x PVUL						1.041

Table 3 presents the inter-construct correlation matrix. The correlation matrix and Fornell-Larcker criterion analysis provide strong evidence for discriminant validity among the constructs. Following (Fornell and Larcker, 1981) guidelines, the square root of the Average Variance Extracted (AVE) for each construct (shown in bold on the diagonal) was compared with the inter-construct correlations (shown in the off-diagonal elements).

The diagonal values, representing the square root of AVE, range from 0.905 (REFF) to 0.952 (PVUL), with all values exceeding 0.90. These values are consistently higher than their corresponding row and column correlations, satisfying the Fornell-Larcker criterion and providing strong evidence of discriminant validity.

Table 3: Inter-Construct Correlations

	BINT	MAND	ORGC	PSEV	PVUL	RCST	REFF	SEFF
BINT	0.946							
MAND	0.224	0.944						

ORGC	0.221	0.145	0.940					
PSEV	0.203	-0.055	-0.038	0.950				
PVUL	0.195	-0.095	0.107	-0.105	0.952			
RCST	-0.115	0.069	0.002	-0.017	0.020	0.944		
REFF	0.051	0.019	-0.093	0.006	0.025	0.072	0.905	
SEFF	0.276	0.127	0.016	0.035	0.013	-0.054	0.075	0.941

The measurement model demonstrated excellent indicator reliability, with factor loadings exhibiting strong psychometric properties. All items loaded substantially on their respective constructs, with loadings ranging from 0.838 to 0.953, well above the conventional threshold of 0.70 (Hair et al., 2019). Notably, there were no concerning cross-loadings above 0.30, providing additional support for discriminant validity.

Table 4: Factor Loadings

	BINT	MAND	ORGC	PSEV	PVUL	RCST	REFF	SEFF
BINT1	0.943	0.230	0.219	0.169	0.192	-0.098	0.043	0.260
BINT2	0.950	0.209	0.220	0.189	0.177	-0.111	0.026	0.281
BINT3	0.945	0.196	0.187	0.220	0.186	-0.118	0.078	0.242
MAND1	0.216	0.943	0.130	-0.033	-0.099	0.088	0.021	0.133
MAND2	0.231	0.945	0.155	-0.055	-0.066	0.044	0.010	0.112
MAND3	0.209	0.947	0.145	-0.063	-0.084	0.062	0.019	0.111
MAND4	0.183	0.938	0.113	-0.057	-0.114	0.068	0.025	0.125
ORGC1	0.181	0.130	0.929	-0.044	0.069	0.009	-0.120	0.015
ORGC2	0.204	0.181	0.944	-0.026	0.111	0.011	-0.123	0.023
ORGC3	0.227	0.112	0.943	-0.062	0.120	0.007	-0.028	0.038
ORGC4	0.215	0.125	0.945	-0.009	0.096	-0.019	-0.088	-0.017
PSEV1	0.149	-0.048	-0.040	0.940	-0.103	-0.009	0.030	0.020
PSEV2	0.207	-0.072	-0.035	0.956	-0.087	-0.036	0.006	0.060
PSEV3	0.211	-0.036	-0.034	0.954	-0.111	-0.002	-0.012	0.016
PVUL1	0.192	-0.084	0.084	-0.082	0.950	0.006	0.036	0.029
PVUL2	0.190	-0.083	0.107	-0.097	0.953	0.026	0.013	0.031
PVUL3	0.175	-0.104	0.115	-0.124	0.952	0.025	0.021	-0.026
RCST1	-0.098	0.089	0.018	-0.048	-0.015	0.945	0.058	-0.066
RCST2	-0.129	0.060	-0.016	0.008	0.031	0.958	0.091	-0.037
RCST3	-0.092	0.048	0.009	-0.016	0.038	0.930	0.046	-0.054
REFF2	0.054	0.017	-0.086	0.004	0.031	0.042	0.943	0.054
REFF3	0.036	0.019	-0.082	0.008	0.009	0.100	0.864	0.091
SEFF1	0.281	0.116	-0.001	0.031	0.013	-0.042	0.069	0.955
SEFF2	0.238	0.132	0.031	0.008	0.021	-0.096	0.055	0.928
SEFF3	0.259	0.112	0.018	0.057	0.004	-0.018	0.087	0.941

Structural Model Assessment

The structural model demonstrated satisfactory fit indices across multiple criteria. The Standardized Root Mean Square Residual (SRMR) value of 0.027 falls well below the conservative threshold of 0.08 (Hu and Bentler, 1999), indicating excellent fit. The d_{ULS} value of 0.235 and d_G value of 0.376 are within acceptable ranges, suggesting good model fit.

The model achieved a Chi-square value of 639.789, which should be interpreted in conjunction with other fit indices due to its sensitivity to sample size. Notably, the Normed Fit Index (NFI) of 0.902 exceeds the recommended threshold of 0.90 (Bentler and Bonett, 1980), indicating good incremental fit. The comparison between the saturated model and estimated model shows virtually identical fit indices (SRMR = 0.027 in both cases, NFI = 0.902), suggesting that the hypothesized model structure effectively represents the underlying data patterns without significant loss of fit compared to the fully saturated model. These results collectively indicate that the proposed model demonstrates good fit to the empirical data, providing a robust foundation for the interpretation of path coefficients and hypothesis testing.

Table 5: Model Fit

	Values
SRMR	0.027
d_ ULS	0.235
d_ G	0.376
Chi-square	639.789
NFI	0.902

The structural model was evaluated using the partial least squares structural equation modeling (PLS-SEM) algorithm with bootstrapping of 5,000 resamples to ensure the stability and reliability of the results. The analysis revealed several significant paths and provided insights into the hypothesized relationships.

The results supported six of the seven hypothesized direct relationships. Perceived severity (H1: $\beta = 0.235$, $t = 4.377$, $p < 0.001$) and perceived vulnerability (H2: $\beta = 0.223$, $t = 4.305$, $p < 0.001$) demonstrated significant positive effects on behavioral intention. Self-efficacy also showed a significant positive influence (H3: $\beta = 0.218$, $t = 4.117$, $p < 0.001$) on behavioral intention. However, response efficacy (H4: $\beta = 0.060$, $t = 0.983$, $p = 0.325$) did not significantly affect behavioral intention.

Response cost exhibited a significant negative relationship with behavioral intention (H5: $\beta = -0.120$, $t = 2.227$, $p = 0.026$), aligning with theoretical expectations. Both mandatoriness (H6: $\beta = 0.201$, $t = 3.776$, $p < 0.001$) and organizational commitment (H7: $\beta = 0.188$, $t = 3.409$, $p = 0.001$) demonstrated significant positive effects on behavioral intention. Contrary to expectations, none of the hypothesized moderation effects of organizational commitment were supported. Table 6 shows the results of the hypothesis testing.

Table 6: Hypothesis Testing Results

Hypothesis	Path	β	t-value	p-value	Support
H1	PSEV -> BINT	0.235	4.377	0.000	Supported
H2	PVUL -> BINT	0.223	4.305	0.000	Supported
H3	SEFF -> BINT	0.218	4.117	0.000	Supported
H4	REFF -> BINT	0.060	0.983	0.325	Not Supported
H5	RCST -> BINT	-0.120	2.227	0.026	Supported (Negative)
H6	MAND -> BINT	0.201	3.775	0.000	Supported
H7	ORGC -> BINT	0.188	3.409	0.001	Supported
H7a	ORGC x PSEV -> BINT	0.040	0.683	0.494	Not Supported
H7b	ORGC x PVUL -> BINT	0.072	1.230	0.219	Not Supported
H7c	ORGC x SEFF -> BINT	-0.003	0.042	0.966	Not Supported
H7d	ORGC x REFF -> BINT	0.027	0.435	0.663	Not Supported

H7e	ORGC x RCST -> BINT	-0.042	0.696	0.487	Not Supported
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Discussion and Implications

This study makes several important theoretical and practical contributions to the understanding of whistleblowing behavior in organizations. The results provide strong support for the application of Protection Motivation Theory (PMT) in explaining whistleblowing intentions and also document that organizational commitment and mandatoriness are significant in influencing reporting behavior.

Theoretical Implications

The findings demonstrate that PMT components significantly influence whistleblowing intentions, with five of the six hypothesized direct relationships empirically supported ($p < 0.5$). Both threat appraisal variables (perceived severity [H1] and perceived vulnerability [H2]) displayed significant positive relationships with whistleblowing intentions. This result indicates that workers who consider fraud as a serious threat and also recognize that their organization is vulnerable to fraudulent activities are more likely to report misconduct through whistleblowing. These findings are consistent with previous research on protective behaviors (Crossler, 2010; Crossler et al., 2014; Herath and Rao, 2009; Menard et al., 2017; Woon et al., 2005) and contribute an extension of the applicability of PMT to the whistleblowing context.

Among the coping appraisal variables, self-efficacy (H3) was a significant predictor of whistleblowing intentions, demonstrating that the level of employees' confidence in their ability to report effectively affects their willingness to come forward to report wrongdoing. The negative relationship between response costs and whistleblowing intentions (H5) confirms that the kind of burdens that are perceived to be involved in reporting is still a crucial deterrent to reporting behavior, as found in previous whistleblowing literature (Lowe and Reckers, 2024). The non-significant relationship between response efficacy and whistleblowing intentions (H4) provides an interesting deviation from previous PMT research, where a majority of the previous studies found response efficacy to be a significant factor of behavioral intentions. This non-significant relationship suggests that employees' beliefs about the effectiveness of whistleblowing may be less influential than the other factors tested in this study in a whistleblowing context.

The strong positive relationship between mandatoriness and whistleblowing intentions (H6) extends previous findings on policy compliance (Boss et al., 2009) to the whistleblowing domain. This new finding suggests that explicit organizational requirements to report misconduct may effectively promote whistleblowing behavior, possibly by providing clear expectations and legitimizing reporting actions.

The significant positive relationship between organizational commitment and whistleblowing intentions (H7) supports previous research on the role of emotional attachment in prompting internal reporting (C.-P. Chen and Lai, 2014). However, the failure to find support for the hypothesized moderating effects of organizational commitment on PMT variables (H7a–e) indicates that the relationship between psychological threat assessment and reporting intentions may be more direct and less affected by organizational attitudes than we theorized.

Practical Implications

The findings of this study have several practical implications for any organization that wants to improve its fraud detection and prevention capabilities. First, organizations should design their fraud awareness programs to educate employees about the consequences of fraud and potential areas of risk within the organization. This dual-focused approach to threat awareness can enhance employees' threat appraisal processes and consequently increase their likelihood of reporting misconduct. Such programs should include real-life examples and data-driven insights to help illustrate the effects of fraud on the organization and its stakeholders.

The significant role of our findings for self-efficacy suggests that companies should develop comprehensive fraud awareness and training programs that increase people's belief in their capability to prevent and report fraud. These programs should contain clear guidance on how to make a report, include case studies of people who have reported fraud and how the reporting system has worked for them in the past, and have it updated frequently. It allows organizations to overcome one of the most important psychological barriers to the development of whistleblowing behavior: the belief in one's own capacity to report misconduct effectively.

Our findings regarding the negative influence of response costs have an important implication for organizations. They need to thoughtfully design their anti-retaliation policies to balance protection with approachability (Wainberg and Perreault, 2016; Wilson and Nelson, 2022). While strong anti-retaliation measures are necessary, Wainberg and Perreault (2016) found that overly strict or formal policies can also make potential whistleblowers feel more threatened and less willing to come forward. Organizations should therefore focus on creating supportive whistleblowing environments rather than simply implementing strict punitive policies against retaliation. It includes assuring whistleblowers that they will be properly protected, and minimizing any burdens or hindrances that may decrease the chances of whistleblowing (Lowe and Reckers, 2024) and developing approaches such as providing resources for confidential reporting, multiple reporting channels, and positive recognition of whistleblowers when appropriate. These balanced measures can help lower the personal and professional risks of reporting misconduct while avoiding the fear that strict anti-retaliation policies sometimes create, making whistleblowing more likely.

The positive impact of mandatoriness on whistleblowing intentions suggests that organizations should potentially implement specific reporting requirements within their codes of conduct and ethics policies. However, these mandatory reporting policies should be carefully balanced with supportive measures to avoid unnecessary pressure or anxiety among employees. Organizations should frame these requirements within a broader context of company ethical responsibility than just compliance obligations. This approach will frame whistleblowing as a shared responsibility, minimizing the potential negative psychological impacts of mandated reporting.

Finally, the significant role of organizational commitment in our findings also points to the importance of leadership in building emotional connections with employees. Organizations should develop and maintain a culture that includes frequent, transparent communication, ethical leadership, and organizational values. Organizations should regularly communicate organizational values and recognize employees who embody these values to strengthen organizational commitment. As a result of strengthened employee organizational commitment, organizations can create an environment where whistleblowing is viewed as an act of organizational stewardship rather than betrayal.

Limitations and Future Research Directions

There are several limitations to this study that suggest promising avenues for future research. While our sample of MBA students provided a diverse group of working professionals, the generalizability of the study may be limited. These students, although experienced professionals from various industries, may differ from the broader workforce in their education level, career stage, and exposure to fraud risks. Specifically, their organizational positions may not have exposed them to the same whistleblowing dilemmas faced by employees in higher-risk roles or those with longer tenure in organizations. Future research should also look at a more diverse professional sample, especially those in high-risk positions such as internal auditors, compliance officers, and financial controllers (Brink et al., 2022).

The second limitation of our study is that our data are cross-sectional and, therefore, cannot provide causal inferences about how threat and coping appraisals affect whistleblowing behavior over time. It takes whistleblowing decisions a long time to develop because they are based on a process of finding out about fraud and deciding on a course of action. Future longitudinal studies should track how employees' appraisals evolve from fraud awareness to whistleblowing decisions. Experimental studies using scenario-based methodologies could also help establish causal relationships while controlling for contextual factors.

Third, the non-significant effect of organizational commitment as a moderator also warrants further investigation. Future research should explore other potential moderators, such as ethical climate, leadership style, professional identity, and cultural values. Our study only focused on affective commitment. Future research should also focus on other components of organizational commitment, such as continuance commitment and normative commitment. Organizational commitment should also be explored as a formative variable containing all three components.

Fourth, the non-significant relationship between response efficacy and behavioral intention suggests that we investigate how employees evaluate reporting systems. Qualitative studies through interviews or focus groups could uncover factors influencing these perceptions, while mixed-method research could also examine how particular features of reporting systems influence perceived efficacy.

PMT is common in health and safety research but rarely used for whistleblowing studies. Whistleblowing involves ethical challenges, workplace politics, and retaliation risks that sometimes don't fit with PMT's focus on self-protection. Unlike typical PMT scenarios where people protect themselves, whistleblowers often protect others while risking personal harm.

This difference means PMT might not fully capture what drives whistleblowing decisions. In future studies, we could combine PMT with ethical decision-making theories like Rest's (1986) Four-Component Model or Treviño's (1986) Person-Situation Model. Our study focuses mainly on individual factors like threat assessments and self-efficacy. These factors don't fully capture how organizational structures, industry regulations, and workplace culture affect whistleblowing decisions as PMT doesn't address these broader influences. Future studies can include organizational factors like ethical climate, leadership behavior, and regulatory environments.

Our study only examines affective commitment (emotional attachment) and does not test continuance commitment (staying due to costs of leaving) and normative commitment (moral duty to remain). This fact limits our understanding of organizational commitment's role in whistleblowing decisions. Employees with high continuance commitment might avoid reporting to protect job security, while those with strong normative commitment might feel obligated to report wrongdoing. Future studies should examine all three factors to gain a better understanding of organizational commitment in the context of whistleblowing.

Finally, this study is also limited by its focus on behavioral intentions rather than actual whistleblowing behavior. Future studies should collect data on actual reporting behaviors through organizational records or self-reported actions to identify factors that influence the translation of intentions into behavior.

These limitations suggest some potential directions for the advancement of whistleblowing research using a variety of methodological techniques and theoretical frameworks and, consequently, the development of more effective whistleblowing systems.

Conclusion

This research increases our knowledge about whistleblowing behavior by establishing that Protection Motivation Theory (PMT) is relevant to fraud reporting decisions. The findings show that the cognitive processes of threat and coping appraisal, which were initially proposed to explain health-protective behaviors, are useful in helping employees determine how to respond to organizational fraud. The study further establishes the significance of organizational commitment and mandatory reporting policies in determining whistleblowing behavior and that emotional attachment to the organization and formal reporting mechanisms can assist in overcoming the barriers to reporting.

From a practical point of view, our findings offer organizations a theoretically grounded framework for enhancing fraud detection capabilities. The results show that for successful whistleblowing programs, clear reporting requirements could be integrated with strong organizational support and employee confidence in reporting abilities should be built. This integrated approach is suggested as a result of the complex interplay among individual threat assessments, institutional requirements, and organizational relationships that characterize reporting decisions.

These insights can help guide organizations in developing better whistleblowing systems when they face increasing fraud risks and regulatory demands. The findings provide a foundation for understanding how organizations can better motivate and support employee reporting of misconduct and thus contribute to stronger corporate governance and fraud prevention capabilities. Thus, this research contributes both to the theoretical understanding and practical implementation of whistleblowing systems by highlighting the psychological and institutional factors that enter into reporting decisions.

Appendix A: Constructs and Their Items

Perceived Threat Severity (PSEV) -(Johnston and Warkentin, 2010)	PSEV1: If someone committed fraud in my company, it would be severe. PSEV2: If someone committed fraud in my company, it would be serious. PSEV3: If someone committed fraud in my company, it would be significant.
Perceived Threat Vulnerability (PVUL) (Witte et al. 1996)	PVUL1: My company is at risk of being defrauded by one of the employees. PVUL2: It is likely that someone will commit fraud at my workplace. PVUL3: It is possible that someone will commit fraud at my workplace.
Self-Efficacy (SEFF) (Bulgurcu et al. 2010)	SEFF1: My company has made it easy for me to report possible fraud occurring at my workplace. SEFF2: My company has made it convenient for me to report possible fraud occurring at my workplace. SEFF3: I am able to report fraud occurring at my workplace without much effort.
Response Efficacy (REFF) (Bulgurcu et al. 2010)	REFF1: My company's fraud reporting process provides protection from fraudulent acts occurring at my workplace. REFF2: The ability of employees to report fraud occurring within the company is effective for protecting my company from fraudulent acts. REFF3: The ability of employees to report fraud occurring within the company is more likely to prevent fraudulent acts in my company.
Response Cost (RCST) (Bulgurcu et al. 2010)	RCST1: Reporting fraud occurring at my workplace is time-consuming for me. RCST2: There is too much work associated with reporting fraud occurring at my workplace. RCST3: Reporting fraud occurring at my workplace requires a considerable investment in effort other than time.
Organizational Commitment (ORGC)	ORGC1: I am willing to put in a great deal of effort beyond that normally expected in order to help my company be successful. ORGC2: I find that my values and my company's values are very similar. ORGC3: I am proud to tell others that I am part of my company. ORGC4: My company really inspires the very best in me in the way of job performance.
Mandatoriness (MAND)	MAND1: I am required to report fraud occurring at my workplace. MAND2: It is expected that I would report fraud occurring at my workplace. MAND3: There is an understanding that I will report fraud occurring at my workplace. MAND4: My company policies emphasize the need for me to report fraud occurring at my workplace.
Behavioral Intention (BINT) (Venkatesh et al. 2003)	BINT1: I intend to report fraud occurring at my workplace. BINT2: I predict I would report fraud occurring at my workplace. BINT3: I plan to report fraud occurring at my workplace.

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