

RESEARCH ARTICLE

Examining the Cognitive Antecedents of Fraud Tolerance: A Structural Model Integrating TPB and Moral Disengagement

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ABSTRACT

Fraud tolerance, individuals' willingness to accept fraudulent behavior, has emerged as a critical yet understudied factor contributing to the persistence of fraud in organizations. This study examines the cognitive and psychological antecedents of fraud tolerance by integrating the Theory of Planned Behavior (TPB) with moral disengagement. A survey was conducted of 167 accountants employed in companies listed on the Tehran Stock Exchange and Iran Fara Bourse, and the proposed model was assessed using partial least squares structural equation modeling (PLS-SEM). The results indicate that moral disengagement significantly increases fraud tolerance intentions, both directly and indirectly. Specifically, moral disengagement reduces negative attitudes toward fraud tolerance and weakens perceived behavioral control, which in turn elevates intentions to tolerate fraud. However, subjective norms do not significantly mediate this relationship. These findings extend TPB by demonstrating that moral disengagement acts as a key antecedent to its core predictors within an ethical decision-making context. The study offers practical implications for organizations seeking to reduce fraud tolerance through enhanced ethics training, increased accountability, and targeted efforts to counter cognitive rationalizations of unethical behavior. Strengthening the internal ethical culture and empowering individuals to act against wrongdoing may help mitigate the normalization of fraud in professional environments.

Introduction

Fraud is one of the most common and costly forms of organizational misconduct, generating significant financial, social, and ethical consequences for companies and economies. International reports indicate that organizations lose a considerable portion of their annual revenue due to various types of fraud, and the prevalence of such misconduct continues to grow (Association of Certified Fraud Examiners, 2024). The escalating concern over fraud extends far beyond financial losses; the persistence and recurrence of fraudulent activities erode public trust, undermine institutional legitimacy, and promote deviant norms within workplaces.

In recent years, the concept of fraud tolerance—that is, individuals' willingness to accept, rationalize, or overlook fraudulent behaviors—has attracted increasing scholarly attention as a key factor in explaining the persistence of fraud (Knechel & Mintchik, 2022). Fraud tolerance reflects the extent to which individuals perceive fraudulent actions as acceptable, justifiable, or negligible (Gong & Wang, 2013; Alvarez-García et al., 2025). Higher tolerance levels can directly increase the likelihood of fraudulent behavior, as individuals who view such actions as harmless or easily justifiable are more inclined to engage in them. Despite its conceptual importance, fraud tolerance remains underexplored in accounting and organizational behavior research, and the psychological and cognitive determinants underlying this concept are still insufficiently understood.

One of the most influential theoretical frameworks for explaining unethical intentions and behaviors is the Theory of Planned Behavior (TPB; Ajzen, 1991). According to TPB, behavioral intention is shaped by three core components: attitude toward the behavior, subjective norms, and perceived behavioral control. Attitude reflects how an individual evaluates his responsibility regarding ethical conduct, which becomes salient when contemplating a particular action. Subjective norms reflect perceived social pressure or support from significant others such as colleagues and family. Perceived behavioral control represents one's perception of the obstacles or facilitators affecting ethical action as well as reflects a person's belief in his ability to successfully perform such behavior (Ajzen, 1991).

However, Black et al. (2022) argue that TPB-based ethical research has largely neglected a critical antecedent of ethical behavior, namely moral disengagement. Their study demonstrated that moral disengagement predicts the three core TPB components—attitude,

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subjective norms, and perceived behavioral control—thereby extending TPB within the domain of workplace ethics. Their findings indicate that these three constructs significantly mediate the link between moral disengagement and ethical intentions.

Moral disengagement, first conceptualized by Bandura (1990), refers to a set of cognitive mechanisms that enable individuals to avoid feelings of guilt or self-condemnation when considering or engaging in unethical actions. It involves cognitive strategies that rationalize or justify misconduct while preserving one's self-perception as a moral individual. Prior research (e.g., Sánchez-Medina et al., 2024) has shown that moral disengagement is one of the strongest predictors of unethical behaviors, including financial fraud. However, its role in shaping fraud tolerance intentions remains understudied, and it is still unclear how moral disengagement influences the TPB components and, through them, individuals' willingness to tolerate fraud.

Despite the growing body of Iranian research on fraud and ethics, prior domestic studies have largely focused on fraudulent behavior, fraud intention, whistleblowing, ethical climate, or professional judgment (e.g., Kaboli et al., 2021; Sarikhani & Ebrahimi, 2022; Arjmandniya et al., 2019), while overlooking fraud tolerance as a distinct cognitive and normative construct. Moreover, although moral disengagement has been examined in Iranian accounting contexts, existing studies emphasize its direct effects and do not explain the psychological mechanisms through which it shapes acceptance of fraud. This study addresses these gaps by integrating moral disengagement with the TPB to explain accountants' fraud tolerance intentions, offering a more nuanced psychological account of how fraudulent practices are normalized.

Accordingly, the present study proposes an integrated model grounded in both the TPB and moral disengagement to explain accountants' intentions to tolerate fraud. This study investigates the direct effect of moral disengagement on fraud tolerance intentions and its indirect effects through changes in attitudes, subjective norms, and perceived behavioral control toward fraud tolerance.

This research seeks to fill important gaps in the literature by examining the cognitive, perceptual, and psychological roots of fraud tolerance, with a particular focus on the TPB constructs. Understanding these mechanisms helps clarify how personal beliefs, social expectations, and perceptions of control shape accountants' acceptance or rejection of fraudulent behavior. Moreover, by examining the cognitive processes underlying moral disengagement, this study sheds light on how accountants justify unethical actions, diminish personal accountability, and bypass feelings of guilt or cognitive dissonance. Understanding these processes is essential for explaining how moral disengagement weakens ethical attitudes, reduces social deterrents, and ultimately increases tolerance toward fraud. From this perspective, the results can provide valuable insights for policymakers, organizational leaders, professional regulators, and accounting institutions. Such insights can inform the design of more effective fraud prevention programs, ethical training initiatives, organizational policies, and behavioral interventions aimed at reducing fraud tolerance and fostering a culture of zero tolerance for unethical conduct.

This paper proceeds as follows: first, the theoretical background and related literature are reviewed, and research hypotheses are formulated. Next, the conceptual model is presented. The methodology and data analysis results are then reported. Finally, the discussion, conclusion, and practical implications of the findings are presented.

Theoretical Background and Hypotheses Development

Fraud Tolerance

The conceptual roots of fraud tolerance can be traced to the literature in sociology, ethics, and social psychology, where tolerance is defined as the acceptance of or leniency toward otherwise unacceptable behaviors (Knechel & Mintchik, 2022). Individuals with low fraud tolerance, who neither accept nor overlook fraudulent acts, tend not only to refrain personally from unethical behavior but also to avoid aligning themselves with those who commit fraud. These individuals actively support strict enforcement of rules, exhibit sensitivity to even minor instances of fraud, and demonstrate a greater willingness to report fraudulent behavior when they encounter it (Gong & Wang, 2013). Fraud tolerance represents values rather than emotions or opinions. It is more stable and transcends specific actions and situations (Yung & Askarzadeh, 2025).

Prior studies (Gong & Wang, 2013; Alvarez-García et al., 2025) assert that fraud and fraud tolerance are closely related phenomena and classify fraudulent behavior into three categories of black, gray, and white, based on the level of acceptance expressed by individuals. Black fraud refers to situations in which individuals condemn a fraudulent act and demand punishment. Gray fraud reflects cases where only some individuals favor punishment while the majority hold ambiguous or ambivalent views. White fraud refers to situations in which most individuals do not support punishment because they perceive the fraudulent act as tolerable. Sardais et al. (2022) demonstrate through experiments that individuals who are tolerant of fraud can quickly transmit fraud-tolerant attitudes to others. They find that such attitudes spread from a small number of individuals to larger groups through group discussions, suggesting that fraud tolerance can facilitate the broader diffusion of fraudulent behavior in society. Yung and Askarzadeh (2025) document that higher levels of fraud tolerance in society are positively associated with firm-level stock price crash risk. Their findings support the view that fraud tolerance fosters managerial incentives to conceal bad news, thereby increasing the likelihood of future stock price crashes.

Few studies have examined the factors influencing fraud tolerance. Knechel and Mintchik (2022) show that self-enhancing values increase fraud tolerance, whereas self-transcending values and belief in hard work reduce it. Consistent with this pattern, Ebrahimi and Rostami (2025) find that moral disengagement and self-enhancing values positively predict accountants' fraud tolerance, while self-efficacy, self-transcending values, and perceived ethical organizational culture have negative effects, with no evidence of cultural moderation. Similarly, Rahimifard et al. (2025) report that moral idealism and belief in hard work reduce auditors' fraud tolerance, self-enhancing values increase it, and self-transcending values, gender bias, and professional skepticism show no significant effects. Shtudiner and Zvi (2025)

provide evidence that individuals' religiosity is negatively associated with fraud tolerance, while fraud tolerance is positively associated with the likelihood of engaging in fraudulent behavior.

While recent Iranian studies have examined moral disengagement, ethical culture, and value orientations as predictors of fraud tolerance (e.g., Ebrahimi & Rostami, 2025; Rahimifard et al., 2025), they do not explain the cognitive mechanisms through which these factors translate into individuals' acceptance of fraud. The present study addresses this gap by modeling fraud tolerance intentions as the outcome of moral disengagement operating through the TPB components, thereby offering a more detailed psychological explanation of fraud tolerance.

Theory of Planned Behavior

According to the TPB (Ajzen, 1991), an individual's intention to perform a behavior is influenced by his attitude toward that behavior, subjective norms, and perceived behavioral control, and this intention serves as a reliable predictor of the actual behavior. Thus, the stronger the intention to engage in each behavior, the more likely the behavior will occur. Based on the definitions provided, attitude toward a behavior refers to a person's positive or negative evaluation of performing the target behavior (Ajzen, 2001). Attitude is defined as a predisposition that leads individuals to respond positively or negatively to certain people or objects within a specific environment. This attitude is grounded in an individual's beliefs about the consequences of the behavior and his evaluation of those consequences. Accordingly, the more favorable a person's assessment of performing a behavior is, the stronger his intention to engage in that behavior will be (Trongmateerut & Sweeney, 2013).

Subjective norms are defined as an individual's perception of the opinions of important others regarding the behavior in question (Ajzen, 1991). In other words, subjective norms reflect a person's beliefs about the extent to which significant others, such as colleagues or family members, support or oppose his behavior. They arise from individuals' normative beliefs and their motivation to comply with the expectations of important referent groups. Therefore, norms possess the capacity to influence human action and represent the behaviors expected of members of society. Individuals often rely on capable and authoritative members of their community to comprehend and respond effectively to social situations, particularly under conditions of uncertainty (Trongmateerut & Sweeney, 2013). According to the TPB, when important others disapprove of a behavior or withhold support, decision-makers are less likely to engage in that behavior.

Perceived behavioral control refers to the extent to which an individual evaluates performing a particular behavior as easy or difficult. More specifically, control beliefs depend on the perceived presence or absence of opportunities and obstacles. Based on the TPB, the greater the perceived behavioral control, the stronger the intention to perform the behavior (Ajzen, 1991). Ajzen (1991) argues that perceived behavioral control is conceptually similar to Bandura's (1977) notion of self-efficacy. Bandura (1977) states that self-efficacy refers to a person's expectation regarding his ability to successfully execute a specific behavior.

Numerous studies have validated the applicability of TPB in ethical decision-making contexts. For example, Carpenter and Reimers (2005) found that the TPB predicts whether managers' decisions are ethical or unethical. More recently, Sarikhani and Ebrahimi (2022) found that the extended TPB components (perceived behavioral control, perceived subjective norms, perceived moral obligation, and attitudes toward whistleblowing) have positive effects on accountants' internal whistleblowing. Consistently, Kaboli et al. (2021) found that the TPB can be an appropriate mechanism to predict managers' decisions related to fraudulent financial reporting. From this perspective, it is reasonable to argue that if accountants view fraud tolerance more favorably, perceive social support for it, and feel capable of tolerating fraud without obstacles, they are more likely to form an intention to tolerate fraudulent actions. Accordingly, the following hypotheses are proposed:

Hypothesis 1: A decrease in negative attitudes toward fraud tolerance is associated with an increase in fraud tolerance intentions.

Hypothesis 2: A decrease in negative subjective norms regarding fraud tolerance is associated with an increase in fraud tolerance intentions.

Hypothesis 3: A decrease in perceived behavioral control related to fraud tolerance is associated with an increase in fraud tolerance intentions.

Moral Disengagement

Bandura (1990) introduced the theory of moral disengagement to explain how individuals can engage in unethical or even inhumane behaviors without experiencing psychological discomfort, internal conflict, or moral tension. Moral disengagement is defined as an individual's tendency to activate cognitive mechanisms through which harmful behavior is reframed as acceptable or trivial, personal responsibility for its consequences is diminished, and perceptions of the harm inflicted on others are weakened (Moore et al., 2012). In other words, moral disengagement consists of a set of conscious or unconscious cognitive strategies that enable individuals to rationalize and justify their unethical actions while maintaining a favorable self-image as a moral person. From this perspective, moral disengagement functions as a cognitive shield, allowing individuals to evade moral obligations and to tolerate the violation of accepted ethical standards without experiencing guilt or self-condemnation (Black et al., 2022).

Moral disengagement operates through eight cognitive mechanisms that allow individuals to justify unethical behavior. Moral justification refers to reconstructing the unethical act as serving a seemingly valuable or noble purpose. Euphemistic labeling softens the perception of the behavior by altering the language used to describe it. Through advantageous comparison, individuals compare their behavior to more egregious actions committed by others in order to make their own conduct appear more acceptable. Three additional mechanisms reduce or obscure personal responsibility: displacement of responsibility, in which responsibility is attributed to authority

figures or external pressures; diffusion of responsibility, in which shared group involvement obscures individual accountability; and disregard or distortion of consequences, in which the harmful effects of the behavior are minimized, obscured, or perceived as uncertain. The final two mechanisms focus on the victim: dehumanization, through which the moral worth of victims is diminished, and attribution of blame, in which responsibility for the wrongdoing is wholly or partially assigned to the victims themselves (Moore et al., 2012).

Numerous studies, including the research by Çollaku et al. (2024), Sánchez-Medina et al. (2024) and Arjmandniya et al. (2019), have found evidence of the impact of moral disengagement on intentions toward unethical behavior and the intention to commit fraud. Accordingly, Ebrahimi and Rostami (2025) find that moral disengagement has a direct positive effect on accountants' fraud tolerance intentions. Building on this empirical evidence and established relationships, we propose the following hypothesis:

Hypothesis 4: An increase in moral disengagement is associated with an increase in fraud tolerance intentions.

Integrating the TPB and Moral Disengagement

Given the complex psychological determinants underlying individuals' willingness to engage in or tolerate fraudulent behavior, explaining the phenomenon of fraud tolerance requires the simultaneous application of complementary theoretical frameworks. The TPB (Ajzen, 1991) posits that behavioral intention, the primary predictor of actual behavior, is influenced by attitudes toward the behavior, subjective norms, and perceived behavioral control. These components have been widely validated in ethical decision-making contexts. However, scholars in organizational ethics (Bandura, 1990; Moore et al., 2012) argue that a key antecedent, moral disengagement, is often overlooked when applying TPB to ethical behaviors. Moral disengagement provides cognitive mechanisms that allow individuals to justify unethical conduct, minimize guilt, weaken moral attitudes, reduce perceived social pressure against misconduct, and diminish perceptions of control over ethical action. Through these pathways, moral disengagement can significantly shape individuals' intentions to tolerate fraud.

Accordingly, integrating TPB with moral disengagement offers a more comprehensive psychological explanation of why fraudulent acts may become normalized and tolerated in professional settings. This integrated model clarifies how cognitive distortions influence ethical judgments and intentions, helping to explain why some accounting professionals display greater tolerance toward fraudulent behavior.

Black et al. (2022) extended the TPB framework in workplace ethics and demonstrated that moral disengagement serves as a key antecedent to attitudes, subjective norms, and perceived behavioral control, which in turn mediate its effects on ethical intentions.

Based on the theoretical foundations and the empirical evidence reviewed, moral disengagement is expected to influence the components of the TPB and, through these components, affect fraud tolerance intentions. Therefore, the following hypotheses are proposed:

Hypothesis 5: As moral disengagement increases, negative attitudes toward fraud tolerance decrease.

Hypothesis 6: As moral disengagement increases, negative subjective norms regarding fraud tolerance decrease.

Hypothesis 7: As moral disengagement increases, perceived behavioral control related to fraud tolerance decreases.

Hypothesis 8: Negative attitudes toward fraud tolerance mediate the relationship between moral disengagement and fraud tolerance intentions.

Hypothesis 9: Negative subjective norms regarding fraud tolerance mediate the relationship between moral disengagement and fraud tolerance intentions.

Hypothesis 10: Perceived behavioral control related to fraud tolerance mediates the relationship between moral disengagement and fraud tolerance intentions.

The hypothesized relationships among the constructs are summarized in the conceptual framework presented in Fig. 1.

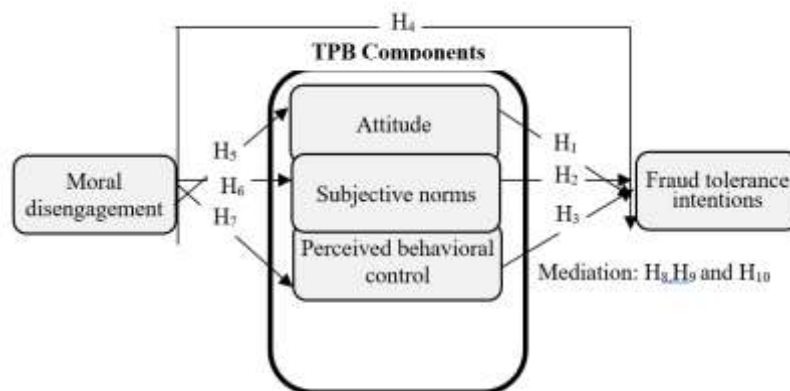


Fig. 1. Conceptual Framework

Methodology

The objective of this study is to investigate accountants' intention to tolerate fraud by integrating the construct of moral disengagement and examining the mediating role of the TPB components. The study is applied in terms of purpose, employs a descriptive-survey research

design, and is cross-sectional in nature. Data were collected using a structured questionnaire. To ensure the instrument's validity and reliability, we assessed item factor loadings, Cronbach's alpha, composite reliability, average variance extracted (AVE), and the heterotrait-monotrait ratio (HTMT) discriminant validity criterion.

The questionnaire consisted of two sections: (1) demographic information, including respondents' gender, age, work experience, and academic major, and (2) construct-specific items measuring moral disengagement, attitude, subjective norms, perceived behavioral control, and fraud tolerance intentions.

The statistical population of this study comprises accounting personnel employed by companies listed on the Tehran Stock Exchange and the Iran Fara Bourse in 2025. A convenience sampling approach was adopted, and data were collected electronically from accessible accountants across multiple cities. The final survey instrument was developed based on feedback obtained from a pilot study. In the pilot phase, 63 questionnaires were distributed, yielding 61 usable responses. The primary purpose of the pilot test was to evaluate the clarity, interpretability, and comprehensibility of the items, as well as the respondents' ability to complete the questionnaire without difficulty. Participants were also invited to provide qualitative feedback, some of which contributed to refining the final version of the instrument. Moreover, we assessed the internal consistency reliability of all scales using Cronbach's alpha, with all constructs exceeding the recommended threshold of 0.70, demonstrating adequate reliability.

The final questionnaire was subsequently distributed to members of the target population, resulting in the collection of 167 complete questionnaires out of 393 distributed. For data preparation, Microsoft Excel 2021 was utilized, and SmartPLS version 4 was employed for data analysis. Hypotheses were tested using structural equation modeling (SEM) based on the partial least squares (PLS) method.

Following Fredin (2011), the study employed a vignette in which a hypothetical inventory accountant encounters a case of financial statement fraud. The measurements of TPB components were anchored to this scenario to enhance realism and contextual relevance.

In this study, fraud tolerance intentions were conceptualized as the dependent variable. The reliance on behavioral intentions is grounded in the TPB, which asserts that intention is the strongest predictor of actual behavior and plays a central role in explaining human actions (Ajzen, 1991). To measure fraud tolerance intentions, items were adapted from Dalton and Radtke's (2013) whistleblowing intention scale. Because willingness to report fraud represents the opposite behavioral direction of fraud tolerance within the context of the scenario, the items were reworded to emphasize non-reporting and acceptance of fraudulent behavior. Thus, to measure fraud tolerance intentions, respondents were asked to evaluate the likelihood that they themselves and other accountants aware of the fraud would tolerate the controller's fraudulent action described in the vignette.

To identify the drivers of accountants' intentions to tolerate fraud, three TPB components—attitude toward fraud tolerance, subjective norms, and perceived behavioral control—were incorporated as mediating variables. In addition, consistent with the framework proposed by Black et al. (2022), moral disengagement was included as the key independent variable shaping these mediators and, indirectly, behavioral intention.

The constructs of attitude, subjective norms, and perceived behavioral control were measured using the instrument developed by Park and Blenkinsopp (2009). In line with Ajzen's (1991) recommendations, attitude was calculated as the product of behavioral beliefs and outcome evaluations; subjective norms as the product of normative beliefs and motivation to comply; and perceived behavioral control as the product of the interaction of control beliefs and perceived power. Moral disengagement was assessed using the validated scale developed by Moore et al. (2012). All items were rated on a five-point Likert scale ranging from 1 (very low) to 5 (very high), with respondents indicating their level of agreement based on the scenario presented.

Findings

Table 1 summarizes the demographic characteristics of the 167 accounting professionals who participated in the study. The sample consisted of 55.7% male and 44.3% female respondents. Most participants were under 30 years of age (55.1%), and most had less than 10 years of professional experience (60.5%). With respect to education, 42.5% held a bachelor's degree or lower, 49.7% held a master's degree, and 7.8% held a Ph.D. Overall, the sample reflects a relatively young and moderately experienced group of accounting practitioners.

Table 1. Demographic Summary (N = 167)

Details	N	N (%)
Gender		
Male	93	55.7
Female	74	44.3
Age		
Under 30 years	92	55.1
30-40 years	49	29.3
41-50 years	19	11.4
Over 50 years	7	4.2
Professional experience		
Under 10 years	101	60.5
11-20 years	37	22.1
Over 20 years	29	17.4
Education		
Bachelor's degree and below	71	42.5
Master's degree	83	49.7
Ph.D.	13	7.8

Measurement Model Assessment

The reflective measurement model was assessed following the guidelines of Hair et al. (2022). Indicator reliability was examined through factor loadings. Most loadings exceeded the acceptable threshold of 0.40, and many were above 0.70, demonstrating satisfactory indicator reliability. For the moral disengagement (MOD) construct, indicators with insufficient loading values (MOD7 and MOD8) were removed to enhance the construct's reliability.

Convergent validity was evaluated using the average variance extracted (AVE). All constructs—Fraud Tolerance Intentions (FTI = 0.500), Moral Disengagement (MOD = 0.673), Attitude (ATT = 0.679), Subjective Norms (SNO = 0.774), and Perceived Behavioral Control (PBC = 0.549)—exceeded the threshold value of 0.50, indicating that each construct explains more than half of the variance in its indicators.

Internal consistency reliability was evaluated using Cronbach's alpha, composite reliability (rho_c), and rho_A. As presented in Table 2, all constructs met or exceeded the recommended minimum threshold of 0.70 for both Cronbach's alpha and composite reliability, confirming adequate internal consistency across all measures.

Table 2. Assessment results of the measurement model

Constructs	Items	Loadings	Cronbach's Alpha	Composite Reliability (rho_a)	Composite Reliability (rho_c)	AVE
Fraud tolerance intentions (FTI)	FTI1	0.888	0.726	0.772	0.803	0.500
	FTI2	0.747				
Moral disengagement (MOD)	MOD1	0.754	0.770	0.795	0.831	0.673
	MOD2	0.799				
	MOD3	0.711				
	MOD4	0.591				
	MOD5	0.420				
	MOD6	0.753				
Attitude toward fraud tolerance (ATT)	ATT1	0.765	0.907	0.920	0.927	0.679
	ATT2	0.871				
	ATT3	0.768				
	ATT4	0.888				
	ATT5	0.867				
Subjective norms (SNO)	SNO1	0.914	0.854	0.867	0.911	0.774
	SNO2	0.880				
	SNO3	0.844				
Perceived behavioral control (PBC)	PBC1	0.647	0.770	0.812	0.826	0.549
	PBC2	0.665				
	PBC3	0.691				
	PBC4	0.925				

Discriminant validity was assessed using the heterotrait–monotrait ratio (HTMT), recognized as a robust criterion for detecting construct distinctiveness (Hair et al., 2022). As shown in Table 3, all HTMT values were significantly below the conservative threshold of 0.90.

Taken together, these analyses demonstrate that the measurement model satisfies all required standards of reliability and validity. The constructs are therefore considered adequate for subsequent structural model evaluation.

Table 3. Discriminant validity assessment using the HTMT criterion

Constructs	FTI	MOD	ATT	SNO	PBC
FTI					
MOD	0.297				

ATT	0.548	0.388			
SNO	0.553	0.174	0.650		
PBC	0.369	0.198	0.192	0.219	

Structural Model Assessment

Following the evaluation of the measurement model, the next step involved assessing the structural model to examine the hypothesized relationships among the constructs. As recommended by Hair et al. (2022), the assessment began with an examination of collinearity through the variance inflation factor (VIF) values. All VIF values were found to be well below the threshold of 3, indicating the absence of multicollinearity concerns. Specifically, the VIF values for moral disengagement, attitude, subjective norms, and perceived behavioral control were 1.000, 1.477, 1.491, and 1.012, respectively, demonstrating that collinearity does not threaten the stability or interpretability of the structural paths.

After confirming acceptable levels of collinearity, the significance and strength of the hypothesized relationships—including the mediation effects—were evaluated using the path coefficients, t-values, and p-values generated through bootstrapping. This analysis provided evidence regarding both the direct and indirect effects in the model, allowing for a comprehensive assessment of the predictive relationships proposed in the study.

Table 4 presents the results of the direct effects. The analysis shows that attitude significantly decreases fraud tolerance ($\beta = -0.282$, $t = 2.824$, $p = 0.002$, $f^2 = 0.078$), providing support for H1. Similarly, subjective norms have a significant negative effect on fraud tolerance ($\beta = -0.242$, $t = 2.468$, $p = 0.007$, $f^2 = 0.057$), supporting H2. Furthermore, perceived behavioral control significantly reduces fraud tolerance ($\beta = -0.330$, $t = 4.055$, $p < 0.001$, $f^2 = 0.155$), supporting H3. Additionally, moral disengagement demonstrated a significant positive influence on fraud tolerance ($\beta = 0.203$, $t = 3.730$, $p < 0.001$), confirming H4.

Moreover, moral disengagement exerts a significant negative effect on attitude toward fraud tolerance ($\beta = -0.386$, $t = 4.816$, $p < 0.001$, $f^2 = 0.175$), thereby supporting H5. In contrast, the effect of moral disengagement on subjective norms was not statistically significant ($\beta = -0.133$, $t = 1.415$, $p = 0.079$, $f^2 = 0.018$), leading to rejection of H6. The results further indicate that moral disengagement significantly reduces perceived behavioral control ($\beta = -0.189$, $t = 1.887$, $p = 0.030$, $f^2 = 0.037$), supporting H7.

Overall, the results highlight the important role of moral disengagement in shaping the TPB antecedents of fraud-related decision-making, as well as directly influencing accountants' fraud tolerance intentions. Furthermore, all three TPB constructs—attitude, subjective norms, and perceived behavioral control—demonstrate significant predictive power in explaining fraud tolerance intentions.

Table 4. Hypotheses test results of direct effects

Hypothesis No.	Relationship	Path coefficient	T- value	P-value	f ²	Decision
H1	ATT → FTI	-0.282	2.824	0.002	0.078	Supported
H2	SNO → FTI	-0.242	2.468	0.007	0.057	Supported
H3	PBC → FTI	-0.330	4.055	0.000	0.155	Supported
H4	MOD → FTI	0.203	3.730	0.000	-	Supported
H5	MOD → ATT	-0.386	4.816	0.000	0.175	Supported
H6	MOD → SNO	-0.133	1.415	0.079	0.018	Not supported
H7	MOD → PBC	-0.189	1.887	0.030	0.037	Supported

Table 5 presents the results of the mediation analysis. The findings indicate that attitude toward fraud tolerance significantly mediates the relationship between moral disengagement and fraud tolerance intentions ($\beta = 0.109$, $t = 2.366$, $p = 0.009$), supporting H8. This suggests that higher levels of moral disengagement indirectly increase fraud tolerance by shaping more favorable attitudes toward tolerating fraudulent behavior. Thus, we conclude that attitude

partially mediates the relationship since both the direct and indirect effects are significant.

The mediating effect of subjective norms was not significant ($\beta = 0.032$, $t = 1.147$, $p = 0.126$), leading to the rejection of H9. Thus, subjective norms do not mediate the relationship between moral disengagement and fraud tolerance intentions.

Finally, perceived behavioral control exhibited a significant mediation effect ($\beta = 0.062$, $t = 2.023$, $p = 0.022$), supporting H10. This indicates that moral disengagement reduces accountants' perceived behavioral control, which in turn contributes to greater intentions to tolerate fraud. Given that both the direct effect of perceived behavioral control and its indirect effect on fraud tolerance are statistically significant, this construct demonstrates a partial mediation role.

Overall, two of the three TPB components (attitude and perceived behavioral control) are confirmed as significant mediators, demonstrating that moral disengagement affects fraud tolerance both directly and through key cognitive mechanisms.

Table 5. Hypotheses test results of indirect effects

Hypothesis No.	Relationship	Path coefficient	T- value	P-value	Decision
H8	MOD -> ATT-> FTI	0.109	2.366	0.009	Supported
H9	MOD -> SNO-> FTI	0.032	1.147	0.126	Not supported
H10	MOD -> PBC-> FTI	0.062	2.023	0.022	Supported

The next stage in evaluating the structural model involves assessing its explanatory power and predictive relevance. The key criterion for determining explanatory power is the coefficient of determination (R^2), which indicates the proportion of variance in each endogenous construct explained by the model's exogenous variables. The results show that the R^2 values for fraud tolerance intentions, attitude, subjective norms, and perceived behavioral control are 0.306, 0.149, 0.018, and 0.036, respectively.

Discussion and Conclusion

The primary objective of this study was to examine the cognitive antecedents of fraud tolerance by integrating the TPB with the construct of moral disengagement. The findings validate the effectiveness of this integrated model in explaining why accountants may accept fraudulent behaviors in organizational settings.

The results provide empirical support for TPB in the ethical domain by confirming that attitude, subjective norms, and perceived behavioral control significantly predict intentions regarding fraud tolerance. When accountants hold more favorable attitudes toward tolerating fraud, perceive weaker pressures from influential others, or believe they lack the ability to intervene, their intentions to tolerate fraud increase.

The results also demonstrate that moral disengagement is a strong predictor of unethical behavioral intentions. Specifically, individuals who activate cognitive justifications for unethical acts display greater willingness to tolerate fraud. This supports the argument that fraud tolerance is not simply a passive stance but is shaped by active rationalization processes that reduce moral accountability. Thus, organizations that allow moral disengagement to flourish, through ambiguous accountability structures, poor ethical climates, or normalization of deviance, may inadvertently increase the likelihood of fraud being tolerated.

Notably, the study contributes new evidence showing that moral disengagement undermines attitude and perceived behavioral control, which in turn fosters greater fraud tolerance. These mechanisms highlight how cognitive disengagement reduces personal disapproval of wrongdoing and weakens individuals' perceived ability to resist it. By contrast, moral disengagement does not significantly predict subjective norms. This finding indicates that even when individuals distort their own moral beliefs, they may still recognize that fraud is socially unacceptable. However, this awareness alone does not sufficiently deter tolerance when personal justifications override self-regulation.

This study offers several theoretical contributions. It demonstrates that fraud tolerance is driven more by cognitive and perceptual justification processes than by stable personality traits or personal values. The findings also reinforce the work of [Black et al. \(2022\)](#) by showing that moral disengagement functions as a key antecedent to TPB components in ethical decision-making contexts. Finally, the stronger mediating effects of attitude and perceived behavioral control, relative to subjective norms, suggest that internal cognitions outweigh external social pressures in shaping professionals' tolerance toward fraud. This suggests that even in environments where fraud is socially condemned, personal rationalizations and perceived incapacity to intervene can still lead individuals to overlook unethical behavior.

The findings offer several important practical implications for organizations, regulators, and professional bodies. First, with respect to Hypotheses 1–3, organizations should address attitudes, subjective norms, and perceived behavioral control simultaneously. Ethics training should move beyond rule-based compliance and challenge justifications for situational fraud. Clear communication from leadership and consistent enforcement of ethical standards can strengthen negative social norms toward fraud tolerance. In addition, reducing barriers to ethical action through confidential reporting channels and supportive supervisory practices can enhance perceived behavioral control. Second, regarding Hypothesis 4, organizations should directly target moral disengagement mechanisms. Scenario-based training that exposes common rationalizations (e.g., diffusion of responsibility or moral justification) can help employees recognize and resist disengagement processes. Strengthening accountability structures and clarifying individual responsibility can further reduce opportunities for moral disengagement. Third, in line with the mediation results of Hypotheses 8 and 10, increasing accountants' ethical agency is critical. Providing accessible ethics consultation resources, whistleblowing protections, and leadership support can empower accountants to act when encountering fraud, thereby reducing fraud tolerance.

Despite its contributions, this study has several limitations that offer useful directions for future research. Because the design was cross-sectional, causal interpretations should be made cautiously; longitudinal or experimental approaches could provide stronger evidence for the temporal dynamics of moral disengagement and fraud tolerance. The use of convenience sampling also limits the generalizability of the findings. Replications with larger and more diverse samples—such as auditors, financial managers, or public sector accountants—would strengthen external validity and allow for professional comparison. Additionally, relying on a single behavioral scenario may not fully reflect

the diverse forms and complexities of fraud tolerance that arise in real organizational settings. Future studies may benefit from examining cultural values as moderating factors, investigating how ethical climate, leadership style, and organizational culture can affect moral disengagement, and moving beyond behavioral intention to assess actual reporting behavior or complicity in fraud. These extensions would deepen our understanding of the psychological and contextual determinants that shape tolerance toward unethical conduct in professional environments.

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