

THE ROLE OF INTERNAL CONTROL AND COMPENSATION APPROPRIATENESS IN SHAPING ANTI-FRAUD BEHAVIOR: THE MODERATING EFFECT OF THE BYSTANDER EFFECT IN COOPERATIVES IN KUDUS REGENCY

SRI MULYANI*
NITA ANDRIYANI BUDIMAN
DINA LUSIANTI
MAMIK INDARYANI

Universitas Muria Kudus, Jl. Lingkar Utara UMK, Gondangmanis, Bae, Kudus, Indonesia
s.mulyani@umk.ac.id

Received: October 29, 2025; Revised: May 4, 2026; Accepted: May 13, 2026

Abstract: *This study aims to examine the influence of internal control and compensation appropriateness on anti-fraud behavior, with the bystander effect acting as a moderating variable in cooperatives in Kudus Regency. This study draws on the Fraud Triangle Theory, which explains that fraud arises from pressure, opportunity, and rationalization. Internal control is associated with reducing opportunity, while compensation appropriateness alleviates pressure. The bystander effect is conceptualized as a social mechanism that reinforces silence and weakens the effectiveness of these structural mechanisms. This study employed a quantitative survey approach using data from 351 cooperative managers, including supervisors, secretaries, and treasurers. Data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The results show that internal control and compensation appropriateness have a positive effect on anti-fraud behavior, while the bystander effect weakens these relationships. This study contributes to the anti-fraud behavior literature by integrating structural and behavioral perspectives, highlighting that the effectiveness of formal control mechanisms depends on social dynamics within the organization.*

Keywords: Anti-Fraud Behavior, Bystander Effect, Compensation Appropriateness, Internal Control

INTRODUCTION

Accounting fraud continues to be a significant challenge for numerous companies globally, including the cooperative sector in Indonesia. The 2024 report from the Association of Certified Fraud Examiners (ACFE) indicated that around 43% of fraud cases are identified via anonymous tips, highlighting the crucial importance of robust internal reporting systems and forensic audit processes in the detection and prevention of organizational fraud ([Patskan](#)

[et al. 2025](#)). However, many organizations, particularly cooperatives, continue to face challenges in developing and implementing comprehensive and sustainable anti-fraud behavior systems ([Rashid et al. 2022](#)).

The cooperative sector in Indonesia still has a lot of trouble keeping accountability and financial integrity since its internal control systems are poor and there is a mismatch between pay and employee duties ([Rashid et al. 2022](#)). According to the Ministry of Cooperatives

and SMEs (2024), the number of cooperatives grew from 127,846 in 2021 to 131,617 in 2024, reflecting the increasing economic significance of the sector alongside heightened vulnerability to financial irregularities ([Hidayati et al. 2022](#)). This increase shows that cooperatives are becoming more important to the economy, but it also means that there is a higher chance of problems. This tendency is shown by a case in Kudus Regency, where a cooperative founder inflicted damages up to Rp 267 billion on its members ([Rachmawati 2022](#)). Another case involved Koperasi Produsen UMKM Kelompok Terpadu Nusantara in Kudus, which was found to be involved in the distribution of counterfeit cooking oil products, resulting in the revocation of its business license by the Ministry of Cooperatives and SMEs ([Arif 2025](#)).

The Fraud Triangle Theory posits that fraud occurs owing to three primary factors: pressure, opportunity, and rationalization ([Cressey 1953](#)). In a cooperative setting, pressure may arise from inadequate compensation or unrealistic performance targets, while opportunity emerges from weak internal control systems. Rationalization refers to the cognitive process by which individuals justify unethical behavior.

In this context, the bystander effect reflects a dual behavioral mechanism that may reinforce both rationalization and opportunity dimensions. On one hand, it strengthens rationalization by normalizing silence and diffusing personal responsibility when misconduct occurs. On the other hand, it weakens the effectiveness of internal control as an opportunity-reducing mechanism, since unreported violations allow fraud opportunities to persist. Therefore, the bystander effect is not merely a passive psychological phenomenon, but also a social condition that simultaneously amplifies rationalization and sustains opportunity, justifying its role as a moderating variable in the relationship between internal control, compensation appropriateness, and anti-fraud behavior.

Prior studies have shown that robust internal control systems are beneficial in mitigating accounting fraud ([Larasati and Tjaraka 2025](#); [Setiawan and Soewarno 2025](#); [Bonrath and Eulerich 2024](#)). These findings bolster the idea that robust control mechanisms, like duty segregation, internal audits, and clear reporting systems, can significantly reduce the potential for fraud. Conversely, equitable and commensurate remuneration is thought to alleviate economic strain and occupational discontent, which are frequently catalysts for fraudulent intentions ([Marota et al. 2024](#)).

Nonetheless, empirical data in the literature continues to be conflicting. [Hariyani et al. \(2024\)](#) found that internal control did not significantly affect anti-fraud behavior. Likewise, [Pratiwi et al. \(2020\)](#) indicated that internal control systems do not influence initiatives aimed at mitigating fraudulent conduct. In contrast, research conducted by [Lin et al. \(2022\)](#), [Hidayati et al. \(2022\)](#), and [Kon et al. \(2024\)](#) found that the suitability of remuneration does not substantially affect anti-fraud behavior when other organizational or individual factors are at play. These contradictions indicate the possible existence of a moderating variable that could affect the correlation among internal control, compensation appropriateness, and the anti-fraud behavior. In this context, the bystander effect is considered relevant for future research as a factor that may amplify or attenuate these associations.

The bystander effect in the workplace occurs when employees choose to remain silent or refrain from reporting known violations, believing it is not their personal responsibility or fearing potential social repercussions. Research on organizational behavior shows that the bigger the bystander effect, the less concerned and socially responsible the people in the organization are ([Sufi et al. 2024](#)). In a cooperative environment, where trust and honesty are essential, the formation of this impact can significantly hinder the anti-fraud behavior.

Furthermore, the bystander effect is more likely to manifest among individuals at the operational level or ordinary cooperative members, who may experience different forms of financial pressure and have limited authority within the organization. These individuals are often more vulnerable to remaining silent due to fear, social pressure, or perceived lack of responsibility. Therefore, their perceptions are essential in understanding how internal control and compensation appropriateness operate in real organizational settings. Although this study primarily involves cooperative management, future research is encouraged to expand the scope of respondents to include lower-level employees and members to better capture the social dynamics of the bystander effect.

Previous research on anti-fraud behavior in cooperatives has predominantly concentrated on systemic issues, including internal control and compensation policies, while a limited number have incorporated social behavioral aspects, such as the bystander effect, into anti-fraud behavior frameworks. Nonetheless, these behavioral factors are crucial in elucidating why effectively constructed monitoring systems occasionally fail to deter wrongdoing.

This study seeks to investigate and assess the impact of internal control and compensation appropriateness on the anti-fraud behavior, with the bystander effect serving as a moderating variable. This study utilizes the Fraud Triangle Theory as its principal theoretical framework to examine the impact of pressure, opportunity, and reasoning on individual behavior within the realm of anti-fraud behavior. This study aims to enhance a transparent and integrity-based cooperative governance system through empirical data from cooperatives in Kudus Regency, contributing both theoretically and practically.

Fraud Triangle Theory

[Cressey \(1953\)](#) came up with the Fraud Triangle Theory, which describes the main

reasons why people commit fraud. This theory explains that three key factors pressure, opportunity, and rationalization drive fraudulent behavior ([Puspitaningrum 2019](#)). Financial conditions, performance goals, or unfulfilled personal needs can all cause stress. When an organization's internal control system is weak and can't identify problems, that's when opportunities arise. Rationalization, on the other hand, is the moral reason someone provides for doing something wrong ([Rodrigues 2025](#)).

These three elements are critical in a cooperative setting. Low pay for employees can cause stress, weak internal control mechanisms might create opportunities, and a company culture that allows unethical activity can lead to rationalization. To strengthen anti-fraud behavior, all three elements must be addressed simultaneously: improve internal control mechanisms, pay people fairly, and create an ethical workplace culture that encourages people to disclose infractions.

The Fraud Triangle Theory serves as the conceptual underpinning for this study by elucidating how internal control and appropriate pay act as deterrents against the pressures and opportunities that foster fraudulent activity. The bystander effect, on the other hand, can make these control mechanisms less effective by making people feel like they have to go along with what everyone else is doing at work.

Anti-fraud behavior

An organization's attempts to avoid, find, and lower the chances of financial system problems are all part of anti-fraud behavior ([Khusnah and Soewarno 2022](#)). These efforts include setting up a solid system of internal controls, making sure that pay is fair, and making the organization's culture more ethical.

[Hajjat et al. \(2024\)](#) assert that anti-fraud behavior is more efficacious when firms do not depend exclusively on formal methods like internal audits but additionally enhance the cultural and behavioral aspects of employee conduct. In cooperatives, anti-fraud behavior

necessitates the endorsement of financial transparency, active member engagement, and integrity-driven leadership ([Adiputra and Werastuti 2024](#)).

This study posits anti-fraud behavior as a dependent variable affected by internal control and compensation appropriateness, with the bystander effect acting as a moderating variable that may diminish these correlations. The Fraud Triangle Theory states that fraud can be prevented by reducing pressure, opportunity, and rationalization in the business.

In this study, anti-fraud behavior is conceptualized at the individual behavioral level, referring to employees' anti-fraud tendencies such as honesty in financial reporting, refusal to manipulate data, and compliance with accounting principles. Therefore, this construct does not represent formal organizational prevention systems, but rather reflects behavioral manifestations of anti-fraud behavior within organizational settings.

Internal Control

Management creates a system of policies and processes called internal control to assure that financial reporting is accurate, operations run smoothly, and all rules are followed ([Lin et al. 2023](#)). In the case of cooperatives, internal control makes sure that all financial and administrative tasks are done in a way that is open and accountable.

[Setiawan and Soewarno \(2025\)](#) say that an internal control system must have five main parts: a control environment, risk assessment, control actions, information and communication, and monitoring. When internal controls are set up correctly, they can lower the chance of anyone doing something wrong because every transaction is documented, checked, and open to audit ([Thuy 2025](#); [Asbe et al. 2025](#)).

Prior research indicates that internal control substantially influences the anti-fraud behavior ([Budiadnyani et al. 2024](#); [Usman and Sundari 2024](#); [Adiputra and Werastuti 2024](#); [Bonrath and Eulerich 2024](#); [Fabiya et al. 2025](#)).

A strong internal control system can stop people from changing financial statements, make it harder to steal assets, and encourage a culture of honesty and openness in the workplace. However, the efficacy of internal control ultimately hinges on management commitment and the active participation of all organizational members ([Nadirsyah et al. 2024](#)).

Compensation Appropriateness

The appropriateness of compensation shows how well the benefits people receive match their duties, contributions, and workload. [Kon et al. \(2024\)](#) assert that an equitable and competitive compensation structure is essential for promoting job satisfaction, employee loyalty, and integrity, as fair remuneration reduces the financial pressure dimension of the Fraud Triangle. According to the Fraud Triangle Theory, unjust pay can cause stress, which can lead to further dishonest behavior.

Empirical research demonstrates that suitable pay can diminish people's propensity to engage in fraudulent activities by easing financial stress and improving perceptions of organizational equity ([Grosch and Rau 2020](#); [Okafor et al. 2020](#)). Furthermore, a clear pay system can build confidence between management and staff, which will help the firm stay true to its ethical values.

Well-aligned pay encourages employees to work honestly and focus on their performance. On the other hand, unfair pay can make people angry, lower their morale, and provide them a moral reason to act unethically. Therefore, fair and proper pay is an important tool for anti-fraud behavior in cooperatives.

Bystander Effect

Latané and Darley initially talked about the bystander effect in 1970 ([Choo et al. 2019](#)). This phenomenon is when people are less likely to intervene or do something when they know something is wrong, especially when other people are around, driven by the diffusion of responsibility across all those who are aware of

the situation. In an organizational setting, the bystander effect transpires when employees opt to keep silent or abstain from reporting fraudulent activities due to a belief that it is not their personal obligation, apprehension of social repercussions, or the assumption that others would address the matter ([Okafor et al. 2020](#)).

This occurrence may diminish the efficacy of internal control systems by undermining the social processes for reporting fraud ([Choo et al. 2019](#)). Within the context of the Fraud Triangle Theory, rationalization refers to the internal justification of unethical behavior. However, the bystander effect reflects a different mechanism, namely social inaction, where individuals fail to intervene despite being aware of misconduct. The more powerful the bystander effect in a group, the more people are willing to put up with unacceptable behavior and the less likely they are to engage in anti-fraud behavior ([Sun and Chen 2022](#)).

In this study, the bystander effect is positioned as a social reinforcement mechanism that may indirectly support rationalization by normalizing silence and diffusing responsibility within the organization. Therefore, rather than equating the bystander effect with rationalization, this study extends the Fraud Triangle framework by incorporating social behavioral dynamics that influence the effectiveness of anti-fraud behavior mechanisms. Consequently, it is imperative to regulate social conduct within corporations. Increasing ethical awareness, establishing secure channels for reporting misconduct, and imparting whistleblowing skills can all contribute to mitigating the bystander effect in collaborative environments.

Fraud Triangle Theory: [Cressey \(1953\)](#) posits that a primary factor contributing to fraud is opportunity, namely conditions that enable individuals to engage in misbehavior owing to inadequate oversight. Internal control is a mechanism that makes sure that all of an organization's actions follow the rules and accounting standards that have been set ([Lubis](#)

[et al. 2024](#)). This approach helps to reduce these kinds of chances.

Several studies show that strong internal control can help keep fraud from happening. [Sun and Chen \(2022\)](#) discovered that the efficacy of internal monitoring substantially impacts the anti-fraud behavior. [Yang and Chen \(2023\)](#) also found that a favorable organizational environment, including reduced cognitive rationalization, strengthens individuals' commitment to honest financial conduct. [Puspitaningrum et al. \(2019\)](#) similarly demonstrated that effective monitoring, as one element of the Fraud Triangle, serves as a significant predictor of fraudulent reporting, reinforcing the argument that opportunity-reducing mechanisms are central to fraud prevention. However, [Hariyani et al. \(2024\)](#) discovered that internal control does not consistently have a substantial impact when the company culture is lenient about infractions.

Theoretically, internal control is the key way to anti-fraud behavior because it limits the chances that people will misuse company resources, even though real-world results differ. Consequently, the initial hypothesis is articulated as follows:

H₁: Internal control has a positive effect on anti-fraud behavior.

The second part of the Fraud Triangle Theory is pressure, which happens when people have needs or are unhappy that they can't meet them in a lawful way. A fair and performance-based pay structure is one approach to ease this kind of strain ([Kon et al. 2024](#)).

[Grosch and Rau \(2020\)](#) demonstrated that procedural unfairness in wage differentials significantly increases employees' propensity toward unethical behavior, confirming that compensation equity functions as a deterrent to fraud. [Hidayati et al. \(2022\)](#) similarly found that financial pressure from inadequate compensation is a key predictor of fraudulent reporting within the Fraud Triangle framework. [Kon et al. \(2024\)](#), however, found that the effect

of compensation on fraud intention is mediated by rationalization, suggesting that pay equity alone may be insufficient when individuals have already developed cognitive justifications for unethical conduct.

Even with the inconsistencies, the majority of empirical research indicates that appropriate pay can alleviate pressure as a contributing factor to fraud. Therefore, the second hypothesis is put forward as follows:

H₂: Compensation appropriateness has a positive effect on anti-fraud behavior.

The bystander effect is when people don't do anything when they see something wrong because they think it's not their job or they're afraid of what others will think ([Choo et al. 2019](#)). In a workplace setting, this tendency may lead employees to permit fraudulent activities to transpire without intervention, thereby undermining the culture of reporting and ethical conduct.

[Sufi et al. \(2024\)](#) discovered that the culture of silence stemming from peer unethical behavior and diffused responsibility diminishes the efficacy of internal supervision. [Latan et al. \(2021\)](#) asserted that the bystander effect adversely impacts anti-fraud behavior by diminishing employees' propensity to report abnormalities through formal or informal channels. On the other hand, [Okafor et al. \(2020\)](#) demonstrated that structured whistleblowing mechanisms and awareness programs can help lessen the bystander effect by reinforcing individual accountability within the organization.

In general, the more people in an organization that aren't concerned about fraud, the larger the bystander effect. The third hypothesis is constructed as follows:

H₃: The bystander effect has a negative effect on anti-fraud behavior.

The bystander effect may serve as a moderating element that diminishes the correlation between internal control and the anti-

fraud behavior. In the Fraud Triangle paradigm, internal control serves to eradicate opportunities for fraud. However, the effectiveness of internal control measures may diminish when individuals inside an organization hesitate to address infractions due to the bystander effect.

[Sun and Chen \(2022\)](#) have shown that, despite the good implementation of internal control systems, a pronounced bystander effect might diminish monitoring efficacy due to employees' reluctance to report abnormalities. [Nadirsyah et al. \(2024\)](#) contended that a culture of silence undermines the effectiveness of formal regulatory measures and audit mechanisms within organizations.

Therefore, we can deduce that the bystander effect reduces the relationship between internal control and the anti-fraud behavior. The bystander effect is hypothesized as a moderating variable that influences the strength of the relationship between internal control and anti-fraud behavior. While internal control functions as a formal mechanism to reduce opportunities for fraud, its effectiveness depends on the active participation of organizational members in identifying and reporting irregularities.

When the bystander effect is high, individuals are more likely to remain passive, thereby weakening the effectiveness of internal control systems as opportunity-reducing mechanisms. In this sense, the bystander effect does not directly influence anti-fraud behavior alone, but alters how effectively internal control operates in practice. This dynamic is particularly salient in community-based financial institutions such as cooperatives, where [Adiputra and Werastuti \(2024\)](#) found that the effectiveness of formal control systems is shaped by the interaction between institutional mechanisms and the social and cultural values prevailing within the organization. Therefore, it is proposed that the bystander effect negatively moderates the relationship between internal control and anti-fraud behavior. The argument suggests the following proposal for the fourth hypothesis:

H₄: The bystander effect weakens the relationship between internal control and anti-fraud behavior.

The bystander effect may not only moderate the association between internal control and anti-fraud behavior, but it may also affect the relationship between compensation appropriateness and anti-fraud behavior. The Fraud Triangle Theory posits that equitable pay alleviates pressure, potentially inciting fraudulent intentions. But when the bystander effect is strong, employees may not want to confront or report coworkers who exploit the reward system, which makes anti-fraud behavior efforts less successful.

[Harlos \(2016\)](#) asserted that in workplaces marked by a culture of silence, equitable compensation alone may be inadequate to promote ethical conduct, as dominant social norms endorse inactivity. [Dewi and Kresnandra \(2025\)](#) similarly found that the bystander effect can weaken the relationship between compensatory satisfaction and anti-fraud behavior, as the presence of passive

observers of unethical conduct reduces moral awareness. Such circumstances may render employees more lenient towards fraudulent activities, even if they are content with their remuneration.

These reasons suggest that the bystander effect is likely to diminish the impact of compensation appropriateness on the anti-fraud behavior. Similar to internal control, the effectiveness of compensation appropriateness in reducing fraud is contingent upon the behavioral context within the organization. The bystander effect may weaken this relationship by fostering a culture of silence, where employees choose not to respond to unethical practices despite perceiving compensation as fair. Thus, the bystander effect functions as a moderating variable that diminishes the impact of compensation appropriateness on anti-fraud behavior. Thereby, the fifth hypothesis is written like this:

H₅: The bystander effect weakens the relationship between compensation appropriateness and anti-fraud behavior.

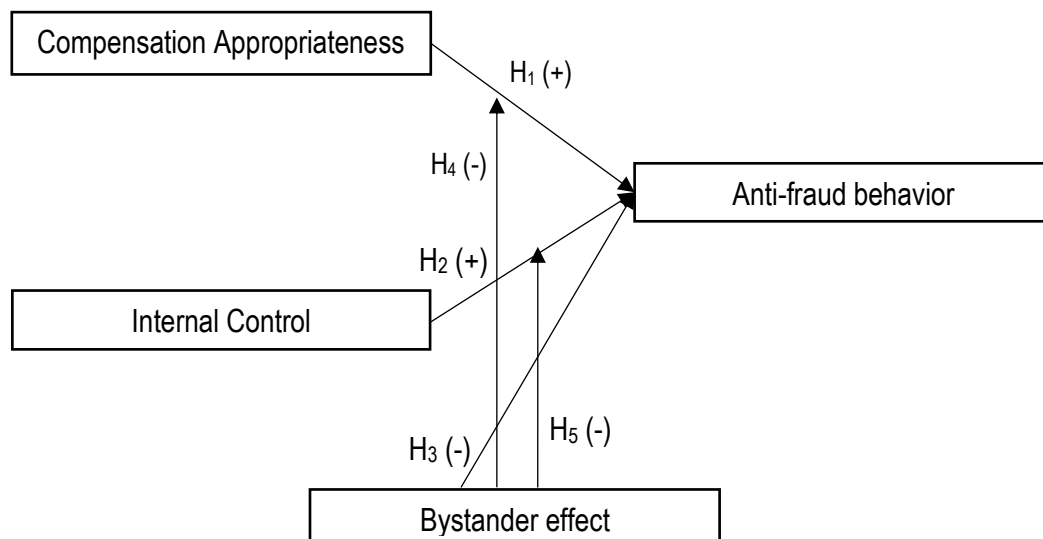


Figure 1. Conceptual Research Model

Figure 1 illustrates the conceptual research model developed in this study. The model incorporates three principal constructs, namely internal control, compensation appropriateness, and the bystander effect, and their theorized relationships with anti-fraud behavior as the dependent variable. Internal control (H_1) and compensation appropriateness (H_2) are hypothesized to exert a significant positive direct effect on anti-fraud behavior, whereas the bystander effect (H_3) is hypothesized to have a significant negative direct effect. Furthermore, the bystander effect is theorized as a moderating variable that attenuates the positive influence of internal control (H_4) and compensation appropriateness (H_5) on anti-fraud behavior. Grounded in the Fraud Triangle Theory, this framework integrates structural and behavioral dimensions to provide a comprehensive theoretical basis for examining anti-fraud behavior within cooperative organizations.

METHOD

This research utilizes a quantitative methodology, namely a survey technique, to gather empirical data from cooperatives in Kudus Regency. Data gathering was conducted using a purposive sampling methodology, which is a non-probability method that identifies respondents based on specific qualities relevant to the research aims. This strategy was chosen because not everyone in the public has adequate knowledge and understanding of accounting systems and internal controls in cooperatives.

The criteria for sampling were (1) cooperatives with active legal standing; (2) cooperatives that hold Annual Member Meetings (RAT) on a regular basis; and (3) respondents who are currently cooperative supervisors, secretaries, or treasurers. The study population comprised 117 active cooperatives in Kudus Regency, according to statistics from the Kudus Office of Cooperatives and SMEs (2024). Based on these criteria, 351 valid responses were

collected from respondents who entirely filled out the questionnaire.

Although multiple respondents were obtained from each cooperative, this study treats responses at the individual level because the unit of analysis focuses on individual perceptions and behaviors. Additionally, the data were tested for collinearity and did not indicate clustering bias. Future studies are encouraged to consider multilevel modeling to capture nested data structures.

From July to September 2025, data was collected utilizing both direct distribution and online forms (Google Forms). Before being analyzed, all of the answers were checked for completeness and consistency. Out of the 380 surveys sent out, 351 were found to be legitimate for further study.

The sample size was ascertained using power analysis utilizing G*Power software (F-test: Linear multiple regression –fixed model, R^2 deviation from zero). The analysis included five predictors (X_1 , X_2 , Z , $X_1 \times Z$, and $X_2 \times Z$) based on the assumptions of a medium effect size ($f^2 = 0.15$), a significance level of $\alpha = 0.05$, and a statistical power of 0.95. The calculation revealed that the minimum sample size required for the study was 138, with a power value of 0.951 and a noncentrality parameter (λ) of 20.70. As a result, the actual sample of 351 respondents was more than the minimum needed, which meant that there was enough statistical power to determine medium to large effects.

The research tool was a structured questionnaire that was split into two primary parts. The first part had questions to screen people and profiles of the people who answered, such as their gender, age, position, education, and length of time in the job. The second part had statements that measured the research constructs. These were rated on a six-point Likert scale, with 1 meaning "strongly disagree" and 6 meaning "strongly agree."

The six-point Likert scale was intentionally employed to eliminate the neutral

midpoint and encourage respondents to express a clear position toward each statement. This approach is particularly relevant in behavioral and ethical research, such as anti-fraud behavior, where neutral responses may obscure actual perceptions or reduce measurement sensitivity. By encouraging respondents to indicate a tendency toward agreement or disagreement, the scale enhances response discrimination and minimizes central tendency bias, thereby improving the robustness of the data collected.

All indicators were modified from previously tested and dependable studies. The internal control construct was adapted from [Nadirsyah et al. \(2024\)](#) and assessed through five indicators: comprehensiveness of the control system, effectiveness of risk assessment and mitigation, systematic control activities, information and communication effectiveness, and periodic monitoring and evaluation.

The compensation appropriateness framework was adapted from [Kon et al. \(2024\)](#) and [Grosch and Rau \(2020\)](#), assessed by two indicators: the congruence between financial remuneration and employee expectations, and the perceived justice and equity of the compensation framework. This framework is assessed by two indicators: the congruence between financial remuneration and employee expectations, and the perceived justice and equity of the compensation framework.

The bystander effect construct was adapted from [Choo et al. \(2019\)](#) and [Sufi et al. \(2024\)](#), assessed through six indicators reflecting passive behavioral tendencies, reluctance to report fraud, hesitation to intervene in unethical situations, diffusion of responsibility, fear of social consequences, and the assumption that others will take action. The bystander effect construct in this study is conceptualized strictly as a passive behavioral response, referring to individuals' reluctance to report or intervene when witnessing unethical or fraudulent activities. To maintain conceptual clarity, this study emphasizes indicators related

to silence, inaction, and diffusion of responsibility rather than active participation in fraud.

The measurement focuses on individuals' tendencies to remain silent, assume that others will take action, avoid reporting misconduct due to fear of social consequences, and perceive reporting as outside their responsibility. This approach aligns with the original psychological definition of the bystander effect ([Latané and Darley 1970](#)), which emphasizes passive non-intervention rather than active wrongdoing.

Although some prior studies incorporate broader ethical dimensions, this study deliberately limits the construct to passive behavioral tendencies to avoid conceptual overlap with individual morality or rationalization constructs.

The system for anti-fraud behavior was founded on [Cressey \(1953\)](#), Fraud Triangle Theory, which looks at ways to lower the pressure, chance, and rationalization that could lead to fraud. The measurement was adapted from [Khusnah and Soewarno \(2022\)](#) and used five indicators: not changing or lying about accounting data, being honest and complete in financial statements, consistently using accounting principles, stopping asset misuse or fake expenses, and keeping transaction evidence real.

Before collecting data on a large scale, a pilot test was done with 30 cooperative respondents who were not part of the main sample to confirm that the questionnaire items were clear and consistent. The findings demonstrated that all items exhibited item-total correlations greater than 0.30 and Cronbach's Alpha values surpassing 0.70, signifying that all constructs were both reliable and valid. After the pilot test, no major changes were made.

To assess common method bias, a full collinearity test was conducted using VIF values. All values were below the threshold of 3.3, indicating that common method bias is unlikely to be a serious concern. This approach follows the recommendation of [Kock and Hadaya](#)

(2018), which suggests that full collinearity VIF values below 3.3 indicate the absence of substantial common method bias in PLS-SEM models.

SmartPLS version 3.0 was used to analyze the data. This process had two primary parts: first, the measurement model (outer model) was tested, and then the structural model (inner model) was tested. The initial phase evaluated convergent validity, discriminant validity, and construct reliability through factor loadings, average variance extracted (AVE), composite reliability (CR), and Cronbach's Alpha. The second stage analyzed proposed correlations using path coefficients and assessed statistical significance through the bootstrapping process. Moderation analysis of the bystander effect utilized the two-stage methodology proposed by [Hair et al. \(2019\)](#) to ascertain if the moderating variable diminishes or enhances the correlations between independent and dependent variables. This design is intended to provide empirical evidence

on how internal control and compensation appropriateness influence anti-fraud behavior, with the bystander effect acting as a moderating variable.

RESULTS

The study commenced with the validation and reliability assessment of instruments to confirm that the measurement tools employed satisfied data adequacy criteria before executing the structural model analysis utilizing SmartPLS 3.0. The Pearson product-moment correlation was used to evaluate its validity. This evaluation looked at the relationship between the score for each item and the total score for the construct. Cronbach's alpha coefficients were used to verify dependability at the same time. The criteria used were that an item is valid if the Pearson correlation coefficient exceeds 0.30, and a construct is reliable if the Cronbach's Alpha value is equal to or greater than 0.70 ([Hair et al. 2019](#)).

Table 1. Demographic Profile of Respondents

Demographic Characteristics	Category	Frequency	Percentage
Gender	Male	164	46.7%
	Female	187	53.3%
Age	< 25 years	74	21%
	26–40 years	218	62%
	> 40 years	59	17%
Position	Treasurer	154	44%
	Secretary	116	33%
	Supervisor	81	23%
	Senior High School	49	14%
Education	Diploma	81	23%
	Bachelor's Degree	207	59%
	Postgraduate	14	4%
Working Experience	< 3 years	95	27%
	3–5 years	204	58%
	> 5 years	52	15%

Source: Processed primary data (2025)

Respondents' Demographic Profile

Table 1 presents the demographic characteristics of the 351 respondents involved in this study. The respondents comprised cooperative supervisors, secretaries, and treasurers from active cooperatives in Kudus Regency. Female respondents constituted the majority of the sample (53.3%; $n = 187$), and male respondents accounted for 46.7% ($n = 164$). Respondents aged between 26 and 40 years represented the largest age group (62%; $n = 218$), indicating that the majority of participants were in their productive working years and directly engaged in cooperative financial management. Respondents under 25 years of age comprised 21% ($n = 74$), and respondents above 40 years of age constituted the remaining 17% ($n = 59$).

Treasurers constituted the largest occupational group (44%; $n = 154$), reflecting their central role in cooperative financial administration. Secretaries represented 33% of respondents ($n = 116$), and supervisors accounted for 23% ($n = 81$). Respondents holding bachelor's degrees formed the majority in terms of educational attainment (59%; $n = 207$), followed by diploma graduates (23%; $n = 81$), senior high school graduates (14%; $n = 49$), and postgraduate degree holders (4%; $n = 14$). Respondents with three to five years of work experience comprised the largest tenure group (58%; $n = 204$). Respondents with less than three years of experience constituted 27% ($n = 95$), and those with more than five years accounted for 15% ($n = 52$).

The demographic profile of the sample supports the representativeness and data quality of this study. Respondents' educational qualifications and their direct involvement in cooperative financial operations equip them with the knowledge and practical experience necessary to provide reliable information on internal control systems, compensation policies, and anti-fraud behavior. The sample is therefore considered sufficiently representative of

cooperative practitioners' perceptions and experiences in the area of fraud prevention.

Measurement model

The assessment model in this study was assessed for construct validity and reliability, encompassing both convergent and discriminant validity tests (Hair et al. 2019). The outer loading and Average Variance Extracted (AVE) values were used to assess for convergent validity. The findings indicate that all indicators possess outer loading values exceeding 0.708, signifying that each indicator sufficiently represents its corresponding construct (Hair et al. 2019). Furthermore, the AVE values beyond 0.50 indicate that each construct accounts for over 50% of the variance of its indicators, thus fulfilling the requirements for convergent validity.

Thereafter, Composite Reliability (CR) and Cronbach's Alpha were used to test the reliability of the construct. A construct is deemed dependable when both the Composite Reliability (CR) and Cronbach's Alpha values are above 0.70 (Hair et al. 2019). The findings demonstrate that all constructs internal control, compensation appropriateness, bystander impact, and anti-fraud behavior exhibit CR values exceeding 0.865 and Cronbach's Alpha values surpassing 0.773. These results verify that all constructs exhibit substantial internal consistency and can be regarded as reliable measuring tools.

The Heterotrait Monotrait (HTMT) ratio was used to assess discriminant validity again. This method checks how different each construct is from the others. The findings indicate that all HTMT values are below the 0.90 threshold, so validating that the constructs provide sufficient discriminant validity without much overlap (Hair et al. 2019).

The Variance Inflation Factor (VIF) analysis was also used to see whether there was any chance of multicollinearity between the constructs. The VIF values were between 1.03 and 1.21, which is much lower than the maximum value of 5 (Hair et al. 2019). This means that there are no multicollinearity

problems that could affect the model's estimates.

In general, the results indicate that all of the constructs internal control, compensation appropriateness, bystander effect, and anti-fraud behavior meet the standards for convergent validity, discriminant validity, and construct reliability. Consequently, the measurement model is deemed sufficient and may proceed to the structural model evaluation phase.

Structure model

Before looking at the structural correlations, the Variance Inflation Factor (VIF) was used to assess for collinearity and guarantee that the regression results were not biased. The VIF value must be below 3 ([Hair et al. 2019](#)). The study model has no collinearity issues since all VIF values are between 1.03 and 1.21, well below the threshold.

The metrics for evaluating the structural model include the coefficient of determination (R^2), cross-validated redundancy (Q^2), Standardized Root Mean Square Residual (SRMR), and path coefficients ([Hair et al. 2019](#)). The R^2 value of 0.775 shows that internal

control, compensation appropriateness, and the bystander effect together explain 77.5% of the differences in anti-fraud behavior. The Q^2 value of 0.643 indicates a significant predictive relationship between exogenous and endogenous constructs, as it exceeds zero ([Hair et al. 2019](#)). The SRMR value of 0.049 shows that the model fits perfectly because it is below the 0.08 criterion.

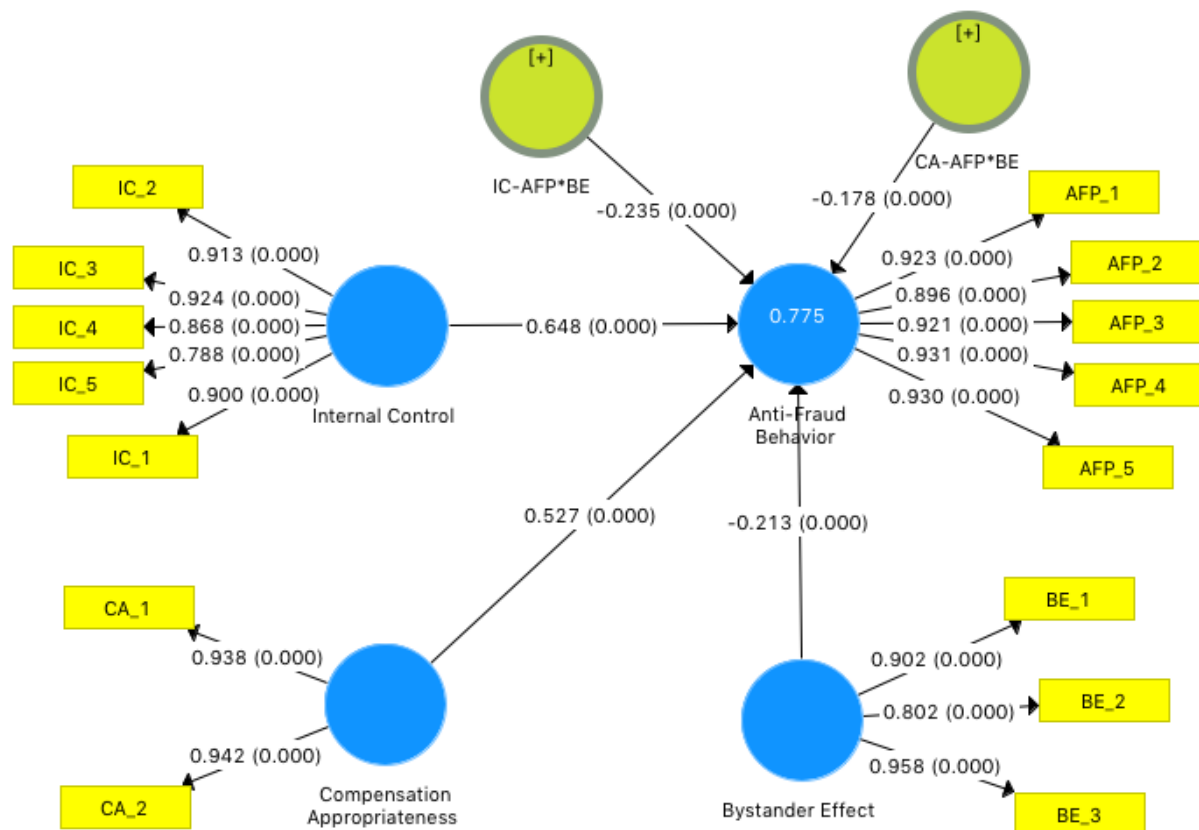
Path coefficients

The route coefficient study utilized the bootstrapping method with a 95% confidence level and 10,000 subsamples, the significance of the relationships was assessed using bootstrapping procedures, with p-values below 0.05 indicating statistically significant effects. The reported path coefficients (β) reflect the strength and direction of the relationships ([Hair et al. 2019](#)). Figure 2 shows the outcomes of this analysis. Table 2 presents the results of the hypothesis testing based on the bootstrapping procedure with 10,000 subsamples at a 95% confidence level. The table summarizes the path coefficients (β), p-values, and the supported or rejected status for each of the five hypotheses tested in this study.

Table 2. Hypotheses results

Hypotheses	Path Coefficients (β)	p - values	Supported
H ₁ : Internal control has a positive effect on anti-fraud behavior	0.648	0.000	Yes
H ₂ : Compensation appropriateness has a positive effect on anti-fraud behavior	0.527	0.000	Yes
H ₃ : The bystander effect has a negative effect on anti-fraud behavior	-0.213	0.001	Yes
H ₄ : The bystander effect weakens the relationship between internal control and anti-fraud behavior	-0.235	0.000	Yes
H ₅ : The bystander effect weakens the relationship between compensation appropriateness and anti-fraud behavior	-0.178	0.000	Yes

Source: Created by authors (2025)



Source: Processed Data using SmartPLS (2025)

Figure 2. Path Coefficient Diagram and P-Values

Figure 2 presents the path coefficient diagram generated through PLS-SEM analysis using SmartPLS 3.0. The diagram visually represents the strength and direction of the relationships among the study's constructs. The path from internal control to anti-fraud behavior shows the strongest positive effect ($\beta = 0.648$), followed by compensation appropriateness ($\beta = 0.527$), indicating that both structural mechanisms substantially contribute to anti-fraud behavior. The bystander effect exhibits a negative direct path to anti-fraud behavior ($\beta = -0.213$), as well as negative moderating paths on both internal control ($\beta = -0.235$) and compensation appropriateness ($\beta = -0.178$). All paths are statistically significant at $p < 0.05$, confirming the robustness of the proposed theoretical model.

The analysis indicates that internal control exerts a favorable and significant influence on the anti-fraud behavior ($\beta = 0.648$; $p = 0.000$). In the same way, compensation appropriateness also has a favorable and substantial effect on anti-fraud behavior ($\beta = 0.527$; $p = 0.000$). These results show that cooperatives can more effectively strengthen anti-fraud behavior when internal control systems and compensation policies are effectively implemented. Although the compensation appropriateness construct is measured using two indicators, prior studies suggest that two-item constructs are acceptable in PLS-SEM when they capture core conceptual dimensions clearly and demonstrate adequate reliability.

On the other hand, the bystander effect has a negative and significant effect on anti-

fraud behavior ($\beta = -0.213$; $p = 0.001$). This means that the more likely individuals are to remain silent or refrain from taking action when they see wrongdoing at work, the less effective anti-fraud behavior efforts are.

The moderation test results also indicate that the bystander effect makes the link between internal control and anti-fraud behavior weaker ($\beta = -0.235$; $p = 0.000$) and the link between compensation appropriateness and anti-fraud behavior weaker ($\beta = -0.178$; $p = 0.000$). This indicates that while an effective internal control system and equitable reward structure enhance anti-fraud behavior, their efficacy may wane when individuals within the organization opt not to disclose, confront, or repudiate fraudulent conduct in their environment.

These results generally support the Fraud Triangle Theory ([Cressey, 1953](#)), which posits that effective control systems and suitable incentives can reduce fraud. However, when the organization accepts rationalization and lenient attitudes towards unethical conduct, the risk of fraud escalates.

The discourse on the impact of internal control on anti-fraud behavior examines the first premise, which posits that internal control has a beneficial effect on mitigating accounting fraud. The analytical results indicate that the association between the two variables is strong and positive. This means that the more effective the anti-fraud behavior efforts of cooperatives are, the greater the internal control they have established.

Studies indicate that cooperatives consistently employing internal control systems can mitigate opportunities for individuals to alter their financial statements. This finding is consistent with [Cressey \(1953\)](#) and the Fraud Triangle Theory, which asserts that opportunity is a primary component facilitating fraud, alongside pressure and rationalization. The outcome corroborates the findings of [Lubis et al. \(2024\)](#), which indicate that robust internal control systems enhance anti-fraud behavior within the

public sector. Internal audits, task separation, and detailed transaction documentation are all effective ways to supervise people and make it harder for them to change financial information.

In the case of cooperatives in Kudus Regency, internal control serves as both an administrative instrument and a control culture that promotes honesty and openness inside the group. When managers and members know how important control processes are, they obey the rules more closely and are more aware of symptoms of fraud. Consequently, strong internal control is an important part of developing cooperative governance that is accountable and has high moral standards.

The second hypothesis asserts that compensation appropriateness enhances the anti-fraud behavior. This finding indicates that fair and equitable pay enhances employees' moral commitment and reduces the likelihood of fraudulent behavior. This data corroborates the theoretical assertion that financial strain or discontent with rewards may serve as a principal catalyst within the Fraud Triangle. [Wang et al. \(2024\)](#) elucidate that when individuals perceive their compensation as inadequate in relation to their obligations, they are more inclined to engage in unethical shortcuts. As a result, compensation appropriateness becomes a key way to lower the "pressure" part of the theory.

This conclusion is further supported by [Grosch and Rau \(2020\)](#), who found that fair and transparent wage structures reduce employees' propensity toward unethical conduct by removing the procedural injustice that often serves as rationalization for fraud. In cooperatives, equitable remuneration commensurate with employees' genuine contributions promotes organizational justice, therefore diminishing the incentive for fraudulent behavior. Field observations demonstrate that cooperatives employing transparent and performance-oriented pay frameworks see reduced occurrences of financial irregularities. This shows how important it is to review pay rules to ensure they match up with workload and

performance goals while also making employees more ethical.

The results also reveal that the bystander effect has a big and detrimental effect on anti-fraud behavior. This means that the more bystanders there are in an organization, the less effective anti-fraud behavior initiatives will be. This occurs when individuals are aware of unethical behavior but choose not to intervene or report the misconduct because they think someone else will.

This finding aligns with the theory of bystander indifference in social psychology, which posits that an individual's moral responsibility diminishes in the presence of others within the same context ([Choo et al. 2019](#)). In a cooperative environment, when employees regard anti-fraud behavior as "someone else's responsibility," the organization's social control mechanisms deteriorate, permitting wrongdoing to continue. [Marota et al. \(2024\)](#) similarly discovered that a culture of silence diminishes the efficacy of internal reporting or whistleblower mechanisms. Therefore, cooperatives need to build up their members' moral bravery so that they can intervene when they see someone doing something wrong.

The study also indicates that the bystander effect makes the link between internal control and anti-fraud behavior weaker. In other words, an internal control system's effectiveness is reduced when people in the organization disregard infractions, even if the system itself is well-designed. These findings indicate that anti-fraud behavior depends not only on formal processes. It also depends on how people act in organizations. The control environment becomes less effective as a preventive measure when workers are afraid to speak up or do something. This evidence backs up [Cressey's \(1953\)](#) claim in the Fraud Triangle Theory that all members of an organization must have moral integrity and ethical awareness in order for control to work.

This result aligns with [Sun and Chen \(2022\)](#), who demonstrated that even well-designed internal control systems lose their deterrent effect when individuals' perceptions of fraud opportunity remain unchanged due to passive social norms. Consequently, anti-fraud behavior initiatives in cooperatives must encompass social and behavioral aspects, ensuring that control systems are not merely procedural but also foster ethical internalization.

The findings further illustrate that the bystander effect adversely influences the correlation between compensation appropriateness and the anti-fraud behavior. This means that even if the pay is fair, it won't have as much of a beneficial effect on ethical behavior if the organization has a culture of quiet. This implies that social circumstances may mask the psychological advantages of perceived fairness. Employees who know about fraud but remain silent due to fear of job loss or group disapproval weaken the role of pay as a deterrent to bad behavior.

This conclusion supports [Dewi and Kresnandra \(2025\)](#), who found that a lack of social solidarity in organizations makes the link between fair pay and good behavior weaker. In a cooperative setting, this finding highlights the significance of fostering a reporting culture and implementing whistleblower protection measures to guarantee that personnel feel secure and supported in maintaining organizational integrity.

In cooperative settings, the collective nature of governance may intensify the bystander effect, as strong social ties can discourage individuals from reporting misconduct. This cultural dynamic explains why formal control mechanisms may become less effective when social silence prevails.

These findings indicate that anti-fraud behavior in cooperatives does not depend solely on formal mechanisms such as internal control and compensation systems. Instead, behavioral factors play a crucial role in determining the effectiveness of these mechanisms. In

cooperative environments characterized by close social relationships, individuals may prioritize group harmony over ethical responsibility, which strengthens the bystander effect. This condition may reduce the effectiveness of internal control systems, even when they are well designed.

CONCLUSION

This study develops a theoretical model of anti-fraud behavior in cooperatives based on Cressey's Fraud Triangle Theory, which explains that fraud arises from three key elements: pressure, opportunity, and rationalization. The model examines the influence of internal control and compensation appropriateness on anti-fraud behavior, with the bystander effect incorporated as a moderating variable.

The results highlight several key findings. First, internal control has a big and beneficial effect on anti-fraud behavior. This implies that implementing an effective internal control system reduces the likelihood of fraud. Second, the appropriateness of remuneration also has a favorable influence on anti-fraud behavior. This means that fair and equitable pay lowers financial stress and makes employees more morally committed. Third, the bystander effect makes anti-fraud behavior less effective, which means that a culture of quiet in the organization weakens anti-fraud behavior. Fourth, the bystander effect adversely influences the relationship between internal control and anti-fraud behavior, suggesting that robust control systems lose efficacy when individuals exhibit passivity towards unethical conduct. Fifth, the bystander effect also makes the link between fair pay and anti-fraud behavior weaker. This means that fair pay has less of an influence on ethical behavior if the organization allows people to stay quiet or do nothing about dishonest acts.

The study has several real-world effects. First, cooperatives should strengthen

their internal control systems by undertaking audits often, segregating tasks, and making sure that reports are understandable. This will make it less likely that fraud happens. Second, pay schemes should be based on performance and responsibility. These steps will help ease the financial stress that leads to a lot of fraud. Third, cooperative management needs to develop a culture at work that supports moral courage, or the willingness to speak out and do something about things that aren't right. This can be done through ethics training and safe ways for people to report wrongdoing. Fourth, leaders of cooperatives must guarantee that each member feels personally responsible for stopping fraud, rather than just depending on official oversight.

This study theoretically enriches anti-fraud behavior literature by integrating structural and behavioral dimensions, particularly by incorporating the bystander effect as a social factor that may weaken the effectiveness of internal control and compensation mechanisms. These findings highlight that anti-fraud behavior depends not only on formal mechanisms but also on employee behavior.

But this study has certain problems. It concentrates solely on cooperatives within Kudus Regency, and the data were acquired via perceptual surveys, perhaps constraining generalizability. Subsequent study should broaden its scope to include cooperatives in various locations and utilize mixed-method approaches to investigate the psychological and social aspects that more profoundly affect anti-fraud behavior.

In conclusion, this study enhances the theoretical and practical frameworks for developing anti-fraud behavior strategies in cooperatives by highlighting the fortification of internal control systems, the refinement of compensation policies, and the promotion of an ethical culture that alleviates the adverse effects of the bystander phenomenon.

REFERENCES

- Adiputra, I. Made Pradana, and Desak Nyoman Sri Werastuti. 2024. "Levers of Control, Catur Purusa Artha and Financial Performance of Village Credit Institutions: Belief System versus Religious Values." *Jurnal Bisnis Dan Akuntansi* 26 (1): 173–196. <https://doi.org/10.34208/jba.v26i1.2469>.
- Arif. 2025. "Menkop Cabut Izin Koperasi di Kudus, Terlibat Kecurangan Minyakita." March 15. <https://jogja.viva.co.id/pantura-rawa/2201-menkop-cabut-izin-koperasi-di-kudus-terlibat-kecurangan-minyakita>.
- Asbe, Dr Chetana, Dr Anita Sahoo, Dr P. Hameem Khan, AravindanMunusamy Kalidhas, Ish Kapila, Prateek Aggarwal, and Dr Neha Agrawal. 2025. "The Role of Forensic Accounting in Detecting Financial Fraud in Emerging Markets." *International Journal of Accounting and Economics Studies* 12 (SI-1): 93–96. <https://doi.org/10.14419/2smzj47>.
- Bonrath, Annika, and Marc Eulerich. 2024. "Internal Auditing's Role in Preventing and Detecting Fraud: An Empirical Analysis." *International Journal of Auditing* 28 (4): 615–631. <https://doi.org/10.1111/ijau.12342>.
- Budiadnyani, Ni Putu, Putu Pande R. Aprilyani Dewi, I. G. A. Desy Arlita, and Putu Sri Arta Jaya Kusuma. 2024. "The Role of Tri Kaya Parisudha as a Moderator in Whistleblowing Systems and the Effectiveness of Internal Controls for Fraud Prevention." In *Technology and Business Model Innovation: Challenges and Opportunities*, edited by Bahaaeddin Alareeni and Allam Hamdan, 923:367–377. no. 1. Cham: Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-55911-2_35.
- Choo, Lawrence, Veronika Grimm, Gergely Horváth, and Kohei Nitta. 2019. "Whistleblowing and Diffusion of Responsibility: An Experiment." *European Economic Review* 119 (October 2019): 287–301. <https://doi.org/10.1016/j.euroecorev.2019.07.010>.
- Cressey, Donald R. 1953. *Other People's Money; a Study of the Social Psychology of Embezzlement*. Other People's Money; a Study of the Social Psychology of Embezzlement. New York, NY, US: Free Press.
- Dewi, Ni Putu Handayani Utami, and Anak Agung Ngurah Agung Kresnandra. 2025. "The Influence of the Bystander Effect, Individual Morality, and Financial Pressure on the Tendency to Commit Fraud in Village Credit Institutions (LPDs) Across Tabanan Regency." *International Journal of Management Research and Economics* 3 (2): 327–340. <https://doi.org/10.54066/ijmre-itb.v3i2.3441>.
- Fabiyl, Olanrewaju Oluwatimileyin, Olateju Dolapo Aregbesola, Olatunde Wright, Sunday Olusola Omojola, and Peace Ebunoluwa Kolawole. 2025. "Internal Control System and Fraud Prevention in Nigerian Deposit Money Banks." *International Journal of Economics and Financial Issues* 15 (3): 179–183. <https://doi.org/10.32479/ijefi.17537>.
- Grosch, Kerstin, and Holger A. Rau. 2020. "Procedural Unfair Wage Differentials and Their Effects on Unethical Behavior." *Economic Inquiry* 58 (4): 1689–1706. <https://doi.org/10.1111/ecin.12906>.
- Hair, Joseph F., Jeffrey J. Risher, Marko Sarstedt, and Christian M. Ringle. 2019. "When to Use and How to Report the Results of PLS-SEM." *European Business Review* 31 (1): 2–24. <https://doi.org/10.1108/EBR-11-2018-0203>.
- Hajjat, Emad, Majed Alzoubi, Leqaa Al-Othman, Lu'ay Wedyan, and Osama Hayajneh. 2024. "The Role of Forensic Accounting in Enhancing Financial Transparency and Minimizing Fraud in Jordanian Institutions." *International Journal of Industrial Engineering & Production Research* 35 (3): 207–216. <https://doi.org/10.22068/ijiepr.35.3.2092>.
- Hariyani, Eka, Supriono Supriono, Rheny Afriana Hanif, Sem Paulus Silalahi, and Meilda Wiguna. 2024. "Determinants Influencing Fraud Detection: Role of Internal Auditors' Quality." *Problems and Perspectives in Management* 22 (2): 51–60. [https://doi.org/10.21511/ppm.22\(2\).2024.05](https://doi.org/10.21511/ppm.22(2).2024.05).
- Harlos, Karen. 2016. "Employee Silence in the Context of Unethical Behavior at Work: A Commentary." *German Journal of Human Resource Management* 30 (3–4): 345–355. <https://doi.org/10.1177/2397002216649856>.
- Hudayati, Ataina, Titis Khairun Nisa, and Zuraidah Mohd Sanusi. 2022. "Financial Pressure and Related Party Transactions on Financial Statement Fraud: Fraud Triangle Perspective." *International Journal of Business and Emerging Markets* 14 (2): 213–230. <https://doi.org/10.1504/IJBEM.2022.121903>.

- Khusnah, Hidayatul, and Noorlailie Soewarno. 2022. "Mediation Effects of Moral Reasoning and Integrity in Organizational Ethical Culture on Accounting Fraud Prevention." *ABAC Journal* 42 (4): 1–13. <https://doi.org/10.14456/abaci.2022.54>.
- Kock, Ned, and Pierre Hadaya. 2018. "Minimum Sample Size Estimation in PLS-SEM: The Inverse Square Root and Gamma-Exponential Methods." *Information Systems Journal* 28 (1): 227–261. <https://doi.org/10.1111/isj.12131>.
- Kon, Zhee San, Yoong Hing Lim, Yuen Onn Choong, Jacy Rani Paloosamy, and Boon Tiong Low. 2024. "The Influence of Pressure on Intention to Commit Fraud: The Mediating Role of Rationalization and Opportunities." *Asian Journal of Business Ethics* 13 (1): 175–195. <https://doi.org/10.1007/s13520-024-00192-x>.
- Larasati, Rudiawie, and Heru Tjaraka. 2025. "The Strengthening Fraud Prevention in Higher Education: An Empirical Study of Internal Control System and Good University Governance." *Qubahan Academic Journal* 5 (3): 411–426. <https://doi.org/10.48161/qaj.v5n3a1903>.
- Latan, Hengky, Charbel Jose Chiappetta Jabbour, and Ana Beatriz Lopes de Sousa Jabbour. 2021. "Social Media as a Form of Virtual Whistleblowing: Empirical Evidence for Elements of the Diamond Model." *Journal of Business Ethics* 174 (3): 529–548. <https://doi.org/10.1007/s10551-020-04598-y>.
- Latané, Bibb, and John M. Darley. 1970. *The Unresponsive Bystander: Why Doesn't He Help?* Appleton-Century-Crofts.
- Lin, Bin, Junqin Huang, Youliang Liao, Shanmin Liu, and Haiyan Zhou. 2022. "Why Do Employees Commit Fraud? Theory, Measurement, and Validation." *Frontiers in Psychology* 13 (October 2022): 1–13. <https://doi.org/10.3389/fpsyg.2022.1026519>.
- Lin, Dongchuan, Xuesong Tang, Hongyi Li, and Guozhu He. 2023. "An Empirical Research on Employee Welfare and Internal Control Quality." *PLOS ONE* 18 (8): 1–19. <https://doi.org/10.1371/journal.pone.0290009>.
- Lubis, Henny Zurika, Maya Sari, Andi Auliya Ramadhany, Debby Chyntia Ovami, and Istiqomah Rahmayati Brutu. 2024. "Effect of Internal Audit, Internal Control, and Audit Quality on Fraud Prevention: Evidence from the Public Sector in Indonesia." *Problems and Perspectives in Management* 22 (2): 40–50. [https://doi.org/10.21511/ppm.22\(2\).2024.04](https://doi.org/10.21511/ppm.22(2).2024.04).
- Marota, Rochman, Ida Rosnidah, and Razana Juhaida Johari. 2024. "The Effect of Attitude towards Behaviour, Local Wisdom Culture, Whistleblowing Intention on Fraud Prevention." *Edelweiss Applied Science and Technology* 8 (5): 465–477. <https://doi.org/10.55214/25768484.v8i5.1710>.
- Nadirsyah, Mirna Indriani, and Ratna Mulyany. 2024. "Enhancing Fraud Prevention and Internal Control: The Key Role of Internal Audit in Public Sector Governance." *Cogent Business & Management* 11 (1): 1–22. <https://doi.org/10.1080/23311975.2024.2382389>.
- Okafor, Oliver Nnamdi, Festus A. Adebisi, Michael Opara, and Chidinma Blessing Okafor. 2020. "Deployment of Whistleblowing as an Accountability Mechanism to Curb Corruption and Fraud in a Developing Democracy." *Accounting, Auditing & Accountability Journal* 33 (6): 1335–1366. <https://doi.org/10.1108/AAAJ-12-2018-3780>.
- Patskan, Yulia, Karina Nazarova, Tetiana Kopotienko, Viktoriia Miniailo, Vladyslav Pavlov, and Natalia Novikova. 2025. "Forensic Diagnostics, Anti-Corruption, and Internal Audit in Ensuring Efficient Company Management in an Open Economy." *Financial and Credit Activity: Problems of Theory and Practice* 4 (63): 63–79. <https://doi.org/10.55643/fcaptp.4.63.2025.4776>.
- Pratiwi, Klara Indra, Dini Rosdini, and Fury Fitriyah. 2020. "Influence of Transformational Leadership Style, Internal Control System, and Government Internal Auditor (APIP) Capability Level on Fraud Prevention." *International Journal of Innovation, Creativity and Change* 10 (11): 705–726. [https://www.ijicc.net/images/vol10iss11/101147 Pratiwi 2020 E R.pdf](https://www.ijicc.net/images/vol10iss11/101147%20Pratiwi%2020%20E%20R.pdf).
- Puspitaningrum, Mia Tri, Eindye Taufiq, and Satria Yudhia Wijaya. 2019. "Pengaruh Fraud Triangle Sebagai Prediktor Kecurangan Pelaporan Keuangan." *Jurnal Bisnis Dan Akuntansi* 21 (1): 77–88. <https://doi.org/10.34208/jba.v21i1.502>.
- Rachmawati, Rachmawati. 2022. "Pendiri Koperasi di Kudus Rugikan Nasabah hingga Rp 267 Miliar, untuk Beli Tanah hingga Saham." *KOMPAS.com*, October 12.

<https://regional.kompas.com/read/2022/10/12/175700678/pendiri-koperasi-di-kudus-rugikan-nasabah-hingga-rp-267-miliar-untuk-beli>.

- Rashid, Md Abdur, Abdullah Al-Mamun, Hajar Roudaki, and Qaiser Rafique Yasser. 2022. "An Overview of Corporate Fraud and its Prevention Approach." *Australasian Accounting, Business and Finance Journal* 16 (1): 101–118. <https://doi.org/10.14453/aabfj.v16i1.7>.
- Rodrigues, Caio César Coelho. 2025. "The Excuses We Make': Defining Eight Corruption Rationalization Categories." *Regulation & Governance* 15 (1): 1–15. <https://doi.org/10.1111/rego.70068>.
- Setiawan, Nanang, and Noorlailie Soewarno. 2025. "The Examination of Asset Misappropriations in Managers' Workplaces Using Hexagon's Fraud and the Moderating Impact of Perceived Strength of Internal Control." *Journal of Financial Crime* 32 (4): 860–877. <https://doi.org/10.1108/JFC-08-2024-0254>.
- Sufi, Aneka Fahima, Usman Raja, and Arif Nazir Butt. 2024. "Impact of Peer Unethical Behaviors on Employee Silence: The Role of Organizational Identification and Emotions." *Journal of Business Ethics* 190 (4): 821–839. <https://doi.org/10.1007/s10551-023-05397-x>.
- Sun, Xiaonan, and Yan Chen. 2022. "Why Do People with Similar Levels of Internal Control Differ in Their Likelihood to Commit Fraud? Analysis of the Moderating Effect of Perceived Opportunity to Commit Fraud." *Frontiers in Psychology* 13 (November 2022): 1–9. <https://doi.org/10.3389/fpsyg.2022.999469>.
- Thuy, Lai Thi Thu. 2025. "Determinants of Internal Audit Effectiveness and Its Mediating Role in Fraud Prevention." *Edelweiss Applied Science and Technology* 9 (4): 1252–1264. <https://doi.org/10.55214/25768484.v9i4.6230>.
- Usman, Asri, and Sri Sundari. 2024. "The Influence of Village Financial System (Siskeudes Application), Transparency, and Internal Control on Fraud Prevention." *Public and Municipal Finance* 13 (2): 24–30. [https://doi.org/10.21511/pmf.13\(2\).2024.03](https://doi.org/10.21511/pmf.13(2).2024.03).
- Wang, Yan, Yichu Li, Hongfei Meng, and Shuhong Kong. 2024. "Injustice Promotes Unethical Behavior Through Moral Disengagement." *Basic and Applied Social Psychology* 46 (1): 7–18. <https://doi.org/10.1080/01973533.2023.2275070>.
- Yang, Miao, and Yizao Chen. 2023. "Cognitive Rationalization in Occupational Fraud: Structure Exploration and Scale Development." *Frontiers in Psychology* 14 (July 2023): 1–18. <https://doi.org/10.3389/fpsyg.2023.1112127>.

This page is intentionally left blank