

Corporate Culture and Fraud Tendency Perceptions: Testing Fraud Hexagon Theory in a Selected Philippine Region

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Abstract

This study examines the Perception of Fraud Tendency (PFT) among employees of microfinance-oriented financial institutions in the CALABARZON region of the Philippines using the Fraud Hexagon framework. It evaluates whether pressure, capability, opportunity, rationalization, ego, and collusion predict PFT, and whether corporate culture moderates these relationships. The study addresses a gap in existing literature by focusing on operational employees in a microfinance context, where decentralized processes and field-based transactions shape fraud-related conditions. A quantitative, cross-sectional research design was employed. Data were collected from 209 respondents selected through proportional stratified random sampling across four institutions. A structured survey instrument adapted from prior studies was used, and reliability was confirmed using Cronbach's alpha. Multiple linear regression and moderated regression analyses were conducted using SPSS to test direct and interaction effects. The findings indicate that the Fraud Hexagon is only partially supported in this context. Opportunity and collusion were found to be significant positive predictors of PFT, with collusion emerging as the strongest predictor. Pressure, capability, rationalization, and ego were not statistically significant. Corporate culture demonstrated a significant negative direct effect on PFT but did not significantly moderate the relationships between the Fraud Hexagon components and PFT. The results suggest that fraud tendency perception in microfinance institutions is influenced more by structural and relational conditions than by individual-level factors. The study contributes to fraud and organizational behavior literature by clarifying the role of corporate culture as a direct influence rather than a moderating mechanism, and by providing context-specific evidence for fraud risk management in microfinance operations.

Keywords – *fraud hexagon theory, corporate culture, perception of fraud tendency, microfinance institutions, opportunity, collusion, Philippines*

1. INTRODUCTION

1.1 Background of the Study

Across the world, fraud continues to pose serious threats to financial institutions, undermining their long-term viability, public confidence, and economic stability. Global evidence indicates that fraud remains a persistent issue, with substantial financial losses reported across industries, and financial services consistently identified as one of the most affected sectors (Association of Certified Fraud Examiners [ACFE], 2024; PwC, 2022). These findings underscore that fraud is not an isolated problem but rather a systemic challenge rooted in weak governance, inadequate internal controls, and dysfunctional organizational behaviors. Within Southeast Asia, financial institutions face heightened vulnerabilities due to expanding financial inclusion initiatives and increasing reliance on decentralized service delivery. Regional reports highlight that

operational-level fraud (including misreporting, unauthorized transactions, and collusive practices) remains a concern in environments where control systems depend heavily on individual employees and field-based activities (Asian Development Bank [ADB], 2022; ASEAN Secretariat, 2023).

In the Philippines, companies have experienced approximately ₱4 trillion in losses attributed to fraud and associated activities, underscoring the exceptional scale of the problem at a national level (The Manila Times, 2025). Regulatory bodies, including the Bangko Sentral ng Pilipinas, have emphasized the need to strengthen internal controls, improve risk management capabilities, and enhance governance frameworks to address fraud risk in financial institutions (BSP, 2023). These developments are especially pronounced in microfinance-oriented financial institutions, where operational conditions create distinct vulnerabilities through decentralized processes, field-based loan transactions, and direct client engagement.

Empirical evidence confirms the presence of these vulnerabilities. A study reported 840 fraud cases within a Philippine microfinance organization between 2015 and 2018, resulting in total losses of approximately ₱11.6 million (Jikiri et al., 2023). More recent internal records from January 2021 to April 2024 document 315 cases in Luzon, 116 in Visayas, and 168 in Mindanao, with the highest recorded fraud amount exceeding ₱26 million. The majority of cases involved operational personnel, particularly account officers, who accounted for approximately 80 percent of incidents, most of whom were within the millennial age group and had three to five years of tenure.

To explain these conditions, recent research has applied the Fraud Hexagon framework, which includes pressure, capability, opportunity, rationalization, ego, and collusion as determinants of fraud-related behavior (Setiawan & Soewarno, 2025). However, empirical applications continue to produce inconsistent results across contexts (Sahla & Ardianto, 2023; Setiawan & Soewarno, 2025). Corporate culture is likewise considered a key organizational factor, influencing how policies are implemented, how accountability is enforced, and how employees respond to irregularities (Schein, 1992). The Perception of Fraud Tendency (PFT) captures early-stage decision-making before misconduct occurs, allowing organizations to identify vulnerabilities that may not yet be visible through formal control systems.

This study examines whether the six elements of the Fraud Hexagon influence the PFT among employees of microfinance-oriented financial institutions in the CALABARZON region of the Philippines, and whether corporate culture moderates these relationships. The study is aligned with Sustainable Development Goals 8 and 16, which are directly relevant to the governance and operational integrity of microfinance institutions.

1.2 Literature Review

Fraud research has evolved from single-factor explanations toward multidimensional frameworks that integrate behavioral, organizational, and structural conditions. The Fraud Hexagon, also referred to as the S.C.O.R.E. model, incorporates pressure, capability, opportunity, rationalization, ego, and collusion as determinants of fraud-related behavior (Vousinas, 2019). Recent empirical studies confirm its relevance in financial and corporate settings (Achmad et al., 2022; Achmad et al., 2023; Khamainy et al., 2022). Despite its theoretical comprehensiveness, however, empirical findings remain inconsistent, with some studies reporting strong relationships between Fraud Hexagon components and fraud outcomes while others find weak or non-significant effects for the same variables (Sahla & Ardianto, 2023; Setiawan & Soewarno, 2025; Yadiati et al., 2023).

A key development in recent literature is the use of PFT as a behavioral indicator of fraud risk. Unlike studies relying on detected fraud cases, which are limited by underreporting and confidentiality concerns, perception-based approaches examine how employees interpret the acceptability and likelihood of fraudulent behavior within their work environment (Sahla & Ardianto, 2023; Setiawan & Soewarno, 2025). Collusion, in particular, significantly increases fraud risk by enabling

individuals to bypass control systems, though research on collusion remains limited due to measurement challenges (Achmad et al., 2023; Khamainy et al., 2022).

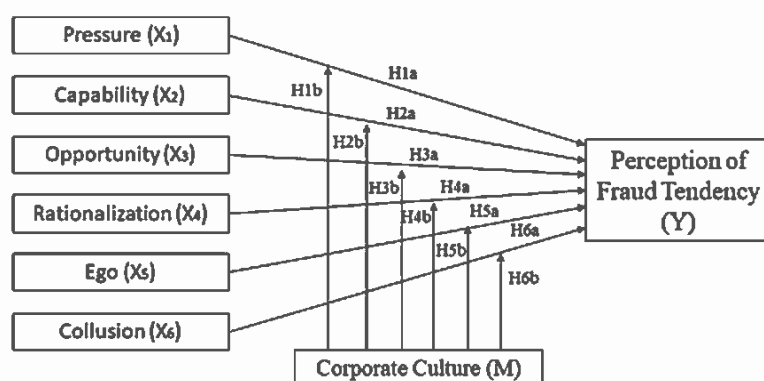
Corporate culture significantly influences employee behavior and organizational outcomes, affecting interpretations of rules and responses to ethical dilemmas. Strong cultures marked by accountability and transparency can reduce fraud risk and enhance governance (Setyaningsih & Nengzih, 2020; Maulidiyah, 2024). However, its role as a moderating variable is debated, with some studies suggesting it weakens fraud drivers, while others position it as a direct influence (Setiawan & Soewarno, 2025; Suryani et al., 2025). The limitations of existing literature are pronounced when considering microfinance-oriented financial institutions, where decentralized processes and strong interpersonal relationships shape fraud determinants differently from corporate or banking environments.

1.3 Research Framework

1.3.1 Conceptual Framework

This study is anchored on the framework developed by Setiawan and Soewarno (2025), which specifies six independent variables, namely Pressure (X_1), Capability (X_2), Opportunity (X_3), Rationalization (X_4), Ego (X_5), and Collusion (X_6), one dependent variable, Perception of Fraud Tendency (Y), and one moderating variable, Corporate Culture (M). The framework tests both the direct effects of each Fraud Hexagon condition on PFT and the moderating effect of corporate culture on each of these relationships, as illustrated in Figure 1.

Figure 1. Conceptual Framework (adapted from Setiawan & Soewarno, 2025)



The anchor study confirmed that pressure, opportunity, and rationalization had significant direct effects on PFT, and that corporate culture significantly moderated each of these relationships in a manager-only sample of Indonesian multinational companies.

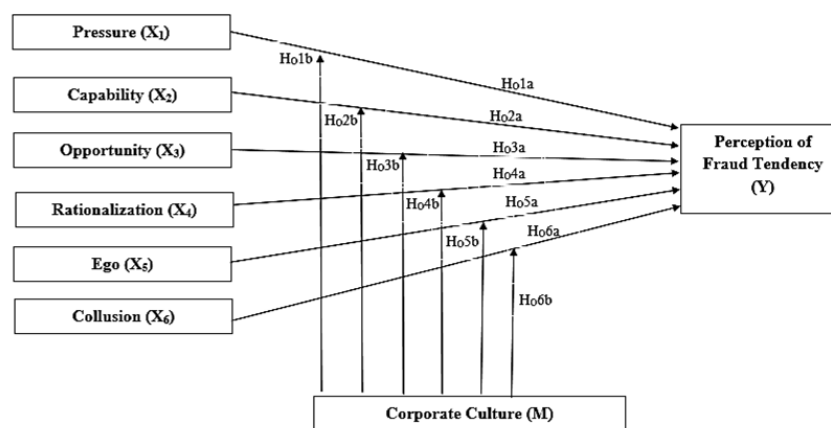
1.3.2 Operational Framework

While Setiawan and Soewarno (2025) tested this framework exclusively among managers of Indonesian multinational companies, the present study extends the respondent base to include both operational and managerial employees of microfinance-oriented financial institutions in the CALABARZON region of the Philippines. This extension is theoretically justified on the basis that operational employees, specifically those involved directly with transaction processing, record keeping, and client interaction, experience different fraud-related conditions than managerial employees (Koomson et al., 2020).

Pressure was operationalized as perceived financial and work-related demands. Capability refers to perceived access to financial transactions, authority over processes, and procedural knowledge. Opportunity was operationalized as the respondent's perception of weaknesses in internal controls. Rationalization was operationalized through agreement with statements that justify or normalize questionable behavior. Ego was operationalized as perceived entitlement and reliance on individual judgment over institutional procedures. Collusion was operationalized as the perceived acceptability of informal coordination that bypasses institutional processes. Corporate culture was operationalized as the respondent's perception of the institution's ethical climate, governance practices, and accountability mechanisms.

As shown in Figure 2, the framework presents the direct relationships between the Fraud Hexagon components and the Perception of Fraud Tendency, as well as the role of corporate culture as both a predictor and a moderating variable.

Figure 2. Operational Framework



1.4 Objectives of the Study

The primary objective of this study is to examine whether the components of the Fraud Hexagon predict the PFT among employees of microfinance-oriented financial institutions in the CALABARZON region, and to determine whether Corporate Culture significantly predicts PFT and moderates the relationships between each Fraud Hexagon component and PFT. Specific objectives are:

- To determine whether pressure significantly predicts the Perception of Fraud Tendency.
- To determine whether capability significantly predicts the Perception of Fraud Tendency.
- To determine whether opportunity significantly predicts the Perception of Fraud Tendency.
- To determine whether rationalization significantly predicts the Perception of Fraud Tendency.
- To determine whether ego significantly predicts the Perception of Fraud Tendency.
- To determine whether collusion significantly predicts the Perception of Fraud Tendency.
- To determine whether corporate culture significantly predicts the Perception of Fraud Tendency.
- To determine whether corporate culture moderates the relationship between each Fraud Hexagon component and the Perception of Fraud Tendency.

1.5 Hypotheses

The following null hypotheses were tested:

- Ho1a: Pressure does not significantly predict the Perception of Fraud Tendency.

- Ho2a: Capability does not significantly predict the Perception of Fraud Tendency.
- Ho3a: Opportunity does not significantly predict the Perception of Fraud Tendency.
- Ho4a: Rationalization does not significantly predict the Perception of Fraud Tendency.
- Ho5a: Ego does not significantly predict the Perception of Fraud Tendency.
- Ho6a: Collusion does not significantly predict the Perception of Fraud Tendency.
- Ho7a: Corporate culture does not significantly predict the Perception of Fraud Tendency.
- Ho1b - Ho6b: Corporate culture does not significantly moderate the relationship between each Fraud Hexagon component (pressure, capability, opportunity, rationalization, ego, and collusion) and the Perception of Fraud Tendency.

2. METHODS

2.1 Research Design

This study employed a quantitative, cross-sectional research design with an explanatory orientation to examine the relationships between the components of the Fraud Hexagon and the Perception of Fraud Tendency, as well as the moderating role of corporate culture. Data were collected at a single point in time using a structured survey questionnaire administered to employees of microfinance-oriented financial institutions in the CALABARZON region of the Philippines. The instrument was adapted from Setiawan and Soewarno (2025) and contextualized to reflect the operational environment of the respondents.

2.2 Locale of the Study

The study was conducted in the CALABARZON region (Region IV-A) of the Philippines, one of the country's most economically active regions and home to a dense concentration of financial service providers. Data were collected from four microfinance-oriented financial institutions operating within the region, hereinafter referred to as MF1, MF2, MF3, and MF4, to maintain institutional anonymity.

2.3 Respondents of the Study

The respondents comprised 209 employees from four selected microfinance-oriented financial institutions. The study focused on employees in operational and managerial roles, including managers, bookkeepers, and account officers, as these positions are directly involved in financial transactions, client account management, documentation, and the implementation of internal controls. Only employees with at least one year of continuous service were included to ensure that respondents had sufficient exposure to routine operational processes and institutional practices.

2.4 Sampling Design

This study employed stratified random sampling to ensure proportional representation across the four participating institutions. The population of 2,405 eligible employees was divided into four strata by institution. Respondents within each stratum were selected through simple random sampling applied to the list of eligible employees provided by each institution (Sekaran & Bougie, 2016).

2.5 Data Gathering Procedures

Before data collection commenced, formal requests were submitted to the heads of the four microfinance institutions. Following approval, survey links were distributed to participants via SurveyMonkey. Participants were informed of the study's

objectives, the voluntary nature of participation, and the assurance of confidentiality. The survey was open for three weeks, with periodic reminders sent to encourage participation. In total, 209 questionnaires were completed and submitted successfully.

2.6 Research Instruments

This study employed a structured survey questionnaire comprising 56 items organized into five sections, adapted from the validated instrument developed by Setiawan and Soewarno (2025). The questionnaire measured the six Fraud Hexagon components using 30 items on a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree), Corporate Culture using nine items, and the Perception of Fraud Tendency using five items. Prior to main data collection, a pilot test was conducted among respondents from comparable institutions. An overall Cronbach's alpha of 0.871 confirmed the reliability of the survey items, as summarized in Table 1.

Table 1. Reliability Coefficient per Variable

Variable	N	Items	Mean	Cronbach's α	Interpretation
Pressure (X₁)	30	5	3.41	0.724	Fair
Capability (X₂)	30	5	3.74	0.822	Good
Opportunity (X₃)	30	5	2.19	0.946	Excellent
Rationalization (X₄)	30	5	2.98	0.796	Fair
Ego (X₅)	30	5	2.76	0.894	Good
Collusion (X₆)	30	5	2.27	0.958	Excellent
Corporate Culture (M)	30	9	4.01	0.881	Good
Perception of Fraud Tendency (Y)	30	5	1.93	0.949	Excellent
Overall	30	44		0.871	Good

Note. Internal consistency interpretation based on Yockey (2008).

2.7 Data Analysis and Interpretation

Data from 209 valid respondents were analyzed using SPSS. Composite scores for each construct were computed by averaging the responses to their corresponding items. Descriptive statistics, including means and standard deviations, were used to summarize respondents' perceptions. Multiple linear regression was conducted to examine whether the six components of the Fraud Hexagon significantly predicted PFT, with corporate culture included as a main-effect variable. Moderated regression analysis was then performed to test whether corporate culture moderated the relationship between each Fraud Hexagon component and PFT. Interaction terms were created by multiplying corporate culture by each independent variable, with mean centering applied to handle multicollinearity, as recommended by Aiken and West (1991). A significance level of $\alpha = .05$ was used as the basis for rejecting or failing to reject the null hypotheses.

2.8 Ethical Considerations

This study adhered to the ethical guidelines established by De La Salle Lipa and obtained clearance from the Research Ethics Clearance Committee prior to data collection. Participation was voluntary, and informed consent was obtained from all respondents. No personally identifiable information was collected, and the participating institutions were anonymized. Data were used solely for academic purposes and securely stored to prevent unauthorized access.

3. RESULTS AND DISCUSSION

This study involved 209 employees from four microfinance-focused financial institutions in the CALABARZON region. The largest proportions of respondents came from MF3 (38.3%) and MF1 (37.3%). Most respondents were between 31 and 40 years of age (58.9%), identified as Millennials (76.6%), were employed at microfinance banks (83.7%), and had worked for six to ten years (41.6%). The full demographic profile is presented in Appendix A.

3.1 Descriptive Statistics

Table 2 presents the mean scores and standard deviations of the study variables. Corporate culture recorded the highest mean score ($M = 3.86$, $SD = 0.66$), followed by capability ($M = 3.56$, $SD = 0.53$) and pressure ($M = 3.38$, $SD = 0.60$). Rationalization ($M = 3.00$, $SD = 0.65$) and ego ($M = 2.78$, $SD = 0.71$) obtained moderate mean values, while opportunity ($M = 2.31$, $SD = 0.92$) and collusion ($M = 2.35$, $SD = 0.89$) recorded lower mean scores. The Perception of Fraud Tendency registered the lowest mean score ($M = 1.99$, $SD = 0.92$), indicating that respondents generally do not perceive fraud-related behaviors as acceptable.

Table 2. Descriptive Statistics of Study Constructs (N = 209)

Construct	Mean	SD	Min	Max	Interpretation
Pressure (X_1)	3.38	0.60	1.40	5.00	Moderate
Capability (X_2)	3.56	0.53	1.00	5.00	High
Opportunity (X_3)	2.31	0.92	1.00	5.00	Low
Rationalization (X_4)	3.00	0.65	1.00	5.00	Moderate
Ego (X_5)	2.78	0.71	1.00	4.80	Moderate
Collusion (X_6)	2.35	0.89	1.00	4.60	Low
Corporate Culture (M)	3.86	0.66	1.00	5.00	High
Perception of Fraud Tendency (Y)	1.99	0.92	1.00	4.80	Low

Note. Scale: 1.00–1.80 = Very Low; 1.81–2.60 = Low; 2.61–3.40 = Moderate; 3.41–4.20 = High; 4.21–5.00 = Very High.

The descriptive results reveal a clear distinction between the presence of fraud-related conditions and the actual perception of fraud tendency. While corporate culture, capability, and pressure were rated at moderate to high levels, the perception of fraud tendency was low, suggesting that the presence of these conditions does not translate into tolerance for fraud-related actions. The relatively strong perception of ethical norms and governance mechanisms associated with corporate culture may help limit fraud-related behavior within the sampled institutions.

3.2 Direct Effects of Fraud Hexagon Components on Perception of Fraud Tendency

Multiple linear regression was conducted to examine whether the six components of the Fraud Hexagon predicted PFT (Table 3). The model was statistically significant, $F(6, 202) = 62.43$, $p < .001$, and explained 65.0% of the variance in PFT, $R^2 = .650$. Among the six predictors, opportunity ($B = 0.301$, $\beta = .300$, $t = 4.62$, $p < .001$) and collusion ($B = 0.471$, $\beta = .455$, $t = 6.59$, $p < .001$) significantly predicted PFT. Collusion had the strongest standardized coefficient among the predictors. Pressure, capability, rationalization, and ego were not statistically significant at the .05 level.

Table 3. Multiple Linear Regression Results – Direct Effects of Fraud Hexagon Components on PFT

Predictor	B	Std. Error	β (Beta)	t	p	Decision
(Constant)	-0.268	0.337	N/A	-0.795	.427	Significant
Pressure (X ₁)	0.057	0.069	.037	0.815	.416	Not Significant
Capability (X ₂)	-0.069	0.078	-.040	-0.885	.377	Not Significant
Opportunity (X ₃)	0.301	0.065	.300	4.617	< .001	Significant
Rationalization (X ₄)	0.057	0.078	.040	0.723	.470	Not Significant
Ego (X ₅)	0.121	0.078	.093	1.545	.124	Not Significant
Collusion (X ₆)	0.471	0.071	.455	6.595	< .001	Significant

Note. Dependent Variable: Perception of Fraud Tendency. $R = .806$, $R^2 = .650$, Adjusted $R^2 = .639$, $F(6, 202) = 62.43$, $p < .001$.

3.3 Moderating Role of Corporate Culture

Moderated regression analysis was conducted to test whether corporate culture moderated the relationships between the Fraud Hexagon components and PFT (Table 4). The full model was statistically significant, $F(13, 195) = 30.88$, $p < .001$, with $R^2 = .673$. Opportunity ($B = 0.267$, $p < .001$) and collusion ($B = 0.480$, $p < .001$) remained significant predictors. Corporate culture demonstrated a significant negative direct effect on PFT ($B = -0.159$, $p = .023$), indicating that a stronger perceived ethical environment is associated with lower fraud tendency perception.

However, none of the interaction terms between corporate culture and the six Fraud Hexagon components were statistically significant (all $p > .05$). This indicates that corporate culture does not moderate the relationships between the Fraud Hexagon components and PFT. Rather, it functions as a direct organizational deterrent, independent of the specific fraud-related conditions present.

Table 4. Moderated Regression Analysis Results – Role of Corporate Culture

Predictor	B	Std. Error	β	t	p	Decision
(Constant)	1.953	0.044	N/A	44.559	< .001	
Pressure (P_c)	0.085	0.074	.055	1.140	.256	Not Significant
Capability (C_c)	-0.054	0.085	-.031	-0.632	.528	Not Significant
Opportunity (O_c)	0.267	0.066	.266	4.067	< .001	Significant
Rationalization (R_c)	0.087	0.084	.061	1.040	.300	Not Significant
Ego (E_c)	0.120	0.091	.092	1.311	.191	Not Significant
Collusion (Co_c)	0.480	0.075	.463	6.384	< .001	Significant
Corporate Culture (Cc_c)	-0.159	0.070	-.115	-2.285	.023	Significant (Direct)
Pressure × CC	-0.186	0.110	-.112	-1.690	.093	Not Significant
Capability × CC	0.246	0.129	.131	1.906	.058	Not Significant
Opportunity × CC	0.060	0.097	.040	0.621	.536	Not Significant
Rationalization × CC	-0.120	0.125	-.075	-0.960	.338	Not Significant
Ego × CC	-0.104	0.123	-.068	-0.848	.397	Not Significant
Collusion × CC	0.026	0.096	.016	0.276	.783	Not Significant

Note. Subscript 'c' denotes mean-centered variables. Dependent Variable: Perception of Fraud Tendency. $R = .820$, $R^2 = .673$, Adjusted $R^2 = .651$, $\Delta R^2 = .023$ from Model 1.

3.4 Summary of Hypothesis Testing Results

Table 5 summarizes the hypothesis testing results. Opportunity ($p < .001$) and collusion ($p < .001$) significantly predicted PFT; therefore, Ho3a and Ho6a were rejected. Pressure, capability, rationalization, and ego were not significant predictors; therefore, Ho1a, Ho2a, Ho4a, and Ho5a were not rejected. Corporate culture demonstrated a significant negative direct effect ($p = .023$); therefore, Ho7a was rejected. All interaction terms were non-significant; therefore, Ho1b through Ho6b were not rejected.

Table 5. Summary of Hypothesis Testing Results

Hypothesis	Statement	p-value	Decision
H_{01a}	Pressure has no significant direct effect on PFT.	.416	Not Rejected
H_{02a}	Capability has no significant direct effect on PFT.	.377	Not Rejected
H_{03a}	Opportunity has no significant direct effect on PFT.	< .001	Rejected
H_{04a}	Rationalization has no significant direct effect on PFT.	.470	Not Rejected
H_{05a}	Ego has no significant direct effect on PFT.	.124	Not Rejected
H_{06a}	Collusion has no significant direct effect on PFT.	< .001	Rejected
H_{07a}	Corporate culture has no significant direct effect on PFT.	.023	Rejected
H_{01b}	CC does not moderate the Pressure–PFT relationship.	.093	Not Rejected
H_{02b}	CC does not moderate the Capability–PFT relationship.	.058	Not Rejected
H_{03b}	CC does not moderate the Opportunity–PFT relationship.	.536	Not Rejected
H_{04b}	CC does not moderate the Rationalization–PFT relationship.	.338	Not Rejected
H_{05b}	CC does not moderate the Ego–PFT relationship.	.397	Not Rejected
H_{06b}	CC does not moderate the Collusion–PFT relationship.	.783	Not Rejected

Note. CC = Corporate Culture; PFT = Perception of Fraud Tendency.

3.5 Conclusion

This study examined whether the components of the Fraud Hexagon predict the Perception of Fraud Tendency among employees of microfinance-oriented financial institutions in the CALABARZON region, and whether corporate culture predicts and moderates these relationships. The findings show that the Fraud Hexagon is only partially supported in this context. Opportunity and collusion significantly predicted PFT, while pressure, capability, rationalization, and ego did not.

A key finding is that fraud tendency perception is more closely associated with structural and relational conditions than with individual motivations. Perceived control gaps and coordinated behavior were more relevant than pressure or rationalization alone, indicating that fraud risk in this context is also a function of organizational processes and interpersonal interactions.

Corporate culture was found to have a significant negative direct effect on PFT, indicating that stronger perceived ethical environments are associated with lower acceptance of fraud-related behavior. However, corporate culture did not significantly moderate the relationships between the Fraud Hexagon components and PFT, suggesting it functions as an independent organizational safeguard rather than a conditional mechanism that alters the influence of fraud risk drivers.

From a theoretical perspective, these findings extend the Fraud Hexagon framework by demonstrating that contextual variables such as corporate culture may not function uniformly as moderators across different institutional settings. From a practical standpoint, efforts to reduce fraud tendency perception should prioritize the strengthening of control mechanisms and oversight of group-based interactions, particularly in operational areas where opportunity and coordination are present. While maintaining a strong corporate culture remains important, it should complement, rather than replace, formal control systems and process-level safeguards.

3.6 Recommendations

Based on the empirical findings, the following recommendations are proposed for microfinance-oriented financial institutions in the CALABARZON region.

First, given that opportunity significantly predicts PFT, management may benefit from conducting process-level validation reviews that go beyond merely confirming that controls exist, assessing whether they are consistently applied, independently verified, and resistant to bypass in actual operations. Periodic supervisory walkthroughs of transactions, where supervisors independently trace approvals and documentation through real cases, are aligned with the internal control principles of the Committee of Sponsoring Organizations of the Treadway Commission (COSO, 2013).

Second, as collusion is the strongest predictor of PFT, management may introduce pattern-based supervisory review, in which transaction records are periodically analyzed to identify repeated pairings or groupings of employees in high-risk transactions. This shifts oversight from checking individual compliance to examining interaction patterns, consistent with ACFE (2024) guidance that collusion can bypass otherwise effective controls.

Third, corporate culture should continue to be maintained as a supporting organizational safeguard. While the findings indicate it does not moderate the effects of opportunity and collusion, its significant negative direct relationship with PFT confirms its value as an independent deterrent. Management should ensure that ethical standards and accountability norms are consistently reflected in operational practices and control enforcement.

3.7 Limitations of the Study

This study has several limitations. The cross-sectional design limits the analysis to associations at a single point in time and does not establish causality. The sample was drawn exclusively from microfinance-oriented financial institutions in the CALABARZON region, which may limit generalizability to other institutional or geographic contexts. The study relied on self-reported data, which may be subject to response bias despite assurances of anonymity. The dependent variable measures PFT rather than actual fraudulent behavior, meaning the findings reflect perceptions rather than confirmed incidents of misconduct. Finally, the study focused on variables derived from the Fraud Hexagon framework and corporate culture; other organizational factors not included in the model may also influence fraud-related perceptions.

References

- Achmad, T., Ghazali, I., & Pamungkas, I. D. (2022). Hexagon fraud: Detection of fraudulent financial reporting in state-owned enterprises Indonesia. *Economies*, 10(1), 13. <https://doi.org/10.3390/economies10010013>
- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Sage.
- Asian Development Bank. (2022). *Financial sector development in Southeast Asia*. ADB.
- ASEAN Secretariat. (2023). *ASEAN financial services sector report*. ASEAN.
- Association of Certified Fraud Examiners. (2024). *Occupational fraud 2024: A report to the nations*. ACFE.
- Bangko Sentral ng Pilipinas. (2023). *Annual report 2023*. BSP.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Lawrence Erlbaum Associates.
- Committee of Sponsoring Organizations of the Treadway Commission. (2013). *Internal control – Integrated framework*. AICPA.
- Cressey, D. R. (1953). *Other people's money: A study in the social psychology of embezzlement*. Free Press.
- Crowe, H. (2011). *Why the fraud triangle is no longer enough*. Crowe Horwath LLP.
- De Leon, M. V., Ramos, R. D., Bugtai, N. T., & Tan-Cruz, A. (2019). Microfinance fraud detection in the Philippines using descriptive analytics. *Procedia Manufacturing*, 39, 782–789. <https://doi.org/10.1016/j.promfg.2020.01.399>
- Jikiri, F. U., Jr., N. B., Abduraji, T. S., Amparo, A. M., Yagaya, A. V., Toring, C. N., & Habib, M. (2022). Assessment of Microfinance Fraud Cases: A Philippines Study. *OIDA International Journal of Sustainable Development*, 15, 37-55.
- Jikiri, S. A., Esa, E., Said, J., & Ghani, E. K. (2023). Collusion factors in financial reporting fraud: Evidence from Malaysia. *Asian Journal of Accounting and Governance*, 19, 43–54.
- Khamainy, A. H., et al. (2022). *Fraud hexagon applications in financial reporting*. [Journal details as in original].

- Koomson, T. A. A., Owusu, G. M. Y., Bekoe, R. A., & Oquaye, M. (2020). Determinants of asset misappropriation at the workplace: The moderating role of perceived strength of internal controls. *Journal of Financial Crime*, 27(4), 1191–1211.
- Kumar, K., Bhattacharya, S., & Hicks, R. (2018). Employee perceptions of organization culture with respect to fraud. *Pacific Accounting Review*, 30(2), 187–198.
- Maulidiyah, D. N. (2024). Consensus on the role of culture in restraining financial crime: A systematic literature review. *Journal of Financial Crime*, 31(4), 883–897.
- PwC. (2022). Global economic crime and fraud survey 2022. PricewaterhouseCoopers.
- Ramadhanty, & Septiani (2024). [As cited in manuscript].
- Sahla, W. A., & Ardianto, A. (2023). Ethical values and auditors fraud tendency perception: Testing of fraud pentagon theory. *Journal of Financial Crime*, 30(4), 966–982.
- Sari, et al. (2022). [As cited in manuscript].
- Schein, E. H. (1992). *Organizational culture and leadership* (2nd ed.). Jossey-Bass.
- Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill-building approach* (7th ed.). Wiley.
- Setiawan, N., & Soewarno, N. (2025). Corporate culture and managers fraud tendency perception: Testing of fraud hexagon theory. *Cogent Social Sciences*, 11(1), Article 2434953. <https://doi.org/10.1080/23311886.2024.2434953>
- Setyaningsih, P. R., & Nengzih, N. (2020). Internal control, organizational culture, and quality of information accounting to prevent fraud. *International Journal of Financial Research*, 11(4), 316–328.
- The Manila Times. (2025, January). Philippine fraud losses reach ₱4 trillion. *The Manila Times*.
- Vousinas, G. L. (2019). Advancing theory of fraud: The S.C.O.R.E. model. *Journal of Financial Crime*, 26(1), 372–381.
- Wolfe, D. T., & Hermanson, D. R. (2004). The fraud diamond: Considering the four elements of fraud. *The CPA Journal*, 74(12), 38–42.
- Yadiati, W., Rezwiandhari, A., & Ramdany. (2023). Detecting fraudulent financial reporting in state-owned companies: Hexagon theory approach. *Journal of Southwest Jiaotong University*, 58(2), 265–277.
- Yockey, R. D. (2008). *SPSS demystified: A step-by-step guide to successful data analysis*. Pearson Prentice Hall.

Appendix A. Survey Questionnaire Instrument

The survey instrument comprised five parts: (I) demographic information, (II) Fraud Hexagon component items (30 items on a 5-point Likert scale), (III) Corporate Culture items (9 items), (IV) Perception of Fraud Tendency items (5 items), and (V) open-ended questions. The full instrument is available upon request.

Appendix B. Consolidated Demographic Profile of Respondents

Category	Frequency (n)	Percent (%)
Institution		
MF1	78	37.32%
MF2	17	8.13%
MF3	80	38.28%
MF4	34	16.27%
Total	209	100.00%
Age Range		
21–30	58	27.75%
31–40	123	58.85%
41–50	28	13.40%
Total	209	100.00%
Generation Cohort		
Generation Z (1997–2012)	40	19.14%
Millennials / Generation Y (1981–1996)	160	76.56%
Generation X (1965–1980)	8	3.83%
Baby Boomers (1946–1964)	1	0.48%
Total	209	100.00%

Gender		
Male	83	39.71%
Female	126	60.29%
Total	209	100.00%
Educational Attainment		
High School / Vocational	42	20.10%
Bachelor's Degree	166	79.43%
Master's / PhD Degree	1	0.48%
Total	209	100.00%
Length of Service (Years)		
1–5	24	11.48%
6–10	87	41.63%
11–15	48	22.97%
16–20	46	22.01%
21–25	4	1.91%
Total	209	100.00%
Type of Institution		
Microfinance-Oriented Bank (Thrift or Rural)	175	83.73%
Microfinance NGO	34	16.27%
Total	209	100.00%

Appendix C. Multiple Linear Regression Output – Direct Effects

Table C1. Model Summary – Direct Effects (Model 1)

Model	R	R ²	Adjusted R ²	Std. Error of the Estimate
1	.806	.650	.639	.553

Table C2. ANOVA – Direct Effects (Model 1)

Source	Sum of Squares	df	Mean Square	F	Sig.
Regression	114.625	6	19.104	62.426	< .001
Residual	61.818	202	.306		
Total	176.442	208			

Appendix D. Moderated Regression Analysis Output

Table D1. Model Summary – Moderated Regression (Model 2)

Model	R	R ²	Adjusted R ²	Std. Error of the Estimate
2	.820	.673	.651	.544