THE NEXUS BETWEEN FRAUD RISK FACTORS, ISLAMIC CORPORATE GOVERNANCE, AND OCCUPATIONAL FRAUD IN THE ISLAMIC BANKING INDUSTRY

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Abstract

Fraud poses a formidable challenge for businesses globally, highlighting the gravity of this issue (Othman et al., 2023; Kaab Omeir et al., 2023). Despite its importance, there has been limited research on occupational fraud (OF) in Malaysian Islamic banks, particularly in the context of integrating Islamic corporate governance (ICG) principles with the fraud diamond theory. This study aims to investigate the effect of the fraud diamond risk elements and ICG on fraud incidences in Malaysian Islamic banks. Data was collected using random sampling, involving 94 respondents, generating a 24 percent response rate. Descriptive, univariate, and multivariate analyses were performed to analyze the data. The findings indicate that opportunity (OP) and capability (CA) exhibited significant positive relationships with fraud in Malaysian Islamic banks. In contrast, pressure (PR), rationalization (RA), and ICG showed insignificant relationships with fraud. The results suggest that employees in Malaysian Islamic banks are more likely to engage in bank fraud if they see an OP and possess the necessary capabilities to commit fraud. This study provides valuable insights into potential fraud risk factors in Islamic banks in Malaysia, recommending that banking institutions focus on fraud risk management strategies that minimize opportunities and limit employees' capabilities to commit bank fraud.

Keywords: Fraud Diamond Theory, Islamic Corporate Governance, Islamic Banks, Occupational Fraud, Malaysia

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1. INTRODUCTION

Fraud poses significant threats to businesses with potentially catastrophic consequences. It remains a pervasive issue that draws global attention given its widespread occurrence across various sectors, especially the banking sector (Abdullah et al., 2023; Kaab Omeir et al., 2023; Khikmah et al., 2023; Mappanyukki et al., 2024; Othman et al., 2023). The survey by the Association of Certified Fraud Examiners (ACFE) showed that banking and financial services consistently reported the highest number of fraud cases each year (ACFE, 2020, 2022). The ACFE's (2022, p. 33, p. 86) report documented 351 fraud cases in the banking and financial services industry, the highest of any sector, with corruption (46%) being the most common fraud scheme, followed by cash handling and check/payment tampering (14% each). It further reports that fraud reduces annual revenue by about 5% across organizations, resulting in an average loss of \$1.78 million per case and a median loss of \$100,000. The issue is of great concern due to its detrimental effects, including adverse impacts on products and capital, penalty-related and indirect losses, as well as operational and psychological losses to employees (Amiram et al., 2018), which may eventually lead to reputational damage and failure among banks. The substantial financial losses and the severity of the issue accentuate the imperative for banks and financial institutions to implement effective measures for detecting and preventing such fraud (ACFE, 2022).

Despite the implementation of rigorous corporate governance measures, the Islamic banking sector is not exempted from the issue of fraud which sheds light on a gap in adherence to values aligned with Islamic principles. Shariah governance is vital for the stability of the Islamic financial system, boosting public confidence and growth, with Islamic banks required to ensure effective governance aligned with Shariah-compliant risk culture, involving active engagement from the board, Shariah committees, and senior management (Bank Negara Malaysia, 2019). Amidst the global success and rapid growth in the industry, Islamic banks have encountered catastrophic fraud incidents over the past decades. Previous studies have reported cases of occupational fraud (OF) in several Islamic banks across different countries, including Bank Jateng Syariah, Bank Jabar Banten Syariah, Bank Syariah Mandiri, Bank Taqwa, Dubai Islamic Bank, Faisal Islamic Bank, Kuwait Finance House, Ihlas Finance House, International Islamic Bank of Denmark, South African Islamic Bank, and Bank Islam Malaysia Berhad (Rahman & Anwar, 2014; Mukminin, 2018; Astuti et al., 2019; Mukhibad et al., 2021; Abdullah et al., 2023).

Fraud incidences in the Islamic banking sector highlight the inadequacy of accounting and management systems, poor management practices, weak internal control, and lax enforcement by authorities (Abdullah et al., 2023). This creates an environment where fraudulent activities can happen undetected (Yusuf, 2017). The role of Islamic values, particularly in the context of Islamic corporate governance (ICG), is crucial as it emphasizes ethics, morality, and integrity as fundamental principles deeply rooted in Islamic values. To address this problem, the adoption of ICG in Islamic banks in Malaysia is seen as a potential solution to mitigate this issue. ICG, being intrinsic in value and aligned with people's consciousness, is suggested as an effective approach compared to the extrinsic nature of modern corporate governance, which is associated with various failure issues (Yusuf, 2017). Drawing upon this phenomenon, the research question that arises is:

RQ: Do key factors of the fraud diamond theory and Islamic corporate governance affect occupational fraud in the Malaysian Islamic banking industry?

Extensive research was conducted to examine the determinants of fraud, predominantly focusing on conventional banks (Hidajat, 2020; Repousis et al., 2019). Nevertheless, a research gap persists regarding the determinant factors of OF in Malaysian Islamic banks, with limited literature incorporating the ICG principles. This study contributes by integrating ICG into the fraud diamond theory, aiming to address gaps in understanding fraud in Malaysian Islamic banks, provide solutions, and enhance fraud prevention measures within the unique context of Islamic banking. In addressing the research question, this study aims to investigate the effect of the fraud diamond risk elements and ICG on fraud incidences in Malaysian Islamic banks based on the fraud diamond theory.

Data was collected through questionnaires yielding 94 responses, generating a 24% response rate. Descriptive, univariate, and multivariate analyses were performed to analyze the data. Based on the underpinning of the fraud diamond theory, the study discovers that opportunity (OP) and capability (CA) significantly affect fraud occurrences, whilst pressure (PR), rationalization (RA), and ICG demonstrated an insignificant impact on fraud incidences. The study is significant for filling knowledge gaps in the Malaysian Islamic banking landscape, offering practical insights to policymakers and banking professionals to reinforce fraud prevention and promote ethical practices. This study also emphasizes the role of employees, advocating for high moral standards, ethical conduct, and adherence to Islamic values to prevent fraud.

The rest of this paper is structured as follows. Section 2 reviews the relevant literature to develop hypotheses regarding PR, OP, RA, CA, and ICG in influencing corporate fraud. Section 3 provides the research methodology that has been used to conduct empirical research on fraud occurrence and the factors of the fraud diamond theory and ICG. Section 4 presents the results from data analysis and a discussion regarding the findings in Section 5. Finally, Section 6 offers the conclusion of this study.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1. Fraud diamond theory

The fraud triangle theory, developed by Cressey (1953), comprises three key elements: 1) PR (incentive), 2) OP, and 3) RA. Wolfe and Hermanson (2004) expanded this theory into the fraud diamond theory by incorporating the CA element, thus forming a diamond-shaped model. The fraud diamond theory refines the concept of OP by emphasizing that employees must possess the CA to exploit opportunities for fraud perpetration and concealment. Within this framework, OP serves as the doorway to fraud, with PR and RA bringing employees closer to the door. However, employees need the CA to walk through the door and effectively cover up their fraudulent activities. Hence, it is argued that a potential fraudster cannot commit fraud without the requisite CA, even in the presence of PR, opportunities, and RA. Although numerous studies on fraud have been conducted worldwide, nevertheless, research examining the occurrences of OF in Islamic banks based on the fraud diamond theory is in scarcity (Kazemian et al., 2019).

2.2. Islamic corporate governance in Islamic banks

Islamic banking in Malaysia is relatively new when compared to its conventional counterparts. The first Islamic bank in Malaysia began operations in 1983, and since then, the Shariah-compliant financial system in the country has become one of the most developed among other Muslim-majority countries. As of 2021, Malaysia had the third-largest Islamic banking assets in Asia, after Iran and Saudi Arabia (Siddharta, 2024). The implementation of ICG in Malaysian Islamic banks, based on principles including *Khilafah*, justice (*Adl*), integrity (*Tauhid*), trustworthiness, *Shura*, accountability, Shariah compliance, morality, *Taqwa*, transparency, and managerial support (Yusuf, 2017), helps prevent OF. These principles, deeply rooted in Islamic values, form the foundation of every Islamic corporate transaction.

However, fraud incidents continue to occur despite the implementation of good corporate governance practices in Islamic banks. Fraud perpetrators typically exploit their positions or employ deceptive tactics to pursue personal gains while circumventing control mechanisms (Lin et al., 2022). The lingering effects of COVID-19 and reduced business confidence may have exacerbated this situation, prompting management and staff to exploit vulnerabilities in internal controls (KPMG, 2022). In the study by Rahman and Anwar (2014) involving 146 Islamic bank managers and officers, customers were found to be the primary perpetrators of bank fraud (43%), followed by management and non-management employees (22%), and external parties (13%). Respondents (42%) expressed concerns about potential fraud within banks, while only 6% were confident in their banks' immunity to fraud threats. The study, however, revealed an encouraging 98% acknowledged that their banks provided fraud awareness training.

Generally, the occurrence of fraud in Islamic banks highlights a critical missing element — The integration of Islamic values is a fundamental concern for ICG (Abdullah et al., 2023). While theoretical studies on ICG exist, there is a lack of empirical examinations in the real-world setting of local Malaysian Islamic banks, emphasizing the need for this study.

2.3. Hypotheses development

2.3.1. Pressure and occupational fraud

Individuals or organizations have the tendency to commit fraudulent activities when they are under PR (Said et al., 2017; Abdullah et al., 2023). This is supported by prior studies that identify PR as a salient influencing factor in most fraud cases (Imagbe et al., 2019; Awalluddin et al., 2022; Biduri & Tjahjadi, 2024). The likelihood of an employee engaging in fraud increases when they face financial or non-financial pressures, a trend also evident in the banking sector (Asmah et al., 2020). Albrecht et al. (2006) found that about 95% of fraud cases were influenced by financial PR. Financial PR rarises when individuals feel burdened by financial obligations they perceive as socially unsustainable, leading them to violate trust through secretive means, thereby increasing the likelihood of committing fraud (Yusuf, 2017).

Non-financial PR has been identified as another significant factor influencing fraud incidences. Kranacher and Riley (2019) expanded the concept of non-shareable financial problems by incorporating additional non-financial pressures, which can be categorized as either real or perceived. Real PR involves tangible financial issues such as overdue bills, unexpected medical expenses, or substantial debt. Conversely, perceived PR stems from a desire to maintain a lifestyle beyond one's financial means or to enhance social status. Further exploring this, Albrecht et al. (2015) identifies six primary pressures: 1) greed, 2) living beyond one's means, 3) substantial personal debts, 4) poor credit management, 5) personal financial setbacks, and 6) unwarranted financial obligations, as major triggers for fraudulent behavior.

Overall, studies have emphasized the serious threats that fraud poses to the banking industry and society, necessitating an investigation into the factors driving employee fraud. However, contrary to many previous findings, studies such as Anindya and Adhariani (2019) revealed that PR had no significant influence on fraud. Given the mixed findings regarding the impact of PR on the likelihood of committing fraud, this study hypothesized the following:

H1: There is a significant relationship between pressure and occupational fraud in Malaysian Islamic banks.

2.3.2. Opportunity and occupational fraud

Fraudulent behavior tends to increase in the presence of OP, especially under significant PR. Cressey's (1953) concept of "perceived opportunity" originally described the potential for resolving financial problems by exploiting a position of trust, but it has since evolved. Professional bodies such as the ACFE, American Institute of Certified Public Accountants (AICPA), and International Federation of Accountants (IFAC) now employ the term "opportunity". This shift highlights a focus on inadequate internal controls, emphasizing that the primary incentive for fraudsters is the pursuit of financial gain, which drives them to circumvent these controls.

When employees perceive an OP with a low risk of detection, they are more inclined to engage in fraudulent behavior (Albrecht et al., 2008; Cressey, 1953). Cressey (1953) posited that the OP for fraud hinges on two key factors: 1) general information, and 2) technical skill. General information refers to the knowledge that employees could use to exploit their position, violate trust, or manipulate the company. Meanwhile, technical skills refer to the specific abilities required to execute fraudulent acts. The combination of these factors poses a significant threat to organizations, especially when employees are strongly motivated to commit fraud.

Previous studies have shown that weaknesses in a bank's internal control represent such opportunities. These deficiencies allow employees to exploit and perpetrate fraud with reduced risk of detection (Asmah et al., 2020; Imagbe et al., 2019; Mangala & Soni, 2023). Hidajat (2020) further highlighted that opportunities for bank employees to engage in fraudulent activities can stem from factors such as inadequate supervision, governance issues, and the dispersed locations of rural banks. These conducive conditions create a perception among employees that the likelihood of being caught is minimal, thereby aligning with the concept of OP in the fraud diamond theory. Studies further revealed that in addition to weak internal controls, insufficient segregation of duties, inadequate competency and skills of internal auditors to detect fraud, lack of training on fraud awareness, failure to implement appropriate disciplinary measures, poor communication of the company's code of ethics, improper documentation, and negative examples set by management-level staff, are among unethical behavior and key opportunities that lead to fraud (Tuan Mat et al., 2019; Asmah et al., 2020; Hidajat, 2020; Biduri & Tjahjadi, 2024).

Findings of past studies mainly show that OP exacerbates fraudulent activities. In contrast, Yusuf (2017) found that OP has a negative relationship with the occurrences of bank fraud, whilst Anindya and Adhariani (2019) revealed that OP has no significant influence on fraud. Based on these mixed findings, the following hypothesis is proposed:

H2: There is a significant relationship between opportunity and occupational fraud in Islamic banks in Malaysia.

2.3.3. Rationalization and occupational fraud

Rationalization involves justifying actions or concepts that would conflict with one's beliefs (Cleff et al., 2013; Biduri & Tjahjadi, 2024). Based on the fraud triangle theory, RA serves as a cognitive process through which individuals justify and explain their fraudulent actions. The RA factor in fraud theories is complex and involves highly subjective justifications. Levi (2008) referred to individuals who see nothing wrong with their fraudulent behavior as "slippery-slope fraudsters". Cleff et al. (2013) explained that fraud offenders use RA by adapting their sense of right and wrong to align with their criminal behavior, making these actions appear rational and allowing them to continue their illicit activities without guilt. Those inherently dishonest may find it convenient to rationalize their fraudulent actions by convincing themselves that fraud is acceptable for various reasons. Conversely, individuals with high moral standards may struggle to rationalize and engage in fraudulent behavior (Yusuf, 2017).

In banking institutions, this RA process involves employees, customers, or external parties providing reasons to justify fraudulent acts. The RA may stem from the financial benefit of the perpetrator, hardships, or even the benefit of the bank itself. Offenders often need convincing reasons, such as saving family members or feeling exploited by managers, to rationalize their fraudulent behavior (Duffield & Grabosky, 2001). Common excuses for theft, such as justifying it as borrowing or deserved compensation due to financial struggles, are examples of RA. Besides a lack of awareness about fraud, poor remuneration is frequently cited as a basis for RA in fraudulent activities among employees (Akomea-Frimpong et al., 2019). In cases of fraudulent financial statements, employees tend to rationalize their actions by believing they are acting in the best interest of the firm. Others rationalize their actions by seeing themselves as owners of the banks' assets and believing that their fraud did not harm anyone (Hidajat, 2020). The study by Ab Majid et al. (2014) found that respondents often believed that "others are doing it too" which is common in cases of asset misappropriation.

Studies have found that RA significantly influences the occurrence of fraud (Hidajat, 2020; Imagbe et al., 2019; Said et al., 2017; Yusuf, 2017). In contrast, studies by Anindya and Adhariani (2019) and Awalluddin et al. (2022) found that RA has an insignificant influence on the likelihood of employees committing fraud. This study aims to examine whether RA is a significant element of the fraud diamond in the context of fraud occurrences in Islamic banks, given that fraud contradicts the religious values these banks uphold. Hence, the following hypothesis is posited:

H3: There is a significant relationship between rationalization and occupational fraud in the Malaysian Islamic bank.

2.3.4. Capability and occupational fraud

The fourth element of the fraud diamond theory is CA. The theory extends the concept of OP from the fraud triangle by asserting that employees are unlikely to commit fraud unless they have the CA to exploit opportunities, execute, and conceal fraudulent actions. Wolfe and Hermanson (2004) explained CA by proposing six essential personality traits of perpetrators which are position or function, intelligence, confidence or ego, coercion skills, effective lying, and immunity to stress. Firstly, an individual's position or function within an organization provides the ability to exploit opportunities for fraud. Secondly, intelligence enables employees to understand and take advantage of internal vulnerabilities by using their position, role, or authorized access. Thirdly, individuals with a strong ego and confidence may believe their misconduct will go undetected or that they could escape consequences if caught. Next, the ability to coerce others and manage stress are crucial traits for committing and concealing fraud. Without attributes such as confidence, lying skills, and manipulation know-how, an individual would lack the CA to commit fraud even when opportunities arise (Wolfe & Hermanson, 2004).

In this context, CA encompasses the necessary skills, mindset, and knowledge for committing fraud. Past findings indicate that executives in the banking sector are particularly adept at high-value fraud due to their CA to circumvent internal controls and governance mechanisms (ACFE, 2014, Biduri & Tjahjadi, 2024). While fraud cases involving low-level employees are more prevalent, those committed by executives are often more sophisticated and involve collusion with other employees and the evasion of anti-fraud controls (Mangala & Soni, 2023).

Studies have found a significant relationship between CA and the occurrence of fraud (Avortri & Agbanyo, 2020; Imagbe et al., 2019), while others such as Yusuf (2017) have found an insignificant relationship between CA and bank fraud. In determining the influence of CA on fraud occurrences, the study posits the following hypothesis:

H4: There is a significant relationship between capability and occupational fraud in Malaysian Islamic banks.

2.3.5. Islamic corporate governance and occupational fraud

Conventional corporate governance involves the management of an organization by its board of directors, with the support of the management team, to ensure accountability to the organization, its shareholders, and stakeholders (Organization for Economic Co-operation and Development [OECD], 2004). This governance framework is categorized into two models: 1) managed corporation and 2) socially responsive. The former prioritizes maximizing shareholder profits through decisions made by the chief executive officer (CEO) and the management team. The latter incorporates the interests of stakeholders beyond shareholders and distributes decision-making authority between executive and supervisory bodies. Although conventional corporate governance aims to create value for all stakeholders, it falls short in addressing the board of directors' accountability to God and society, which is a critical component of ICG (Muneeza & Hassan, 2014).

In contrast to conventional governance, Shariah corporate governance comprises principles that extend beyond shareholders and stakeholders to encompass accountability to God. This Islamic approach to corporate governance seeks to manage organizations according to Maqasid Al-Shariah, the principles of Islamic law. It is founded on three core principles: 1) transparency, 2) disclosure, and 3) accountability. Success and welfare are evaluated based on moral and ethical spiritual obligations, rooted in trust and accountability to Allah (S.W.T).

Islamic banks operate as both principals and agents for their customers, necessitating adherence to principles of good faith, trustworthiness, and accountability to all stakeholders. Specific Shariah governance guidelines, such as those from the Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) and the Islamic Financial Services Board (IFSB), are designed for Islamic banking and financial institutions. Any form of cheating or illicit gain by the management or employees from the bank's funds is regarded as a breach of Islamic teachings. The required moral values are outlined in the Al-Quran, the Sunnah, and Fiqh. The Al-Quran mandates the honest fulfillment of all contracts (Al-Quran, Surah Al-Maidah: 1), regardless of their nature, and prohibits betrayal of trusts (Al-Quran, Surah Al-Anfal: 27) and bribery to gain unjust advantage (Al-Quran, Surah Al-Baqarah: 188). Consequently, any income obtained through cheating, dishonesty, or fraud is deemed immoral (Al-Quran, Surah An-Nisa: 29).

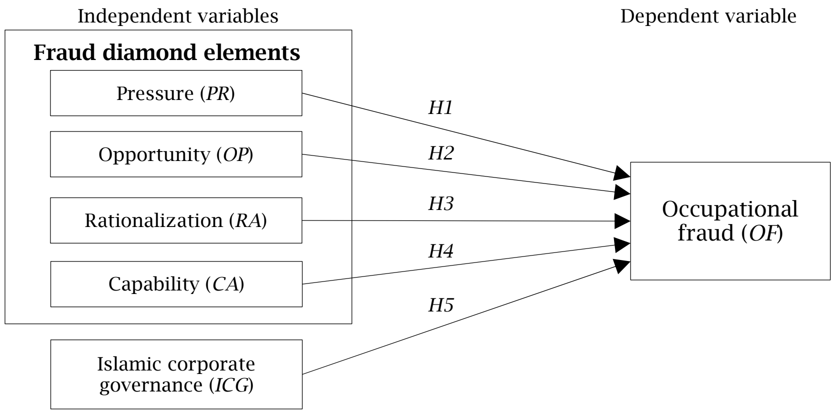
Implementing ICG in Islamic banks could effectively mitigate fraud in the banking sector. In line with the findings by Mukhibad et al. (2021), Suryanto and Ridwansyah (2016) demonstrated that the competence of Shariah auditors positively impacted fraud prevention in Shariah banks. Azizan and Razlina (2015) found that religious employees maintained positive job attitudes despite workplace incivility, underscoring the importance of improving understanding and dedication to Islamic practices to manage unethical behavior. The leadership style known as Khilafah, significantly contributed to fraud prevention in Indonesian Shariah banks (Suharto, 2020). This approach, which emphasizes obedience to Allah (S.W.T), the Prophet S.A.W, and the leader, regards employees as human representatives or vicegerents (Khalifah). Creating a supportive work environment grounded in the concept of Khilafah was suggested to reduce employee PR and lower the chances of fraudulent activities. Yusuf (2017) further emphasized that specific ICG principles, such as Adl and transparency contributed to the mitigation of bank fraud.

However, the above contention and findings were contradicted by In'airat (2015), who concluded that the mere existence and application of ICG were inadequate in diminishing fraud levels. Astuti et al. (2019) further highlighted that the implementation of Shariah corporate governance in Shariah banking, categorized into three levels — very good, good, and good enough — was insufficient to prevent fraud in Shariah banking. Based on the mixed findings, there is a need for studies across various regions worldwide to examine issues related to ICG and fraud, especially within the banking sector. To address this research gap, the following hypothesis is posited:

H5: There is a significant relationship between Islamic corporate governance and occupational fraud in Malaysian Islamic banks.

The following Figure 1 presents the research framework for this study.

Figure 1. Proposed research model



3. RESEARCH METHODOLOGY

3.1. Population and sample of the study

The study employs the survey method which has been extensively used in prior studies on banking fraud (ACFE, 2014; Kazemian et al., 2019; Said et al., 2017). The study's unit of analysis comprises employees of Islamic banks in Malaysia, given their potential involvement in fraudulent activities. A total of 380 questionnaires were distributed to 17 Malaysian Islamic banks, yielding 94 usable responses, which corresponds to a 24% response rate. Research studies may consider alternative methods for conducting the research including a systematic literature review approach to determine key fraud risk factors, and corporate governance that affect fraud occurrences. Additionally, in-depth interviews could be conducted with employees or top management of the banks or financial institutions to gain insight into motivational drives, and challenges related to OF.

3.2. Variable measurement

The questionnaire survey employed in this research is structured into seven parts, labeled from Section A to Section G. Section A specifically aimed to collect demographic data from participants, encompassing details such as gender, age, educational background, religion, marital status, years of working experience, job position, and department. Sections B to G of the survey employed a five-point Likert scale to assess respondents' agreement with each item statement, ranging from 1 (strongly disagree) to 5 (strongly agree). Section B comprises five items to measure the level of OF in Islamic banks based on the work of Ogola et al. (2016), and Yusuf (2017). Section C contains 13 items adapted from Albrecht et al. (2008), Lokanan (2015), and Yusuf (2017) to measure PR. Section D includes 11 items that assess opportunities for fraud by identifying weaknesses in the work environment, based on Albrecht et al. (2008), Lokanan (2015), and Yusuf (2017). Section E comprises five items related to RA that reflect the work environment and culture. Section F consists of five items on the CA for fraud perpetration based on the works by Wolfe and Hermanson (2004) and Yusuf (2017). Finally, Section G includes ten items on ICG that are adapted from Rahman and Bukair (2013) and Yusuf (2017).

3.3. Research model

Data was analyzed using descriptive statistics, factor analysis, univariate analysis, and cross-sectional regression. The preliminary testing on data validity was tested by using several standard diagnostic procedures. The Kaiser–Meyer–Olkin (KMO) test, skewness, kurtosis analyses, F-test, and Bartlett's test of sphericity were employed to assess data adequacy, normality, and homoscedasticity, respectively. Correlation analysis was performed to identify potential issues of multicollinearity. Additionally, the reliability of the data was assessed using Cronbach's alpha. The following equation represents the regression model for the study:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \varepsilon \quad (1)$$

where, Y = fraud occurrence; X_1 = pressure; X_2 = opportunity; X_3 = rationalization; X_4 = capability; X_5 = Islamic corporate governance; and ε = error.

4. RESULTS RESULTS

4.1. Demographic profile

Table 1 displays the demographic profile of the respondents. The study included 94 respondents, comprising 39 males (41.5%) and 55 females (58.5%). The majority of respondents belonged to the 25–34 years old age group, accounting for 58.5% of the total. This was followed by the 35–44 years old age group (17%), the 45–54 years old age group (16%), and respondents aged 55 years old and above (3.2%). Most respondents were Muslims (81.9%), whilst others constituting 12% and Christians 5.3%. The majority held a Bachelor's degree (61.7%), followed by those with a Diploma/Malaysian Higher School Certificate (*Sijil Tinggi Persekolahan Malaysia* — STPM) (13.8%), a master's degree (12.8%), and SPM (3.2%). More than half of the respondents (52.1%) were single, while 47.9% were married. In terms of working experience, the largest group had 6–10 years of experience (35.1%), followed by those with 1–5 years (22.4%) and 11–15 years (21.3%). The smallest group had less than a year of experience (7.4%). Most respondents worked as officers or executives (71.3%), followed by managers (14.9%), clerks (11.7%), and others (2.1%).

Table 1. Demographic profile of the respondents

Demographic factor	*Items*	*Frequency*	*Percentage (%)*
Gender	Male	39	41.5
	Female	55	58.5
Age	Below 25 years old	5	5.3
	25–34 years old	55	58.5
	35–44 years old	16	17.0
	45–54 years old	15	16.0
	55 years old and above	3	3.2
Religion	Islam	77	81.9
	Christian	5	5.3
	Others	12	12.8
Education level	Malaysian Certificate of Education (*Sijil Pelajaran Malaysia* — SPM)	3	3.2
	Diploma/STPM	13	13.8
	Bachelor's degree	58	61.7
	Master's degree	12	12.8
	Professional	8	8.5
Marital status	Single	49	52.1
	Married	45	47.9
Working experience	Less than 1 year	7	7.4
	1–5 years	21	22.4
	6–10 years	33	35.1
	11–15 years	20	21.3
	16 years and above	13	13.8
Job position	Clerk	11	11.7
	Officer/Executive	67	71.3
	Manager	14	14.9
	Others	2	2.1

4.2. Descriptive analysis

Table 2 presents data distribution, including the means, standard deviation, minimum, and maximum for this study. The skewness and kurtosis values range are close to zero and, hence, is considered within the acceptable range for normally distributed data.

Table 2. Descriptive statistics

Constructs	*Cronbach's alpha*	*Mean*	*SD*	*Min*	*Max*
OF	0.792	4.809	0.470	3.00	5.00
PR	0.903	4.436	0.697	2.00	5.00
OP	0.928	4.638	0.686	1.00	5.00
RA	0.931	4.713	0.561	3.00	5.00
CA	0.879	4.596	0.661	2.00	5.00
ICG	0.895	4.798	0.436	3.00	5.00

According to Pallant (2020), a Cronbach's alpha value of 0.70 and higher is acceptable for demonstrating good internal consistency. The Cronbach's alpha values for *OF*, *PR*, *OP*, *RA*, *CA*, and *ICG* are 0.792, 0.903, 0.928, 0.931, 0.879, and 0.895, respectively, indicating good internal consistency of the data.

To test the homoscedasticity or homogeneity of variances, Bartlett's test of sphericity was performed. The results were statistically significant for *OF* (chi-square = 191.22, $p < 0.000$), *PR* (chi-square = 755.00, $p < 0.000$), *OP* (chi-square = 759.66, $p < 0.000$), *RA* (chi-square = 417.01, $p < 0.000$), *CA* (chi-square = 255.93, $p < 0.000$), and *ICG* (chi-square = 719.56, $p < 0.000$). Meanwhile, the KMO measure of sampling adequacy is employed to construct factors and assess the validity of the instruments utilized. The KMO coefficients were 0.725 for *OF*, 0.857 for *PR*, 0.866 for *OP*, 0.841 for *RA*, 0.848 for *CA*, and 0.834 for *ICG*, indicating that the data are suitable for factor analysis (Hair et al., 2019). Factor analysis is subsequently conducted to condense variables into a smaller set of underlying factors while preserving as much information as possible. The results indicate that all items have loadings greater than 0.4, demonstrating the importance of all variables.

Table 3. Bartlett's test of sphericity and KMO measure of sampling adequacy

Variables	*Chi-square*	*p-value*	*KMO*
OF	191.22	0.000	0.725
PR	755.00	0.000	0.857
OP	759.66	0.000	0.866
RA	417.01	0.000	0.841
CA	255.93	0.000	0.848
ICG	719.56	0.000	0.834

4.3. Correlation analysis

Table 4 displays the correlation matrix between the independent and dependent variables. The findings suggest minimal multicollinearity concerns, as the correlations among the variables are generally modest. The highest correlation observed is 0.742 between *CA* and *OP*. However, this correlation alone does not imply causality. *CA* is an element for dealing with the stress of committing a fraudulent action (Wolfe & Hermanson, 2004). The high correlation indicates that employees who are under *PR* are more likely to have the *CA* to engage in fraud. Further analysis of the value of the variance inflation factor (VIF) for all variables is also shown to be less than 10 which indicates that all the variables are not highly intercorrelated (Field, 2009).

Table 4. Correlation analysis

Variables	*OF*	*PR*	*OP*	*RA*	*CA*	*ICG*
OF	1					
PR	0.488**	1				
OP	0.684**	0.672**	1			
RA	0.523**	0.492**	0.706**	1		
CA	0.717**	0.597**	0.742**	0.641**	1	
ICG	0.360**	0.435**	0.491**	0.486**	0.572**	1

*Note: ** Correlation is significant at the 0.01 level (2-tailed).*

4.4. Multivariate regression analysis

It is the aim of the study to examine whether pressure, *OP*, *RA*, *CA*, and *ICG* affect fraud incidences in the Malaysian Islamic banking industry. To address this aim, Table 5 illustrates the multivariate regression estimates depicting how independent variables relate to fraud incidences.

Table 5 presents the Durbin–Watson value for the model of 1.749, which is proximate to the value of 2, suggesting that the assumption of independent errors is acceptable. According to Field (2009), the ideal Durbin–Watson values should be between 1 and 3. Given the obtained value, the model can be considered free from autocorrelation errors, rendering it acceptable for further analysis. Table 5 further presents the model summary detailing the overall fit of the model in predicting the dependent variable (Field, 2009). The summary elucidates the statistical significance of the model through variations in the dependent variable. R^2 signifies the variation in the outcome or fraud occurrence explained by the independent variables as the predictors. Based on Table 5, the R^2 value is 0.574 with a significance level of $p < 0.000$, indicating that 57.4% of the variance in fraud occurrence is explained by *PR*, *CA*, *RA*, and *ICG*.

It is posited in *H1* that there is a significant relationship between *PR* and *OF* in Islamic banks in Malaysia. The result in Table 5, however, shows that the coefficient of pressure is negative and insignificant ($\beta = -0.015$, $p > 0.100$), suggesting that *H1* is rejected. This result is consistent with Anindya and Adhariani (2019) that PR had no significant influence on OF.

Table 5. Multivariate regression analysis

Variables	*Coefficient*	*Std. error*	*t*	*Sig.*
Constant	2.579		6.717	0.000
PR	-0.015	0.065	-0.234	0.815
OP	0.254***	0.032	2.907	0.005
RA	-0.010	0.043	-0.119	0.906
CA	0.372***	0.043	4.571	0.000
ICG	-0.114	0.058	-1.210	0.229
R	0.757			
R^2	0.574			
Adjusted R^2	0.549			
Durbin-Watson	1.749			
Std. error of the estimate	0.316			
p-value (ANOVA)	0.000			

*Note: *** Significant at the 0.01 level (2-tailed).*

Likewise, *H2* proposed that there is a significant relationship between *OP* and *OF* in Islamic banks in Malaysia. The coefficient for *OP* as shown in Table 5 is positively significant ($\beta = 0.254$, $p < 0.05$). *H2* is thus supported by indicating a significant influence of *OP* towards fraud cases. This result is in line with the findings demonstrated by past studies such as Yusuf (2017), and Tuan Mat et al. (2019) that OP facilitates bank employees to engage in fraudulent activities.

H3 posited that there is a significant relationship between *RA* and *OF* in Islamic banks in Malaysia. However, the coefficient for *RA* was found to be negative and insignificant ($\beta = -0.010$, $p > 0.100$), indicating that *H3* is not supported. These findings align with previous studies by Anindya and Adhariani (2019), Lokanan (2015), and Awalluddin et al. (2022) which concluded that *RA* has no significant influence on *OF*. Therefore, it is argued that people do not always need RA to commit fraud.

As for *H4*, it was proposed that there is a significant relationship between *CA* and *OF* in Islamic banks in Malaysia. Table 5 exhibits that the coefficient for capability is positive and significant ($\beta = 0.372$, $p < 0.001$), thus *H4* is accepted. The finding is consistent with past studies which suggest that capability is a crucial element that is prone towards fraud occurrences. In line with the findings by Avortri and Agbanyo (2020), Imagbe et al. (2019), and Yusuf (2017), the study found that the occurrences of OF will increase if the fraudster has an increased CA to commit OF.

Finally, *H5* posited that there is a significant relationship between *ICG* and *OF* in Islamic banks in Malaysia. The result shows that the coefficient for *ICG* is negative and insignificant ($\beta = -0.114$, $p > 0.100$), demonstrating that *H5* is not supported. This finding is consistent with studies by Astuti et al. (2019) and In'airat (2015), which concluded that ICG is insufficient to reduce the level of fraud. Hence, the presence of ICG does not significantly impact the occurrences of OF.

5. DISCUSSION

Pressure, as illustrated by Cressey (1953), is the incentive that may motivate an individual to engage in fraud. PR may arise from personal problems, such as financial PR, or from additional PR stemming from family or social expectations, as well as from workplace factors such as peer-group PR, resentment towards superiors, unfair treatment by the company, excessive and varied workloads, close associations with suppliers and other key people, or management scrutiny due to job performance weaknesses. However, the findings of this study show no indication that PR motivates individuals to perpetrate fraud in banks. This finding is supported by Anindya and Adhariani (2019) and Awalluddin et al. (2022) that revealed PR had no significant influence on OF. It is argued that an individual will only engage in fraud under exceptionally strong PR, which can be highly compelling and trigger fraudulent actions (Awalluddin et al., 2022). In such situations, the perpetrator is aware of the potential consequences if their fraudulent activities are exposed. The PR element is tied to the concept of "worthy or not worthy", which is non-shareable from the fraudster's perspective. Due to intense PR, individuals feel justified in committing fraud and do not perceive their actions as unethical.

In contrast, the study revealed that OP has a significant and positive impact on the OF among Islamic banks in Malaysia. OP often serves as a means of escaping fraud detection, and perpetrators are unlikely to commit fraud without it (Awalluddin et al., 2022). Individuals intending to commit fraud actively seek more effective and advanced techniques by thoroughly examining both the internal and external environments of business organizations, including accounting processes and internal control systems. By doing so, perpetrators identify opportunities and exploit weaknesses in the organization's structure or operations to enhance the likelihood of successful fraud. These fraud opportunities would range from inadequate checks and balances, unethical management, inadequate staffing, ineffective internal auditors, and the absence of periodic employee rotation to inaccurate personnel records, poorly documented policies or guidelines, insufficient physical controls, untimely transaction computation, or unsecured cashboxes. Thus, it is crucial to acknowledge that insufficient governance and internal controls significantly facilitate fraud by providing safe opportunities for fraudulent activities.

This study further found that RA has an insignificant negative relationship with fraud occurrence. Lokanan (2015) argued that RA is not always a prerequisite for engaging in fraud. Some individuals may not require a moral justification for their actions. Instead, they exploit opportunities where they perceive a low risk of detection. In these instances, factors such as cultural influences and inadequate training and knowledge sharing on fraud make RA unnecessary for driving an individual to commit fraud. This finding is further supported by Awalluddin et al. (2022), which suggests that RA does not significantly influence employees to commit fraud.

Moreover, the study documented that CA exhibited a significant positive relationship with fraud incidences, consistent with past studies (ACFE, 2022; Avortri & Agbanyo, 2020). CA manifests as a strong influence over situations, the ability to persuade colleagues to cooperate, a deep understanding of the internal control system, or the capacity to exploit opportunities for personal gain. Only employees possessing the requisite skills can identify and capitalize on opportunities for fraudulent purposes. According to Imagbe et al. (2019), the necessary technical skills and knowledge, termed CA, significantly impact financial crimes in the Nigerian banking industry. Unless measures are taken to address these elements of the fraud diamond, financial crimes are likely to persist in banking and financial institutions.

Finally, the study discovered that ICG has an insignificant negative relationship with fraud incidences in Malaysian Islamic banks. ICG is therefore shown to be ineffective in deterring OF. The finding is supported by researchers who reported that internal control procedures were not significant in preventing fraud occurrences. The results align with In'airat (2015) and Astuti et al. (2019), both of which concluded that the mere existence and implementation of ICG are inadequate for mitigating fraud.

6. CONCLUSION

Fraud is a common issue among employees and constitutes an invisible threat to all types of organizations, whether in the public or corporate sector, with a substantial impact on banking and financial institutions. This study investigates factors influencing fraud occurrence in the Malaysian banking industry. Results indicate that factors including OP and CA influence the likelihood of fraud incidences in Malaysia. However, other factors such as PR, RA, and ICG did not show any significant effect on fraud occurrences. Given the increased PR on companies around the globe to prevent OF, this study provides valuable insight into the effect of the fraud diamond determinants on the prevalence of corporate fraud in banks. As such, this study offers critical consideration for policymakers and regulators. This study further addresses the scarcity of research on the impact of ICG on the propensity to perpetrate corporate fraud in financial institutions.

The study has several limitations that should be taken into account when assessing the results. First, although the sample includes numerous banks, the overall sample size is limited. Second, this study may contain personal biases and judgment errors. Respondents rated all variables using a five-point Likert scale, which could have introduced personal bias and affected the accuracy of the findings. Third, the foundation for the study is limited due to a lack of prior research in Malaysia. Hence, determining guidelines for further examination of this issue within the Malaysian banking sector has proved challenging.

The methodological limitations and small sample size of this study highlight the need for future research to address these issues by employing alternative methods, such as interviews, and increasing the number of respondents to capture a broader range of perceptions and opinions. Future research could delve into updated ICG regimes and compare the fraud risk factors across different sectors and countries. Future studies could explore and evaluate various strategies for detecting and preventing fraud, including the incorporation of emerging technologies. Furthermore, exploring the impact of cultural differences and regulatory frameworks could provide deeper insights into fraud risks and prevention measures across different contexts.

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