

## Profiling Fraud, Fraudster, and Victim

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### ABSTRACT

Globally, companies often face occupational fraud, which is considered the most damaging type of fraud for businesses, accounting for five percent of their annual income losses each year. Profiling is one effective technique for preventing and detecting occupational fraud. This process involves creating profiles of both fraud victims and perpetrators. This qualitative research, employing a descriptive study method, aims to analyze trends in victim profiles, types of fraud, and fraudster profiles over the past decade, using data from the Association of Certified Fraud Examiners (ACFE) for the years 2012–2022. The findings indicate that financial statement fraud results in the highest financial losses, despite being the least common type of fraud. Conversely, asset misappropriation is the most frequent type of fraud but results in the lowest financial losses. The most common profile of fraud perpetrators includes the following characteristics: male, aged between 31 and 45, employed in a non-managerial position, holding a bachelor's degree, having worked for one to five years, with no criminal history, and living beyond their means. Additionally, smaller firms are more susceptible to fraud, and organizations in the banking and financial sectors are particularly vulnerable to occupational fraud.

### ABSTRAK

Secara global, perusahaan sering menghadapi kecurangan okupasional, yang dianggap sebagai jenis kecurangan paling merusak bagi bisnis, menyumbang lima persen dari kerugian pendapatan tahunan mereka setiap tahun. Profiling adalah salah satu teknik efektif untuk mencegah dan mendeteksi kecurangan okupasional. Proses ini melibatkan pembuatan profil baik dari korban kecurangan maupun pelaku. Penelitian kualitatif ini, menggunakan metode studi deskriptif, bertujuan untuk menganalisis tren dalam profil korban, jenis kecurangan, dan profil pelaku kecurangan selama dekade terakhir, menggunakan data dari Association of Certified Fraud Examiners (ACFE) untuk tahun 2012–2022. Temuan menunjukkan bahwa kecurangan laporan keuangan mengakibatkan kerugian finansial tertinggi, meskipun merupakan jenis kecurangan yang paling jarang terjadi. Sebaliknya, penggelapan aset adalah jenis kecurangan yang paling sering terjadi tetapi mengakibatkan kerugian finansial terendah. Profil pelaku kecurangan yang paling umum mencakup karakteristik berikut: laki-laki, berusia antara 31 dan 45 tahun, bekerja di posisi non-manajerial, memiliki gelar sarjana, telah bekerja selama satu hingga lima tahun, tidak memiliki riwayat kriminal, dan hidup melebihi kemampuan finansialnya. Selain itu, perusahaan yang lebih kecil lebih rentan terhadap kecurangan, dan organisasi di sektor perbankan dan keuangan sangat rentan terhadap kecurangan okupasional.

### 1. INTRODUCTION

Occupational fraud, or deception in the workplace, is a significant global concern. Research indicates that this type of fraud can lead to organizations losing up to 5% of their annual revenue (ACFE, 2022; Foodman, 2022). A survey by the Association of Certified Fraud Examiners (ACFE) in 2022 found that 86% of the 2,110 cases studied involved fraudulent asset misappropriation, with losses reaching up to USD 100,000 per case. Furthermore, a 2020 report by PwC identified corruption and bribery as among the top four challenges organizations worldwide face (PwC, 2020). The issue is exacerbated by fraudsters continually developing

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new methods, such as collusion, which has increased since 2020. Consequently, organizations are experiencing a rise in fraud cases and escalating financial losses (ACFE, 2022; KPMG, 2016; PwC, 2022).

Despite the evolving tactics of fraudsters, they often follow recognizable patterns. Identifying these patterns can form the basis for developing preventative measures against occupational fraud. Profiling both perpetrators and victims of fraud is a viable strategy for prevention and detection. Understanding profiling trends can provide a clearer picture of both perpetrators and victims, thereby expediting the detection and investigation process and minimizing losses (Padgett, 2015; Sofianti, 2018). Profiling is a widely used strategy to prevent, detect, and investigate organizational fraud. The ACFE publishes a biennial report called the "Report to the Nation," which covers various aspects of fraud but only shows trends over a two-year period. Given that occupational fraud poses a significant global threat to organizations, our study will analyze profiling data from the past decade (2012-2022) to provide a comprehensive understanding of perpetrator profiles, types of fraud, and fraud victims globally. This analysis aims to enhance the effectiveness of fraud prevention and detection through profiling.

While some studies have focused on specific countries, there is a need to identify universal patterns in fraud over the last decade. For instance, a study by Jalil & Omar (2015) explored the characteristics of corruption and asset misappropriation perpetrators in Malaysia from 2006 to 2011, finding that typical offenders were Malay males aged 36-55 years in managerial positions. High-risk organizations for fraud were identified in the government and oil and gas sectors. Meanwhile, Gekoski et al. (2022) described fraudsters in North America, the United Kingdom, Europe, and Australia as white males aged 40-60 years with average or higher income, corporate jobs, stable family background, and married with at least one child. In Indonesia, Kennedy & Siregar (2017) identified occupational fraud perpetrators in 2016 as males aged 36-45 years with a bachelor's degree or higher education. In contrast, Sofianti et al. (2020) described corruptor profiles in Indonesia from 2005 to 2016 as males in executive positions with managerial roles and a bachelor's degree. This research investigates victim profiles, fraud types, and perpetrators over the past decade to gain a comprehensive understanding of global profiling trends.

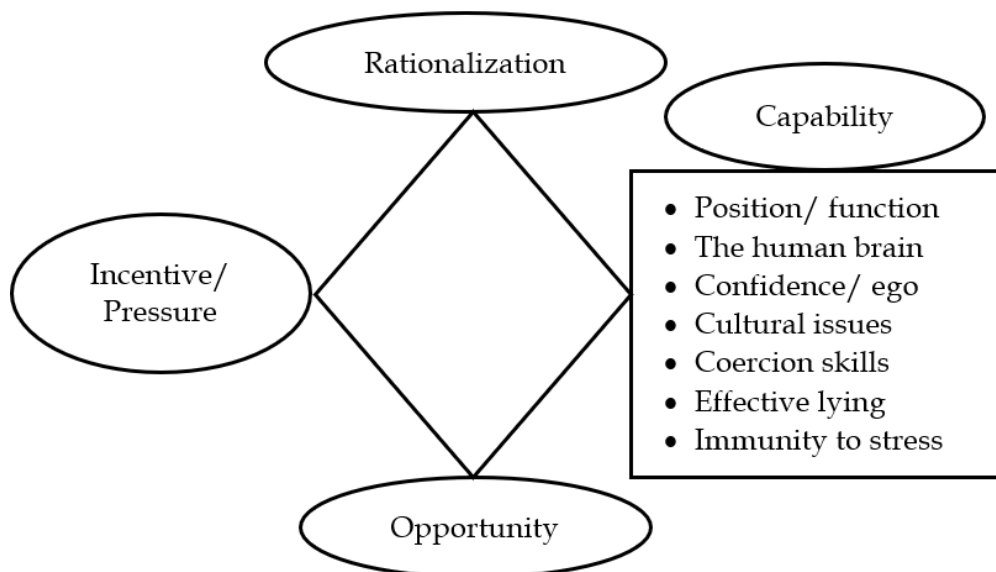
## 2. THEORETICAL FRAMEWORK AND HYPOTHESES

### 2.1. Fraud Triangle Theory

The fraud triangle theory, developed by Donald Cressey, explains the factors associated with white-collar crime (Cressey, 1953). These factors—pressure, opportunity, and rationalization—form the basis for committing fraud, as illustrated in Figure 1. An employee might decide to commit fraud due to various pressures, which can be financial or non-financial. Such pressures often relate to problems that cannot be openly discussed due to fear of negative stigma (Cressey, 1953). For instance, an employee maintaining a luxurious lifestyle may experience non-financial pressure to sustain that lifestyle. Similarly, financial pressures, such as unrealistic work targets, can lead employees to adopt aggressive accounting policies and practices (Jackson & Bekerian, 1997; Rezaee, 2019a).



**Figure 1.** Conceptual framework Cressey's Fraud Triangle  
**Source:** Cressey (1953)



**Figure 2.** The Fraud Diamond  
**Source:** Wolfe & Hermanson, (2004)

The factors of opportunity and rationalization further support these pressures. When an opportunity arises, an employee or manager with access to the company's internal systems might exploit weaknesses in the internal control system to commit fraud. The presence of such opportunities is a key factor in the decision to commit fraud. After committing fraud, the perpetrator may rationalize their actions, attempting to justify or excuse their behavior by making it appear acceptable rather than wrong (Cressey, 1953).

## 2.2. Fraud Diamond Theory

Figure 2 illustrates the Fraud Diamond Theory, an extension of the Fraud Triangle Theory, formulated by Wolfe and Hermanson (2004). This theory introduces the capability factor as a crucial element in committing fraud, alongside the three existing factors: financial pressure, opportunity, and rationalization (Wolfe & Hermanson, 2004). According to the theory, four significant factors can lead an employee to commit fraud. Managers may feel compelled to manipulate financial reports to present a more favorable picture of the company, regardless of its actual financial condition. Opportunities for fraud often arise from inadequate internal control systems, such as insufficient security measures to protect passwords or a lack of separation of duties. Perpetrators frequently rationalize their actions by believing they will repay the stolen funds before their actions are discovered or by considering the stolen amount as immaterial and harmless. The capability factor is a critical component of the Fraud Diamond Theory. It refers to an individual's knowledge and ability to access accounting systems, company finances, and computer networks without proper authorization. The theory asserts that committing fraud is impossible without the necessary knowledge and skills (Breton, 2019; Priantara, 2013).

## 2.3. Occupational Fraud

Occupational fraud refers to fraudulent activities conducted by employees who exploit their employer's trust for personal or group gain, often resulting in financial losses for the company (Jalil & Omar, 2015; Kuo & Tsang, 2022; Padgett, 2015; Suh et al., 2019). It is also known as internal, insider, or employee fraud. The Association of Certified Fraud Examiners (ACFE) defines it as a crime committed by employees to enrich themselves through the misuse of company assets (ACFE, 2022). Occupational fraud is often classified as white-collar crime, as employees in high-ranking positions within a company are typically responsible for causing the most significant losses (Gekoski et al., 2022; Yang & Chen, 2023).

The ACFE categorizes occupational fraud into three types: asset misappropriation, corruption, and financial statement manipulation (ACFE, 2022). Asset misappropriation and corruption are usually committed by employees for personal or group gain, with organizations being the primary victims. However, financial statement manipulation may be driven not only by personal gain but also by a company's desire to alter its financial condition. In such cases, the company is not a direct victim but indirectly becomes a

perpetrator of occupational fraud. When this type of fraud occurs, stakeholders who rely on the financial statements become the victims (Priantara, 2013; Suh et al., 2019).

#### **2.4. Profiling in Fraud Prevention and Detection**

Profiling analysis is crucial in forensic accounting and investigative auditing for the early detection of fraud within corporations (Sayyid, 2015). Fraud profiling uses predictive analysis by collecting historical fraud data to identify vulnerable areas. This method effectively pinpoints potential fraudsters and the types of fraud that may occur in the future. By analyzing past data, profiles of the most susceptible fraudsters and the victims they target can be developed (Padgett, 2015).

The outcomes of profiling serve as an analytical tool for preventing and detecting fraud within an organization. This process narrows down the list of suspected fraudsters and potential victims, thereby saving time, budget, and personnel resources required for investigations. Profiling's effectiveness lies in its ability to analyze various characteristics of individuals, groups, or situations that have led to fraud, aiming to bridge significant forensic gaps (Padgett, 2015). This indicates that profiling provides essential information for the investigation process, serving as an analytical tool in organized crime (Sofianti, 2018). Consequently, it enhances investigation efficiency by offering additional insights about suspected fraudsters based on data analysis (Lee, 2014; Rezaee, 2019b).

#### **2.5. Profiling of Fraudsters, Fraud Victims, and Types of Fraud**

Analyzing the profiles of fraud perpetrators involves using historical data to identify the psychological and behavioral characteristics of individuals involved in fraudulent activities. This analysis helps determine whether someone is engaged in fraudulent activities (Padgett, 2015; Sofianti et al., 2020). Fraudster profiling may include demographic information, length of tenure in the company, and red flag behaviors. The results provide a clearer picture of suspected fraudsters.

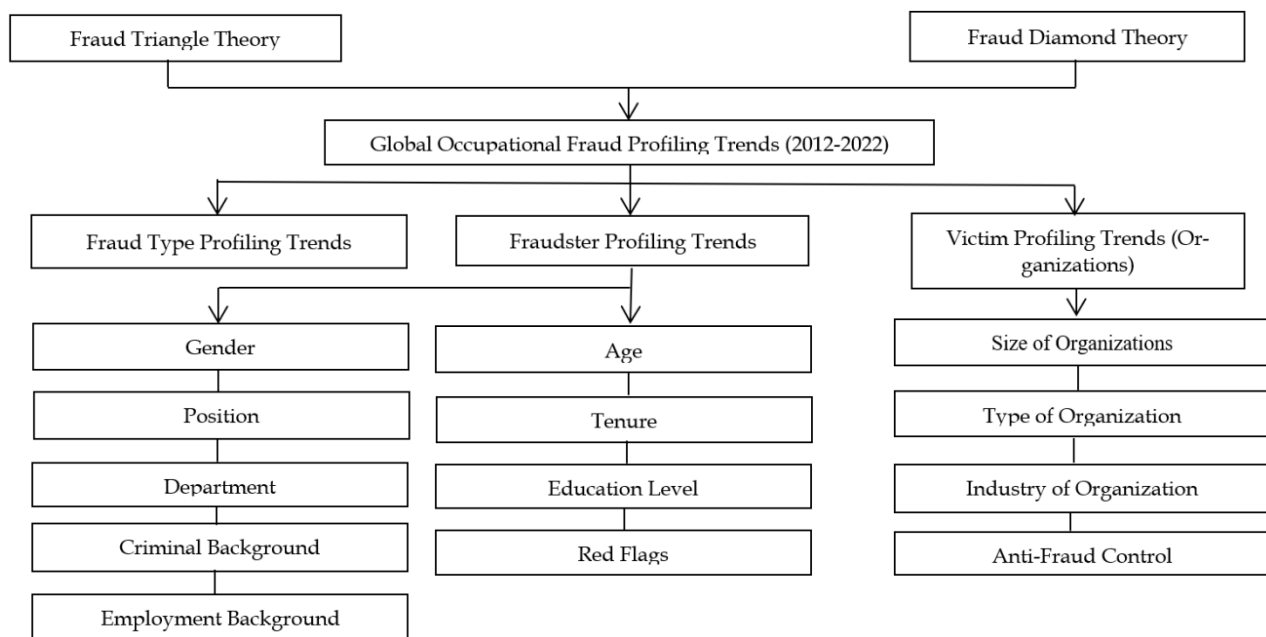
In addition to profiling fraudsters, identifying the profiles of victims of occupational fraud is valuable. Analyzing a victim's fraud profile can assess an organization's vulnerability to occupational fraud by examining previous instances of fraud (Deliema et al., 2020). By analyzing these profiles, industries with high vulnerability to occupational fraud can be identified. For example, the ACFE's 2022 report states that the finance and banking industry has the highest number of occupational fraud cases (ACFE, 2022). This information is useful for organizations in these industries to strengthen internal controls and implement anti-fraud programs. Profile analysis is also essential for identifying types of occupational fraud. According to the ACFE, there are three types: corruption, asset misappropriation, and financial statement manipulation (ACFE, 2020). Each type has unique characteristics regarding frequency, loss level, and consequences. Identifying and analyzing profiles for these types is crucial to strengthening the internal control systems of organizations in areas susceptible to occupational fraud.

It is important to note that profiling should not be used to stereotype fraudsters and victims of occupational fraud. Instead, it should be used to understand their actions and interactions to better comprehend the risks and opportunities involved. Detecting and preventing occupational fraud should not rely on pre-existing templates of fraudster profiles, as these may not accurately portray fraud perpetrators (Padgett, 2015). Figure 3 presents the conceptual framework of this research. The research aims to analyze profiling trends of fraudsters, victims (organizations), and types of occupational fraud through the lens of the fraud triangle theory and the fraud diamond theory.

### **3. RESEARCH METHOD**

This study aims to investigate trends in the profiles of perpetrators, victims, and types of fraud in global occupational fraud over the past decade, using the ACFE's periodic reports from 2012 to 2022 as the primary data source. A qualitative descriptive research approach was employed to analyze these profiling trends. Through a systematic documentation process, data was extracted from the ACFE reports, providing a comprehensive dataset for analysis. The data was then analyzed using the Miles and Huberman framework, chosen for its flexibility and iterative nature, which allows researchers to move seamlessly between data reduction, display, and conclusion stages (Miles & Huberman, 1984). This iterative process enhances the accuracy of the findings.

Data reduction involved the ongoing summarization and categorization of data based on research objectives, followed by trend identification. Data display included visual representations, such as profiling



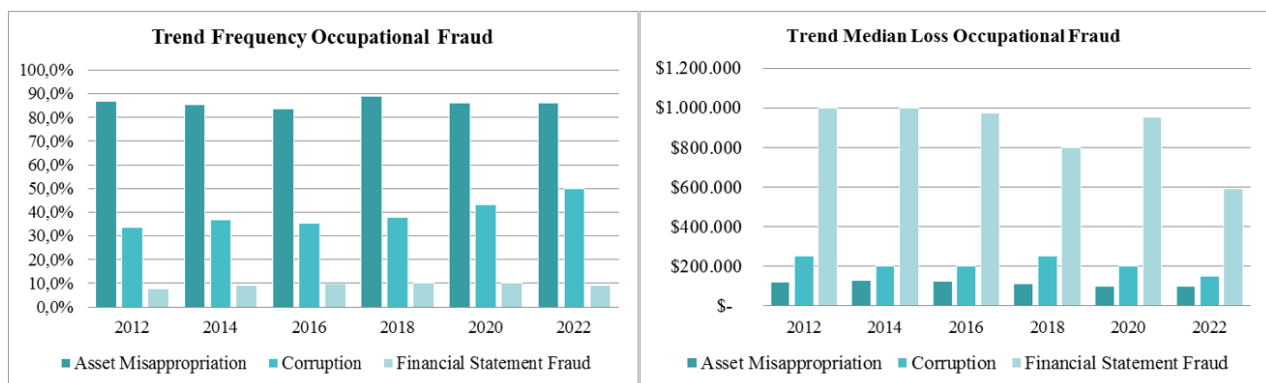
**Figure 3.** Conceptual framework

trend graphs, and narrative descriptions.

Conclusions were drawn from a comprehensive understanding of the presented data. To ensure the validity and reliability of the research, triangulation techniques were implemented to verify the convergence and consistency of the findings. This approach strengthens the overall reliability of the research (Bungin, 2014; Sugiyono, 2019). In this study, triangulation was achieved by using additional secondary data, such as books and journal articles.

#### 4. DATA ANALYSIS AND DISCUSSION

This research utilizes primary data from the ACFE's globally renowned "Report to the Nations" to analyze trends in occupational fraud. The data includes the quantity and median loss levels of three types of occupational fraud: asset misappropriation, corruption, and financial statement fraud. The analysis explores fraudster profiling trends by examining factors such as gender, age, job level, tenure, department, education level, previous employment background, criminal history, and red flags. Additionally, the research investigates victim profiling trends to identify the types of organizations targeted by fraudsters, including company size, industry type, and anti-fraud programs implemented. The "Report to the Nations" provides a comprehensive analysis of actual cases of occupational fraud reported by Certified Fraud Examiners (CFE). The report examines a varying number of cases each year, including 1,388 cases in 2012, 1,483 cases in 2014, 2,410 cases in 2016, 2,690 cases in 2018, 2,504 cases in 2020, and 2,110 cases in 2022.



**Figure 4.** Trend in the number of cases and median loss from occupational fraud types

#### 4.1. Profiling Trends of Global Fraud Types

Different types of occupational fraud exhibit unique characteristics regarding how often they occur and the typical financial losses they cause. As shown in Figure 4, asset misappropriation is the most common form of occupational fraud experienced by organizations globally, followed by corruption and financial statement fraud. However, the frequency of these cases does not necessarily correspond to the severity of the financial losses they cause. Specifically, while asset misappropriation is the most frequently reported, it typically results in the smallest financial losses. In contrast, financial statement fraud, despite being the least common, tends to cause the largest financial losses among the three types of occupational fraud.

#### 4.2. Profiling Trends of Fraudster

Figure 5 illustrates that, over the past decade, male fraudsters have been responsible for more occupational fraud cases than female fraudsters, and these cases tend to result in larger median losses. However, this trend cannot be solely attributed to the higher number of males in the workplace. Conversely, Figure 6 presents the distribution of fraud cases and associated losses by the age group of the perpetrators. It shows that 50% of occupational fraud cases are committed by individuals aged 31 to 45. The next highest number of cases is committed by those aged 56 to 60, followed by individuals under 26 and those over 60. Notably, while fraudsters over 60 commit the fewest cases, they cause the highest total losses among all age groups. Additionally, the total losses caused by fraudsters aged 31 to 45 are not greater than those caused by fraudsters over 60.

According to Figure 7, from 2012 to 2020, employees were responsible for the highest number of fraud cases, followed by managers and executives. However, in 2022, the number of cases involving managers increased, making them the group with the highest number of occupational fraud cases that year, surpassing employees. Interestingly, executives consistently accounted for the fewest fraud cases. Despite this, the median loss associated with executive-level fraud is the highest compared to other job levels. Additionally, there is a correlation between the job level of the fraudster and their tenure, affecting both the number of cases and the median loss. Figure 8 shows that fraudsters with one to five years of tenure consistently caused the most occupational fraud cases over the past decade. Those with more than ten years of tenure consistently ranked third in the number of fraud cases from 2012 to 2016. When examining the trend of median losses by tenure, it becomes evident that the longer a fraudster has worked in an organization, the higher the median loss. Consequently, the trend in median loss, from highest to lowest, is observed among fraudsters with more than ten years of tenure, followed by those with six to ten years, one to five years, and less than one year.

Figure 9 illustrates the trends in the frequency of fraud cases and median loss rates by department. Five departments consistently report the highest number of fraud cases: accounting, operations, sales, top management, and customer services. However, these departments do not correspondingly account for the highest total median losses. Instead, the departments with the highest total median losses over the past decade are top management, the board of commissioners, finance, accounting, and manufacturing and production. Notably, the manufacturing and production department and the board of commissioners are not among the top five departments with the most fraud cases, yet they incur significant total losses. In fact, these two departments have the fewest fraud cases.

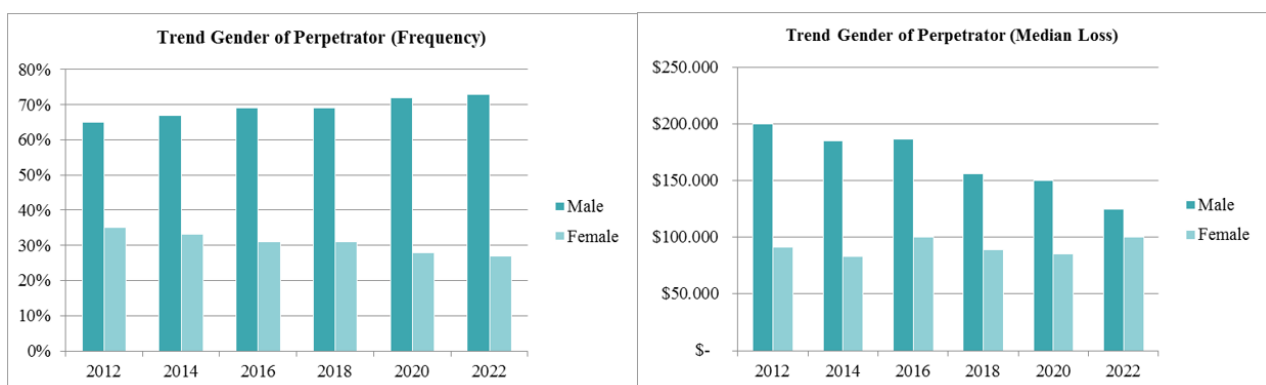


Figure 5. Trend in the number of cases and median loss based on fraudster gender

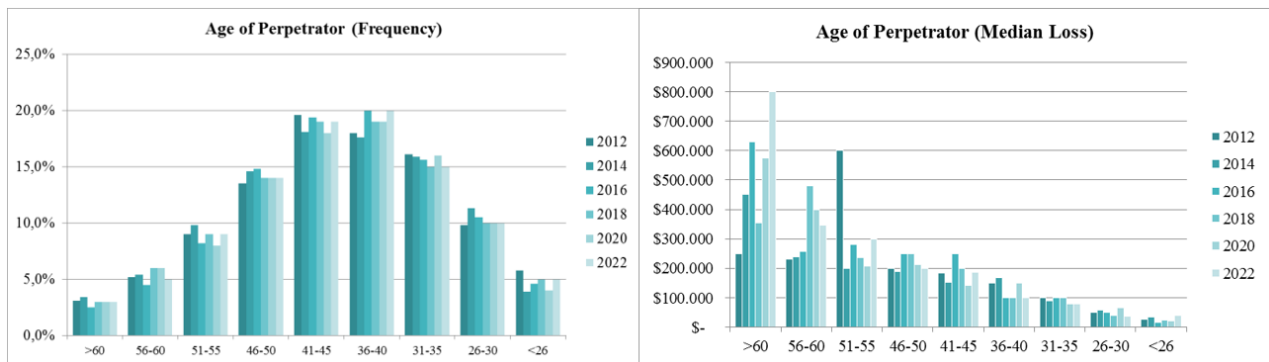


Figure 6. Trend in the number of cases and median loss based on fraudster age

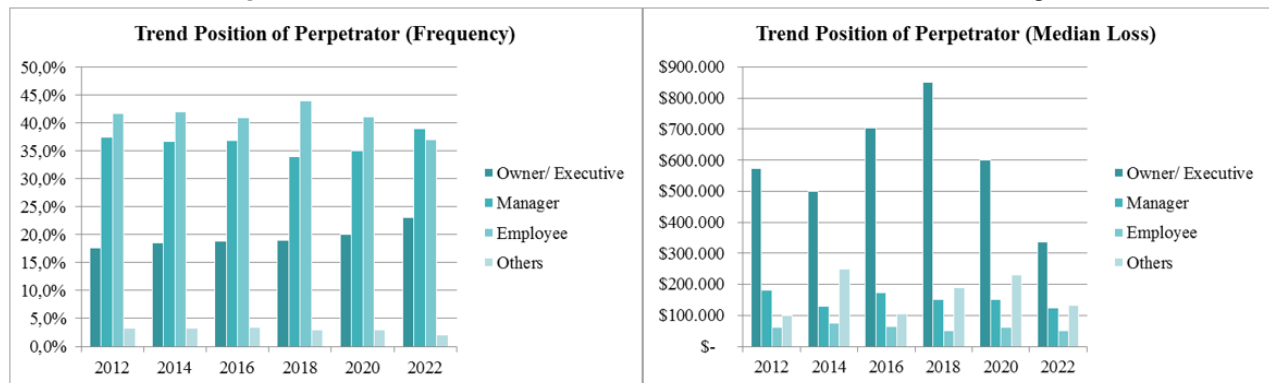


Figure 7. Trend in the number of cases and median loss based on position of fraudster

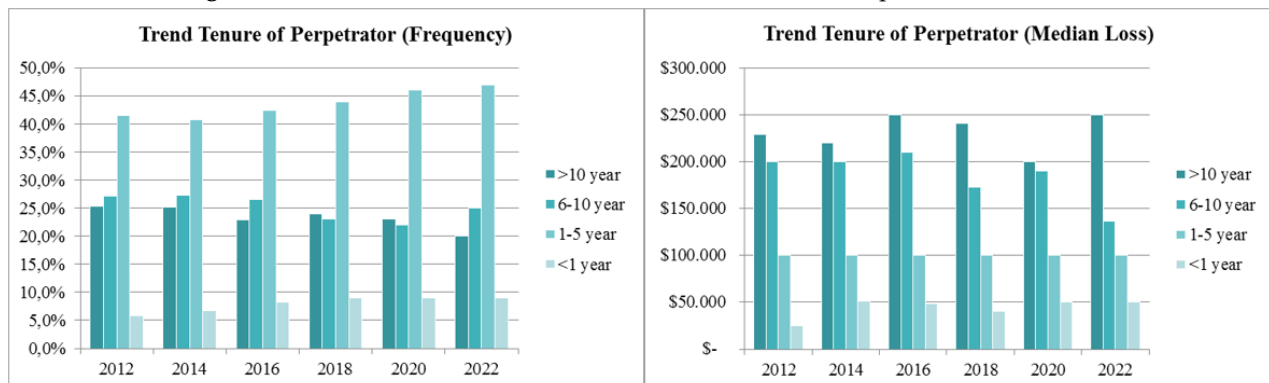


Figure 8. Trend in the number of cases and median loss based on fraudster's tenure

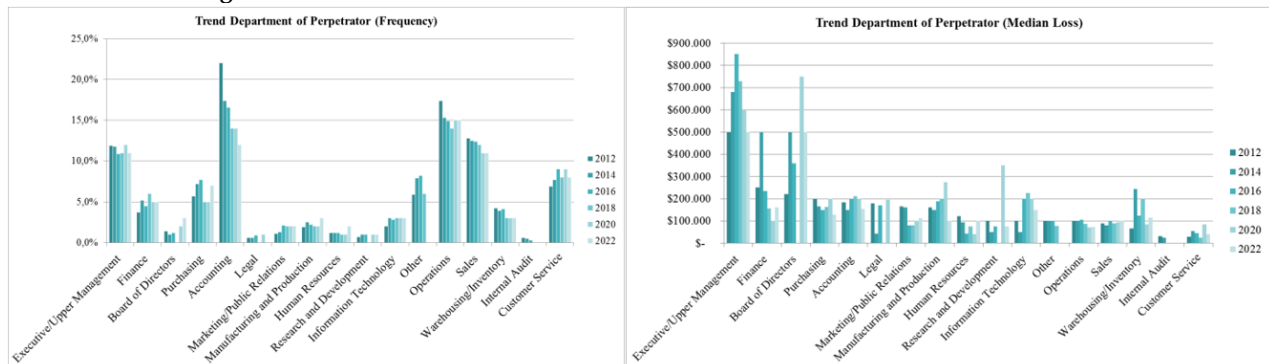


Figure 9. Trend in the number of cases and median loss based on fraudster's department

Recent studies on the educational backgrounds of fraudsters, as shown in Figure 10, reveal that individuals with a high school or bachelor's degree are more likely to engage in fraudulent activities than

those with postgraduate education. Although fraudsters with postgraduate education are involved in fewer cases, they tend to cause the highest losses. Over the past decade, there has been a direct correlation between higher education levels and greater median losses. Surprisingly, most fraudsters are first-time offenders who have never been convicted or dismissed from previous jobs, as indicated in Figure 11. Additionally, fraudsters often have a clean criminal record. However, every act of occupational fraud eventually reveals at least one red flag of suspicious behavior, as suggested by Figure 12. Over the past decade, the most common red flags among identified fraudsters include living beyond their means, experiencing financial difficulties, having close relationships with vendors or customers, exhibiting control issues, being reluctant to share duties, and displaying a wheeler-dealer attitude.

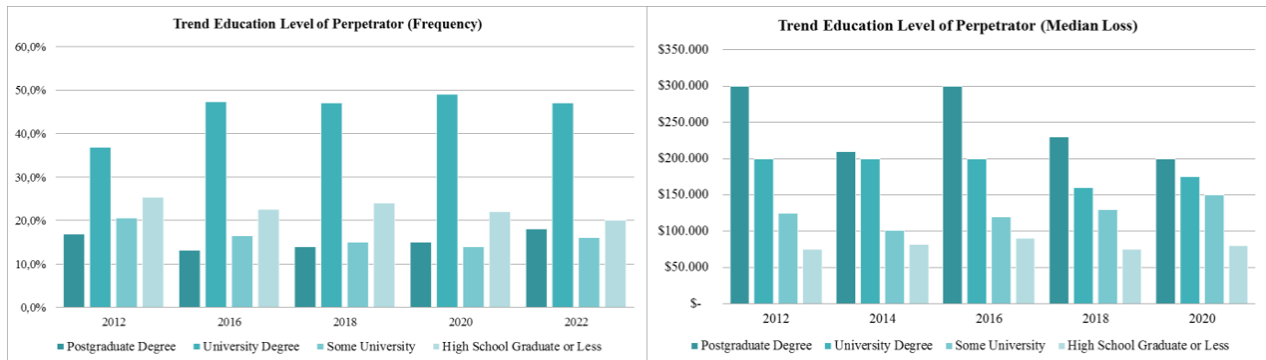


Figure 10. Trend in the number of cases and median loss based on fraudster's education

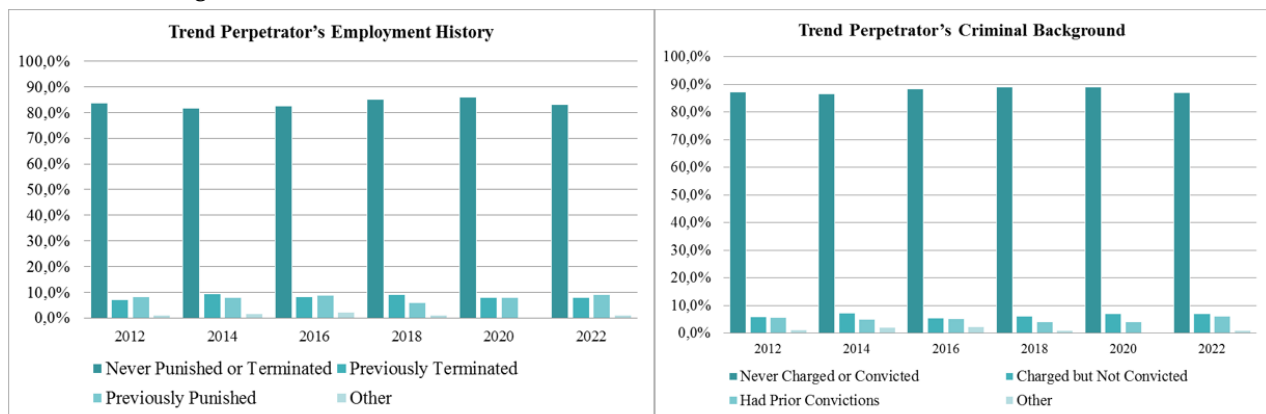


Figure 11. Trend in the number of cases and median loss based on fraudster's employee and criminal background

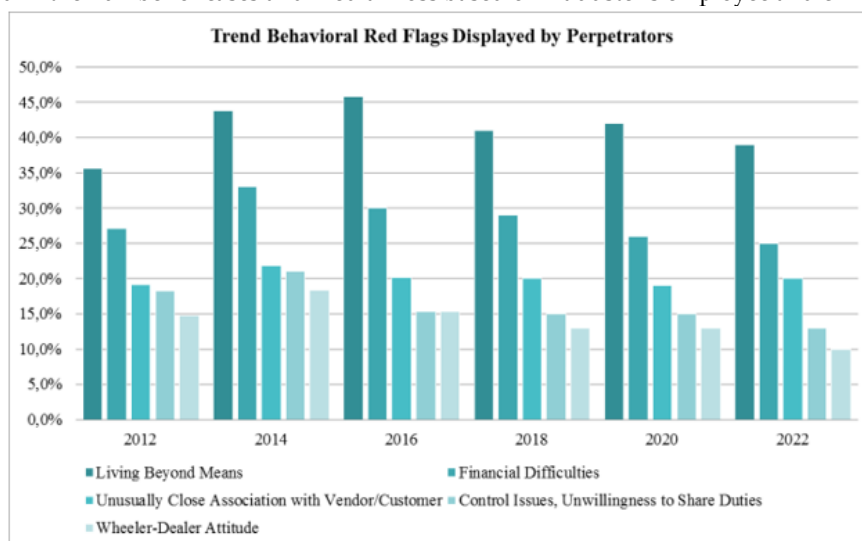


Figure 12. Trend in the number of cases and median loss based on fraudster's red flags



### 4.3. Profiling Trends of Organization Victims

According to the data in Figure 13, profit-oriented organizations have experienced a higher frequency of fraud cases compared to non-profit organizations over the past ten years. Public and private companies have been the most affected, while non-profit organizations have encountered fewer fraud cases. This indicates that the likelihood of fraud is lower in non-profit and government organizations than in public and private companies. Additionally, the median losses for private companies and public organizations have been higher due to the high frequency of fraud cases. As shown in the graph, private companies have consistently reported the highest median losses compared to other types of organizations. Figure 14 illustrates the varying levels of vulnerability to occupational fraud across different industries. The financial and banking industry has consistently had the highest frequency of occupational fraud cases over the last decade. However, the median losses incurred by each industry vary. Notably, the industry with the highest frequency of fraud cases does not necessarily experience the highest total losses. This is evident in Figure 14, where the mining industry has the highest median loss despite having the lowest frequency of occupational fraud incidents from 2012 to 2022.

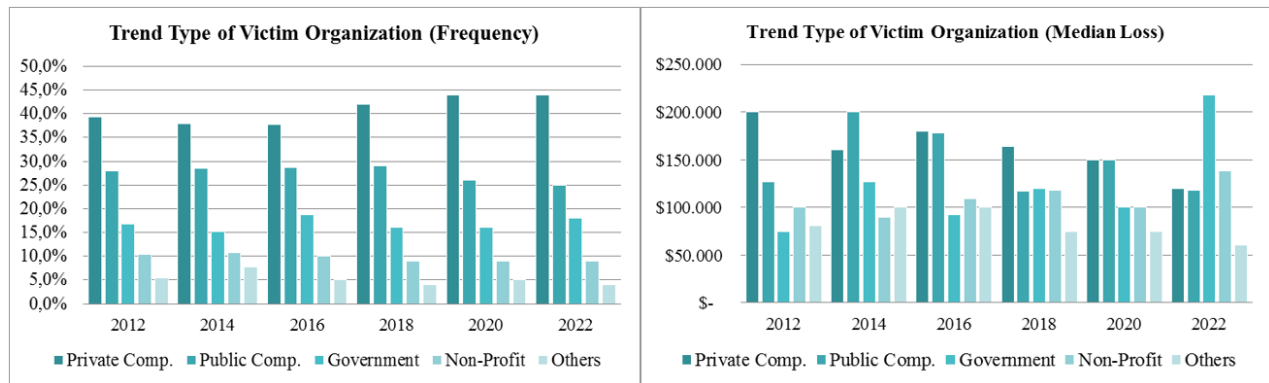


Figure 13. Trend in the number of cases and median loss based on type of organizations (victim)

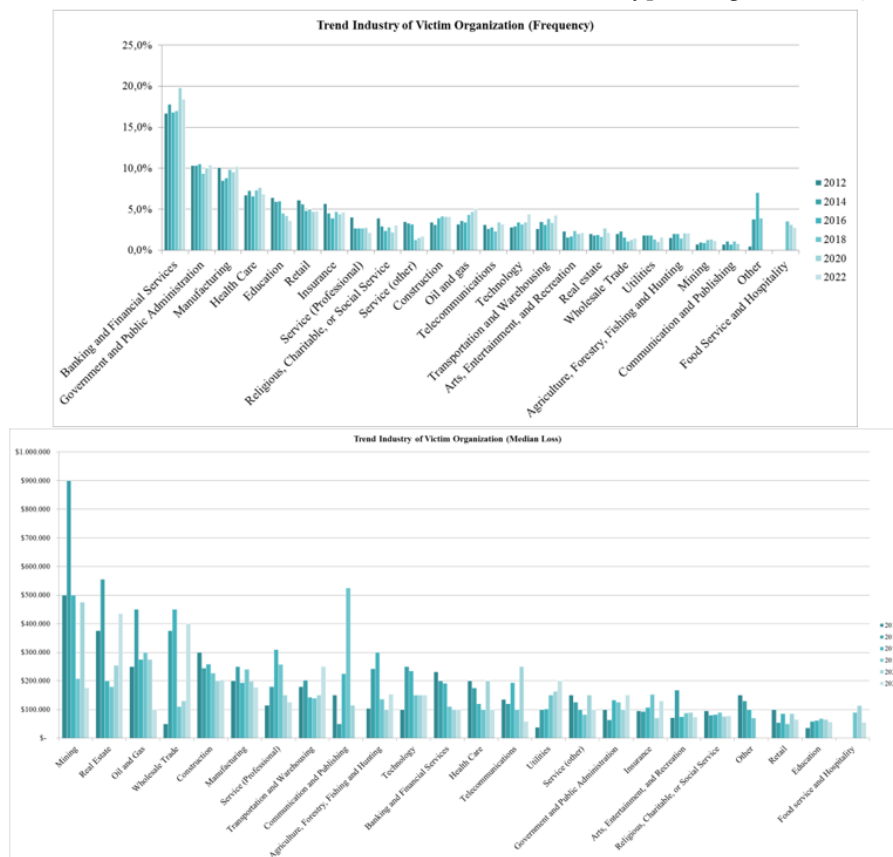


Figure 14. Trend in the number of cases and median loss based on industry of organizations

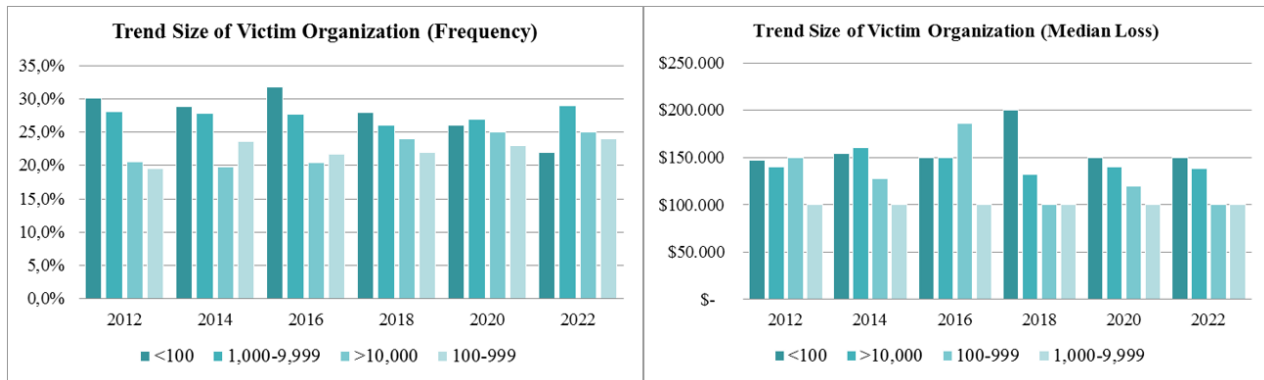


Figure 15. Trend in the number of cases and median loss based on size of organizations

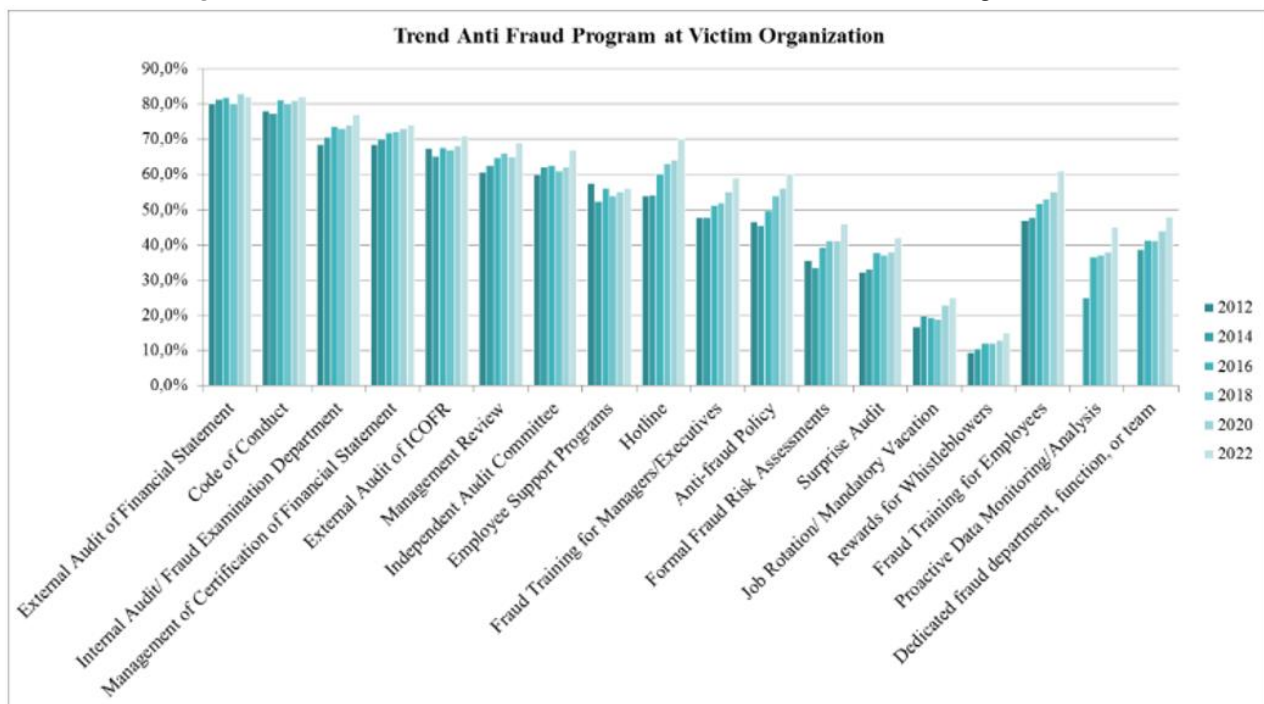


Figure 16. Trend in the number of cases and median loss based on anti-fraud control at victim organization

Figure 15 shows that an organization's vulnerability to occupational fraud is largely influenced by its size. Smaller organizations, with 100 or fewer employees, are at a higher risk of fraud compared to larger organizations. Data from 2012 to 2018 indicates that fraud cases were most prevalent among organizations with fewer than 100 employees. In contrast, large organizations with more than 10,000 employees experienced the third-highest number of fraud cases during the same period. Additionally, smaller organizations tend to incur higher total median losses compared to larger companies when considering median loss. Figure 16 presents a chart highlighting the most commonly used anti-fraud programs by companies worldwide. The top five anti-fraud measures include external financial statement audits, a code of ethics, internal auditors or fraud examination departments, certification of financial statements for managers, and external auditors for Internal Control over Financial Reporting (ICoFR).

#### 4.4. Discussion

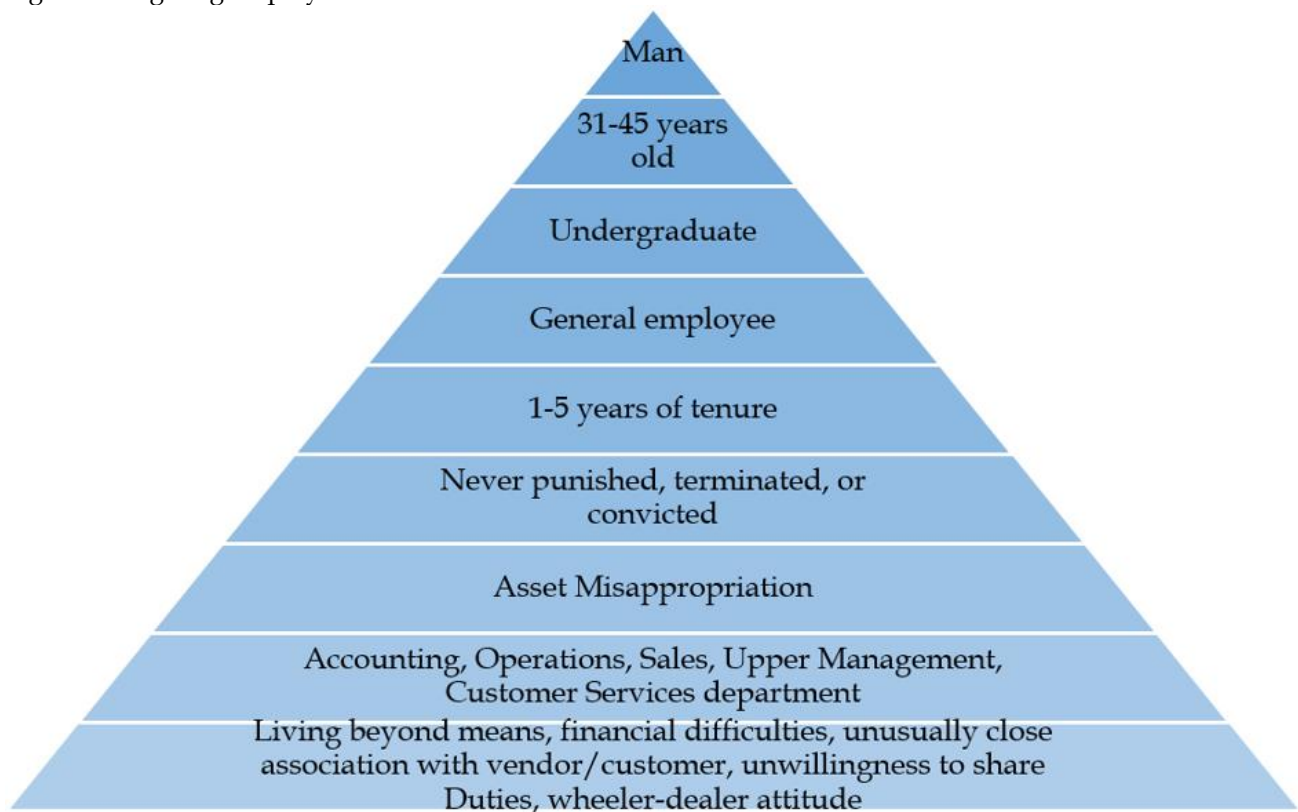
Figure 17 provides a profile of fraud perpetrators responsible for the largest number of fraud cases within organizations. Over the past decade, the most common fraudsters have been male employees aged 31 to 45, with a bachelor's degree, working at the employee level, and having one to five years of tenure. Typically, these individuals commit fraud as their first offense, having no prior record of punishment, prosecution, or termination from previous jobs. This profile suggests that most fraud involves the misuse of company as-

sets, indicating that employees with relatively little experience in their current organization are more likely to commit fraud.

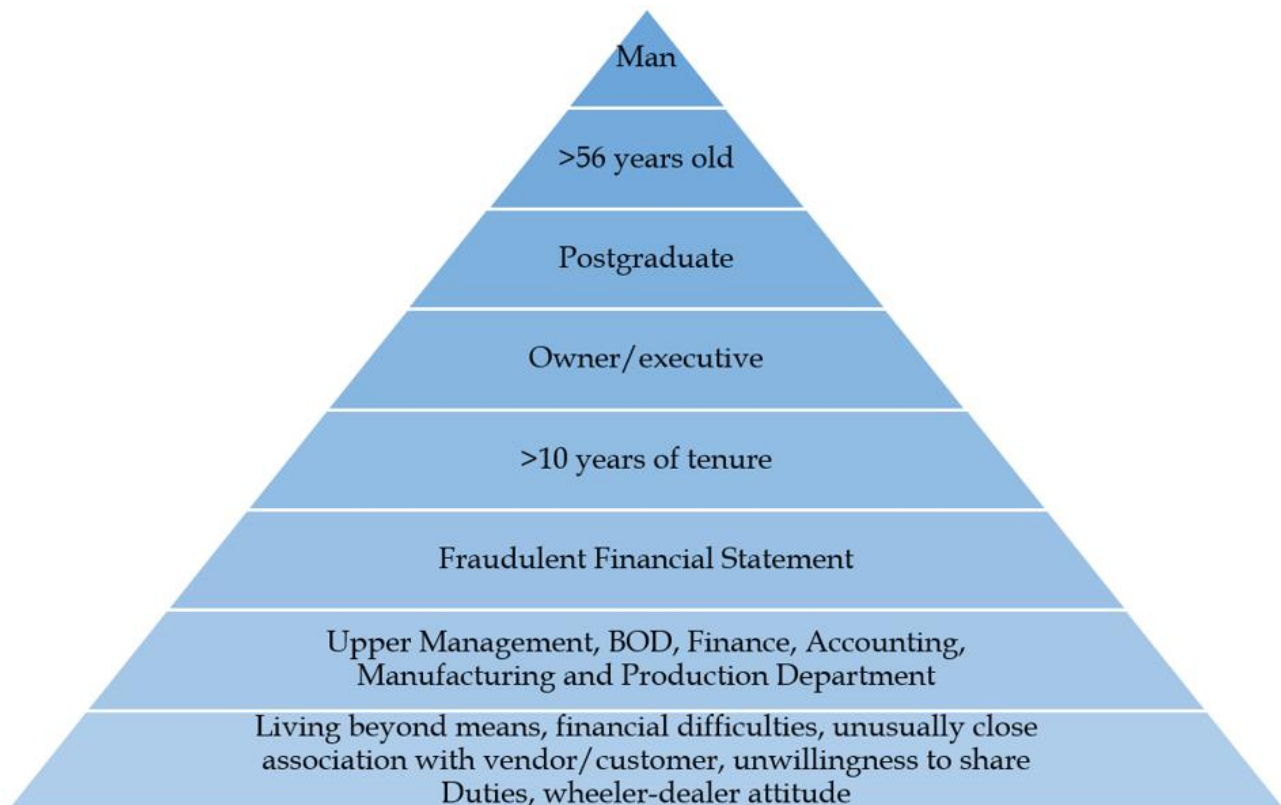
According to the fraud triangle theory, the factors driving employees to commit fraud against their employers are pressure, opportunity, and rationalization of illegal actions (Cressey, 1953). The pressure to commit fraud can vary, often motivating employees with this profile to act in their personal interest. Financial pressures are the most common, including high bills, significant personal debts, a desire for a luxurious lifestyle due to environmental influences, or unexpected financial needs. While pressure is not limited to financial factors, these are the most prevalent pressures faced by fraud perpetrators with the profile described in Figure 17 (Alexander & Cumming, 2020; Priantara, 2013).

The control environment, including culture, ethics, and corporate governance, forms the foundation for a robust internal control system. However, the prevalence of fraud among lower-level employees suggests that managers have failed to establish a controlled environment free from fraudulent activities. Managers and executives have not set a high-integrity example, leading lower-level employees to view fraud as an acceptable behavior to emulate. Perpetrators may rationalize their actions as reasonable if they believe their managers engage in similar conduct. In such organizations, fostering a culture of integrity becomes challenging.

Most employee fraud can be attributed to ineffective communication between management and employees (Amat, 2019). To promote adherence to organizational culture and ethical guidelines, consistent and clear communication between leadership and staff is essential. Effective communication fosters a shared understanding of procedures and controls, encouraging compliance with ethical standards (Ghani et al., 2021). Employees who receive clear, consistent guidance are less likely to perceive opportunities for fraud. Conversely, inconsistent or unclear communication may be seen as tacit approval to deviate from protocols. When policies and controls are not effectively communicated, employees may exploit perceived loopholes for personal gain, increasing the risk of fraud. This highlights the importance of establishing robust, transparent communication channels to foster accountability and ethical conduct (Ghani et al., 2021; Liu et al., 2014). By prioritizing effective communication, organizations can better align employee behavior with organizational values, reducing the likelihood of fraud. Proactive communication is crucial in preventing and mitigating employee fraud.



**Figure 17.** Profile picture of fraudsters causing the most fraud cases in organizations



**Figure 18.** Profile picture of fraudsters causing the highest median loss for organizations

Figure 17 shows that most fraud cases are committed by employees with one to five years of tenure, often referred to as "predatory employees" because they join organizations to exploit them (ACFE, 2014). This suggests failures in internal controls and recruitment processes, as these systems have not effectively screened out potential fraudsters. The Association of Certified Fraud Examiners (ACFE) provides a checklist to test the effectiveness of fraud prevention systems, including recruitment policies (ACFE, 2022). This checklist includes verifying previous employment, conducting background checks, and verifying education. To minimize fraud risk, recruitment procedures should be designed to select honest candidates and adhere to the fraud prevention checklist.

The fraud diamond theory highlights capability as another critical factor driving individuals to commit fraud (Miles & Huberman, 1984). Capability is often linked to an employee's work experience and intellectual skills, which may be enhanced by higher education (Padgett, 2015; Priantara, 2013). Longer tenure provides employees with a deeper understanding of internal processes and vulnerabilities, enabling them to devise sophisticated fraud schemes. Similarly, individuals with strong intellectual capabilities may better exploit loopholes and conceal illicit activities. Consequently, capability can significantly contribute to the magnitude of losses suffered by organizations due to fraud (Utami et al., 2019). Employees with the skills and expertise to perpetrate complex fraud schemes are more likely to inflict substantial financial and reputational damage (Priantara, 2013). However, the fraudster profile in Figure 17 may not represent those responsible for the highest median losses but rather those committing the most frequent fraud cases. The capability factor, combined with opportunity and rationalization, plays a crucial role in determining the scale and impact of fraudulent activities.

There is a clear correlation between capability and the magnitude of losses caused by fraud. The fraudster profile trends in Figure 17 suggest that perpetrators are often first-time offenders with less than five years of experience, a bachelor's degree, and general staff positions. These factors indicate a relative lack of capability to generate substantial gains from fraud. This likely leads them to engage more in asset misappropriation rather than corruption or fraudulent financial reporting, which require technical skills like manipulating financial statements (M. Omar et al., 2016; Williams, 2018). Asset misappropriation does not demand such complex capabilities. Individuals with limited experience and education may lack the

knowledge and authority to execute sophisticated fraud schemes, focusing instead on asset misappropriation. The capability factor is crucial in determining the potential scale and impact of fraudulent activities. Perpetrators with greater capabilities, due to their tenure, education, and roles, are more likely to inflict higher levels of damage.

The fraudster profile trends in Figure 17 indicate that asset misappropriation is the preferred fraudulent act. It is often perceived as a less serious form of fraud, with lower financial losses and impact (Kassem, 2014; Majid et al., 2014). This perception can serve as a rationalization factor, allowing perpetrators to justify their actions. The simplicity of asset misappropriation makes it more feasible for perpetrators to carry out and rationalize their behavior (Yusrianti et al., 2020). Fraudsters may rationalize their actions by claiming the stolen assets are immaterial or promising to return them later, or by asserting that others engage in similar practices. This minimization of severity provides psychological justification for asset misappropriation. The ability to rationalize behavior is a critical component of the fraud diamond theory (Wolfe & Hermanson, 2004). When individuals perceive their actions as less egregious, they are more likely to overcome ethical inhibitions and commit fraud.

The following text describes the profile of fraud perpetrators responsible for causing the highest median losses to organizations. This profile differs from those who commit the most fraud cases. The perpetrators causing the highest losses are typically owners or executives with over ten years of experience and postgraduate education. Generally, these individuals are men over 56 years old, working in top management, finance, commissioner, accounting, and manufacturing and production departments. They often cause significant losses by manipulating financial reports, such as inflating earnings to present favorable results to stakeholders. In summary, the profile of a fraud perpetrator causing the highest losses is that of a senior employee.

Various factors can pressure a fraud perpetrator with this profile. For instance, a luxurious lifestyle may be a motivating factor (Parsons et al., 2018). Male executives may be surrounded by colleagues in similar high positions, often part of an upper-class society with luxurious lifestyles (Amat, 2019). Maintaining such a lifestyle may drive them to commit fraud (Hjalmarsson et al., 2015). Besides financial pressure, work-related factors, such as the fear of losing one's job, can also exert pressure. High-ranking individuals may feel compelled to maintain their positions after failing to meet financial targets. For example, if profits fall short of targets, an executive may feel pressured to present positive results to shareholders, leading to financial report manipulation to maintain public trust.

The pressure of potentially losing a job can arise from unsustainable company policies, avoiding legal responsibility, or public doubt about leadership abilities. Executives may implement ineffective corporate governance policies, resulting in unsustainability or failure to address company issues. If performance targets are unmet or company stability is compromised, lawsuits may be filed against board members, causing shareholders to doubt their leadership, thus threatening their positions. These factors can lead boards to take risky actions, including fraud (Amat, 2019; Pedneault, 2021).

Opportunities for fraud can also exist within the corporate governance system. As shown in Figure 16, executives are often responsible for the highest fraud losses. Their position provides access to information, internal workings, broader authorization, and higher trust from colleagues (ACFE, 2016; Groot & Brink, 2010; Taylor, 2023). Executives may exploit these opportunities for personal gain and conceal fraud, as others lack access to the same information. Consequently, fraud committed by executives can result in substantial losses, as indicated by Figure 16. Opportunities for fraud are particularly prevalent when executives have extensive authority and trust. In such cases, other employees may fear retribution and fail to report dishonest acts (ACFE, 2016; Pedneault, 2021). This allows perpetrators to conceal their activities, especially if no strict sanctions exist for executive fraud, increasing the likelihood of future fraudulent acts and highlighting control system weaknesses.

Senior employees or those in high-ranking positions are most likely to cause significant losses due to fraud (Muceldili, 2019; Parsons et al., 2018). As executives or managers, they play a crucial role in formulating company policies to achieve organizational goals. However, policies created by such individuals may be unsustainable or ineffective in addressing company problems, potentially due to a lack of management skills. Co-workers may not recognize poor managerial performance, creating opportunities for fraud amidst ineffective policies (Amat, 2019; Rezaee, 2019b).

Fraudulent acts are more likely when perpetrators have the capability to commit them, alongside pressure, opportunity, and rationalization factors, as explained in the fraud diamond theory. Kassem (2014)

explains that a manager's higher position enables them to commit fraud more effectively, as they can better conceal their actions. This is supported by the opportunities managers possess, such as high trust, increased responsibilities, and greater authority over company assets (ACFE, 2016). The capability to commit fraud is often found in male perpetrators with higher education, lengthy service, and high-level positions (Pedneault, 2021; Rezaee, 2019b). Figure 16 shows that perpetrators use their education, long service, and high positions to benefit from fraudulent acts.

According to Taylor (2023), white-collar crime is more prevalent among individuals with higher education, who use their skills to enhance fraudulent actions, leading to higher losses. Employees with long tenures, such as ten years or more, are more likely to understand company control and governance systems, including weaknesses, making exploiting them and committing fraud easier. Such employees are also more adept at manipulating financial reports to conceal fraud (Pedneault, 2021; Schilit et al., 2018).

A high-level position increases the likelihood of fraudulent activities. Executives, in particular, understand internal weaknesses and can address governance problems. However, their position also provides opportunities to commit fraud and profit substantially. Conversely, an ineffective management system can create opportunities for fraud among managers lacking the necessary skills, with co-workers unable to identify poor managerial performance (Alexander & Cumming, 2020; Pedneault, 2021; Schilit et al., 2018).

#### **4.5. The Trend of Men as the Perpetrators Causing the Most Fraud Cases and the Highest Fraud Losses**

Figures 17 and 18 indicate that men are the primary perpetrators of fraud incidents, leading to the highest financial losses for organizations. According to the fraud triangle and diamond theories, perpetrators are often driven by pressure, which can stem from financial difficulties or low integrity. Male perpetrators may view workplace fraud as a domain dominated by men, reinforcing stereotypes. Additionally, men are generally more prone to risk-taking than women, which may increase their likelihood of committing fraud at work (Byrnes & Miller, 1999; Sofianti, 2018; Zimbelman et al., 2014).

Beyond pressure, fraud can also occur due to available opportunities. Male perpetrators often face lighter consequences for their actions compared to females, which may encourage repeat offenses (Morgenroth et al., 2022). Cheating is often perceived as a masculine trait, making fraud by women seem unusual and less likely to be repeated. In contrast, men may rationalize their fraudulent activities as normal, leading to repeated offenses (ACFE, 2012, 2018; Morgenroth et al., 2022).

Men's opportunities to commit fraud and gain significant advantages are likely linked to their greater presence in high-level organizational positions. A 2021 global survey by Grant Thornton found that women held only 31% of senior-level positions (Grant Thornton, 2021). This suggests that men still dominate these roles. Messerschmidt (1997) argues that men often dominate criminal activities due to their virtual monopoly on crimes in syndicates, corporations, and politics. Figures 17 and 18 show that trends in occupational fraud cases and the highest fraud losses are predominantly male-driven, with top management frequently involved. This indicates that the most frequent and highest-loss fraud cases involve predominantly male top management. The limited access and representation of women in senior leadership positions contribute to the lower proportion of female white-collar criminals.

Research by Gottschalk and Glase (2013) supports the link between gender and high-level positions. Their study found that out of 255 white-collar crime cases reported in Norwegian newspapers from 2009 to 2012, only 20 involved women. One reason for men's dominance in high-level corporate crimes is the lack of opportunities for women to hold senior positions (Gottschalk & Glase, 2013). While women's access to leadership roles is increasing, their presence at the executive level remains rare in most large companies (Gottschalk & Glase, 2013; Malerba, 2020). Corporate crimes are more likely to be supported by top managers or executives due to the "privileges" of their positions, including access to information, internal organization, and high trust from colleagues, which can lead to ineffective supervision (ACFE, 2016; Groot & Brink, 2010; Taylor, 2023). Thus, the research suggests that men have greater opportunities to commit fraud as top executives than women. The limited representation of women in senior leadership roles contributes to the lower proportion of female white-collar criminals. However, the researchers do not claim that men in high positions frequently commit fraud against their organizations. Fraudulent behavior is influenced by various factors beyond holding a senior position, which was not analyzed in this study.

#### **4.6. Trends in Profiling Types of Occupational Fraud**

This study thoroughly examines profiling trends and reveals a strong correlation between the type of occu-



pational fraud committed and the characteristics of the perpetrators. Data analysis from Figure 17 shows that asset misappropriation, the most common type of fraud, is typically committed by younger, less experienced employees across various departments. In contrast, though less frequent, fraudulent financial statements are more damaging and often executed by older, more experienced individuals in positions of authority (Figure 18). The study indicates that asset misappropriation is frequently associated with individuals from top management, accounting, sales, operations, and customer service departments. These perpetrators are typically male, aged 31 to 45, with a bachelor's degree as their highest educational attainment. They are often first-time offenders with limited organisational tenure, usually holding general staff positions.

Conversely, fraudulent financial statements are more likely to be committed by individuals from top management, finance, accounting, and manufacturing & production departments. While the gender profile remains consistent with asset misappropriation, perpetrators of fraudulent financial statements tend to be significantly older, typically over 56 years of age, and possess advanced degrees. These individuals often have extensive experience within the organization, having worked there for more than ten years and occupying positions such as owners or executives. The findings suggest that the severity of occupational fraud is closely linked to the experience and position of the perpetrator. Individuals with greater authority and tenure are more likely to engage in fraudulent activities that result in substantial financial losses. This observation aligns with the fraud triangle principles and diamond theories, which posit that pressure, opportunity, rationalization, and capability are key factors contributing to fraudulent behavior.

Asset misappropriation involves the misuse, embezzlement, forgery, theft, or misappropriation of an entity's assets for personal purposes, affecting the presentation of the entity's financial statements (ACFE, 2022; Florida Atlantic University, 2018; Kassem, 2014; Priantara, 2013). According to the fraud diamond theory, the perpetrator's capability to commit fraud is crucial for increasing the profits from their actions. Asset misappropriation is considered relatively easy to commit and does not require technical skills to misuse a company's cash or non-cash assets (Priantara, 2013). Consequently, individuals at any position level, including general employees, can commit this fraud. As Ghony et al. (2020) and Priantara (2013) noted, asset misappropriation is often identified as employee fraud because most perpetrators hold general employee positions. Although losses from asset misappropriation are relatively small or not material (Kassem, 2014; Majid et al., 2014), this type of fraud remains a concern for companies due to its prevalence. Perpetrators may rationalize their actions by downplaying the materiality of the losses, even if they are aware of their wrongdoing.

Fraudulent financial statements result in the highest losses compared to asset misappropriation and corruption. This is due to the ability to conceal and alter financial records, making detection difficult. Also known as "management fraud," it is often initiated by managers for personal gain (N. Omar et al., 2015; Priantara, 2013; Williams, 2018). Managers may feel pressured to achieve certain performance goals and, when failing, manipulate financial records to enhance their appearance. They exploit their positions to collaborate with company accountants, edit financial records, or create fictitious documentation, often rationalizing their actions as beneficial for the company. Financial statement fraud is complex and involves manipulating financial numbers through accounting irregularities, such as inflating asset values or recording estimates of future sales (Priantara, 2013). This requires technical skills to avoid detection, making it challenging for everyone to commit such fraud and resulting in high losses for organizations.

Financial statement fraud, a complex endeavor often involving "accounting irregularities," is typically perpetrated by individuals with a deep understanding of financial reporting and disclosure standards. As illustrated in Figure 4, these perpetrators often possess the technical skills necessary to manipulate financial numbers through tactics such as profit management, recognizing estimated future sales, and inflating asset values. This sophistication allows them to conceal their fraudulent activities, making detection difficult and resulting in significant financial losses for organizations. Unlike other types of occupational fraud, which may be less technically demanding, financial statement fraud requires high expertise and knowledge. This correlates with the capability factors explained in the fraud diamond theory. The barrier to entry contributes to the higher losses associated with such fraud, as perpetrators can more effectively evade detection and exploit vulnerabilities in the financial reporting system.

#### 4.7. Fraud Organizations Victim Profiling Trends

Fraud victim profiling involves identifying the characteristics of victims, the patterns of fraud they experi-

ence, and the resulting impacts. This analysis aids in identifying suspected fraud perpetrators by examining the traces of fraud left by victims, enabling responsive and effective action in handling fraud cases (Priantara, 2013). The trend indicates that public and private profit-oriented organisations face the highest number of fraud cases. These organizations often set financial targets that create pressure on employees, potentially leading to fraudulent behavior. Such pressure arises when companies set unrealistic financial targets that employees struggle to meet, prompting them to commit fraud to achieve these goals (Kranacher & Riley, 2020; Wells, 2018).

Opportunities for fraud in profit-oriented organizations can stem from weak internal controls and collusion between internal and external parties to conceal fraudulent activities. According to the fraud diamond theory, employees in these organizations often possess better financial knowledge, making them more capable of committing fraud. Perpetrators may rationalize their actions by believing that fraud is necessary for achieving organizational targets (Kranacher & Riley, 2020; Toader & Onofrei, 2018). Profiling fraud victims by organizational size reveals that most fraud cases in the past decade have occurred in organizations with fewer than 100 employees. These small organizations have also suffered the greatest losses from fraud compared to larger entities. The opportunity factor is considered the primary contributor to fraud in small organizations, as explained by the fraud triangle and fraud diamond theories (Muceldili, 2019; Parsons et al., 2018; Rezaee, 2019a).

Fraud opportunities in small organizations arise from inadequate internal control systems. Limited human and financial resources hinder the implementation of effective control systems to prevent fraud. This often results in owners or executives placing excessive trust in employees, especially when personal relationships exist (ACFE, 2022; Yendrawati et al., 2019). Consequently, managers may assign multiple responsibilities to employees, increasing opportunities for fraud. The lack of proper internal controls and supervision and inadequate recruitment processes further increase the risk of fraud in small organizations (Bunn et al., 2019). While effective anti-fraud control programs can prevent fraud, their cost may lead small organizations to overlook them due to high trust in their employees, leaving them vulnerable to fraud.

Over the past decade, the financial and banking industry has experienced the highest occupational fraud frequency. Despite having the highest loss rate trend, this industry is highly regulated, indicating significant risks without regulatory oversight (ICAEW, 2022; Kranacher & Riley, 2020; Tuovila, 2023). The high frequency of occupational fraud in this sector can be attributed to the presence of numerous professional fraud examiners (CFE). Given the susceptibility of banking to internal threats, the industry requires specific risk management practices to prevent fraud and the potential threat of bankruptcy (Suh et al., 2019).

The financial and banking industry faces significant threats, including internal corruption (endogenous factors) (Ben Ali et al., 2020). According to the ACFE, this industry's proportion of asset irregularities and corruption has remained relatively stable. Corruption in the financial and banking sector is closely linked to the primary activity of banks: capital distribution. This threat can be understood from both the supply and demand sides of bank funding. On the supply side, bank employees may accept bribes to approve high-risk loan applications. On the demand side, borrowers may offer rewards to bank employees to reduce penalties for potential defaults. Corruption in the financial and banking industry can ultimately hinder efficiency (Ben Ali et al., 2020; Suh et al., 2019).

## 5. CONCLUSION, IMPLICATION, SUGGESTION, AND LIMITATIONS

This research analyses trends in profiling types of occupational fraud, fraudsters, and fraud victims globally over the past decade. The data collection method used in this study is documentation, and the collected data are analyzed to achieve the research objectives. Based on the analysis of trends in profiling types of occupational fraud, fraudsters, and fraud victims, several key findings emerge: First, the analysis of trends over the past decade in occupational fraud shows that asset misappropriation is the most frequent type of occupational fraud. Additionally, financial statement fraud consistently causes the highest median loss. Second, based on the gender of fraudsters, the profiling trend indicates that males are the most frequent perpetrators, contributing to both the highest frequency and median loss in occupational fraud. The age group with the highest number of fraudsters is 31-45, but the age group causing the highest median loss is between 51 and over 60 years. Regarding job level, employees show the highest occupational fraud frequency, while executive positions result in the highest median loss. Furthermore, the accounting department records the highest number of fraudsters, although the highest median loss is caused by fraudsters in



top management positions. The analysis also reveals that a higher level of education among fraudsters leads to higher median losses. Fraudsters with less than five years of employment are the most common perpetrators, indicating that many commit their first criminal act during this period. However, fraudsters with the longest tenure cause the highest median loss. Each fraud committed by a fraudster typically displays at least one red flag, with "lifestyle exceeding means" being the most frequently observed red flag. Third, analysing trends regarding organizations (fraud victims) that incur the highest losses shows that private and public companies, particularly small-sized companies, are the most targeted by fraudsters and bear the most significant losses. On the other hand, the financial and banking industry has had the highest occupational fraud frequency over the past decade. Still, the highest loss rates are attributed to the mining industry. Due to the vulnerability to occupational fraud, every organization is expected to have effective anti-fraud control programs, and implementing more anti-fraud controls is expected to minimize occupational fraud. The results of this research are expected to have significant implications for organizations across various industries and sizes. The findings can help organizations improve their internal controls to prevent occupational fraud and mitigate the harm it can cause. The profiling trends can also be used to develop fraud prevention and detection programs in organizations as part of their broader strategy.

Finally, there are some limitations to this study. The research focuses on occupational fraud and analyzes global trends in fraud types, fraudsters, and fraud victims over the last decade. The study only examines three primary types of occupational fraud: asset misuse, corruption, and financial statement fraud. It does not cover every type of fraud within these three categories. The results of fraudster profiling do not include the frequency and median loss from fraud carried out in collusion. Based on the limitations of this research, several suggestions can be made for future studies. Firstly, future research should consider the limitations of this research and use them as a point of innovation for their study. Secondly, future analyses can expand profiling analysis by incorporating non-occupational fraud and increasing the duration of the trend analysis.

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