

COMPARATIVE ANALYSIS OF FRAUD SCHEMES, DETECTION METHODS, AND ANTI-FRAUD CONTROLS ACROSS DIFFERENT GEOGRAPHIC REGIONS

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ABSTRACT

The development of globalization has increased the complexity of economic activities as well as the risk of fraud, which brings both financial and non-financial impacts. This study aims to analyze differences in fraud schemes, detection methods, and anti-fraud controls across eight geographic regions using secondary data from the Association of Certified Fraud Examiners (ACFE) reports from 2020 to 2024. A qualitative approach was used with a narrative literature review method. The results show that the United States & Canada and Sub-Saharan Africa recorded the highest number of fraud cases with relatively small losses due to simple and well-documented schemes. In contrast, Latin America & the Caribbean and Eastern Europe & Western Asia experienced higher losses despite fewer cases, dominated by financial statement fraud and weak internal control. These findings highlight the importance of tailoring prevention policies to regional characteristics, including enhancing transparency and detection technologies to globally mitigate fraud risks.

Keywords: Fraud; Fraud Schemes; Fraud Detection; Prevention Control; Geographic Regions

INTRODUCTION

The development of globalization has increased the complexity of economic activities, which directly correlates with a rise in the risk of economic crimes and fraud. Globally, fraud is expected to continue increasing, causing both financial impacts (such as economic losses) and non-financial impacts (such as reputational damage) to organizations worldwide. Data from the Association of Certified Fraud Examiners (ACFE) in 2024 reported 1,921 cases across 138 countries, with total losses reaching \$3.1 billion. Organizations are estimated to lose around 5% of their annual revenue due to fraud. Fraud schemes are classified into three main categories: asset misappropriation, corruption, and financial statement fraud. Although financial statement fraud occurs the least frequently, it results in the highest median loss (\$766,000 per case). Meanwhile, the most common detection method is through whistleblower reports. The PwC Global Economic Crime Survey (2024) also highlights that procurement fraud remains one of the most prevalent forms of deception. Considering these ongoing threats, organizations need preventive control systems (anti-fraud controls) that are effectively designed and implemented.

Several previous studies have analyzed the impact of fraud in specific regions, such as in the Asia-Pacific, where the COVID-19 pandemic triggered increased corruption in social aid funds and worsened systemic vulnerabilities. Other studies have examined the profiles of financial fraud victims, particularly in developing countries, who are more vulnerable due to economic pressure and limited financial literacy (Christian et al., 2023; Christian & Febriana, 2023; Lev et al., 2022). However, these studies tend to focus on the impacts within specific regions or groups. The distinction of this research lies in its object and focus. This study provides a broader overview based on both global and regional perspectives. Therefore, the purpose of this research is to analyze and compare fraud schemes, detection methods, and anti-fraud control strategies across different geographical regions.

METHOD

This study employs a qualitative approach, which is conducted by developing a comprehensive and in-depth description explained through words, providing detailed insights based on information sources (Fadli, 2021). The research uses the narrative literature review method, a literature study aimed at organizing and summarizing findings from various previous studies within a particular field (Baumeister & Leary, 1997).

Secondary data were obtained from the ACFE reports (2020), (2022), and (2024). The analysis covers eight geographical regions such as Asia-Pacific, Eastern Europe & Western/Central Asia, Latin America & the Caribbean, the Middle East & North Africa, South Asia, Sub-Saharan Africa, the United States & Canada, and Western Europe. The data were analyzed by comparing dominant fraud schemes, detection methods, and anti-fraud controls in each region to identify differences in characteristics and the effectiveness of fraud control.

RESULTS AND DISCUSSION

The analysis results reveal significant variations in the number of cases, losses, dominant schemes, and control effectiveness, which align with the characteristics of regional governance. Figure 1 presents the distribution of fraud case numbers and average losses across each region based on ACFE data from 2020–2024.

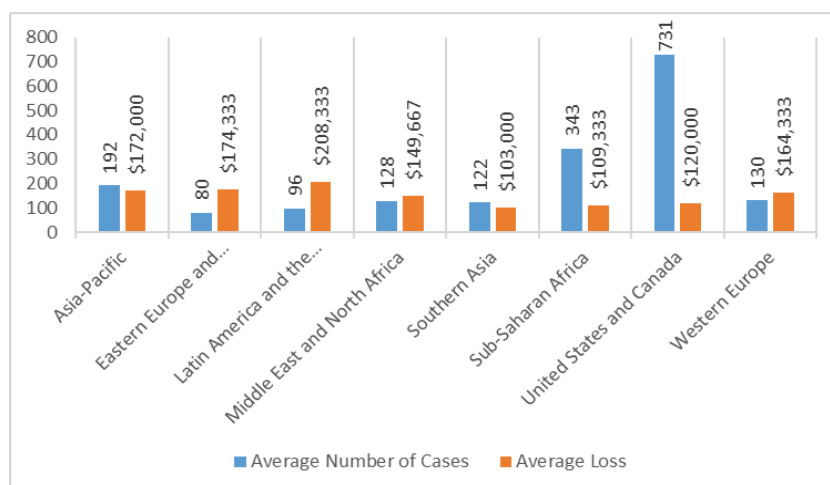


Figure 1. Average Number of Cases and Losses by Region (ACFE, 2020–2024)

The regions with the highest levels of fraud cases are the United States & Canada and Sub-Saharan Africa. Interestingly, although these two regions recorded the highest number of cases, their average loss per case is relatively low. Conversely, Latin America & the Caribbean, as well as Eastern Europe & Western/Central Asia, reported the highest losses despite having fewer cases. This phenomenon represents a key scientific finding explained through the analysis of differences in fraud schemes and detection methods. A summary of the main comparisons among these four regions is presented in the following table:

Table 1. Key Comparative Overview

Aspect	United States & Canada; Sub-Saharan Africa	Latin America & the Caribbean; Eastern Europe & Western/Central Asia
Dominant Scheme	Check and Payment Tampering, Expense Reimbursements	Financial Statement Fraud, Skimming
Detection Method	Document examination, Account Reconciliation	External Audit
Anti-Fraud Control	Management Certification of Financial Atatements, Employee Support Programs, External Audit of Internal Controls Over Financial Reporting	Hotline, Management Review

Source: Data Processed (2025)

The main differences in fraud schemes and detection methods show a strong correlation between the type of fraud and the level of loss. In the United States & Canada and Sub-Saharan Africa (high case numbers, low losses), the dominant schemes are relatively simple and well-documented, such as check tampering, fraudulent payments, and expense reimbursements. These types of fraud are typically committed by lower level employees, involve small but recurring amounts, and are detected more quickly through methods such as document examination and account reconciliation. Conversely, in Latin America & the Caribbean and Eastern Europe & Western/Central Asia (low case numbers, high losses), the dominant schemes are more complex and large scale, primarily involving financial statement fraud and skimming. Such frauds are usually perpetrated by senior executives or top management, are difficult to trace, and are often only uncovered after causing significant losses, frequently relying on external detection methods such as external audits.

Fraud prevention controls also show adaptation to regional characteristics. The United States & Canada and Sub-Saharan Africa tend to emphasize internal preventive controls (Akinbowale et al., 2024), such as financial reporting management certifications, employee support programs, and external audits of internal controls over financial reporting. This strong focus on internal control plays a crucial role in limiting the occurrence of major fraud. Meanwhile, Latin America & the Caribbean and Eastern Europe & Western/Central Asia tend to strengthen external reporting mechanisms, such as hotlines and management reviews. The use of hotlines highlights the importance of external reporting as a response to weaknesses in internal oversight, which is often vulnerable to manipulation by management itself. These findings underscore the importance of adapting fraud prevention policies to regional characteristics, including enhancing transparency and strengthening detection technologies globally.

The above explanation does not necessarily generalize fraud conditions across all countries within those regions. Therefore, to provide a more specific overview, the following section discusses financial characteristics and their relationship to fraud by examining examples from several countries that significantly contribute to fraud cases in each region. The data below present the number of cases by country/territory across various regions, based on the Report to the Nations by ACFE in 2020, 2022, and 2024.

Table 2. Countries/Territories with the Highest Number of Cases (2020–2024)

Region	Highest Number of Cases per-Country/Territory		
	2020	2022	2024
United States & Canada	United States (829)	United States (625)	United States (572)
Sub-Saharan Africa	South Africa (77)	South Africa (188)	South Africa (88)
	Kenya (53)	Nigeria (61)	Nigeria (62)
	Nigeria (49)	Kenya (49)	Kenya (40)
Latin America & the Caribbean	Mexico (23)	Mexico (22)	Mexico (29)
	Brazil (22)	Brazil (12)	Brazil (11)
	Argentina (10)	Argentina (8)	Colombia, Peru (7)
Eastern Europe & Western/Central Asia	Serbia (14)	Rusia (11)	Türkiye (9)
	Rusia (13)	Ukraine (11)	Bulgaria (7)
	Türkiye (13)	Poland (9)	Poland, Romania (7)

Source: Report to The Nations (ACFE)

The United States, which leads in the number of fraud cases within the United States & Canada region, has a highly advanced and digitized financial system, supported by a robust audit infrastructure and the adoption of technological innovations such as AI, machine learning, and blockchain. These factors contribute to a high rate of fraud detection with relatively low financial losses (Ebirim et al., 2024). In contrast, countries with high-loss regions such as Mexico (Latin America & the Caribbean) and Russia (Eastern Europe & Western/Central Asia) have very low Corruption Perception Index scores (Transparency International, 2024). Although these countries possess relatively advanced financial systems, they remain overshadowed by systemic corruption, weak law enforcement, and ineffective judicial and oversight institutions. These structural weaknesses create an environment vulnerable to large-scale, organized, and difficult-to-detect fraud, leading to significant financial losses (Transparency International, 2023). Meanwhile, South Africa (Sub-Saharan Africa) lies in the middle of this dynamic. Despite having regulatory frameworks such as the Public Financial Management Model Law (PFM Model Law), the implementation of accrual accounting continues to face challenges such as a shortage of skilled professionals and the frequent disregard of auditor reports, which weakens fiscal accountability and oversight (Salato et al., 2024; Zongwe, 2024).

This research presents findings consistent with previous studies but extends the analysis through a broader global comparative perspective. The results regarding differences in fraud schemes and loss levels across regions reinforce the findings of Christian & Febriana (2023) and Christian et al. (2023), who emphasized that structural vulnerabilities such as weak oversight and economic pressure significantly contribute to regional fraud patterns. For example, the rise of corruption in social aid funds in the Asia-Pacific region following the COVID-19 pandemic, and the substantial losses caused by corruption in Indonesia due to weak internal controls in small enterprises and misuse of social assistance funds, align with the conclusion that poor governance factors can trigger large scale fraud resulting in severe financial losses.

Furthermore, the findings regarding the high losses in Latin America & the Caribbean and Eastern Europe & Western/Central Asia attributed to structural weaknesses such as systemic corruption and ineffective law enforcement are consistent with Christian et al. (2023), who argue that structural factors drive differing fraud vulnerabilities across regions. On the other hand, the findings of Lev et al. (2022) on the profiles of financial fraud victims in developing countries driven by economic pressure and low financial literacy provide additional context for why simple yet recurring fraud schemes are prevalent in Sub-Saharan Africa, a region characterized by high case frequency but relatively low losses. Such schemes may involve individuals who possess these particular vulnerabilities. Thus, this study makes a significant contribution by presenting a comparative synthesis that integrates fraud schemes, detection methods, and preventive controls at a global level, complementing previous regional studies.

CONCLUSION

Based on the objective of this study to analyze and compare fraud schemes, detection methods, and anti-fraud control strategies across various geographical regions it was found that fraud vulnerability is strongly influenced by regional governance characteristics and the complexity of financial systems. These findings emphasize that prevention strategies must be region-specific, regions exposed to large scale fraud risks require strengthened governance, law enforcement, and transparency, whereas regions with high fraud frequency require enhanced internal controls and greater utilization of detection technology. The main limitation of this study lies in its relatively narrow scope, as it focuses only on four major geographical regions based on ACFE classifications, without conducting in depth analysis at the individual country level. Future research is therefore recommended to conduct more specific country level studies rather than regional ones, in order to capture variations in national characteristics that may influence fraud patterns and the effectiveness of fraud control mechanisms.

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