



Spotlight on fraud risk in hospitality a systematic literature review

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ABSTRACT

This is the first systematic review of fraud in the hospitality sector to provide a holistic view of this crime, identify literature gaps, and suggest new directions for future research. The paper identifies six main themes in hospitality fraud research based on a "4W2H" framework that examines (i) WHAT – are the fraud types, (ii) WHO – are the fraud victims and perpetrators, (iii) WHERE – is fraud taking place in hospitality, (iv) WHY – is fraud committed, (v) HOW – is fraud committed, and (vi) HOW THEN – can fraud be countered. Overall, the review reveals that research on hospitality fraud is sparse and requires substantial attention. The study identifies several gaps and suggests new directions for future research. The findings have implications for theory and practice, later discussed.

1. Introduction

The Fraud Act (2006) in England and Wales¹ refers to fraud as any dishonest behaviour that intentionally results in a loss to the victim(s), exposes the victim(s) to risk, or provides gain to the perpetrator(s). This can occur through false representation (i.e., falsifying information/facts), the abuse of a position of trust, and failure to disclose information when there is a legal obligation to disclose such information. This broad definition of fraud allows a wide range of crimes to be considered and treated as fraud. This includes theft, offering or accepting bribes, manipulating an organisation's financial records, using an organisation's assets for personal purposes without the organisation's consent and knowledge, or simply lying on a job application or insurance form. Similarly, Wells (2011) defines fraud as a crime involving intentional deception, trickery, manipulation, cheating, lying, or stealing.

Although some may view theft as a different crime from fraud, according to the above definitions and the Crown Prosecution Service (CPS)² in England and Wales, fraud is also theft in many cases. This is particularly true in the case of occupational fraud (i.e., insider fraud or white-collar crimes), which is defined as "the use of one's occupation for personal enrichment through the deliberate misuse or misapplication of the employing organisation's resources or assets" (The Association of Certified Fraud Examiners (ACFE, 2022, p.1). The fraudulent aspect of occupational fraud deals with the employee's fiduciary duties to the organisation, which will be violated. Therefore, by abusing their

position of trust for personal gain, the employee committed fraud, whether it is theft or any other fraud form.

Fraud could have a detrimental impact on the hospitality sector. The impact, however, often goes beyond financial losses. In a recent global fraud study by the ACFE (2022), the median loss to the hospitality industry amounted to \$579,000, five times higher than the reported losses in 2020. The financial loss due to fraud is not limited to the amount stolen or manipulated by fraud perpetrators. It includes the cost of regulatory fines, customer compensation, and fraud investigations. For instance, the hotel group Marriott was fined £ 18.4 m in 2019 for a breach that exposed the data of 339 million customers worldwide due to cyber fraud. However, it is expected to pay more than that in customer compensation and secure its systems to remedy this reputational damage and regain customers' trust (Tidy, 2020).

Fraud is a deviant behaviour regarded as an absolute risk in hospitality, disrupting operational efficiency, undermining staff well-being, damaging brand reputation and value, and threatening the consumer experience, thus compromising profitability (Lugosi, 2019). Online review fraud impairs credibility and significantly affects customers' intention to book a hotel (Xie et al., 2011; Chakraborty, 2019), resulting in hotel customers' dissatisfaction and loss of customer loyalty (Akhtar, 2019). Corruption, which is also a fraud type (Kassem, in press), adversely impacts hotel performance (Kubickova and Smith, 2019) and threatens sustainability in hotel organisations (Gillard et al., 2018). Ouyang et al. (2020) argue that a hotel fraud's negative impact is likely to spread to the entire destination when the public perceives other hotels

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¹ Fraud Act 2006 (legislation.gov.uk)

² Fraud Act 2006, The | The Crown Prosecution Service (cps.gov.uk)

as also subject to a problem.

Despite the dominantly negative impact of fraud on the hospitality sector, a systematic literature review of fraud studies has not yet been conducted. The evidence and findings appear scattered, lacking a holistic view of the subject. Previous comprehensive reviews broadly focused on deviance (Lugosi, 2019) or crimes in hospitality (Hua et al., 2020), overlooking fraud. The current study systematically reviews two decades of prior studies on fraud in hospitality to provide a holistic view of this crime, identify literature gaps, and suggest new directions for future research. The paper identifies six main themes in hospitality fraud research based on a "4W2H" framework that examines WHAT – are the fraud types, WHO – are the fraud victims and perpetrators, WHERE – is fraud taking place in the hospitality businesses, WHY – is fraud committed, HOW – is fraud committed, and HOW THEN – can fraud be countered.

This review, therefore, advances and contributes to the crime literature in hospitality, which is still an understudied field, as Hua et al. (2020) noted. Moreover, it contributes to practice by developing guidance on countering fraud in hospitality, including the forms and methods of fraud, the reasons for fraudulent behaviour, and methods for countering fraud. Such guidance could help policymakers and leaders in hospitality design effective counter-fraud strategies.

The study was motivated by several reasons—first, the adverse impact of fraud on the hospitality sector, as elucidated earlier in this section. Second, there is a scarcity of a systematic literature review highlighting the forms of fraud, the reasons for fraud perpetration, and what can be done to counter fraud in the hospitality sector. Third, although no industry is immune to fraud, there is evidence that fraud risk is relatively high in the hospitality sector, implying the need for effective interventions to counter fraud. Ruth et al. (2020) report evidence of increased fraud risk in the hospitality industry, particularly in restaurants. Similarly, Erkan et al. (2017) suggested that the hospitality sector is more vulnerable than other sectors because the hospitality management supply chain is wider than other sectors and is labour-intensive, making it vulnerable to fraud.

Additionally, the financial regulator, the Financial Reporting Council (FRC), in the United Kingdom (UK), has recently reported the hospitality sector as a priority sector in their audit inspections and that the focus of monitoring will be fraud risk. According to the FRC, priority sectors are considered exceptionally high risk in corporate reporting and audit by particular economic or other pressures (See News I Financial Reporting Council (frc.org.uk)). Hence, UK organisations in the hospitality sector will face the financial regulator's scrutiny and financial penalties if they fail to manage fraud risk. Similarly, given the UK regulator's awareness of fraud risk in the hospitality sector, it will be unsurprising in the coming years to see regulators in other regions expecting the same preparedness concerning fraud risk from hospitality organisations in their regions. Hence, the importance and need for this research topic.

The rest of the paper is organised as follows. It proceeds by elucidating the meaning and typologies of fraud, upon which this paper's review is based. The methodology of this systematic review is then described in section three before presenting the results in section four. Finally, the findings and implications are discussed in section five.

2. Fraud typologies

Although fraud can be categorised in countless ways, fundamentally, every type of fraud is either organisational or individual, whether we look at it from the perspective of perpetrators or victims (ACFE, 2022); therefore, this study categorises fraud types into two categories based on fraud perpetrators and victims: (i) Fraud against individuals and (ii) Fraud against organisations.

Fraud against individuals occurs when a person is targeted by an individual or organisation that uses deception, manipulations, theft, cheating or lies to defraud them for personal gain (Button et al., 2009; ACFE, 2022). Examples of fraud against individuals in the hospitality

sector include hospitality organisations posting fraudulent online reviews to attract customers or hospitality staff overcharging customers.

Fraud against organisations occurs when a single person, group of individuals, or another organisation (e.g. competitor in the hospitality industry or organised criminal group) uses deception, manipulations, theft, cheating, or lies to harm that organisation for personal gain (Wells, 2011). Individuals committing fraud against an organisation can be insiders or outsiders to that organisation. Fraud against an organisation committed by outsiders (e.g., customers, suppliers, or organised crime groups) are called external fraud and includes cyber-enabled fraud to steal the organisation's intellectual property or customer data; customer fraud, where customers deceive the organisation through fraudulent refunds, discounts, or payments; or supplier fraud, where suppliers create fictitious expenses or overcharging organisations (Kassem, in press).

Fraud against an organisation committed by insiders (e.g., employees, managers, or directors) is called insider fraud, occupational fraud, or white-collar crime and includes financial fraud, asset misappropriation, and corruption (Wells, 2011; Kassem, in press; ACFE, 2022). *Financial fraud* is manipulating an organisation's accounting records for personal gain. It can be committed by various means, including overstating, understating, or creating fictitious revenues, assets, expenses, liabilities, or disclosures (Kassem, 2019). *Asset misappropriation* is the abuse and theft of an organisation's assets and often involves covering the theft to avoid detection through trickery, manipulation, or lies. It includes a wide range of schemes such as payroll fraud, cheque fraud, stealing an organisation's assets, using an organisation's assets for personal purposes, overbilling, procurement fraud, and expense reimbursement fraud. The abuse of assets comprises using an organisation's assets for personal rather than business purposes, for example, using the organisation's printers to print personal documents (Wells, 2011).

Corruption is the abuse of a position of trust for personal gain and includes bribery, illegal gratuities, conflict of interest, extortion, favouritism, nepotism, and neglect of duties (OECD, 2007; Wells, 2011). Bribery is the "giving, requesting, receiving, or accepting of an improper advantage related to a position, office, or assignment" (Gottschalk, 2020, 722). Bribery and illegal gratuity are two closely related offences comprising giving, offering, or promising to give anything of value to a public official in exchange for or because of an official act. The main difference between bribery and illegal gratuity is the intent involved. The initial intention of gratuities may not be to bribe an official. Still, gratuities may turn into bribery or extortion in the future (i.e., there might be an understanding that future decisions beneficial to that person will also be rewarded).

In economic extortion, a person threatens another person or an organisation to receive economic benefits. Extortion might involve threats of physical harm to the victim's reputation or family (Wells, 2011). A conflict of interest occurs when an individual or an organisation exploits their professional capacity for personal or business benefit (OECD, 2007). Favouritism means giving unfair preferential treatment to a specific individual(s) at others' expense while performing public duties (Asencio, 2018). Nepotism is another form of favouritism based on acquaintances and familiar relationships. Someone in an official position exploits their power and authority to provide a job or favour to a family member or friend at others' expense (Fazekas, 2017).

3. Methodology

This systematic review aims to explore fraud in the hospitality industry. The following phases were considered in this review following the systematic literature review (SLR) methodology and flow diagram (see Fig. 1) proposed by Moher et al. (2009): (i) Identification of academic articles suitable for the research focus using various databases. (ii) Screening to remove duplicates from search records. (iii) Assessing articles for eligibility based on predetermined exclusion and inclusion criteria. (iv) Including only the relevant articles for the qualitative and

Table 1
Prior Studies on Hospitality Fraud.

No.	Author (s) & Publication Year	Research focus	Findings	Method	Country
1.	Adam and Adongo (2016)	Crimes against tourists	Backpackers suffered theft and fraud	Questionnaire	Ghana
2.	Akhtar et al. (2019)	Fraudulent hotel reviews	Unethical and unfair review practices engender unhappiness that leads to consumer dissatisfaction.	Questionnaire	China
3.	Alsubari et al. (2021)	Fake reviews detection	An intelligent system was developed that can detect fake reviews on e-commerce platforms.	Experiment using hotel reviews from trip adviser	United States, Chicago
4.	Arcuri et al. (2020)	Cyber risk	Negative market returns occur following announcements of cyber-attacks suffered by hospitality companies.	Secondary data, LexisNexis database	N/A
5.	Arici et al. (2021)	Corruption - Favouritism	Favouritism negatively affects job embeddedness, procedural justice, distributive justice, and interactional justice.	Questionnaire	North Cyprus
6.	Banerjee and Chua (2021)	Fake online hotel reviews detection	Linguistic cues help people discern online hotel review authenticity to a certain extent.	Online questionnaire	Singapore, India, China
7.	Barbado et al. (2019)	Fake review detection	Using only the text of a review is not an effective approach. In contrast, features related to the user are more effective.	Experiment using secondary data, Yelp filter	US: New York, San Francisco, Los Angeles and Miami.
8.	Berezina et al. (2012)	Cyber risk	Information security breach scenarios negatively impacted the outcome variables regardless of whether or not the guest's credit card information was compromised.	Experiment	US
9.	Berg and Noorderhaven (2016)	Corruption	Several motives and opportunities for corruption in Lamu were identified.	Semi-structured interviews and observations	Kenya, Lamu
10.	Beritelli et al. (2020)	Tax fraud	Utilitarian affordances and the individual tax morale of hospitality managers motivate overnight tax evasion.	Online questionnaire	Switzerland
11.	Chen and Fiscus (2018)	Cyber risks	Cybercrimes have become more critical in the hospitality industry.	Secondary data, database of Privacy Rights Clearinghouse	US
12.	Chen and Jai (2019)	Cyber risks	The information sources of hotels' data breach incidents affect consumers' perception of hotels' crisis responsibility, influencing their trust and revisiting intention toward the hotels.	Experiment and questionnaire	US
13.	Cole et al. (2022)	Asset misappropriation - Wage theft in hotels	They found three forms of wage theft in London hotels, including theft of labour time through managerial coercion, the theft of base wages, and the theft of variable wages.	Observation	UK, London
14.	Cruz et al. (2021)	Fake online reviews for restaurants	Social TV influences fake online reviews of restaurants involved in a TV show.	Secondary data	Brazil
15.	Erkan et al. (2017)	Financial manipulations and fraud controls	Various forms of financial manipulations were found due to weaknesses in internal controls.	Case study, field study, internal financial audit	Turkey
16.	Fong et al. (2022)	Fake hotel reviews	Fake review writers are less likely to provide a profile picture.	Secondary data and online experiment	US
17.	Gillard et al. (2018)	Corruption	Employees in North American hotels committed various forms of corruption.	Case study analysis	US
18.	Goh and Kong (2018)	Motivations of employee theft in the hotel industry	The adrenaline feeling when committing hotel employee theft is the key motivator.	Interviews	Australia
19.	Gwebu and Barrows (2020)	Cyber risk	The proportions of breaches in the hospitality industry are larger than in other sectors.	Secondary data	N/A
20.	Hajek and Sahut (2022)	Restaurant fake reviews detection	A review representation model based on behavioural and sentiment-dependent linguistic features was proposed and detected fake restaurant reviews effectively.	Secondary data and online experiment	N/A
21.	Harris and Pressey (2021)	Employee misbehaviours	Employee misbehaviours were linked to the convergence of suitable target victims, potential offenders, and the absence of a guardian.	In-depth interviews	N/A
22.	Harris (2012)	Tourists' perceptions of service worker (mis) behaviour	Some service workers deliberately target tourists to dupe them into paying more for services than non-tourist customers.	Survey	London, UK
23.	Hlee et al. (2021)	Fraudulent online restaurant reviews	Newly opened restaurants' online reviews are distorted.	Secondary data	US
24.	Howard (2009)	Tourists' challenging experiences in Thailand	Around 40% reported fraud, constant overcharging, and dual pricing	Survey	Thailand
25.	Hunt (2015)	Fake online reviews	Australian consumer law is presently adequate to the task – provided that deficiencies in legal enforcement, fake review detection and consumer awareness are proactively addressed.	Secondary data, discussion paper	Australia
26.	Jones and Groenenboom (2002)	Crime in London Hotels	Theft from tourists and credit card fraud are the predominant crime forms in hotels.	Interviews	UK, London
27.	Krippel et al. (2008)	Employee theft and employers' strategies for detecting it	Over 50 per cent reported one or more incidents of employee theft. Perpetrators were typically younger males who frequently targeted cash and inventory. They were caught through internal controls, special investigations, and whistleblowers.	Questionnaire	US

(continued on next page)

Table 1 (continued)

No.	Author (s) & Publication Year	Research focus	Findings	Method	Country
28.	Lee et al. (2022)	Detecting fake reviews	Applying a machine learning-based classification model with review, reviewer, and linguistic characteristics is methodologically and practically crucial for detecting fake reviews in hospitality.	Model building using secondary data, restaurants' online reviews on Yelp.com	US
29.	Li et al. (2020)	Fake reviews detection	Established restaurants have a higher possibility of receiving fake reviews than new restaurants. The majority of the fake reviews contain no photos. Local reviewers are likelier to write fake reviews than non-local reviewers.	Logistic regression analysis of restaurant reviews from Yelp.com	US
30.	Luca and Zervas (2016)	The incentives to commit review fraud	A restaurant is likelier to commit review fraud when its reputation is weak. Chain restaurants benefit less from Yelp and are less likely to commit review fraud. When restaurants face increased competition, they become more likely to receive unfavourable fake reviews.	Secondary data, restaurants' online reviews on Yelp.com	US
31.	Makofske (2020)	Corruption in restaurants	Restaurants' hygiene quality disclosure is manipulated by bribing inspectors.	Secondary data analysis	Los Angeles County, US
32.	Malbon (2013)	Fraudulent online consumer reviews	Policymakers and regulators need to take fake reviews seriously.	Focus group	Australia
33.	Moona et al. (2021)	Fake consumer reviews	The factors that can separate deceptive reviews from genuine ones in hotels are identified.	Questionnaire and content analysis of three online review platforms	US
34.	Peacock and Kubler (2001)	The failure of 'control' in the hospitality industry.	Some fraud forms in bars, restaurants, and hotels are identified.	Observation and unstructured interviews	London, UK
35.	Pearce (2011)	Fraud against tourists	Cases of credit card fraud and overbilling tourists in bars, restaurants, and hotels are highlighted.	Semi-structured interviews	Thailand
36.	Poulston (2008)	Rationales for Employee Theft in Hospitality	Employee theft is common and strongly associated with workplaces where understaffing and inadequate training are also common. Casual workers, young people, and those paid the least are found to be the most tolerant of theft.	Questionnaire	Auckland, New Zealand
37.	Ravenelle et al. (2022)	Job fraud against hospitality staff during the COVID-19 pandemic	Workers regularly encounter fraudulent job advertisements via digital media.	In-depth interviews	US
38.	Ruth et al. (2020)	Fraud vulnerability in the food service industry	Fraud vulnerability was more determined by the type of food service operator than the type of food product. Casual dining restaurants appeared most vulnerable, followed by fine dining restaurants. Mass caterers seemed the least vulnerable operators because they had more adequate food fraud controls.	Focus group	Netherlands
39.	Wang et al. (2022)	Detecting fake hospitality reviews	Fake reviews contain more emotional cues compared with authentic reviews. Moreover, the dynamics of emotional and cognitive cues are salient among negative reviews.	Secondary data analysis using Yelp.com reviews for hotels and restaurants	San Francisco, US
40.	Zhang et al. (2022)	Restaurants' Motivations to Solicit Fraudulent Reviews	Competitors' aggressive solicitation of fake reviews can enhance a restaurant's motivation to solicit more fake reviews. A stronger market advantage can reduce a restaurant's motivation to solicit positive fake reviews. Prospective popularity can strengthen a restaurant's motivation to solicit positive fake reviews.	Secondary data analysis using Yelp.com reviews for restaurants	US

quantitative analysis.

3.1. The identification phase

More than two decades of academic peer-reviewed journal articles from 2000 to 2022 were systematically reviewed using multiple search engines and databases for relevant papers. This includes JSTOR, Wiley Online Library, SCOPUS, EBSCOhost Business Source Premier, ProQuest, Elsevier ScienceDirect, Emerald Insight, Springer Standard Collection, Sage Journals Management, Allen Press American Accounting Association, IEEE Open Access Journals, and Conferences, and Taylor & Francis Open Access.

The keywords used in the search are based on the fraud definitions in the introduction section and fraud typologies in Section 2 of this paper. To elucidate, the Fraud Act (2006) in England and Wales refers to fraud as any dishonest behaviour that intentionally results in a loss to the victim(s), exposes the victim(s) to risk, or provides gain to the perpetrator(s). This can occur through false representation (i.e., falsifying information/facts), the abuse of a position of trust, and failure to disclose information when there is a legal obligation to disclose such information. This broad definition of fraud allows a wide range of crimes

to be considered and treated as fraud. This includes theft, offering or accepting bribes, manipulating an organisation's financial records, using an organisation's assets for personal purposes without the organisation's consent and knowledge, or simply lying on a job application or insurance form. Similarly, Wells (2011) defines fraud as a crime involving intentional deception, trickery, manipulation, cheating, lying, or stealing. Therefore, I have used the following keywords in the search: fraud AND hospitality; theft AND hospitality; cheating AND hospitality; lying AND hospitality; deception AND hospitality; abuse AND hospitality; manipulation AND hospitality; fraud AND business; fraud AND consumer; Fakery AND hospitality; Abuse of position AND hospitality; False representation AND hospitality; Disclosure AND hospitality.

In the meantime, fraud is a serious crime and deviant behaviour. Therefore, I have used the following keywords: crime AND hospitality; deviance AND hospitality.

As explained in the paper, fraud against organisations includes corruption in all its forms (e.g. bribery, conflicts of interest, extortion, illegal gratuities, favouritism, and nepotism), financial fraud, and asset misappropriation. Hence, the following keywords are also used: corruption AND hospitality; Asset misappropriation AND hospitality; Asset abuse AND hospitality; bribery AND hospitality; extortion AND

hospitality; conflict of interest AND hospitality; neglect of duty AND hospitality; illegal gratuities AND hospitality. I have added this clarification to the methodology section. Given that hospitality encompasses hotels, guest houses, B&B, restaurants, bars, pubs, and cruises, the search used these terms as keywords replacing hospitality.

To identify relevant studies, paper titles, keywords, abstracts, and primary texts were searched for these terms. When a relevant paper was identified, the reference list was examined to ensure that other vital contributions were not missed. Afterwards, the keywords were refined based on how fraud in hospitality was described in these articles to locate other relevant articles. One of the keywords identified in the reference list of some sources is the term scam, which is used to describe fraud, so it was included in the search to locate relevant articles.

The searches stated above identified 60 journal articles before the screening process. Reviewing these articles helped identify some common themes and develop an overall 4W2H framework for synthesising critical aspects of hospitality fraud research and identifying gaps in the literature. These six themes were used to analyse the literature systematically. The "4W2H" framework examines (i) WHAT – are the fraud types, (ii) WHO – are the fraud victims and perpetrators, (iii) WHERE – is fraud taking place in the hospitality businesses, (iv) WHY – is fraud committed, (v) HOW – is fraud committed, and (vi) HOW THEN – can fraud be countered. These themes, with corresponding studies, are discussed in section four.

3.2. The screening phase

In this stage, duplicates were removed, and the following screening criteria were applied to ensure further the selected publications' quality and relevance: (1) Only full-text academic peer-reviewed articles were included in the analysis. (2) Only articles with an empirical or theoretical focus on fraud in hospitality were included. (3) Only peer-reviewed academic articles written in English were considered in this paper. (4) Following the approach of Moll and Yigitbasioğlu (2019), the review was not limited to a journal list. Still, attention was paid to papers published in leading accounting journals cited in the Association of Business Schools (ABS) Academic Journal Guide 2021 for the following reasons: (i) The ABS journal guide provides details on a wide range of journals, stretching across fields that are either central or salient to business and management studies. (ii) Its ratings are based upon peer review, editorial and expert judgements following the evaluation of hundreds of publications and are informed by statistical information relating to citation. (iii) The ratings of journals reflect the outcomes of consultations carried out by the subject experts of the Scientific Committee with expert peers and scholarly associations as to the relative standing of journals in each subject area (Chartered Association of Business Schools, 2021). The total number of records after the screening was 47 articles.

3.3. The eligibility and inclusion stages

The contents of relevant sources were read to ascertain the focus, scope, and methodology where relevant. During these processes, seven articles were excluded from subsequent analysis, for example, because they focused on food safety or fraud in the tourism industry but did not mention the hospitality sector. They also covered deviance or crime with no mention of fraud in hospitality.

At the end of the data collection and selection process, a final sample of 40 papers was collected for analysis. Most papers were from the *International Journal of Hospitality Management*, and the rest were scattered throughout different journals. Table 1 lists these 40 studies, their research focus, findings, methodology, and where they were conducted.

4. Results

4.1. WHAT are the fraud types in hospitality?

As elucidated in section two, fraud can be committed against individuals or organisations. This section discusses how these fraud categories are committed in the hospitality section.

4.1.1. Fraud against individuals in hospitality

The review highlights that fraud in hospitality can be committed against customers/tourists or hospitality workers. However, little attention was given to fraud against hospitality workers, with only one study reporting that workers in hospitality regularly encountered fraudulent job advertisements via digital media during the COVID-19 pandemic (Ravenelle et al., 2022).

On the other hand, fraud against customers or tourists in hospitality can have various forms, including (i) fraudulent online hotel or restaurant reviews, (ii) credit card fraud, (iii) overcharging customers, (iv) demanding bribes from customers, (v) theft of customers' money, and (vi) selling free goods to customers. Nevertheless, more attention was given to fraudulent reviews compared to other forms of fraud against customers/tourists in hospitality.

Several studies noted the negative impact of fraudulent reviews and concluded that they are a worsening problem, betraying consumers' trust in reviews by pretending to be authentic and informative (Malbon, 2013; Hunt, 2015; Hlee et al., 2021; Cruz et al., 2021; Moona et al., 2021; Zhang et al., 2022). Two studies found credit card fraud cases against tourists, where their card details have been stolen by hospitality workers and used to purchase goods and services (Jones and Groenenboom, 2002; Howard, 2009). Others identified incidents of overcharging customers (Peacock and Kubler, 2001; Howard, 2009; Pearce, 2011; Harris, 2012). Harris and Pressey (2021) discovered that some dishonest hospitality workers offer customers free drinks to get better tips and hide these activities by overcharging other customers while others sell customers free goods and services. Howard (2009) reported the theft of customers' money in hospitality venues, and Gillard et al. (2018) found corruption cases where hospitality workers demand bribes from customers for better services.

4.1.2. Fraud against hospitality organisations

As explained in Section 2 of this paper, fraud against hospitality organisations can be perpetrated by insiders or outsiders. Hence, this fraud type can be further categorised from the perpetrators' perspectives into insider and external fraud. Evidence from the literature shows insider and external fraud incidents in the hospitality sector. This section discusses each fraud category.

4.1.2.1. Insider fraud in hospitality. Insider fraud comprises various schemes such as financial fraud, asset misappropriation, and corruption, as explained in Section 2. Evidence of all three insider fraud forms was found in the literature, albeit more attention was given to asset misappropriation. In particular, previous studies reported more cases involving the theft of assets (Peacock and Kubler, 2001; Jones and Groenenboom, 2002; Poulston, 2008; Krippel et al., 2008; Poulston, 2008; Erkan et al., 2017; Cole et al., 2022) than the abuse of assets in hospitality (Erkan et al., 2017). Remarkably, few studies identified financial fraud, mainly manipulating accounting records and bonuses (Peacock and Kubler, 2001; Erkan et al., 2017) and perpetrating tax fraud (Beritelli et al., 2020). Still, fewer studies discussed corruption, specifically bribery (Makofske, 2020) and favouritism (Arici et al., 2021).

4.1.2.2. External fraud. Very little attention was given to external fraud in the hospitality literature, with only two studies highlighting two forms of external fraud: (i) fraudulent reviews and (ii) cyber fraud. Hunt

(2015) reported fraudulent reviews posted by dishonest or disgruntled customers to cause reputational damage to an organisation. Business owners also post negative fraudulent reviews against their competitors to demote their competitors' products/services. Gwebu and Barrows (2020) discovered cyber fraud cases where external hackers steal business and customer data and that the proportions of breaches in the hospitality industry are higher than in other sectors.

4.2. WHO are the fraud victims and perpetrators?

Fraud victims and perpetrators vary depending on the fraud type committed. For instance, in *fraud against individuals*, the victims are usually tourists or customers but could also be hospitality workers. In the meantime, the perpetrators could be hospitality workers, organisations, criminals, or other dishonest customers. For instance, some studies discovered that tourists were victims of overbilling, credit card fraud, and theft, while the perpetrators in these cases were bar, hotel, and restaurant workers (Peacock and Kubler, 2001; Jones and Groenenboom, 2002; Howard, 2009; Pearce, 2011). Similarly, there is evidence that cruise guests were manipulated and overcharged by cruise workers (Harris and Pressey, 2021). Customers were victims of bribery demanded by employees in restaurants and hotels (Gillard et al., 2018). Harris (2012) found that female, non-white foreign visitors with poor English skills are disproportionately victimised and that restaurant, bar, and hotel workers were the main perpetrators.

However, hospitality workers are not the only perpetrators of fraud against tourists and customers. Adam and Adango (2016) reported that backpackers in Ghana are more likely to be defrauded by individual criminals than other tourists. In some fraudulent review cases, the victims can be customers, and the perpetrators can be hospitality business owners or other dishonest customers (Hunt (2015); Hlee et al. (2021); Malbon (2013); Luca and Zervas (2016). Hlee et al. (2021) added that newly opened restaurants are more likely to perpetrate it to attract customers. In another case, restaurants in Los Angeles manipulated hygiene quality inspection scores to deceive consumers (Makofske, 2020).

Employees in hospitality can also be victims of fraud. Ravenelle et al. (2022) reported that restaurant workers were victims of fraudulent job advertisements and were targeted by individual criminals via social media during the pandemic.

In *fraud against organisations*, particularly *insider fraud*, most of the evidence reveals that hospitality businesses, particularly hotels, were the victims and employees were the perpetrators of insider fraud (Beritelli et al., 2020; Erkan et al., 2017; Krippel et al., 2008; Poulston, 2008; Jones and Groenenboom, 2002). Still, restaurants (Erkan et al., 2017; Krippel et al., 2008) and bars (Peacock and Kubler, 2001; Erkan et al., 2017) can also be victims of worker asset misappropriation. Krippel et al. (2008) added that young male workers who frequently targeted cash and inventory committed employee theft at restaurants and hotels. However, the perpetrators could also be managers. Some studies (Erkan et al., 2017; Peacock and Kubler, 2001; Cole et al., 2022) found restaurant and hotel managers were the perpetrators of asset misappropriation.

In *external fraud*, hospitality businesses can be victims of cyber fraud, where the perpetrators are external hackers (Gwebu and Barrows, 2020). Besides, they can be victims of fraudulent reviews committed by disgruntled customers or competitors (Hunt, 2015; Hlee et al., 2021; Malbon, 2013; Luca and Zervas, 2016). There is evidence that restaurants are more likely to be victims (Luca and Zervas, 2016) of fraudulent reviews.

In other cases, hospitality businesses can be the fraud perpetrators. Hunt (2015) reported that hospitality businesses could be the perpetrators of fraudulent reviews targeting other businesses to reduce market competition. Others found that hotels were the perpetrators of tax fraud (Beritelli et al., 2020), and restaurants manipulated accounting records (Erkan et al., 2017). The victim in these cases could be another

organisation like the tax authority or even the government.

4.3. WHERE in the hospitality business does fraud occur?

The analysis shows that fraud can occur anywhere in hospitality; however, there is evidence that some fraud forms are committed more in some places than others. Asset misappropriation seems more common in hotels (Peacock and Kubler, 2001; Jones and Groenenboom, 2002; Poulston, 2008; Krippel et al., 2008; Howard, 2009; Harris, 2012). One study found that employees mainly steal bags, briefcases, and laptop computers from the hotel's public areas, such as the lobby area, restaurants, bars, and breakfast rooms (Jones and Groenenboom, 2002). Still, asset misappropriation can also occur on cruises (Harris and Pressey, 2021) and in restaurants and bars (Peacock and Kubler, 2001; Howard, 2009; Pearce, 2011; Harris, 2012).

Corruption cases were identified in hotels and restaurants (Erkan et al., 2017; Gillard et al., 2018; Makofske, 2020). In comparison, credit card fraud against tourists or customers can occur in hotels (Jones and Groenenboom, 2002; Howard, 2009). Financial fraud cases were found in restaurants (Erkan et al., 2017) and hotels (Beritelli et al., 2020). Fraudulent reviews against customers or other hospitality businesses are more likely to occur in restaurants (Luca and Zervas, 2016; Hlee et al., 2021). When searching for jobs, hospitality workers are more likely to be defrauded through social media (Ravenelle et al., 2022).

4.4. WHY is fraud committed in hospitality?

Criminologists highlighted five fraud factors resulting in fraud, including (i) motives, opportunity, rationalisation, integrity level, and perpetrators' capabilities (Cressey, 1950; Albrecht et al., 2008; Wolfe and Hermanson, 2004; Wells, 2011). These fraud factors could apply to individual and organisational perpetrators. Although some studies explore the reasons for hospitality fraud, overall research on the reasons for fraud in hospitality is sparse and has yet to receive substantial research attention. In particular, there is more focus on the motives for hospitality fraud, little attention on the opportunity, rationalisation, and integrity factors, and no attention on fraud perpetrators' capabilities. This section discusses the findings of previous studies in this area.

4.4.1. Motives

Motives are considered critical antecedents to fraud and are the factors pressuring individuals to commit fraud (Kassem, 2018). Motives can be financial or non-financial, such as financial need, greed, ego, revenge, or the desire to obtain financing (Kassem, in press).

Based on the analysis of prior studies' findings, motives vary by fraud forms and perpetrator type (i.e., individual vs. organisation) in hospitality. For example, *at the individual level*, adrenaline feelings motivated hotel employees to commit asset misappropriation (Goh and Kong, 2018). Financial gain, saving time and effort, and customer satisfaction were the primary reasons for manipulating cruise guests, as reported by Harris and Pressey (2021). Revenge and supporting the business of a friend/family member are motives for fraudulent reviews perpetrated by customers against other customers. Hunt (2015) reported that dishonest consumers tend to create fraudulent identities and post negative reviews without a financial incentive to take revenge when they are unsatisfied with the products/services of a company. Other consumers post positive fraudulent reviews because they wish to support the business of their friends or family. In contrast, the main motives for paying bribes are saving time, reducing costs, avoiding emotional stress, and financial benefits, referring specifically to tax evasion through bribing tax inspectors (Berg and Noorderhaven, 2016).

At the organisational level, Beritelli et al. (2020) uncovered that the motives behind hotel overnight tax evasion depend on utilitarian affordances (e.g. the perceived struggle of the accommodation sector or disutility from the ways overnight tax funds are currently used) and a perceived disutility of how destinations spend the collected overnight

tax funds. Zhang et al. (2022) concluded that aggressive solicitation strategies could trigger a restaurant's motivation to surpass competitors and become more competitive by soliciting fake reviews. Luca and Zervas (2016) noted that restaurants were more likely to receive unfavourable fraudulent reviews when facing increased competition, a desire to boost their reputation, or an increased profit. Hunt (2015) suggested that business owners post undeserved positive comments regarding their product for a promotion or post negative fraudulent reviews against their competitors to demote their products/services. Similarly, Malbon (2013) highlighted that restaurants use fraudulent online identities or pay others to post extremely positive fraudulent reviews to improve their reputation.

4.4.2. Opportunity

An opportunity for fraud is the chance to commit fraud without being caught, and it could come about by a weakness in an organisation's internal control system (Wells, 2011). A study by Ruth et al. (2020) concluded that the increased fraud risk in the hospitality industry, particularly restaurants, pertains to the lack of anti-fraud controls. Poulston (2008) found that asset theft is strongly associated with workplaces where understaffing and inadequate training provide a lucrative opportunity for employees to defraud the organisation. Harris and Pressey (2021) highlighted that the opportunities enabling employees to manipulate cruise workers are (i) lack of employee monitoring (no electronic surveillance) and tacit tolerance by supervisors. They also suggest that some cruise ship employees engage in work that aligns with the poor working conditions, servile roles, or stigmatised positions of 'dirty workers'. Cole et al. (2022) concluded that wage theft is embedded in the hospitality sector, particularly integrated into hotel organisational cultures due to the absence of unions, the lack of adequate labour laws and the non-enforcement of existing labour laws.

4.4.3. Integrity and rationalisation

Integrity refers to moral values such as honesty, fairness, and trustworthiness. Rationalisation justifies fraudulent behaviour due to an individual's lack of personal integrity (Kassem, in press). A study by Poulston (2008) found that tolerance of asset theft by employees was persistently and strongly rationalised in hotels, and employee intolerance was associated with fear of consequences and moralising. Perpetrators used various rationalisations, including "They were going to throw it out", "I did not take much", "I used it here, so it is not theft", "These do not cost much", and "Everyone else is doing it". The author concludes that employees' misunderstanding of what constitutes theft resulted in rationalising employee theft and added that employee theft is likely to be a minor concern where management is perceived more as a means of support than an adversary. Beritelli et al. (2020) uncovered that hotel overnight tax evasion depends on the individual tax morale of hospitality managers. Berg and Noorderhaven (2016) discovered that the factors that lead to corrupt behaviour by hospitality SME managers in Lamu are mostly connected with the behaviours of those working in the administrative system: politicians surfacing through stacked elections, officials and even judges who take bribes, a government administration that fails to deliver, and arbitrariness of police officers. Moona et al. (2021) reveal the factors influencing people's willingness to write fake reviews include social media trust, product quality consciousness, deal proneness, hedonic and utilitarian consumption, prosocial behaviour, and individualism.

4.5. HOW is the fraud perpetrated?

4.5.1. Fraud against individuals

The analysis shows that tourists and customers were defrauded by various means. In some cases, they were overcharged in hotels and restaurants by workers who added items (i.e., products or services) they never bought or inflated the prices of items they bought (Howard, 2009). Pearce (2011) found that customers are offered cheap drinks in

bars, but the bill includes the charge for the "free" show. Spa services on the hotel bill may be inflated with extra taxes and service charges, and restaurants add bogus charges to bills for service, tips and memorable times. In other cases, cruise workers offered guests free drinks to get better tips and hide these activities by overcharging other customers, selling free goods and services to customers (Harris and Pressey, 2021), or overcharging for taxis ordered through hotels (Peacock and Kubler, 2001). Gillard et al. (2018) noted cases where employees demanded bribes from customers in restaurants and hotels.

Customers also received fake calls from receptionists or hotel staff seeking credit card details (Pearce, 2011), and their money was stolen from the hotel safe (Howard, 2009). Additionally, consumers can be deceived through fake online reviews. Hunt (2015) reported that some consumers post positive fraudulent reviews because they wish to support the business of their friends or family. Cruz et al. (2021) concluded that social TV influences fake online reviews of restaurants that were involved in a TV show. They found that some reviewers assess the service without having tried the service, which strongly biases the influence they will have on potential consumers. During the pandemic, individual criminals defrauded restaurant workers by creating fraudulent job advertisements via digital media. They were advertising for jobs that did not exist and asked workers to pay a commission fee or buy something required for the job with no clear directions for reimbursement (Ravenelle et al., 2022).

4.5.2. Fraud against organisations

4.5.2.1. Insider fraud. Insider fraud can be committed in hospitality using various means. For instance, asset misappropriation was committed by stealing customers' or hotel's inventory, including bags, briefcases, and laptop computers from the hotel's public areas, such as the lobby area, restaurants, bars, and breakfast rooms (Jones and Groenenboom, 2002). In other cases, pens and unused food were the items most likely to be taken from hotels; however, toilet paper, towels, cleaning products, money, or alcohol can also be stolen (Poulston, 2008; Krippel et al., 2008). Employees can also steal cash from the brewery, and managers manipulate their restaurant bonuses by inflating the efficiency figure at the point of customer food orders (Peacock and Kubler, 2001). Erkan et al. (2017) uncovered cases of abuse of assets where workers took advantage of all-inclusive customer services or kitchen managers invited friends or relatives into the hotels free of charge. In another case, managers stole wages using various means, including coercion through under-measurement of hours, non-payment of holiday entitlements, theft of annual leave pay, charging hidden fees for training, and theft of tips and service charges (Cole et al., 2022).

Financial fraud was perpetrated by inflating the quantity of meat used in restaurant kitchens, thus overstating expenses (Erkan et al., 2017), and hotels intentionally and fraudulently underreporting income from accommodation services to evade taxes. This includes cases where businesses charge guests overnight taxes on their bill but retain the tax share and where they intentionally forgo charging overnight taxes to offer guests a favourable room rate at a price point below the competitive offer (Beritelli et al., 2020).

Corruption was perpetrated using different techniques. For example, kitchen managers abused their power by inviting friends or relatives into the hotels free of charge (Erkan et al., 2017). Makofske (2020) discovered that bribes are paid to inspectors to manipulate quality inspection scores. Arici et al. (2021) highlighted cases of favouritism in hospitality organisations where certain employees are given unfair advantages over their peers in promotions and financial incentives.

4.5.2.2. External fraud. In fraudulent reviews, business owners post negative fraudulent reviews against their competitors to demote their competitors' products/services. Dishonest consumers tend to create fraudulent identities and post negative reviews without financial

incentive when they are unsatisfied with the products/services of a company. These fraudulent reviews can be stories about a product/service or inappropriate answers to customer complaints or questions (Hunt, 2015). Gwebu and Barrows (2020) discovered cyber fraud cases where external hackers steal business and customer data and that the proportions of breaches in the hospitality industry are higher than in other sectors. This can be done through the use of malware and viruses.

4.6. HOW THEN can hospitality fraud be countered?

Most studies suggested methods for countering fraud in hospitality, which are discussed in this section. A closer analysis of these suggestions reveals that fighting fraud against individuals requires educational campaigns where hospitality customers and managers are educated about the risk of hospitality fraud and how to avoid it. Moreover, there is an emphasis on the significance of monitoring websites to remove or prevent fraudulent reviews aiming to deceive customers and fake job advertisements targeting hospitality workers. Countering insider fraud concerns ethics, anti-fraud education, and robust anti-fraud internal controls in hospitality organisations. In contrast, investing in adequate technology and cybersecurity can mitigate external fraud risk.

4.6.1. Countering fraud against individuals

Raising fraud awareness and educating customers and staff about fraud risk in hospitality seems to be the most frequently suggested method for countering fraud against individuals. Adam and Adango (2016) proposed that backpackers can be briefed on theft and fraud and how to protect themselves against such crimes at the various tourist information centres. Besides, they suggested the concept of tourism policing in tourist hotspots, especially during peak periods. To reduce fraud against tourists in Thailand, Howard (2009) recommended that the country consider broader consular travel warnings and eliminate some disliked official practices. Banerjee (2022) also suggested educating hotel managers on the negative impact of fraudulent reviews and the significance of avoiding participating in this fraud scheme. Additionally, review websites should highlight review writers' ethical and social responsibilities in the form of pop-ups each time an individual proceeds to submit an entry. The review submission forms could also convey the importance of accurately portraying their experiences rather than using exaggeration.

Other studies recommended monitoring websites and taking corrective actions to prevent and detect fraudulent reviews aimed at deceiving customers and fraudulent job posts targeting hospitality workers. Akhtar et al. (2019) recommended that hotel and travel review website managers regularly monitor online hotel reviews and immediately report any suspicious, fake, or manipulated reviews to the association for removal and dissemination of that information on the association's website. They also proposed that hotel managers should avoid posting fraudulent reviews from expert reviewers and, after service failure, immediately take corrective actions for service recovery because dissatisfied consumers will spread negative word-of-mouth and damage the hotel's reputation. To fight fraudulent job advertisements against hospitality workers, Ravenelle et al. (2022) suggested that job listing websites should increase their monitoring mechanisms, increase efforts to prevent such postings and take decisive action against fraudulent listings.

Banerjee (2022) encouraged customers to remain vigilant and recommended that they should not let down their guard while reading reviews and not trust reviews that match their expectations mindlessly. In the meantime, computer scientists and developers are recommended to finetune the detection algorithms based on the context instead of relying on a one-size-fits-all approach. Besides, review website interfaces should be designed so confirmatory bias cannot kick in easily. Hotel websites could also choose to display testimonials in ways that will hinder confirmatory bias.

4.6.2. Countering fraud against organisations

4.6.2.1. *Countering insider fraud.* Most studies assert the role of ethics and robust controls in countering insider fraud. Developing and maintaining a strong ethical culture is integral to any robust internal control system (Kassem, 2022). To nurture a strong ethical culture, anti-fraud education and a code of ethics with zero tolerance for fraud are critical. Poulston (2008) suggested the following to reduce employee theft in hospitality: (i) providing ethics training to employees on the impact and consequences of theft, (ii) restricting access to specific inventories and supplies vulnerable to theft, (iii) providing employees with free or subsidised meals and supplies (iv) regular communication between managers and employees about ethical behaviour. Similarly, to prevent employee theft and maximise ethical behaviour in future hotel employment, Goh and Kong (2018) recommend the following strategies: (i) Educators and practitioners must emphasise the importance of breaking the law when committing employee theft and the consequences of employee theft. (ii) Hotel managers should closely monitor and mentor staff, especially the younger ones. (iii) Providing compulsory orientation session that covers ethical responsibility and zero tolerance for employee theft in the workplace. (iv) There should be short professional development courses that new and existing staff must complete to ensure they are correctly educated about employee theft. (v) All hotels should work together to develop a database to share information about theft and unethical behaviour to detect and take preventive measures to educate new staff members with past theft history. Krippel et al. (2008) found that employees who committed theft in hotels and restaurants were caught through internal controls, special investigations, and whistleblowers, implying the significance of these control mechanisms in detecting employee theft.

To counter overnight tax evasion in hotels, Beritelli et al. (2020) propose (i) communicating the legal and market consequences of overnight tax evasion to nudge hospitality managers toward compliance. (ii) redirecting taxes for immediate benefit to the accommodation sector. (iii) aiming for high levels of transparency in explaining to what ends overnight taxes are spent, how priorities are set, and how organisations that spend those tax funds are held accountable. Erkan et al. (2017) asserted that effective hospitality management requires adequate internal controls to reduce fraudulent financial reporting. In particular, (i) it is essential to determine each employee's authority and responsibilities. (ii) The purchasing, payment, collection, recording, and operations missions must be separated. (iii) Internal audits must be conducted to evaluate internal controls' effectiveness. (iv) Organisational culture with high morale must be formed. Gillard et al. (2018) suggest that organisations in the hospitality sector should severely punish their members who commit corruption, maintain open communication among workers and managers, and conduct regular property audits.

To fight wage theft, Cole et al. (2022) suggest that it requires structural changes in the economy that support workers' power, including increased social protections, stronger collective bargaining legislation and increased enforcement and penalties for labour market violations.

4.6.2.2. *Countering external fraud.* Using adequate technology and investing in cyber security are the main methods for fighting external hospitality fraud. Arcuri et al. (2020) argued that adequate investments in technology for cyber security and staff training are paramount in the hospitality sector to reduce cyber risk. Chen and Fiscus (2018) emphasised the importance of evaluating the hospitality sector's cyber risks, vulnerabilities, and capabilities. Berezina et al. (2012) proposed that hotel operators must continually strive to keep the sensitive data collected from their guests secure. Chen and Jai (2019) recommend that hotel practitioners develop action plans regarding cyber crisis management and conduct regular information security assessments, system

Table 2
4W2H Hospitality Fraud Framework.

WHAT are the fraud types?	WHO are the fraud victims & perpetrators?	WHERE is fraud occurring?	WHY is fraud committed	HOW is fraud committed?	HOW THEN can fraud be countered?
<p>Fraud against individuals:</p> <p>Fraud against customers or tourists:</p> <p>Fraudulent online reviews</p>	<p>Victims:</p> <p>Customers or tourists</p> <p>Perpetrators:</p> <p>Hospitality businesses and other customers</p>	<p>Restaurants, hotels</p>	<p>To surpass its competitors</p> <p>Increased competition</p> <p>A desire to boost their reputation</p> <p>A desire to increase profit</p>	<p>Hospitality businesses post fake positive reviews to attract more customers.</p> <p>Some consumers post positive fraudulent reviews because they wish to support the business of their friends or family.</p> <p>Social TV influences fake online reviews of restaurants involved in a TV show</p>	<p>Hospitality businesses should raise fraud awareness and educate customers and staff about fraud risk.</p> <p>Review websites should highlight review writers' ethical and social responsibilities in the form of pop-ups each time an individual proceeds to submit an entry.</p> <p>Hotel and travel review website managers should regularly monitor online hotel reviews and immediately report any suspicious, fake, or manipulated reviews to the association for removal and dissemination of that information on the association's website.</p> <p>Customers should remain vigilant while reading reviews and not mindlessly trust reviews that match their expectations.</p> <p>Computer scientists and developers are recommended to finetune the detection algorithms based on the context instead of relying on a one-size-fits-all approach.</p> <p>Review website interfaces should be designed so confirmatory bias cannot kick in easily.</p> <p>Hotel websites could choose to display testimonials in ways that will hinder confirmatory bias.</p> <p>Hotel and travel review websites should collaborate to develop a registration portal on the internet on which reviewers' bio-data and details should be consistent and credible for customers.</p> <p>Travel review websites should hire data experts to remove manipulated profile information, fraudulent identities, hotel experiences, and reviewer accounts.</p>
<p>Fraud against customers or tourists Continued.</p> <p>Credit card fraud</p> <p>Overcharging customers</p> <p>Demanding bribes from customers</p> <p>Selling free goods to customers</p>	<p>Victims:</p> <p>Customers or tourists</p> <p>Perpetrators:</p> <p>Hospitality workers</p>	<p>Restaurants, hotels, bars, cruises</p>	<p>Adrenaline feeling</p> <p>financial gain</p> <p>saving time and effort,</p> <p>customer satisfaction</p> <p>Lack of employee monitoring</p> <p>Tacit tolerance by supervisors.</p> <p>poor working conditions,</p> <p>Servile roles, or stigmatised positions of 'dirty workers.'</p>	<p>Customers are overcharged by workers who added items they never bought or inflated the prices of items they bought</p> <p>Customers are offered cheap drinks in bars, but the bill includes the charge for the "free" show.</p> <p>Spa services on the hotel bill may be inflated with a large number of extra taxes and service charges,</p> <p>Restaurants added a set of fake extra charges to bills for service, tips and memorable times.</p> <p>Cruise workers offered guests free drinks to get better tips and hid these activities by overcharging other customers</p>	<p>Hospitality businesses should raise fraud awareness and educate customers and staff about fraud risk and the consequences of engaging in fraudulent activities.</p>

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Table 2 (continued)

WHAT are the fraud types?	WHO are the fraud victims & perpetrators?	WHERE is fraud occurring?	WHY is fraud committed	HOW is fraud committed?	HOW THEN can fraud be countered?
Fraud against customers or tourists Continued. Theft of customers' money	Victims: Customers or tourists Perpetrators: Hospitality employees Individual criminals	Restaurants, hotels, hostels, or cheap accommodations	Financial gain	or selling free goods and services to customers. Customers were overcharged for taxis ordered through hotels Customers received fake calls from receptionists or hotel staff seeking credit card details Customers' money was stolen from the hotel safe. Backpackers were duped by individual criminals who stole their money and defrauded them.	Tourism policing can be introduced in tourist hotspots Brief customers on theft and fraud and how to protect themselves against such crimes
Fraud against hospitality workers: Fraudulent job advertisements	Victims: Hospitality workers seeking jobs during the pandemic Perpetrators: Individual criminals	Social media	Financial gain	During the pandemic, individual criminals defrauded restaurant workers by creating fraudulent job advertisements via digital media. They were advertising for jobs that did not exist and asked workers to pay a commission fee or buy something required for the job with no clear directions for reimbursement.	Job listing websites should increase their monitoring mechanisms, increase efforts to prevent such postings and take decisive action against fraudulent listings
Fraud against hospitality organisations: Insider fraud - Asset misappropriation	Victims: Hospitality organisations Perpetrators: Hospitality workers, managers	Restaurants, bars, hotels (lobby, breakfast rooms), and cruises	The lack of anti-fraud controls Understaffing Inadequate training Employees' misunderstanding of what constitutes theft resulted in rationalising employee theft. The absence of unions The lack of effective labour laws The non-enforcement of existing labour laws	Stealing customers' or hotel's inventory, including bags, briefcases, and laptop computers from the hotel's public areas, such as the lobby area, restaurants, bars, and breakfast rooms Pens and unused food were most likely taken from hotels; however, toilet paper, towels, cleaning products, money, or alcohol could also be stolen. Employees can steal cash from the brewery, Workers took advantage of all-inclusive customer services Kitchen managers invited friends or relatives into the hotels free of charge. Managers stole wages using various means, including coercion through under-measurement of hours, non-payment of holiday entitlements, theft of annual leave pay, charging hidden fees for training, and theft of tips and service charges.	Providing ethics training to employees on the impact and consequences of theft Restricting access to specific inventories and supplies vulnerable to theft Providing employees with free or subsidised meals and supplies Regular communication between managers and employees about ethical behaviour Educators and practitioners must emphasise the importance of breaking the law when committing employee theft and the consequences of employee theft. Hotel managers should closely monitor and mentor staff, especially the younger ones. Providing compulsory orientation session that covers ethical responsibility and zero tolerance for employee theft in the workplace. There should be short professional development courses that new and existing staff must complete to ensure they are correctly educated about employee theft. All hotels should work together to develop a database to share information about theft and unethical behaviour to detect and take preventive measures to educate new staff members with past theft history. Organisational culture with high morale must be formed. Conduct regular property audits. Develop and enforce a code of ethics. Build an ethical work climate

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Table 2 (continued)

WHAT are the fraud types?	WHO are the fraud victims & perpetrators?	WHERE is fraud occurring?	WHY is fraud committed	HOW is fraud committed?	HOW THEN can fraud be countered?
2.1. Insider Fraud – Financial Fraud	Victims Hospitality organisations & other organisations, such as tax authorities or governments Perpetrators Employees, managers	Restaurants, hotels	Lack of anti-fraud controls Utilitarian affordances (e.g. the perceived struggle of the accommodation sector or disutility from the ways overnight tax funds are currently used) and a perceived disutility of how destinations spend the collected overnight tax funds Individual tax morale of hospitality managers	Managers manipulate their restaurant bonuses by inflating the efficiency figure at the point of customer food orders. Inflating the quantity of meat used in restaurant kitchens, thus overstating expenses Hotels intentionally and fraudulently underreport income from accommodation services to evade taxes.	promoting ethical values and commitment to integrity. Increased social protections, stronger collective bargaining legislation Increased enforcement and penalties for labour market violations Investing in whistleblowers' anonymous line Communicating the legal and market consequences of overnight tax evasion to nudge hospitality managers toward compliance. Redirecting taxes for immediate benefit to the accommodation sector. Aiming for high levels of transparency in explaining to what ends overnight taxes are spent, how priorities are set, and how organisations that spend those tax funds are held accountable. It is essential to determine each employee's authority and responsibilities. The purchasing, payment, collection, recording, and operations missions must be separated. Internal audits must be conducted to evaluate internal controls' effectiveness.
2.1. Insider Fraud - Corruption	Victims: Employees, hospitality organisations Perpetrators: Managers	Restaurants, hotels	Saving time, reducing costs, avoiding emotional stress, and financial benefits The behaviours of those working in the administrative system: politicians surfacing through stacked elections, officials and even judges who take bribes, a government administration that fails to deliver, and arbitrariness of police officers.	Hygiene scores in restaurants were manipulated by bribing inspectors Favouritism in hospitality organisations is where certain employees are given unfair advantages over their peers in promotions and financial incentives.	Organisations in the hospitality sector should severely punish their members who commit corruption. Organisations in the hospitality sector should maintain open communication among workers and managers, Organisations in the hospitality sector should conduct regular property audits.
External fraud: Fraudulent reviews by customers and other businesses Cyber fraud by cybercriminals	Victims: Hospitality businesses Perpetrators: Customers, other businesses, and cybercriminals	Restaurants, hotels	Take revenge Financial gain To support the business of their friends or family To demote their competitors' products/services	Business owners post negative fraudulent reviews against their competitors to demote their competitors' products/services. Dishonest consumers tend to create fraudulent identities and post negative reviews without financial incentive when they are unsatisfied with the products/services of a company. These fraudulent reviews can be stories about a product/service or inappropriate answers to customer complaints or questions. External hackers steal business and customer data through malware and viruses.	Investing in cyber security and evaluating cyber risks, vulnerabilities, and capabilities in the hospitality sector The use of filtering algorithms and machine learning to identify fraudulent reviews Adequate investments in cybersecurity Provide staff training on cyber fraud and security Evaluate cyber risks, vulnerabilities, and capabilities in the hospitality sector. Hotel operators must continually strive to keep the sensitive data collected from their guests secure. Hoteliers should proactively notify guests whose data were compromised to reduce the adverse effects of the data breach, as trust plays an imperative role in brand reputation. Hotel practitioners should develop action plans regarding

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Table 2 (continued)

WHAT are the fraud types?	WHO are the fraud victims & perpetrators?	WHERE is fraud occurring?	WHY is fraud committed	HOW is fraud committed?	HOW THEN can fraud be countered?
					<p>cyber crisis management and conduct regular information security assessments, system reliability audits, and vulnerability analyses of cybersecurity attacks. Hospitality platforms should construct indices to rank the reliability of each review and use relevant filtering techniques to screen out the reviews with a high possibility of being fraudulent. Extra screening or filtering algorithms can be applied to reviews with negative star ratings to detect possible fraudulent reviews from neighbourhood competitors. Embed linguistic cues related to psychological processes in Yelp's fraudulent review detection algorithm. Add a fraudulent review detection system, such as Yelp, fraudulent filter reviews to the bottom of each restaurant's homepage. Online word-of-mouth (WoM) platforms should: Enhance their review recommendation algorithms by adopting stricter algorithms to filter reviews for restaurants with lower review valence than their competitors. Institute policies to penalise restaurants with more fraudulent reviews than their competitors, such as by placing an "Uncredible" tag on their homepage to alert customers or lower these establishments' search rankings. Offer incentives to restaurants with fewer filtered reviews to encourage review credibility and healthy competition.</p>

reliability audits, and vulnerability analyses of cybersecurity attacks. Moreover, hoteliers should proactively notify guests whose data were compromised to reduce the adverse effects of the data breach, as trust plays an imperative role in brand reputation.

Several studies recommended using machine learning and algorithms to reduce or detect online review fraud risk. [Li et al. \(2020\)](#) suggested that hospitality platforms construct indices to rank the reliability of each review and use relevant filtering techniques to screen out the reviews with a high possibility of being fraudulent. Extra screening or filtering algorithms can be applied to reviews with negative star ratings to detect possible fraudulent reviews from neighbourhood competitors or other sources to decrease the number of fraudulent reviews. Moreover, embedding linguistic cues related to psychological processes in Yelp's fraudulent review detection algorithm may help. [Banerjee \(2021\)](#) show that computational algorithms can classify online reviews as authentic or fake based on linguistic nuances. They recommend that moderators of review websites play an active role in identifying and weeding out fake entries from their platforms. Additionally, they advised users to use critical thinking and not rely on intuition to verify online information authenticity. Users could treat excessive

exaggeration and inadequate specificity as warning flags, particularly when reading reviews. They should cultivate strong epistemic beliefs concerning the justification for knowledge to ensure they do not let down their guard. The role of epistemic belief should also be highlighted in digital literacy campaigns.

[Zhang et al. \(2022\)](#) suggested fraudulent review detection systems, such as Yelp, to filter fraudulent reviews to the bottom of each restaurant's homepage. This can help restaurant managers easily identify fraudulent reviews from competitors. Moreover, online WOM platforms should enhance their review recommendation algorithms by adopting stricter algorithms to filter reviews for restaurants with lower review valence than their competitors. They should also institute policies to penalise restaurants with more fraudulent reviews than their competitors, such as by placing an "Uncredible" tag on their homepage to alert customers or lower these establishments' search rankings. In addition, online WOM platforms can offer incentives to restaurants with fewer filtered reviews to encourage review credibility and healthy competition. For example, platforms can reward restaurants with fewer fraudulent reviews, a higher search ranking, or discounts on advertising. Platforms can also apply a "Premium quality" banner to publicise these

restaurants further. These initiatives could more effectively filter fraudulent reviews, help customers make better-informed decisions, and dissuade companies from soliciting fraudulent feedback.

Alsubari et al. (2021) concluded that supervised machine-learning methods could classify customers' opinions into fake and truthful with the highest accuracy and outperform human judgment in differentiating between fake and truthful opinions. Barbado et al. (2019) concluded that fake reviewers could not hide their social network footprints, which can be a path for detecting them through machine learning. Hajek and Sahut (2022) proposed a machine-learning model based on behavioural and sentiment-dependent linguistic features that effectively exploit the domain context. They argued that the proposed model is more effective than existing approaches regarding detection accuracy and accurately estimates the average rating assigned by legitimate reviewers. Lee et al. (2022) provide an applicable methodological procedure applying Artificial Intelligence (AI)-based supervised Machine Learning (ML) algorithms in detecting fake reviews of online review platforms and identify the best ML algorithm as well as the most critical fake review determinants for a given restaurant review dataset. They reveal that among the seven ML algorithms, the random forest algorithm outperforms the other algorithms and, among the 16 review attributes, time distance is found to be the most important, followed by two linguistic (affective and cognitive cues) and two review-related attributes (review depth and structure).

Others discussed the factors and characteristics of fake reviews which could help their identification. Fong et al. (2022) added that fake review writers are less likely to provide a profile picture because this act would increase the chances of being caught for fabricating the reviews and suggested that online review platforms should consider the availability of profile pictures and whether it is the user's face when developing an algorithm to identify fake reviews. Equally, Moona et al. (2021) reveal the factors that determine fake reviews include a lack of details, present- and future-time orientation, and emotional exaggeration. Wang et al. (2022) found that Fake reviews contain more emotional cues than authentic reviews. Their findings recommended that online review websites identify reviews with a high proportion of emotional cues as potential fake reviews. If the reviews are negative, they should also consider the proportion of cognitive cues. Notably, a negative review with a high proportion of cognitive cues and a low proportion of emotional cues should be scrutinised. Hoteliers and restaurant operators can use LIWC 2015 to identify potential fake reviews and then report them to the review websites. They also suggest that consumers should be wary of reviews with numerous emotional cues if they want to make a proper purchase decision. Hlee et al. (2021) shed light on the critical role of review valence and extremity in detecting the diagnosticity of fake reviews. They indicate that online reviews of newly opened restaurants show a time trend in which fewer negative sentiments and fewer words reflect extreme reviews than long-running restaurants. They suggested that online marketers are encouraged to build a better filtering system that adopts sentiment analysis of reviews with extreme ratings to detect fake reviews.

5. Discussion and implications

Based on a systematic review of the literature, this paper represents one of the first attempts to capture the state of the literature on fraud in the hospitality industry. Systematic Literature Reviews (SLR) offer a reliable process for aggregating literature on a particular topic and identifying areas of investigation within and gaps in the extant literature (Khanra et al., 2020).

The current paper highlights the profile of previous studies, identifies the gaps in the extant literature, and suggests new directions for future research to open up academic debates on this critical topic. It also identifies six main themes in hospitality fraud research based on a "4W2H" framework that examines (i) WHAT – are the fraud types, (ii) WHO - are the fraud victims and perpetrators, (iii) WHERE - is fraud

taking place in the hospitality businesses fraud occurs, (iv) WHY – is fraud committed, (v) HOW – is fraud committed, and (vi) HOW THEN – can fraud be countered.

The findings related to these themes are then summarised in Table 2. From practice and policy perspectives, this summary could be helpful to practitioners and policymakers responsible for countering fraud in hospitality. For instance, the financial regulator, the Financial Reporting Council (FRC), in the United Kingdom (UK), has recently reported the hospitality sector as a priority sector in their audit inspections and that the focus of monitoring will be fraud risk. The guidance proposed in this study could alert the FRC to how fraud is committed in hospitality, by whom, where, and why. Such knowledge could, in turn, help the FRC develop effective interventions to counter fraud in hospitality, such as targeted audit inspections, extensive monitoring of specific individuals or locations in hospitality, better reinforcements of governance codes within hospitality organisations, and stricter penalty mechanisms for fraud perpetrators. Similarly, given the UK regulator's awareness of fraud risk in the hospitality sector, it will be unsurprising in the coming years to see regulators in other regions expecting the same preparedness concerning fraud risk from hospitality organisations in their regions. Hence, the importance and need for this research topic.

In the meantime, hospitality organisations could view the guidance provided by the current study as helpful in improving their anti-fraud controls and effectively responding to regulatory requirements in this area. Table 2 summarises various fraud risk factors and methods for countering fraud in hospitality, which could help hospitality organisations achieve this.

Academics in the Higher Education sector could also use this guidance in teaching fraud risk assessments, governance, audit, and hospitality management to raise awareness about hospitality fraud and how it can be countered.

The findings highlight that investing in technology could help fight external fraud, particularly fraudulent online reviews and cyber fraud. This implies the need for hospitality businesses to leverage technology and data analytics to detect and prevent such fraudulent activities in the hospitality sector. Table 2 provides many suggestions on how technology could help fight external fraud.

Another point worth discussing is Cole et al.'s (2022) conclusion that wage theft is intensified in the hospitality sector due to the absence of unions, the lack of effective labour laws, and the non-enforcement of existing labour laws. Weak accountability increases the opportunities for fraud (Kassem, 2022); hence, the present study urges hospitality organisations to ensure compliance with relevant laws and regulations governing the hospitality industry. This can be ensured via effective external and internal audits, regularly reviewing and updating their policies and procedures to align with legal requirements and industry standards, including adhering to accounting standards, data protection regulations, and anti-fraud legislation.

Moreover, the study shows that prior studies suggested educating customers/tourists about fraud in hospitality to protect them against fraud victimisation. However, who is responsible for educating customers/tourists? Should this be the responsibility of hospitality organisations or policymakers? This article argues that developing educational materials and campaigns to raise awareness among customers about common fraud schemes in the hospitality industry is the responsibility of hospitality organisations and policymakers. When fraud occurs, it puts organisations' reputations and credibility at risk and results in a loss of confidence in governance systems and the rule of law. Therefore, educational campaigns should focus on providing information on the various forms of fraud that guests may encounter during their interactions with hotels, restaurants, bars, or other hospitality locations. The various fraud forms and risk factors identified in this paper could inform these educational campaigns. By educating customers about potential fraud risks and preventive measures, organisations and policymakers can help them protect themselves and encourage them to report suspicious activities if spotted.

Table 3
Profiling Previous Studies.

Country	No of studies
US	20
UK	4
Australia	3
China	2
Thailand	2
Ghana	1
Cyprus	1
Singapore	1
India	1
Kenya	1
Switzerland	1
Brazil	1
Turkey	1
New Zealand	1
Netherlands	1
Methodology	No of studies
Quantitative:	14
• Secondary data analysis, model building	11
• Questionnaire	6
• Experiment	7
Qualitative:	2
• Interviews	2
• Observation	2
• Case study	2
• Focus group	2

From a research perspective, the analysis highlights the research areas that have remained underexplored, which should act as a foundation for scholars in the field to research fraud in hospitality further and build on the findings highlighted in this paper. These understudied-research areas are discussed below.

5.1. The forms of hospitality fraud

Although prior studies indicate evidence of fraud against individuals and organisations in the hospitality sector, several knowledge gaps were identified in this area. First, research on fraud against hospitality workers is sparse, with only one study reporting fraudulent job advertisements via social media. This lack of insights into how hospitality workers might be defrauded increases their fraud vulnerability. Therefore, future research must explore how hospitality workers are defrauded, where, and how they can be safeguarded.

Second, although the analysis of the results shows that fraud against customers or tourists in hospitality can have various forms, including (i) fraudulent online hotel or restaurant reviews, (ii) credit card fraud, (iii) overcharging customers, (iv) demanding bribes from customers, (v) theft of customers' money, and (vi) selling free goods to customers, more research was found on fraudulent reviews compared to other forms of fraud against customers/tourists in hospitality. Various questions should be raised concerning this knowledge gap precisely why this gap exists. Are fraudulent reviews the most common form of fraud against customers/tourists in hospitality, and thus, it attracts more research attention? Are researchers aware of the other forms of fraud against customers/tourists reported in this study? Are the other forms of fraud against customers/tourists under-reported in practice and thus do not attract much research attention? To address these questions, future research should investigate other forms of fraud against customers/tourists in hospitality.

Third, concerning fraud against organisations, although there is evidence of insider and external fraud in the hospitality literature, research on external fraud is minimal. This knowledge gap implies that insider fraud is more common in hospitality or that external fraud is under-reported in practice and, therefore, under-studied. Even reviewing studies on insider fraud shows other literature gaps. Specifically, the

literature focused more on insider fraud type: asset misappropriation, mainly the theft of assets more than the abuse of assets. Additionally, while there is evidence of the other two types of insider fraud (i.e., corruption and financial fraud), only a handful of studies discussed them in the hospitality literature.

Table 3 reveals that most studies (n = 13) focused on insider/internal fraud. Out of the thirteen studies on insider fraud, seven cover asset misappropriation, four corruption, and two financial fraud. A handful of studies (n = 9) discussed fraud against tourists and customers, out of which four covered fraudulent reviews to deceive customers, and only one study explored fraud against hospitality staff during the pandemic. Even less attention was given to external fraud against hospitality organisations (n = 7), out of which five studies focused on the impact of cyber risk on hospitality, and only two covered fraudulent reviews by customers. This analysis shows the need for more future research to investigate the understudied areas related to fraud forms in hospitality highlighted in this study.

5.2. The reasons for hospitality fraud

Research on the reasons for fraud in hospitality is also sparse and has yet to receive substantial research attention. In particular, there is more focus on the motives for hospitality fraud, little attention on the opportunity, rationalisation, and integrity factors, and no attention on fraud perpetrators' capabilities. Regarding motives, more studies identify internal factors (e.g., individual or organisational) than external factors (e.g., culture, laws, etc.) deriving hospitality fraud. Future studies should explore the following research questions to address this literature gap: (i) What motivates fraud perpetrators to commit fraud in hospitality? The motives for committing corruption and financial fraud are particularly under-studied. (ii) How do different fraud perpetrators rationalise their fraud crimes in hospitality? (iii) What are the capabilities and opportunities enabling fraud in hospitality? (iv) To what extent could individual integrity and ethical value help mitigate fraud risk in hospitality? (v) What external factors impact the motives for perpetrating hospitality fraud? (vi) Is there a difference between the motives of committing hospitality fraud based on different forms and perpetrators? Although the present study observed a difference in the motivation for committing hospitality fraud based on different forms and perpetrators (i.e., individuals versus organisations), it is based on a systematic literature review. Evidence-based research is needed in this area to address this research question.

5.3. Methods for countering hospitality fraud

The current study summarises prior studies' suggestions on how to counter hospitality fraud (see Table 2). However, while various studies recommended methods for fighting fraud in hospitality, most results were based on the authors' viewpoints rather than empirical evidence. There is a need for practice-based evidence on effective methods for countering fraud in hospitality. These methods should also be tailored to specific hospitality fraud forms, especially the most common ones, to mitigate fraud risk in hospitality effectively.

5.4. Where is hospitality fraud committed?

The analysis shows that fraud can occur anywhere in hospitality; however, there is evidence that some fraud forms are committed more in some places than others. Asset misappropriation seems more common in hotels but can occur on cruises, restaurants, and bars. Corruption cases were identified in hotels and restaurants. Credit card fraud against tourists or customers can occur in hotels. Financial fraud cases were found in restaurants and hotels. Fraudulent reviews against customers or other hospitality businesses are more likely to occur in restaurants. When looking for jobs, hospitality workers are more likely to be defrauded through social media. However, not many studies covered

Table 4
Fraud Forms in Hospitality.

Fraud Forms	No. of Studies
Fraud against tourists	9, out of which 4 focus on fraudulent reviews, three about theft from tourists and overcharging them, one about food fraud, and one unspecified.
Internal fraud	13, out of which 7 cover asset misappropriation, 4 corruption, and 2 financial fraud
External fraud	7, out of which 5 discuss cyber risk and 2 fraudulent reviews by customers

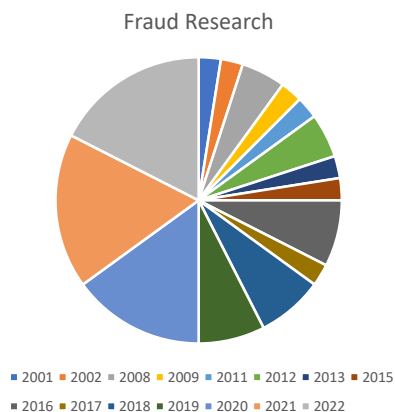


Fig. 2. Fraud Research in Hospitality.

this area, and again, this paper’s analysis was based on a systematic review rather than empirical evidence. This implies the need for future research investigating where fraud occurs in hospitality and whether fraud forms vary by location.

5.5. The need for qualitative research and beyond

The paper summarised and analysed the findings of previous studies to learn the current state of research on fraud in the hospitality industry. The analysis illustrated in Table 4 shows that most studies (n = 20) were based in the United States (US). Quantitative and qualitative research methodologies have been employed to investigate fraud in hospitality. However, quantitative studies remain dominant, with approximately 70% of the reviewed articles conducted this way. Fig. 1 highlights that fraud research in the hospitality industry has risen over time and has been given more attention in recent years since 2020. Still, research in this area is scant and has yet to receive substantial research attention.

There is a need for more qualitative research to provide deeper insights into the fraud issue in the sector. Up to now, most studies have been quantitative. Future studies employing qualitative research should strive to answer research questions about how and why fraud is perpetrated in hospitality and how it can be countered, especially in countries other than the US, as they are currently under-represented in the literature.

To conclude, this paper is the first attempt to provide a holistic view of the state of hospitality fraud, albeit it is only based on a systematic literature review, which has its limitations. The paper, however, identifies various literature gaps and suggests new directions for future research that will hopefully open up more academic debates on this important topic.

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Declaration of Competing Interest

I hereby confirm that there is no conflict of interest associated with this submission and no funding received.

Data Availability

No data was used for the research described in the article.

Appendix A. Supporting information

Supplementary data associated with this article can be found in the online version at doi:10.1016/j.ijhm.2023.103630.

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