

# A Quantitative Approach of Professional Skepticism and Fraud Detection among Malaysian Internal Auditors

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## ABSTRACT

**Purpose:** This study examines how professional skepticism traits influence internal auditors' fraud detection.

**Design/methodology/approach** The participants in the study were internal auditors employed in Malaysia. Survey questionnaires including six characteristics of professional skepticism based on Hurr's (2010) paradigm were disseminated. The traits are classified into three categories: evaluation of evidence (inquisitive mindset, suspension of judgement, pursuit of knowledge), comprehension of evidence providers (interpersonal insight), and auditor initiative to act on evidence (self-assurance and self-determination), serving as the independent variables. The dependent variable was the identification of fraud by internal auditors. Numerous studies have examined the correlation between these attributes and fraud detection, predominantly concentrating on external auditors, with few investigations into internal auditors. A total of 150 replies were collected and considered valid. Pearson correlation and multiple linear regression were conducted to fulfill the research goals.

**Findings** The findings, grounded in attribution theory, indicated substantial positive correlations among enquiring mindset, pursuit of knowledge, interpersonal comprehension, self-determination, and fraud detection. Nonetheless, the correlations between the suspension of judgement and self-confidence in respect to fraud detection, albeit positive, were deemed inconsequential.

**Originality/value** This study enhances Attribution Theory by associating attributes of professional skepticism with fraud detection, offering empirical proof of their influence on internal auditors. This expands the theory's applicability beyond social psychology to organisational behaviour and forensic accounting, enriching our comprehension of auditors' cognitive and behavioural processes. The findings provide directives for internal auditors in Malaysia and regulatory authorities, highlighting the cultivation of professional skepticism attribute to enhance fraud detection. Regulatory entities such as IIA Malaysia ought to contemplate amending standards, instituting training programs, and fostering awareness to augment auditors' competencies and mitigate fraud threats.

**Keywords:** Hurr's professional skepticism, fraud detection, internal auditors, questioning mind, attribution theory

## INTRODUCTION

The ongoing prevalence of fraud, corruption, and economic crimes remains a global challenge. In 2022, PwC executed a global study on economic crime and fraud to assess organisations' viewpoints on these matters. The results indicate that 46% of organisations encountered fraud or economic crime in recent years, a statistic comparable to the 47% reported in 2020 (PwC, 2022). It is particularly alarming that more than 50% of organisations with revenues surpassing US\$10 billion encountered fraud, with 18% of these suffering a significant financial impact of at least \$50 million from their most severe fraud occurrences (PwC, 2022). The Association of Certified Fraud Examiners (ACFE) investigated the causes and consequences of occupational fraud, uncovering significant findings. The research, entitled 'Occupational Fraud 2024: Research to the

Nations', revealed nearly two thousand cases of fraud across 138 nations. The total financial damage from these fraud instances surpassed \$3.1 billion (ACFE, 2024). This comprehensive global study underscores the widespread occurrence of occupational fraud and its effects on organisations in various geographical regions. The findings indicate that increased vigilance, preventive strategies, and effective fraud detection systems are essential to protect organisations and reduce significant financial losses resulting from fraudulent activity.

Financial fraud endures, echoing earlier schemes such as Ponzi's. Considering economic apprehensions, the trial of the Futures Exchange (FTX) underscores persistent difficulties, as the founder confronts allegations of fund misappropriation, affecting investors and instigating a legal conflict. Bernie Madoff engineered the largest Ponzi scam, with investigations revealing that his organisation embezzled almost USD 19 billion from 40,000 investors (O'Connell & McVearry, 2024). Enron is notable as one of the most consequential corporate fraud instances of the 21st century, having admitted in November 2001 to inflating profits by about USD 600 million. These instances exemplify enduring issues, illustrating the continuing importance of fraud detection and prevention (O'Connell & McVearry, 2024).

In the modern context, businesses face a more complex business environment influenced by technology advances, changing regulatory requirements, rising hazards, and other elements (PwC, 2019). People increasingly expect the internal audit department to act as a strategic business partner, offering crucial insights to tackle these challenges. A survey on internal audit concerns performed by PwC in collaboration with IIA Malaysia indicated that 93% of respondents agreed that stakeholder expectations of internal audit have significantly increased recently (PwC, 2019). Proficient auditors possessing strategic insight and specialist company expertise are crucial for delivering astute business suggestions. Almost half of the respondents identified a lack of skilled staff in their internal audit teams, impeding the provision of high-quality work (PwC, 2019). Kabuye et al. (2017) demonstrate that internal auditors possessing the necessary knowledge, abilities, and experience are more capable of assisting management in implementing successful anti-fraud measures.

Hamshari et al. (2021) assert that a statistically significant association exists between professional skepticism and the identification of cheating, fraud, and misstatements in financial statements. Consequently, internal auditors who employ a significant degree of professional skepticism are more likely to identify fraud within businesses. Gabryela (2017) asserts that, based on a study conducted in Indonesia, members of Badan Pengawasan Keuangan dan Pembangunan (BPKP) in Central Java had a comprehensive grasp of professional skepticism in fraud detection. Internal auditors are explicitly required to perform their duties with professional skepticism, necessitating a thorough investigation and critical evaluation of results while upholding an impartial assumption about the integrity or deceit of management or staff. This competence is essential, as the predominant reason for neglecting fraud is linked to insufficient implementation of the principle of professional skepticism (Djordjevic & Đukić, 2015).

Studies conducted by Amin et al. (2019), Solichin et al. (2021), and Wahidahwati and Asyik (2022) have examined the relationship between professional skepticism and fraud detection. Nevertheless, this research exclusively used Hurtt's professional skepticism framework to evaluate overall professional skepticism, overlooking individual traits in the assessment of fraud detection. Hurtt (2010) categorises skepticism into many branches to examine how these characteristics influence professional skepticism. Hurtt (2010) identified six essential characteristics of professional skepticism, dividing them into three broad groups. The initial set of attributes (an inquisitive mindset, suspension of judgement, and pursuit of information) directly relates to how auditors examine evidence. A sceptical individual demonstrates a willingness to meticulously evaluate evidence before making judgements (Fullerton & Durtschi, 2011). They critically evaluate information, defer conclusions until more investigation, and exhibit a thirst for knowledge, eschewing superficial acceptance of circumstances in favour of seeking rationale, evidence, and justifications (Fullerton & Durtschi, 2011). The fourth attribute, interpersonal understanding, emphasises the importance of comprehending the human elements of auditing while examining evidence (Hurtt, 2010). The argument presented is that a sceptical individual recognises the heterogeneity in personal perceptions of an event and understands that these divergent viewpoints may contribute to the dissemination of false, biased, or misleading information (Fullerton & Durtschi, 2011). The latter two traits (self-confidence and self-determination—emphasize the individual's ability to act decisively based on acquired information (Hurtt, 2010). These characteristics enable sceptics to

value their own viewpoints, question the assumptions of others, and demand sufficient information to rectify any discrepancies or inaccuracies offered by others (Fullerton & Durtschi, 2011).

Few studies have investigated the degree of professional skepticism among internal auditors, as most research has concentrated on external auditors (Dudy Satyawati et al., 2022; Nazri et al., 2023; Sayed Hussin & Iskandar, 2015). Although professional skepticism is primarily linked to external auditors, as thoroughly outlined in the International Standard of Auditing, its relevance transcends the realm of external auditing. Although prior researchers have extensively examined the correlation between professional skepticism and fraud detection in regions such as Indonesia (Dudy Satyawati et al., 2022; Gabryela, 2017) and the United States (Castro, 2013; Ramen et al., 2023), studies are deficient in focusing on Malaysia, especially concerning the professional skepticism attributes delineated by Hurn (2010) and their influence on internal auditors' fraud detection capabilities. This study aims to investigate how professional skepticism's characteristics affect the ability of internal auditors to identify fraud. The results of this study are expected to provide significant insights to organisations, propose enhancements to the internal audit function, and offer tactics to improve fraud detection by strengthening the professional skepticism of internal auditors.

## LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

### Attribution Theory

Attribution theory, introduced by Fritz Heider in 1958, is a key psychological framework that aims to explain how humans make sense of their surroundings by assigning causes to events and behaviours. It has had a significant influence on social psychology and our understanding of how individuals perceive and interpret others' behaviour. This theory is essentially based on two key ideas: the distinction between internal and external attributions and causal attributions (Heider, 1958). The core of Heider's theory is causal attribution. It refers to the human proclivity to seek explanations for why events occur and people behave the way they do. In other words, when we see an event or behaviour, our initial reaction is to ask, "Why did this happen?" According to Heider's theory, this process of causal attribution is essential to human cognition and social interaction (Heider, 1958). Internal attributions are the assignment of credit for an event or behaviour to a variable within an individual. Internal attributions assign the reason to something intrinsic in the individual, such as personality qualities, abilities, or intentions (Heider, 1958). For example, if someone does very well on a test, we may attribute their achievement to intellect or dedication, both of which are internal characteristics. External attributions, however, attribute an event's or behaviour's origin to factors other than the person. These outside variables include environmental or situational elements that are out of a person's control (Heider, 1958). Making external attributions means attributing someone's tardiness to heavy traffic or their scholastic difficulties to a difficult course. According to Heider's Attribution Theory, depending on the information at hand and the situation's context, humans frequently switch between internal and external attributions. This dynamic attribution process aids our ability to make sense of the outside environment, analyse others' behaviour, and predict future behaviour.

The attribution theory was employed in this study because it sought to analyse the pertinent aspects of internal auditors' professional skepticism that affect fraud detection by examining how professional skepticism attributes, such as questioning mindset, suspension of judgement, search for knowledge, interpersonal understanding, self-confidence, and self-determination, would enhance the internal auditors' ability to detect fraud. Several prior research works, applying the attribution theory to assess factors influencing fraud detection among auditors, support this study. For example, Chen et al. (2023) applied the attribution theory in their research, which stated that personality attributes and professional skepticism can be leveraged to improve audit quality. Additionally, they found that professional skepticism has a considerable impact on fraud detection. This attribution theory is also used by Wahidahwati and Asyik (2022) to determine what aspects impact the auditors when doing an engagement, particularly the auditors' personal qualities. The level of professional skepticism, ethical behaviour, and experience that have an influence on the quality of their work in the organisations are used to measure the quality of personal auditors in their study. A similar study by Nazri et al. (2023) also employed attribution theory to investigate the correlation between auditors' professional skeptical features and fraud detection in Malaysia among non-Big4 auditors.

## Fraud Detection

ISA 240 (UK and Ireland) outlines the main responsibility for fraud prevention and detection for those charged with governance (TCWG) and management. Emphasising oversight, it stresses the need for robust internal controls to ensure reliable financial reporting and minimise the risk of material misstatements in financial statements due to fraud and operational inefficiency.

IIA (2019) emphasised that, although the primary responsibility for preventing and detecting fraud lies with management and those charged with governance (TCWG), internal auditors play a crucial role in supporting management's anti-fraud efforts. Internal auditing, an independent and impartial function within an organisation, aims to improve operations through a systematic and disciplined approach that assesses and enhances governance, risk management, and internal control procedures. This approach involves providing assurance services on the design of internal controls to prevent and detect fraud (IIA Malaysia, 2017). The internal auditor evaluates fraud risks, conducts audits on controls, assesses the likelihood of fraud, and examines the organisation's approach to managing fraud risk (IIA, 2019).

Establishing fraud detection methods is done when preventative measures have failed or when the fraud has happened (Djordjevic & Đukić, 2015). Fraud identification entails actions to assess the likelihood that fraud is taking place (Albrecht et al., 2018). Detecting fraud necessitates skill, information, and intuitive acuity. This intuition is a component of both professional skepticism and spiritual intellect. Internal auditors are crucial in detecting fraud because they possess the necessary knowledge and expertise (Agustina et al., 2021a; Bayuandika & Mappanyukki, 2021). According to Ar'Reza et al. (2020), internal auditors detect fraud by using risk-based internal audits. Risk-based internal auditing is a method of prioritising business risks and important controls that hurt the accomplishment of a company's goals, where they will use the risk profile developed by the risk management unit in the central company as a tool for conducting audits. Internal auditors' audits will concentrate on high and extreme risk points to detect red flags or the chance of fraud with risk-based internal audits (Ar'Reza et al., 2020). Red flags are cues or signs that something is unusual and needs further examination (Agustina et al., 2021a). Amin et al. (2019) stated that understanding the red flags could increase the chances of detecting fraud and eventually minimising it within the organisation.

As a member of the organisation, the internal auditor acquires an in-depth understanding of its controls (IIA, 2019) and enjoys unhindered access to its reports and documents (Castro, 2013). This understanding enhances the effectiveness of fraud investigations and the identification of potential control gaps leading to fraud. Additionally, the internal auditor, as an organisational employee, is more likely to observe unusual staff behaviours due to daily interactions within the same workplace (Castro, 2013), increasing the likelihood of detecting fraud compared to external auditors. Historically, a significant number of frauds have been uncovered inadvertently (Albrecht et al., 2018). The use of technology to mine various databases in search of unusual trends, numbers, relationships, or other anomalies that could indicate fraud has become a significant proactive fraud detection development recently (Albrecht et al., 2018). Internal auditors face unique challenges in detecting fraud. They are bombarded with stimuli and competing goals. Internal auditors must play both the advocate and adversary roles, building positive relationships with those who are highly driven, politically astute, and most prone to commit fraud. The auditors' dual accountability may influence their decisions and decrease their skepticism (Fullerton & Durtschi, 2011).

The IIA includes fraud knowledge in its competency framework, as it is crucial for internal auditors to be proficient in detecting, preventing, and addressing fraudulent activities within an organisation (IIA, 2020). Competence in fraud-related matters ensures that internal auditors can effectively assess and mitigate risks associated with financial misconduct, safeguarding the integrity of an organisation's operations. This knowledge empowers auditors to recognise red flags, conduct thorough investigations, and recommend control measures to prevent fraud, ultimately contributing to improved organisational governance and financial stability (IIA, 2020).



## Hypothesis Development

### Examination of Evidence and Fraud Detection

According to Hurtt (2010), auditors should embody three key traits in the process of evidence assessment, i.e., maintaining a questioning attitude, withholding premature judgements, and actively pursuing information. This embodiment underscores the necessity for internal auditors to refrain from blindly accepting evidence. Instead, they must rigorously scrutinise it to determine its adequacy and relevance before concluding. Professional skepticism, as outlined by the ISA, encompasses a mindset of critical inquiry and meticulous examination of audit evidence. Philosophically, skepticism underscores the value of maintaining a questioning attitude, which enriches the thoroughness of evidence evaluation in audit scenarios.

Furthermore, a skeptical individual exercises judgement suspension when assessing evidence, adhering to directives from regulatory bodies overseeing auditors. Confronted with dogmatic assertions, skeptics refrain from premature conclusions, demonstrating a deliberate approach to opinion formation (Hurtt, 2010). A thirst for knowledge, unlike a questioning mindset, embodies a broad curiosity that transcends specific facts or theories (Hurtt, 2010). This trait, identified by Sayed Hussin and Iskandar (2015) and echoed by Hurtt (2010), characterises skepticism. Auditors equipped with extensive expertise demonstrate heightened skepticism, contributing to fraud detection efforts (Dudy Satyawati et al., 2022; Sayed Hussin & Iskandar, 2015). A robust understanding of accounting standards, legislation, and technology enhances auditors' capacity to identify potential instances of management fraud.

### Questioning Mind

Most conducted research highlights a positive correlation between a questioning mindset and fraud detection. Nevertheless, some studies present contrasting findings. In 'The Influence of Professional Skepticism on Fraud Detection: The Case of Malaysian Non-Big 4 Auditors' by Nazri et al. (2023), a survey of 200 non-Big 4 auditors in Malaysia revealed a significant positive relationship between a questioning mindset and fraud detection. The study underscores the need for professional skepticism in non-Big 4 firms to enhance audit quality.

Gabryela (2017) explored the application of professional skepticism among government internal auditors in Central Java. She found that a questioning mindset is evident in the respondents' rejection of statements regarding the lack of clear evidence. Forensic auditors consistently ask questions, demonstrating a critical and open-minded approach (Gabryela, 2017). Sayed Hussin and Iskandar (2015) assessed skepticism traits among auditors in Kuala Lumpur and found that auditors harbour doubts about the accuracy of audit evidence, emphasising the importance of maintaining a questioning approach for accurate audit results. In contrast, Dudy Satyawati et al. (2022) found that a questioning mindset, measured by Hurtt's (2010) scale, has no effect on fraud detection among auditors at KAP in Indonesia. The emphasis on adhering to client-specific standards and historical reporting appears to mitigate the impact of professional skepticism on their ability to detect fraud.

### Suspension of Judgement

Nazri et al. (2023) identified a significant positive correlation between the suspension of judgement and effective fraud detection among auditors, emphasising the meticulous and prudent approach to decision-making that requires comprehensive evidence before reaching conclusions. Ciolek (2017) and Castro (2013) also supported this outcome, concluding that skeptical attitudes inherently involve cautious consideration and deferring decisions until a thorough investigation of information is conducted, thus ensuring high audit quality. This collective research underscores the crucial influence of suspending judgement on fraud detection in auditing.

However, Dudy Satyawati et al. (2022) found no correlation between the suspension of judgement and fraud detection. This finding is primarily because investors rely on timely financial statements for investment decisions, and prolonged judgement suspension by auditors may cause delays. Additionally, differing degrees of auditor skepticism across countries and varying market efficiencies lead to distinct consequences. Sayed

Hussin and Iskandar (2015) found that the suspension of judgement may not be a component of professional skepticism in the Malaysian context. The absence of this feature suggests that auditors in Malaysia seldom delay judgements, possibly due to factors like tight deadlines and short timeframes.

### **Search for Knowledge**

Multiple studies consistently indicate a positive relationship between the trait of search for knowledge and fraud detection among auditors. Gabryela (2017), in her qualitative study on forensic auditors at BPKP Representative of Central Java Province, found that the search for knowledge enhances the respondents' ability to detect fraud. According to the author, auditors who demonstrate a commitment to mastering technology and information systems are better equipped to uncover fraud and streamline the audit process. Ciołek (2017) emphasised that individuals displaying skepticism, marked by a genuine desire to expand their knowledge, excel at avoiding oversimplified responses and conscientiously validating conclusions. Such behaviour contributes to improved fraud detection capabilities. According to Ahmad et al. (2016), forensic accountants with specialised knowledge in fraud, computer forensics, and legal and financial matters demonstrate superior capabilities for preventing, detecting, and responding to fraud compared to auditors in Nigeria. This result suggests that possessing specialised knowledge enhances the effectiveness of forensic accountants in managing various aspects of fraud more efficiently than auditors. Moreover, the study by Fullerton and Durtschi (2011) indicates that auditors with elevated levels of skepticism demonstrate a notably stronger inclination to improve their search for information related to fraud symptoms.

Nevertheless, Gabryela (2017) and Nazri et al. (2023) presented contrasting results to the previously mentioned findings. Their research identified a negative association between the search for knowledge and fraud detection. Despite growing concerns about auditors' perceived lack of professional skepticism in their audit practices, auditors at non-Big 4 firms do not exhibit a sufficient level of professional skepticism, particularly in actively seeking knowledge. This outcome is attributed to the auditors' concentration on meeting tight deadlines, limiting their capacity to explore new knowledge for enhancing audit quality (Nazri et al., 2023).

Based on the preceding considerations, the following hypotheses were developed:

H1: There is a significant positive relationship between a questioning mind and internal auditors' fraud detection.

H2: There is a significant positive relationship between suspension of judgement and internal auditors' fraud detection.

H3: There is a significant positive relationship between the search for knowledge and internal auditors' fraud detection.

### **Understanding Evidence Provider and Fraud Detection**

#### **Interpersonal Understanding**

Professional skepticism, as highlighted by Hurtt (2010), involves delving deeper than mere evidence scrutiny. It entails grasping the motivations and credibility of evidence providers and emphasising human factors when assessing evidence (Hurtt, 2010). Auditors must consider potential fraud triggers, such as incentives, pressure, and rationalisations (Hurtt, 2010). This heightened skepticism allows auditors to anticipate deceit in communication and appreciate diverse viewpoints (Hurtt, 2010). Recognising the significance of interpersonal understanding, often overlooked, is vital for detecting false information (Castro, 2013; Hurtt, 2010). Auditors lacking this insight may struggle with fraud detection (Castro, 2013; Hurtt, 2010). Skeptical auditors challenge assumptions and address ambiguous intentions (Ciołek, 2017), aligning with ISA 300's adaptability requirement (IFAC, 2009b). Internal auditors who understand dishonesty cues adjust strategies to pre-empt suspicion (Castro, 2013). This adjustment underscores the practical value of interpersonal understanding in audits.

Nazri et al. (2023) highlighted the importance of auditors avoiding sole reliance on client recommendations and stressed a thorough verification for information validity in audit decision-making. Their study revealed a strong positive correlation between interpersonal understanding and fraud detection, emphasising that auditors with this trait can identify irregularities by comprehending their clients' intentions. The research concluded that auditors leverage interpersonal understanding to grasp clients' rationale, thus fostering positive work relationships (Nazri et al., 2023). In contrast, Sayed Hussin and Iskandar (2015) tackled challenges in implementing skepticism in the Malaysian context due to limited literature and unclear guidelines. Despite insights from Hurtt (2010), their study affirmed a positive correlation between interpersonal understanding and professional skepticism. It suggested that enhanced professional skepticism in fraud detection occurs when auditors grasp client actions, enabling vigilance toward changes in management behaviours and investigation of unusual circumstances (Sayed Hussin & Iskandar, 2015).

Similar to the findings of Siew et al. (2018), which suggested that interpersonal understanding does not significantly correlate with auditors' fraud detection, Dudy Satyawati et al. (2022) also indicated that interpersonal understanding does not have a significant impact on fraud detection. According to Dudy Satyawati et al. (2022), despite the respondents' strong tendency to comprehend management behaviours, their inability to detect fraud implies a lack of understanding of the client's industry and business risks. This deficiency ultimately hinders the effectiveness of auditors in fraud detection.

Based on the above arguments, the fourth hypothesis is proposed as follows:

H4: There is a significant positive relationship between interpersonal understanding and internal auditors' fraud detection.

### **Auditor Initiative to Act on Evidence and Fraud Detection**

The final aspect of professional skepticism, as described by Hurtt (2010), involves two important qualities: self-confidence and self-determination. These traits are crucial for auditors to act decisively on the evidence they have gathered. Rather than simply accepting information, auditors with self-confidence are more likely to ask probing questions and seek deeper understanding. Additionally, being self-determined means that skeptical auditors trust their judgement about the validity of assertions, even when others may try to persuade them otherwise. In essence, these qualities provide auditors the confidence and independence to make informed decisions, strengthening the overall integrity of the audit process (Hurtt, 2010).

### **Self-Confidence**

Self-confidence, as described in psychological studies, is a belief in one's abilities and self-worth, enabling resistance to persuasion (Hurtt, 2010). High self-confidence allows auditors to contest others' premises and conclusions, particularly in face-to-face interactions, emphasising skepticism in acknowledging evidence (Castro, 2013; Ciolek, 2017). This quality empowers auditors to resist influence, maintain autonomy (Ciolek, 2017), and gather ample proof during audits (Hurtt, 2010). Internal auditors with high self-confidence are less likely to be intimidated or influenced by management, ensuring appropriate conclusions, while low self-confidence may hinder auditors in defending their judgements (Sayed Hussin & Iskandar, 2015). In summary, maintaining a high level of professional skepticism involves displaying substantial self-confidence to ensure appropriate audit conclusions. Research in the field shows a nuanced picture of the relationship between self-confidence and fraud detection, revealing both positive and negative correlations. Some studies suggested that higher self-confidence among auditors can enhance their vigilance and determination, leading to improved fraud detection. Conversely, other research indicated that excessive self-confidence may contribute to the overestimation of one's abilities, potentially hindering effective fraud detection efforts.

Bogdan et al. (2017) examined the impact of individual optimism, risk-taking, and self-confidence on the accounting judgement of Romanian accountants. They identified adequate accounting judgement as being "logical, consistent, and substantiated" (Bogdan et al., 2017, p. 329), and their research concluded that the self-confidence of Romanian accountants is directly tied to their perspectives on factors influencing judgement and decision-making in accounting. Furthermore, during a survey assessing the efficiency of resource allocation

and legitimacy of well-educated and seasoned governmental auditors in Taiwan, Su et al. (2016) determined a positive relationship between self-efficacy and mission performance. This finding suggests that elevated self-efficacy contributes to increased motivation, effort, persistence, and overall success among governmental auditors in Taiwan.

Nazri et al. (2023) discovered a significant negative correlation between self-confidence and fraud detection, highlighting the potential for an overly confident demeanour. This arrogance may lead individuals to overestimate their abilities, risking misjudgement beyond realistic parameters. Focusing on auditors in Indonesian public accounting firms, Dudy Satyawan et al. (2022) investigated whether skeptical traits, including self-confidence, could prevent fraud. Surprisingly, the study also found that high self-confidence did not enhance fraud detection, suggesting that elevated self-confidence, without experience, does not improve auditor skepticism in detecting management fraud. Likewise, Owoso and Weickgenannt's (2009) study, which investigated the correlation between auditors' self-assessment skills and practical performance by scrutinising concerns about overconfidence and potential mismatches, found no substantial link between auditors' self-perceived abilities and their actual audit performance.

### **Self-Determination**

The IPPF (2019) emphasised that internal auditors must maintain objectivity, resist external influence, and refrain from deferring to others' opinions. A high degree of professional skepticism enables auditors to be less swayed by external opinions and more concerned with their independent assessment of truthfulness. Professional skepticism, requiring personal autonomy and moral freedom, is crucial for self-determination in auditors. AICPA (2014) similarly mandated independence of mind and appearance, ensuring auditors execute services without influence, exercise impartiality, and maintain professional skepticism. Independence in appearance prevents compromising integrity, objectivity, or skepticism, reinforcing the importance of auditors' unbiased judgement and autonomy.

Collectively, the investigations conducted by Nazri et al. (2023) and Siew et al. (2018) sought to explore comprehensively the influence of Hurr's (2010) professional skepticism traits on auditor fraud detection. Both studies revealed a significant positive correlation between self-determination and fraud detection, indicating auditors' ability to independently assess data suitability and minimise reliance on client-provided information, emphasising the identification of inconsistencies (Nazri et al., 2023). Siew et al. (2018) additionally noted that auditors with self-determination exhibit heightened attention to inconsistencies, crucial for forming independent judgements based on evidence and resisting external influence.

Septian and Febrianti (2022) and Hamilah et al. (2019) examined how independence affects the fraud detection abilities of auditors in the government sector and the pharmaceutical industry in Central Java. Septian and Febrianti (2022) noted a positive relationship between auditors' independence and their effectiveness in identifying fraud. Similarly, Hamilah et al. (2019) revealed a significant positive correlation between internal auditor independence and fraud detection, indicating that an independent internal auditor equipped with high integrity and objectivity remains free from undue influence.

While several studies established a substantial positive link between self-determination and fraud detection, Hatuwe et al. (2022) presented a contrasting perspective. In their investigation into the factors influencing fraud detection in financial statements, the study uncovered that independence had no impact on fraud detection despite underscoring the necessity for independent auditors to possess qualities like honesty, integrity, objectivity, mental and physical fitness, and resistance to external influence when expressing audit opinions. The study suggested that situations involving potential bribery may compromise the auditor's independence.

As a result of the above considerations, the fifth and sixth hypotheses are proposed as follows:

H5: There is a significant positive relationship between self-confidence and internal auditors' fraud detection.

H6: There is a significant positive relationship between self-determination and internal auditors' fraud detection.



## RESEARCH METHODOLOGY

### Data Collection

In undertaking this study, a questionnaire survey was used to examine the influence of professional skepticism traits of internal auditors on fraud detection. The respondents of the present study were internal auditors registered with IIA Malaysia. Internal auditors were chosen due to their significance in anti-fraud controls, as indicated by the ACFE's Global Study on Occupational Fraud and Abuse (2020). Despite internal audits detecting a small percentage of fraud incidents, this study pointed out the need for an efficient internal audit department and robust controls. According to the IIA Malaysia's annual report for 2022, there were 3,127 registered members. This study used simple random sampling from the total sampling frame to ensure equal selection chances for all registered members. Hence, to ensure an adequate sample size, 400 questionnaires were distributed (rounding up to 327). The questionnaire was formatted in Google Forms, with links shared via Microsoft Teams with internal auditors working in the same office as this researcher and primarily through WhatsApp to targeted external respondents. A total of 150 questionnaires were received and analysed, resulting in a response rate of 37.5%. Following a brief review by the researcher, all the returned questionnaires were found to be suitable for further analysis.

### Research Instrument

This study employed a structured and closed-ended questionnaire to collect data. It served as an instrument with a series of statements designed to elicit information from the respondents. The nominal and ordinal measurement scales were applied in this study. The questionnaire comprised three sections: Section A (demographic information), Section B (six professional skepticism traits), and Section C (fraud indicators covering nine constructs). Sections B and C were tailored to address the research objectives and questions. The items for Sections B and C were structured as shown in the Appendix. Regarding Sections B and C, an interval scale in the form of a 6-point Likert scale was implemented. This scale enhances data accuracy by excluding a neutral option. This study's questionnaire incorporated the 6-point Likert scale for scoring, allowing a swift measurement of agreement or disagreement with six different scale rates ranging from '1' to '6'. For Section B, '1' signified 'strongly disagree', and '6' denoted 'strongly agree', while for Section C, '1' indicated 'less likely', and '6' represented 'most likely'.

Section A of the research instrument focuses on the respondents' demographic details. A nominal scale was used for variables like gender, while an ordinal scale was employed for variables such as age, professional qualifications, years of experience, and job position.

Section B of the questionnaire requires respondents to respond to 6 traits of professional skepticism. These traits are divided into three categories: examination of evidence (questioning mind, suspension of judgement, search for knowledge), understanding evidence providers (interpersonal understanding), and auditor initiative to act on evidence (self-confidence and self-determination), as the independent variables. An interval scale in the form of a 6-point Likert scale was implemented. This scale enhances data accuracy by excluding a neutral option. This study's questionnaire incorporated the 6-point Likert scale for scoring, allowing a swift measurement of agreement or disagreement with six different scale rates ranging from '1' to '6'. For Section B, '1' signified 'strongly disagree', and '6' denoted 'strongly agree' (Hurtt, 2010). The first category (examination of evidence) questioning mind represents the inquisitive mindset which is associated with curiosity and interest; suspension of judgement refers to an approach in which auditors delay forming judgements until they have acquired adequate audit evidence to support a conclusion; and search for knowledge involves a profound curiosity to acquire knowledge for its intrinsic value, rather than merely confirming a conclusion. The second category (understanding evidence providers), interpersonal understanding, involves comprehending the motives and integrity of the provider of evidence. The last category (initiative to act on evidence), self-confidence, pertains to the sense of self-value and confidence in one's capabilities, and self-determination represents the auditor's capacity to assess the sufficiency of information as evidence for making an audit judgement.

Section C contains 10 instruments for assessing potential fraud indicators by examining corporate culture, relationships with outside parties, financial pressures, fraud opportunities, personal symptoms, personal realisations, demographic indicators, accounting practice indicators, financial statement indicators, and neutral fraud situations for fraud detection (Fullerton & Durtschi, 2011). An interval scale in the form of a 6-point Likert scale was implemented. This scale enhances data accuracy by excluding a neutral option. This study's questionnaire incorporated the 6-point Likert scale for scoring, allowing a swift measurement of agreement or disagreement with six different scale rates ranging from '1' to '6'. For Section C, '1' indicated 'less likely', and '6' represented 'most likely'.

## Data Analysis

In examining how professional skepticism traits influence internal auditors' fraud detection, correlation and multiple regression analysis were conducted to explore the predictive ability of the professional skepticism traits on fraud detection (Pallant, 2007). The independent variables include 6 traits of professional skepticism. These traits are divided into three categories: examination of evidence (questioning mind, suspension of judgement, search for knowledge), understanding evidence providers (interpersonal understanding), and auditor initiative to act on evidence (self-confidence and self-determination). The dependent variable is fraud detection. The details are outlined below to represent the regression equation model.

$$\text{Model 1: } FD = \beta_0 + \beta_1 QM + \beta_2 SJ + \beta_3 SK + \beta_4 IU + \beta_5 SC + \beta_6 SD + \varepsilon$$

Where;

FD	: Fraud Detection
QM	: Questioning Mind
SJ	: Suspension of Judgement
SK	: Search for Knowledge
IU	: Interpersonal Understanding
SC	: Self-Confidence
SD	: Self-Determination
$\beta_0$	: Constant
$\beta_1 \dots \beta_6$	: Slope of the regression surface
$\varepsilon$	: Error term

## RESULTS AND DISCUSSION

### Demographic Information

**Table 1** presents the respondents' demographic profiles in terms of gender, age, professional certification, years of experience, and job position. It shows that approximately 54% of the respondents are female, while 46% are male. In terms of age groups, the majority (49%) fall into the 25- to 35-year-old group, followed by 30% in the 36- to 45-year-old age group. The age groups below 25 years old and between 46 and 55 years old range almost the same, between 9% and 10%. The least represented group is above 56 years old, constituting 0.7% of the respondents. Remarkably, over 58% of the participants lack a professional certificate. The prevalent certifications include the Association of Chartered Certified Accountants (ACCA), with around 23%

of respondents holding that qualification. The less common certifications among the respondents include MIA, Certified Fraud Examiner (CFE), and others.

Most respondents' work history spans from 2 to 10 years, with a notable 28.7% (43 individuals) representing the cohort with 6 to 10 years of experience. Those reporting less than 2 years or over 15 years of experience each constitute approximately 16% of the total respondents. Meanwhile, the segment with 11 to 15 years of experience constitutes the smallest group, comprising around 11.3% of the sample. The examination of the respondents' job roles highlights the dominance of junior internal auditors, forming the majority at 38% (57 individuals). The next most significant role is held by senior internal auditors, who account for 26% (39 individuals) of the respondents. A noteworthy 19.3% and 12.7%, equivalent to 29 and 19 respondents, serve as assistant managers and internal audit managers, respectively. While the role of Internal Audit Director is the least prevalent, with 4% of respondents holding this position

Table I Demographic Information

Type	Description	Frequency	Percentage (%)
Gender	Male	69	46.0
	Female	81	54.0
Age	Below 25 years	14	9.3
	25 to 35 years	74	49.3
	36 to 45 years	45	30.0
	46 to 55 years	16	10.7
	56 years old and above	1	0.7
Professional Certificate	ACCA	34	22.7
	MIA	9	6.0
	CFE	7	4.7
	None	87	58.0
	Others	13	8.6
Years of Experience	Less than 2 years	25	16.7
	2 to 5 years	41	27.3
	6 to 10 years	43	28.7
	11 to 15 years	17	11.3
	More than 15 years	24	16.0
Job Position	Junior Internal Auditor	57	38.0
	Senior internal auditor	39	26.0
	Assistant Manager	29	19.3

	Internal Audit Manager	19	12.7
	Internal Audit Director	6	4.0

### Descriptive Statistics

**Table II** shows the mean scores and standard deviations for all the continuous variables. For the questioning mind, the highest mean score is 4.86 (sd = 1.117), exemplified by the statement, "I often reject statements unless I have proof that they are true," indicating that the respondents predominantly agree with this sentiment. The second independent variable, suspension of judgement, presents the descriptive analysis for the second independent variable, suspension of judgement. The statement "I like to ensure that I've considered most available information before making a decision" receives the highest mean score of 4.89 (sd = 0.945), indicating the respondents' agreement to withhold judgement until they have considered the latest available information. The study explores the descriptive overview of the third independent variable, which focusses on the pursuit of knowledge. The highest mean score for this variable, at 5.49 (sd = 0.632), corresponds to the statement, "Discovering new information is fun." This mean value indicates that the respondents generally express enjoyment in learning and acquiring new information. The fourth independent variable investigated in the study focuses on interpersonal understanding. The highest mean score for this variable, 5.49 (sd = 0.632), corresponds to the statement, "Other people's behaviour doesn't interest me." This item was reverse-coded, indicating that the respondents generally disagree with this statement. The highest average rating for self-confidence is recorded at 4.84 (SD = 0.905), as indicated by the statement "I have confidence in myself," suggesting that the respondents possess self-assurance. The final independent variable reveals intriguing results. Among the participants, the highest average score of 4.31 (sd = 1.068) suggests a tendency for individuals to somewhat agree that they can usually identify discrepancies in the provided information. The descriptive analysis conducted in the study focused on the dependent variable, which is fraud detection. The highest mean score observed for this variable is 4.59 (sd = 1.511), corresponding to the statement, "The controller was making a lot of adjusting entries the week before the external auditors arrived." This mean value suggests that the respondents believe that there is a likelihood of potentially fraudulent activities being performed if the controller makes significant numbers of adjustment postings the week before the external auditor arrives to cover the fraud trail.

Table II: Descriptive Analysis

	N	Mean	SD
Fraud Detection	150	4.59	1.511
Questioning Mind	150	4.86	1.117
Suspension of Judgement	150	4.89	0.945
Search for knowledge.	150	5.49	0.632
Interpersonal Understanding	150	5.49	0.632
Self-confidence	150	4.84	0.905
Self-Determination	150	4.31	1.068

### Multiple Regression Analysis

**Tables III** and **IV** provide the results of multiple regression analysis and Pearson correlation, respectively. The two analyses yielded consistent results, as illustrated in the two tables.

### Correlation Coefficient Analysis



Table III Pearson Correlation Analysis for all variables

	QM	SJ	SK	IU	SC	SD
Questioning Mind (QM)	1				.	
Suspension of Judgement (SJ)	0.593**	1				
Search for Knowledge (SK)	0.598**	0.593**	1			
Interpersonal Understanding (IU)	0.516**	0.540**	0.613**	1		
Self-Confidence (SC)	0.440**	0.551**	0.643**	0.494**	1	
Self-Determination (SD)	0.123	0.113	0.368**	0.222**	0.333**	1
Fraud Detection	0.561**	0.572**	0.657**	0.603**	0.558**	0.334**

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

\* . Correlation is significant at the 0.05 level (2-tailed).

Table IV: Multiple Regression Analysis

	Standard Coefficient	t - value	Significance
Variables	Beta		
(Constant)			
Questioning Mind	0.164	2.168	0.032*
Suspension of Judgement	0.153	1,939	0.055
Search for Knowledge	0.211	2.334	0.021*
Interpersonal Understanding	0.222	2.982	0.003*
Self-Confidence	0.112	1.456	0.148
Self-determination	0.132	2.142	0.034*
R <sup>2</sup> : 0.559			
Adjusted R <sup>2</sup> : 0.54			
Notes: * significant at 0.05			

The *first objective* of this study is *to examine the relationship between internal auditor examination of evidence characteristics and fraud detection*. This objective was further broken down into three hypotheses covering three traits of professional skepticism, which are questioning mind, suspension of judgement, and search for knowledge. Based on the statistical analysis above, a questioning mind has a positive and significant relationship with fraud detection (Beta = 0.164, t = 2.168, p-value = 0.032). Since the first hypothesis (H1) suggests that there is a significant positive relationship between questioning mind and internal auditors' fraud detection, it is accepted. The result is consistent with the findings of Nazri et al. (2023), which also found a significant positive relationship between a questioning mind and fraud detection. Auditors with outstanding questioning-mind characteristics can enhance their capabilities to detect error or fraud within the financial

statements. However, the result contradicts Dudy Satyawan et al.'s (2022) findings, which indicated that a questioning mind has no effect on fraud detection among auditors in Indonesia. They tend to adhere to their clients' standards and historical reporting, which hinders them from maintaining a questioning mind.

The second hypothesis (H2) suggests a significant positive relationship between suspension of judgement and internal auditors' fraud detection. Table 4.14 above shows that there is a positive but insignificant relationship between suspension of judgement and internal auditors' fraud detection, as the p-value exceeds 0.05 (Beta = 0.153,  $t = 1.939$ , p-value = 0.055). As such, H2 is rejected. Earlier research conducted by Ciołek (2017) and Castro (2013) also reached similar conclusions, whereby skeptical attitudes inherently involve cautious consideration and deferring decisions until a thorough investigation of information is conducted to maintain the quality of the audit work. However, these findings slightly differ from those of Nazri et al. (2023), who not only identified a positive correlation between suspension of judgement and effective fraud detection among auditors but also stressed that the relationship is significant. This finding underscores the meticulous and cautious approach in decision-making, which necessitates comprehensive evidence before reaching conclusions. On the contrary, some researchers, such as Dudy Satyawan et al. (2022) and Sayed Hussin and Iskandar (2015), found no correlation between suspension of judgement and fraud detection, attributing it to tight deadlines and the need to issue financial statements promptly, which leads auditors to avoid delaying their judgements.

The third hypothesis (H3) of this study, focusing on the trait search for knowledge, suggested a significant positive relationship between search for knowledge and internal auditors' fraud detection. The coefficient analysis results confirm a significant positive correlation between search for knowledge and internal auditors' fraud detection (Beta = 0.211,  $t = 2.334$ , p-value = 0.021), thus supporting H3. This finding aligns with previous research by Ahmad et al. (2016), who observed a significant positive relationship between the search for knowledge and fraud detection. They noted that specialised knowledge in fraud and related fields enhances forensic accountants' ability to address fraud compared to auditors in Nigeria. Additionally, auditors with high levels of professional skepticism are more likely to have a better understanding of fraud-related issues. Moreover, Gabryela (2017) and Ciołek (2017) also found a positive correlation between the search for knowledge and fraud detection. Gabryela (2017) highlighted that auditors proficient in technology are more effective at detecting fraud, while Ciołek (2017) demonstrated that being skeptical and eager to learn aids auditors in detecting fraud. However, studies by Nazri et al. (2023) yielded different results, indicating a negative relationship between the search for knowledge and fraud detection. We attribute this discrepancy to auditors' concerns about meeting deadlines, which limit their ability to explore new knowledge.

When examining the relationship between internal auditors' examination of evidence characteristics and fraud detection, it is concluded that only two out of three traits, which are questioning mind and searching for knowledge, are significantly and positively related to fraud detection. In contrast, suspension of judgement does not significantly affect internal auditors' ability to detect fraud. This finding can be attributed to the cultural and time constraints faced by internal auditors in Malaysia, who are often pressured by top management to reach conclusions quickly, preventing them from fully applying their suspension of judgement until they have gathered sufficient and up-to-date information. However, it can be concluded that internal auditors in Malaysia exhibit a high level of questioning mindset in their work and are consistently eager to acquire new knowledge in order to make accurate decisions and conclusions.

The *second objective* of this study is *to examine how internal auditors' understanding of evidence providers relates to fraud detection*, focusing on the professional skepticism trait of interpersonal understanding, as outlined in the fourth hypothesis (H4). H4 suggests a significant positive correlation between interpersonal understanding and fraud detection. The regression results in Table 4.15 indicate a significant positive relationship between interpersonal understanding and fraud detection (Beta = 0.222,  $t = 2.982$ , p-value = 0.003). Thus, H4 is accepted. This finding aligns with Nazri et al. (2023), who found a strong positive correlation between interpersonal understanding and fraud detection, emphasising that auditors who grasp clients' intentions well are better at spotting irregularities. However, Siew et al. (2018) and Dudy Satyawan et al. (2022) argued that interpersonal relationships do not significantly impact fraud detection, stating that, while understanding management behaviour is beneficial, a lack of comprehension of clients' businesses and industries can impede the effectiveness of fraud detection.

Hence, it can be concluded that there is a positive and significant relationship between internal auditors' understanding of evidence providers and fraud detection. Internal auditors, who understand management's intentions and behaviours better, can identify and uncover suspected fraudulent activity. This thorough understanding enables auditors to go through surface-level data and detect subtle signals of fraud that would otherwise go unnoticed. Internal auditors can better protect firms from fraudulent practices by appropriately analysing management's actions and motivations.

The final objective of this study is to investigate how an auditor's initiative to act on evidence relates to fraud detection. Two professional skepticism traits categorised under the last category are self-confidence and self-determination. Hypothesis 5 (H5) suggests a significant positive relationship between self-confidence and fraud detection. According to the statistical regression analysis, there is a positive relationship between self-confidence and fraud detection ( $\text{Beta} = 0.112$ ,  $t = 1.456$ ,  $p\text{-value} = 0.148$ ) (see Table 4.14). However, the relationship is insignificant, as the  $p$ -value is above 0.05. Thus, H5 is rejected. The outcome, however, is consistent with other studies, which noted a positive relationship between self-confidence and fraud detection. It is also similar to the research by Su et al. (2016), which found a positive association between self-confidence and mission performance among governmental auditors in Taiwan, suggesting that increased self-confidence boosts motivation, effort, persistence, and overall success. This finding also aligns with the conclusions drawn by Bogdan et al. (2017), who found a direct link between the self-confidence of Romanian accountants and their perspectives on factors influencing judgement and decision-making in accounting. However, in contrast, Nazri et al. (2023) observed a significant negative relationship between self-confidence and fraud detection, underscoring the potential drawbacks of excessive confidence, which may lead individuals to overestimate their abilities and make misjudgements. Conversely, Dudy Satyawati et al. (2022) and Owoso and Weickgenannt (2009) found no correlation between self-confidence and fraud detection or actual audit performance, suggesting that experience plays a crucial role in this regard.

Finally, the sixth hypothesis (H6) proposes a significant positive association between self-determination and fraud detection. The statistical analysis results in Table 4.15 confirm this hypothesis, revealing a positive and significant correlation between self-determination and fraud detection ( $\text{Beta} = 0.132$ ,  $t = 2.142$ ,  $p\text{-value} = 0.034$ ). Therefore, H6 is supported. This finding is consistent with previous studies conducted by Nazri et al. (2023), Hamilah et al. (2019), and Siew et al. (2018), all of which underscored the significant positive relationship between self-determination and fraud detection. These researchers suggested that independent auditors with self-determination exhibit heightened diligence in assessing evidence suitability and identifying document inconsistencies, thereby enhancing fraud detection effectiveness (Hamilah et al., 2019; Siew et al., 2018). However, the findings contrast with those of Hatuwe et al. (2022), who concluded that independence has no impact on fraud detection, indicating a risk of auditors overlooking fraud if independence is compromised, particularly in cases involving bribes.

Lastly, only one trait within the category of auditor initiative to act on evidence has a significant positive impact on internal auditors: self-determination. Although self-confidence is highlighted by Hurtt (2010) as a trait of professional skepticism, it does not influence fraud detection among internal auditors in Malaysia. Auditors with high self-confidence often overestimate their abilities, and confidence alone does not enhance fraud detection if internal auditors lack sufficient experience. In contrast, internal auditors with high self-determination are more likely to be independent, objective, and less easily influenced by management.

In summary, the descriptive analysis reveals that the majority of respondents frequently reject statements until they have evidence to support their truthfulness, prefer to gather ample information before making decisions, express enjoyment in discovering new information, display curiosity about human behaviour, possess self-confidence, and typically detect inconsistencies in explanations. Before proceeding with further analysis, reliability and normality tests were conducted to evaluate the normality and reliability of the data. The findings indicate that the data is normally distributed and reliable for further analysis. Furthermore, correlation coefficients were computed to ascertain the presence of relationships between all the variables tested in this study and to determine their strength and direction. The findings indicate the absence of multicollinearity issues among the variables, as none of the correlations exceed 0.70.

Finally, a multiple regression analysis was performed to explore the relationships between fraud detection and questioning mind, suspension of judgement, search for knowledge, interpersonal understanding, self-confidence, and self-determination among internal auditors in Malaysia and thus, testing the hypotheses proposed in this study. The results indicate that a questioning mind, a search for knowledge, interpersonal understanding, and self-determination have significant positive relationships with fraud detection. However, suspension of judgement and self-confidence have a positive but insignificant correlation to fraud detection. In conclusion, maintaining a questioning mindset, continuing to explore and learn new knowledge, being attentive to human behaviours, and resisting external influences significantly enhance fraud detection among internal auditors in Malaysia. Conversely, delaying decisions until sufficient information is considered and maintaining high confidence levels do not significantly improve fraud detection. Given the study's emphasis on individual and organisational factors, enhancing professional skepticism traits among internal auditors could be advantageous for the organisation. This initiative could potentially bolster fraud detection capabilities, thereby reducing company losses.

### **Implications Of The Study, Limitations And Suggestions For Future Research**

This study has a theoretical implication for Attribution Theory. Several studies have applied the attribution theory to explore the relationship between auditors's professional skepticism traits and fraud detection. This study has provided empirical evidence on how specific traits of professional skepticism would have an impact on internal auditors' fraud detection. By linking these professional skepticism traits to fraud detection, the study highlights how internal auditors attribute causes to potential fraud events. This enhanced our understanding of the cognitive and behavioural processes that auditors employ in their evaluations. Furthermore, this study provides an extension to the attribution theory, as its application to professional skepticism in auditing broadens the theory's scope. Traditionally, attribution theory focused on social psychology. However, this study has demonstrated its relevance for both organisational behaviour and forensic accounting. This is through illustrating how internal auditors' professional skepticism contributes to their ability in fraud detection and hence, reduces the fraud impact on the organisation.

This study's findings have implications for internal auditors and the regulatory bodies overseeing their work in Malaysia. This study holds serious consequences for professional internal auditors. Understanding how these traits impact fraud detection, internal auditors can refine their practices to better detect and prevent fraudulent activities within their organisations. Prioritising the continuous development of professional skepticism traits can enhance their fraud detection capabilities, strengthening their role in safeguarding against fraud. Furthermore, this research highlights the importance of maintaining a questioning mindset, suspending judgement, seeking knowledge, understanding interpersonal dynamics, and fostering self-confidence and determination in auditing practices. By incorporating these traits in their professional approaches, internal auditors can effectively navigate complex organisational environments and mitigate fraud-related risks.

Specifically, regulatory bodies, such as IIA Malaysia, play an important role in establishing standards and guidelines for internal auditors' professional conduct and practices. They may need to consider revisiting the existing standards to emphasise the development and maintenance of professional skepticism traits among internal auditors. This act could involve implementing training, education, and continuous professional programmes focused on enhancing internal auditors' professional skepticism. Furthermore, regulatory bodies could engage in outreach and awareness programmes to educate internal auditors about the significance of maintaining professional skepticism in fraud detection. The regulatory bodies need to take proactive steps to promote its development and integration into auditing practices by recognising the pivotal role of professional skepticism in enhancing fraud detection capabilities among internal auditors.

This study has several limitations. Firstly, all variables were assessed using a 6-point Likert scale, restricting the internal auditors' responses to the scale provided in the questionnaire. As professional skepticism traits are associated with human attitudes, evaluating these characteristics numerically may be subjective. Consequently, the results may not capture the respondents' opinions fully and accurately. Furthermore, this study examined only the six professional skepticism traits delineated by Hurr (2010). The results of the multiple regression analysis show that these traits only explain 55.9% of the variance in fraud detection. This investigation did not include the remaining 44.1% of the explanatory variables, potentially overlooking other significant factors



pertinent to the research. As stated earlier, this study used a 6-point Likert scale to gauge all its variables. Given that professional skepticism traits are linked to human attitudes, incorporating open-ended questions alongside the structured items would allow respondents to offer more detailed explanations and insights. This approach would improve the data by enabling participants to articulate their thoughts, experiences, and perspectives in their words, enhancing depth and richness. Moreover, combining survey questionnaires with interviews can further add value to the research outcomes. Surveys offer an efficient means of gathering quantitative data from a sizable sample, while interviews facilitate deeper exploration of responses, clarification of ambiguities, and examination of complex issues. By leveraging both methods, researchers can integrate findings, thereby enhancing the reliability and validity of the results.

In future studies, researchers could enhance the professional skepticism model by introducing additional independent variables or other control variables. Internal auditors' fraud detection may be influenced by factors beyond professional skepticism traits, such as their competence, independence, objectivity, experience, and audit time pressure (Agustina et al., 2021), as well as role conflict, the complexity of assignments, role obscurity, and locus of control (Atmadja & Kurniawan Saputra, 2018). Additionally, it is advisable to refine the professional skepticism model for future investigations, as proposed by Hurtt (2010). Notably, among the six characteristics of professional skepticism examined by this study in the Malaysian context, suspension of judgement and self-confidence appear to exert the least significant influence. Therefore, the refined model could involve identifying more relevant constructs to predict their impact on internal auditors' fraud detection. Future research could also adopt a mixed-methods approach, combining quantitative surveys with qualitative interviews or case studies to gain deeper insights into how skepticism traits manifest in real-world fraud detection scenarios. Expanding the sample size and including internal auditors from diverse industries or different countries would enhance the generalisability of the findings. Additionally, using longitudinal data could help establish causal relationships between skepticism traits and fraud detection effectiveness over time.

## CONCLUSION

In summary, this study provides valuable insights to stimulate interest in this field and make way for future research on ethical judgement. To a certain degree, the empirical findings of this study support the goal of enhancing fraud detection by internal auditors, which will improve their effectiveness.

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