



Uncovering Fraud: Can Spirituality Improve Auditors' Detection Ability?

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Abstract. This study aimed to examine the effect of auditor experience, professional skepticism, and competence on the ability to detect fraud, with spiritual intelligence as a moderating variable. The research sample comprised 100 auditors working at the Audit Board of the Republic of Indonesia (BPK) in Central Java Province. A quantitative approach was employed, utilizing Structural Equation Modeling-Partial Least Squares (SEM-PLS) to analyze data collected through structured questionnaires. The results indicated that auditor experience, professional skepticism, and competence had a significant positive impact on fraud detection capabilities. Although spiritual intelligence did not significantly moderate the relationship between auditor experience and fraud detection, it enhanced the influence of professional skepticism and competence on fraud detection ability. These findings underscored the importance of incorporating spiritual intelligence into auditor training programs to strengthen their ethical considerations. Audit organizations were advised to integrate aspects of spiritual intelligence into professional development initiatives to improve auditors' effectiveness in detecting fraud.

Keywords: Auditor Experience, Professional Skepticism, Competence, Spiritual Intelligence, Fraud Detection.

1 Introduction

Corruption remains a significant issue in Indonesia in recent years. According to the 2020 Corruption Perception Index, Indonesia experienced a drop in both ranking and score. The country's rank fell from 85th in 2019 to 102nd out of 180 countries, and its score decreased by 3 points, from 40 to 37 [1]. The ongoing prevalence of corruption has underscored the need for more competent auditors to detect fraud, as this is seen as a critical step in reducing corruption in Indonesia. Data from the 2019 Corruption Enforcement Trend Report shows that there were 271 corruption cases, with total state losses reaching Rp 8.4 trillion [2]. Compared to the previous year, this marked an increase in state financial losses by Rp 2.8 trillion [2].

Fraud, considered an internal threat to organizations, includes corruption, asset misappropriation, and fraudulent financial reporting [3]. According to the Association

of Certified Fraud Examiners (ACFE), fraud is defined as "the use of one's occupation for personal gain through the misuse or misapplication of the employing organization's resources or assets" [4]. Fraud often occurs due to weak control mechanisms within institutions, allowing individuals to exploit these weaknesses [5, 6]. Understanding the motivations and psychological traits of perpetrators can offer valuable insights into fraud detection [7]. Although various tools such as data mining techniques and behavioral analysis have been developed to detect fraud, these tools often struggle to identify fraud in real-time [8].

The complexity of human behavior has prompted the development of new approaches to improve the accuracy and speed of fraud detection, including hybrid learning systems and supplementary learning [9]. One significant challenge is the limited amount of data available for fraud detection systems to learn from. Some systems do not require previous examples of fraud, but managing both large and small datasets demands different approaches [9, 10]. Fraud detection is a multidimensional issue that requires diverse detection mechanisms, as highlighted in previous research [11, 12].

At the 2023 National Anti-Fraud Conference (NAFC), several recent advances in fraud prevention and detection were discussed, including the use of advanced technologies and the factors contributing to fraud. Participants emphasized that technologies such as suspicious transaction detection software and big data analytics are playing an increasingly important role in detecting fraud across organizations. These tools enable investigators to quickly identify unusual transactions within the vast number of transactions processed by organizations. The conference also addressed the challenges and opportunities in implementing these technologies across different sectors (ACFE Indonesia).

The Badan Pemeriksa Keuangan (BPK) has implemented the State Financial Audit Standards (SPKN) through BPK Regulation No. 1 of 2017, replacing the previous standards established in BPK Regulation No. 1 of 2007 [13]. These standards serve as the primary reference for auditing state financial management and accountability. Auditors conducting audits on behalf of BPK, including public accountants and internal government auditors, are required to comply with SPKN when conducting performance audits and special-purpose audits.

The SPKN framework includes several key components, such as PSP No. 100 on General Standards, PSP No. 200 on Standards for Conducting Audits, and PSP No. 300 on Audit Reporting Standards. Auditors must follow these general standards, which cover ethics, independence, integrity, professionalism, quality control, competence, fraud management, and the obligations of both public and internal auditors when auditing state finances [14].

Auditor experience is an important component of an effective fraud detection strategy [15, 16]. The role of auditors now extends beyond financial statement audits, encompassing the analysis of internal systems and processes [17–19]. This involves evaluating risks, internal controls, and identifying vulnerabilities that could be exploited for fraud [20]. An auditor's effectiveness in detecting fraud depends on several interrelated factors, which contribute to their overall ability to uncover fraudulent activities [21].

Professional skepticism is one of the key factors in fraud detection [22]. This critical mindset encourages auditors to question and verify the accuracy of the data

being audited [23]. Auditors who demonstrate high levels of professional skepticism are more likely to identify discrepancies or anomalies in financial reports rather than accepting the information at face value [24]. This approach helps auditors remain vigilant for potential manipulations and misleading reports while prompting them to seek additional evidence to confirm their findings [25].

Auditor competence, which includes technical knowledge and analytical skills, is also essential in applying the appropriate audit techniques across different scenarios [26]. Competent auditors have a strong grasp of accounting principles, auditing procedures, and applicable regulations, enabling them to utilize the latest tools and technologies in fraud detection [27]. This expertise ensures that auditors can conduct audits with a high level of accuracy and integrity [28].

In the context of fraud detection, spiritual intelligence also plays a crucial role [29]. Spiritual intelligence refers to the ability to live according to strong ethical and moral principles and to find a deeper sense of meaning and purpose in one's work [30, 31]. Auditors with high levels of spiritual intelligence are more likely to adhere to integrity and honesty, even when faced with pressure or temptation to compromise their values [32]. Spiritual intelligence strengthens auditors' commitment to ethical behavior, motivating them to uncover the truth and prevent fraud while ensuring that their decisions align with ethical standards [32, 33]. This moral resilience helps auditors make wise and fair decisions, even when under pressure to overlook or conceal irregularities [34, 35].

Improving auditors' ability to detect fraud positively impacts both organizations and the broader economy [36, 37]. Effective fraud detection can prevent significant financial losses, bolster investor confidence, and ensure efficient resource allocation [38]. Investments in auditor training, development, and the adoption of advanced technologies and best practices are critical steps for organizations to strengthen internal controls and reduce fraud risks.

By focusing on auditor experience, professional skepticism, competence, and spiritual intelligence, organizations can establish a strong foundation for effective fraud detection and prevention. Auditors who integrate these elements into their work will be better equipped to identify risks, gather relevant evidence, and provide constructive recommendations for enhancing internal control systems. In doing so, auditors play an essential role in fostering a transparent, accountable business environment that is free from fraudulent practices.

2 Literature Review

2.1 Auditor Experience on Fraud Detection Ability

Audit experience is an internal factor that can only be developed through a substantial number of assignments, significantly influencing an auditor's ability to detect fraud [25]. According to attribution theory, an individual's behavior is driven by internal factors or motivations [39, 40]. Experienced auditors have different perspectives and responses to information compared to less experienced auditors, enhancing their ability to detect, analyze, and address fraud issues while also improving the effectiveness of audit procedures [25]. This finding is supported by research

confirming that audit experience positively influences an auditor's ability to detect fraud [41]. Similar results were also reported, demonstrating that experience plays a critical role in fraud detection capabilities [42].

H₁: Auditor experience has a significant positive effect on fraud detection ability.

2.2 Professional Skepticism on Auditor's Ability to Detect Fraud

In the audit process, auditors should not immediately trust the statements provided by management but must instead gather evidence to ensure the accuracy and reliability of such statements [43]. This is essential for achieving the audit objectives related to financial transactions and balances. Auditors must independently verify the information presented by management to ensure the financial statements' reliability [43]. It is further stated that auditors should adopt a professional skepticism mindset, questioning the audit evidence and reasoning used to uncover hidden fraud [44]. Cognitive dissonance theory explains the interaction between professional skepticism and other factors influencing fraud detection [45]. By maintaining professional skepticism, auditors can gather sufficient evidence and avoid easily accepting client statements as a basis for detecting fraud [28]. This finding is supported by research highlighting the positive and significant influence of professional skepticism on fraud detection [46, 47].

H₂: Professional skepticism significantly enhances an auditor's ability to detect fraud.

2.3 Competence on Auditor's Ability to Detect Fraud

Auditors who have gained practical experience and feedback in detecting fraud are more accurate in assessing fraud-related risk factors in the environment than inexperienced auditors [48]. Auditing financial statements involves high risk for auditors; if they fail to detect material errors in the financial statements, they may face sanctions [43]. The theory of planned behavior suggests that auditors with higher competence are better equipped to detect fraud because they are more adept at analyzing audited financial statements to identify fraudulent activities and detect manipulative techniques used in committing fraud [43]. This is further supported by research demonstrating a significant positive impact of competence on an auditor's ability to detect fraud [28, 43, 49].

H₃: Auditor competence has a significant positive impact on the ability to detect fraud.

2.4 The Moderating Role of Spiritual Intelligence on Fraud Detection Ability

Spiritual intelligence plays a significant role in enhancing an auditor's ability to detect fraud by helping them find deeper meaning and ethical purpose in their work. Spiritual intelligence enables individuals to solve complex problems and find meaning in their tasks, which enhances their ability to fulfill their professional responsibilities [50]. Even experienced auditors may struggle to uncover fraud, but

those with high spiritual intelligence can navigate ethical challenges more effectively, leading to better fraud detection outcomes.

Attribution theory explains that spiritual intelligence, as an internal factor, can influence an auditor's behavior, particularly when combined with experience and competence. Spiritual intelligence helps auditors maintain integrity and ethical standards, allowing them to approach their work with a deeper sense of purpose. It also facilitates the identification of fraudulent activities, even when external pressures or challenges arise. This is supported by research asserting that spiritual intelligence moderates the relationship between auditor experience and fraud detection ability [51]. Additionally, studies highlight that spiritual intelligence strengthens the impact of professional skepticism on fraud detection, making auditors more effective in uncovering fraud [52, 53].

Spiritual intelligence also enhances an auditor's competence by aiding them in ethical decision-making, especially in high-risk situations. Spiritual intelligence can be developed through continuous effort and training, allowing auditors to apply deeper moral reasoning when evaluating fraud risk [54]. Research supports the conclusion that spiritual intelligence moderates the relationship between competence and the ability to detect fraud, further emphasizing its importance in ensuring ethical and effective audit practices [51, 55].

H₄: Spiritual intelligence moderates the relationship between auditor experience and fraud detection ability.

H₅: Spiritual intelligence moderates the relationship between professional skepticism and fraud detection ability.

H₆: Spiritual intelligence moderates the relationship between auditor competence and fraud detection ability.

3 Method

3.1 Research Design

This research adopts a quantitative design to investigate the relationships between auditor experience, professional skepticism, competence, and fraud detection abilities. Using Structural Equation Modeling - Partial Least Squares (SEM-PLS), the study evaluates how these independent variables impact fraud detection ability, with spiritual intelligence acting as a moderating factor. SEM-PLS is selected due to its ability to manage complex relationships between variables and its suitability for handling smaller sample sizes while producing robust results [56].

3.2 Population and Sample

The population for this study consists of auditors working at Badan Pemeriksa Keuangan (BPK) in Central Java. Given the study's context and objectives, 100 auditors are purposively selected based on specific criteria. The sample includes auditors who have been working for at least one year and have relevant experience in

auditing, ensuring that the data collected is appropriate for evaluating fraud detection abilities [53].

3.3 Data Collection Method

Data is gathered through a self-administered questionnaire, where respondents independently complete the form after receiving clear instructions on how to respond. This method ensures high response rates and provides efficiency in data collection. The questionnaire is developed based on previously validated instruments and modified slightly to suit the context of this research, focusing on variables such as auditor experience, professional skepticism, competence, fraud detection ability, and spiritual intelligence [56].

The variables in this study include several key factors influencing fraud detection auditors. Auditor experience (*AE*) is measured through indicators such as the duration of employment, participation in training programs, ability to detect errors, and the number of institutions audited [57]. Professional skepticism (*PS*) is assessed through a critical mindset, understanding interpersonal dynamics, confidence, and persistence in evaluations [58]. Competence (*CP*) is evaluated based on personal quality, general knowledge, and specialized expertise [28]. Additionally, Spiritual intelligence (*SI*) focuses on flexibility, the quality of life shaped by values, and the ability to cope with adversity [59]. Lastly, fraud detection ability (*FDA*) is measured by an auditor's understanding of fraud and their capacity to detect it during audit stages [28].

3.4 Analysis Techniques

The data analysis techniques employed in this study consist of several key steps. First, the Measurement Model Analysis (Outer Model) was conducted to evaluate the validity and reliability of the constructs. Indicators such as composite reliability, Cronbach's alpha, convergent validity (measured by the Average Variance Extracted - AVE), and discriminant validity were used. The model's validity was confirmed when AVE values exceeded 0.50, and reliability was established if Cronbach's alpha values were above 0.70 [60]. Following this, the Structural Model Analysis (Inner Model) was applied to assess the relationships between the independent variables, including auditor experience, professional skepticism, and competence, and the dependent variable, which is the auditor's ability to detect fraud. This was done using path coefficients and bootstrapping techniques to measure the significance of the relationships, with paths considered significant if the t-statistic exceeded 1.96 [61]. Lastly, Moderation Analysis was conducted to explore the moderating effect of spiritual intelligence on the relationship between the independent variables and the dependent variable. This analysis used interaction terms between spiritual intelligence and the independent variables to determine whether spiritual intelligence significantly influences the relationship between the auditor's characteristics and their ability to detect fraud.

4 Result

4.1 Confirmatory factor analysis; reliability and validity

To evaluate the psychometric properties of the constructs, a confirmatory factor analysis (CFA) was performed using SmartPLS4. Reliability was assessed through the calculation of Cronbach's alpha (α) and composite reliability [62]. As shown in **Table 2**, the reliability of all reflective constructs was confirmed, with Cronbach's alpha values exceeding 0.70 and CR values indicating internal consistency. Moreover, both convergent and discriminant validity were examined. Convergent validity was established as all factor loadings for the indicator variables were ≥ 0.70 with significant item loadings ($p < 0.01$), and the average variance extracted (AVE) for all latent variables surpassed 0.50. To confirm discriminant validity, the Fornell-Larcker criterion (1981) was employed, which demonstrated that the shared variance among constructs was lower than the AVE within each latent construct and its respective indicators [63] (**Table 1**).

Heterotrait-Monotrait (HTMT) ratio is a more precise measure of discriminant validity in PLS-SEM analysis [64]. According to **Table 2**, all HTMT values for the model were below the recommended threshold of 0.90, further supporting the discriminant validity of the constructs.

Table 1. Outer Model Test

Variable	Item	Outer loadings	Cronbach's alpha	CR	AVE
AE	AE1	0.754	0.937	0.944	0.693
	AE2	0.788			
	AE3	0.868			
	AE4	0.856			
	AE5	0.870			
	AE6	0.851			
	AE7	0.879			
	AE8	0.784			
CP	CP1	0.863	0.916	0.929	0.703
	CP2	0.868			
	CP3	0.778			
	CP4	0.873			
	CP5	0.837			
	CP6	0.807			
FDA	FDA1	0.858	0.963	0.964	0.796
	FDA2	0.910			

	FDA3	0.881			
	FDA4	0.912			
	FDA5	0.867			
	FDA6	0.905			
	FDA7	0.893			
	FDA8	0.908			
PS	PS1	0.836	0.939	0.943	0.701
	PS2	0.856			
	PS3	0.841			
	PS4	0.814			
	PS5	0.855			
	PS6	0.823			
	PS7	0.837			
	PS8	0.833			
SI	SI1	0.798	0.922	0.925	0.721
	SI2	0.855			
	SI3	0.846			
	SI4	0.891			
	SI5	0.823			
	SI6	0.877			
M1	SI x PS	1.000			
M2	SI x AE	1.000			
M3	SI x CP	1.000			

Description: CR, Composite Reliability; AVE, Average Variance Extracted; M, Moderations
Sources: Data Processed by Researchers, 2024

Table 2. Fornell-Larcker Criterion Test

	AE	CP	FDA	PS	SI
AE	0.832				
CP	0.459	0.838			
FDA	0.770	0.569	0.892		
PS	0.830	0.365	0.759	0.837	
SI	0.483	0.434	0.693	0.549	0.849

Sources: Data Processed by Researchers, 2024

4.2 Hypothesis Testing

100 sub-samples were used. Hypothesized results were confirmed through β -coefficient, t-values, and p-values. Similarly, the overall model fitness or change in the model was measured by the coefficient of determination (R^2). The results of the R^2 show that there was a significant change in fraud detection ability (FDA) due to all direct and moderating variables. It shows a good fit of the model.

Direct hypothesis. In **Table 3**, the results presented show the following: auditor experience ($\beta = 0.256^{***}$, $t = 2.679$, $p = 0.008$), competence ($\beta = 0.180^{***}$, $t = 2.606$, $p = 0.009$), and professional skepticism ($\beta = 0.226^{**}$, $t = 1.969$, $p = 0.049$) are positively and significantly related to fraud detection ability (FDA). Therefore, H1–H3, which project a positive association between auditor experience, professional skepticism, and competence with fraud detection ability, are fully supported.

Moderation hypothesis. The moderation hypotheses are partially supported. The interaction between spiritual intelligence and competence (SI x CP) is positively and significantly related to fraud detection ability ($\beta = 0.172^{**}$, $t = 2.248$, $p = 0.025$), supporting H6. However, the interaction between spiritual intelligence and auditor experience (SI x AE) is not significant ($\beta = -0.019$, $t = 0.172$, $p = 0.864$), indicating that H4 is not supported. On the other hand, the interaction between spiritual intelligence and professional skepticism (SI x PS) shows a significant positive effect on fraud detection ability ($\beta = 0.239^{**}$, $t = 2.500$, $p = 0.013$), supporting H5.

The results emphasize the importance of direct and moderating variables in influencing auditors' ability to detect fraud. H1–H3 and H5–H6 are confirmed, while H4 is not supported. This suggests that while spiritual intelligence enhances the effect of competence and professional skepticism on fraud detection, it does not significantly moderate the relationship between auditor experience and fraud detection ability.

Table 3. Hypothesis Testing Results

	Original sample	T statistics	P values
AE -> FDA	0.256	2.679	0.008***
CP -> FDA	0.180	2.606	0.009***
PS -> FDA	0.226	1.969	0.049**
SI x CP -> FDA	0.172	2.248	0.025**
SI x AE -> FDA	-0.019	0.172	0.864
SI x PS -> FDA	0.239	2.500	0.013**

Description: ***, **, * = significant P-value 1%, 5%, 10%

Sources: Data Processed by Researchers, 2024

4.3 Discussion

The finding that auditor experience positively affects fraud detection ability was supported. The findings indicate that more experienced auditors are better able to detect fraud. This aligns with prior research, which highlights that auditors with more experience are better equipped to recognize patterns of fraudulent activity due to their accumulated knowledge. Experienced auditors are better at detecting fraud due to their accumulated knowledge and skills. Studies show that experience, along with incentives and independence, significantly improves auditors' fraud detection capabilities [37]. Additionally, auditors with specific fraud training can identify more fraud risk factors, even with minimal training time [65].

The relationship between professional skepticism and fraud detection ability was also confirmed. Auditors who maintain a skeptical mindset are more likely to detect

fraudulent activities. This finding supports the importance of skepticism in the auditing profession, as outlined in professional standards [66]. It reinforces the idea that skepticism encourages auditors to question and critically evaluate evidence, leading to better fraud detection outcomes [67]. This is consistent with previous research suggesting that skepticism allows auditors to probe deeper into financial statements and uncover discrepancies that might otherwise go unnoticed [44]. As a result, fostering skepticism in auditors should be a key focus of training programs to improve their effectiveness in detecting fraud.

The idea that competence enhances fraud detection ability was supported. The findings indicate that auditors with a higher level of competence are more capable of identifying fraudulent activities. Competence, which includes both technical knowledge and practical skills, enables auditors to thoroughly analyze financial data and detect irregularities [68]. This is in line with previous research that emphasizes the critical role of competence in effective fraud detection [69]. The results highlight the importance of continuous professional development for auditors to maintain and enhance their competence levels, ensuring they remain capable of effectively identifying fraud.

The proposal that spiritual intelligence strengthens the relationship between auditor experience and fraud detection ability was not supported. The results suggest that spiritual intelligence does not significantly enhance the effect of experience on fraud detection. One explanation is that the experience itself already contains intuitive judgement and decision-making skills that would have been possible without spiritual intelligence [70]. As a result, spiritual intelligence may not add significant value to the detection abilities that come from experience alone.

In contrast, the idea that spiritual intelligence enhances the relationship between professional skepticism and fraud detection ability was supported. The findings suggest that spiritual intelligence complements skepticism, making auditors more effective in detecting fraud. Spiritual intelligence fosters deeper ethical awareness and moral reasoning, which can strengthen auditors' skeptical attitudes [33]. This combination allows auditors to approach fraud detection with a more holistic and ethically grounded perspective, improving their ability to uncover fraud [53].

Lastly, the proposal that spiritual intelligence enhances the relationship between competence and fraud detection ability was also supported. The findings indicate that spiritual intelligence complements auditors' technical and analytical skills, allowing them to detect fraud more effectively. Auditors with higher spiritual intelligence are likely to apply their skills with greater ethical consideration, leading to improved fraud detection. This confirms the importance of spiritual intelligence in complementing auditors' technical abilities by providing a broader perspective and deeper ethical insight into their work [51].

5 Conclusion

Based on the findings, we conclude that auditor experience, professional skepticism, and competence significantly enhance an auditor's ability to detect fraud. Experienced auditors are better equipped to recognize patterns of fraudulent activity due to their accumulated knowledge and skills, enabling them to detect irregularities that less

experienced auditors might overlook. Professional skepticism plays a crucial role; auditors who maintain a skeptical mindset are more likely to question and critically evaluate evidence, leading to more effective detection of fraudulent activities. Competence, encompassing both technical knowledge and practical skills, allows auditors to thoroughly analyze financial data and identify fraudulent activities with greater accuracy.

Although spiritual intelligence did not significantly enhance the relationship between auditor experience and fraud detection ability, it does strengthen the relationships between professional skepticism and competence with fraud detection ability. Spiritual intelligence fosters deeper ethical awareness and moral reasoning, complementing skepticism and competence. Auditors with higher spiritual intelligence approach their work with a holistic and ethically grounded perspective, improving their effectiveness in detecting fraud. This suggests that spiritual intelligence is a valuable asset in enhancing the ethical considerations and moral reasoning necessary for effective fraud detection.

These findings have several important implications. Organizations should focus on enhancing auditor training programs to provide practical experience in fraud detection techniques, promote professional skepticism, and invest in continuous professional development to improve auditors' competence. Incorporating spiritual intelligence development into training programs can further enhance auditors' ethical reasoning and sense of purpose. Establishing clear ethical guidelines and providing support for auditors reinforces the importance of integrity in the auditing process. By implementing these strategies, organizations can enhance their auditors' abilities to detect fraud, leading to more reliable financial reporting and increased trust from stakeholders.

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