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Exploring How Professional Skepticism Mediates the Impact of Ethics and Audit Risk on Opinion Accuracy

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Abstract: This study investigates the dynamic interplay among audit risk, auditor ethics, and audit opinion accuracy, emphasizing professional skepticism as a crucial mediating construct. The primary aim is to examine how audit risk and auditor ethics influence audit opinion accuracy by elucidating the role of professional skepticism as an intervening behavioral mechanism. Consequently, the study addresses a central research question regarding the behavioral pathways that shape audit judgment accuracy. Using a quantitative, questionnaire-based design, data were collected from 101 auditors at public accounting firms in DKI Jakarta, Indonesia, via convenience sampling and analyzed through Partial Least Squares Structural Equation Modeling (PLS-SEM). The empirical results indicate that both audit risk and auditor ethics significantly enhance audit opinion accuracy. Professional skepticism independently improves judgment quality and serves as a significant mediator between auditor ethics and audit opinion accuracy, whereas the effect of audit risk remains direct and unmediated. The study's novelty, grounded in agency theory, reconceptualizes professional skepticism as a dynamic mechanism linking ethics to outcomes, advancing behavioral auditing beyond traditional direct-effects models. Practically, audit firms should reinforce ethical frameworks, training programs, and quality control systems that explicitly cultivate professional skepticism. Regulators and professional bodies are encouraged to integrate behavioral auditing and skeptical judgment into auditor education to further enhance audit quality.

Keywords: Professional Skepticism; Auditor Ethics; Audit Risk; Audit Opinion Accuracy; Audit Quality.



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探讨职业怀疑如何调节伦理与审计风险对审计意见准确性的影响

摘要：本研究探讨了审计风险、审计师职业道德与审计意见准确性之间的动态关系，强调职业怀疑态度作为关键的中介变量。本研究的主要目的是考察审计风险和审计师职业道德如何通过职业怀疑态度这一行为机制影响审计意见准确性，从而回答塑造审计判断准确性的行为路径这一核心研究问题。本研究采用问卷调查的定量研究设计，通过便利抽样收集了印度尼西亚雅加达特区101名公共会计事务所审计师的数据，并运用偏最小二乘结构方程模型（PLS-SEM）进行分析。实证结果表明，审计风险和审计师职业道德均显著提升审计意见的准确性。职业怀疑态度不仅独立改善判断质量，还在审计师职业道德与审计意见准确性之间起显著中介作用，而审计风险的影响则保持直接且不经中介。本研究的新颖性基于委托代理理论，将职业怀疑态度重新概念化为连接职业道德与审计结果的动态机制，从而推动行为审计研究超越传统的直接效应模型。在实践方面，审计事务所应强化职业道德框架、培训项目及质量控制体系，以明确培养职业怀疑态度。监管机构和专业团体则应将行为审计与怀疑性判断纳入审计师教育，以进一步提升审计质量。

关键词：职业怀疑态度；审计师职业道德；审计风险；审计意见准确性；审计质量

1. Introduction

Auditors play a crucial role in today's rapidly evolving business landscape by ensuring the accuracy and reliability of financial statements, which help stakeholders make informed decisions [1]. They not only verify data but also provide opinions based on financial reporting frameworks and uphold ethical standards to build trust in financial reporting [2]. They actively promote financial transparency and accountability by ensuring stakeholders receive accurate information, despite challenges from audit risk, ethical issues, and the need for heightened professional skepticism that supports trust and integrity in complex economic environments [3][4][5][6][1].

Recent audit failures, particularly the PT Garuda Indonesia Tbk case, reveal concerning trends of ethical lapses and inadequate professional skepticism, which impact stakeholders and regulatory bodies significantly. These failures underscore the necessity of exploring how audit risk and ethical standards impact the accuracy of auditor opinions, particularly through the lens of professional skepticism. Research indicates that the interplay between these components is critical in safeguarding audit integrity and reliability [7][8].

This study will examine how audit risk and ethical standards collectively affect the accuracy of audit opinions via professional skepticism. Numerous financial scandals linked to ethical shortcomings emphasize the urgent need for a comprehensive analysis of these factors [9]. While existing literature explores various dimensions influencing audit quality,

there remains a significant gap in assessing how these elements interact to either enhance or compromise audit opinion precision [10]. This investigation aims to fill this void, offering insights that could contribute to more robust auditing practices [11].

The next sections of this paper are structured as follows: Section 2 covers the literature review, theoretical frameworks, and the development of hypotheses. Section 3 describes the research methodology. Section 4 presents the research results and discusses the findings in greater detail. Section 5 concludes the paper with recommendations for practice and directions for future research.

2. Literature Review

2.1 Agency theory

This research is based on agency theory [12], which explains the need for independent auditors to minimize conflicts of interest between management and owners due to information asymmetry. The accuracy of the auditor's provision of audit opinions reflects the auditor's professionalism in assessing the fairness of the financial statements. Audit risk, auditor ethics, and professional skepticism have been shown to affect the accuracy of opinions [5][6][3][4]. Audit risk demands prudence, ethics maintain integrity, and skepticism ensures critical judgment. Based on this, this study positions professional skepticism as a mediating variable between audit risk and auditor ethics on the accuracy of giving opinions.

2.1 Audit risk affects the accuracy of the delivery of audit opinions

The components of audit risk are well-defined and include inherent risk, control risk, and detection risk in SPAP SA 315; SA 320, and SA 33 [4][1]. Empirical research indicates that identifying higher audit risks requires auditors to adopt a more diligent approach in evidence gathering and the evaluation of financial statements, thereby enhancing the overall accuracy of the opinions delivered [13][14][1].

Emphasise the necessity of rigorous risk assessment, arguing that the accurate identification and evaluation of inherent, control, and detection risks are crucial for auditors to plan effectively and maintain the integrity of their opinions [15]. Complementary findings indicate that structured audit risk assessments correlate positively with opinion reliability in companies listed on the Indonesia Stock Exchange [16]. Additionally, auditor characteristics such as experience, independence, and professional scepticism are crucial moderators of opinion accuracy.

Emphasise that experienced and independent auditors are better equipped to recognise risks, thus ensuring the accuracy and integrity of audit opinions [16][4]. Therefore, a comprehensive understanding of the components of audit risk and the auditors' intrinsic qualities is essential for enhancing the veracity of financial reporting. Based on this description, the first hypothesis is formulated as follows:

H1: Audit risk negatively affects the accuracy of the provision of audit opinions.

2.2 Auditor ethics affect the accuracy of giving audit opinions

Adherence to ethical principles such as integrity, objectivity, and professional scepticism fosters rigorous financial statement evaluation, leading to more accurate audit conclusions [3][1]. Ethical auditors conduct thorough evaluations of financial statements, which enhances the reliability of their opinions in SPAP SA 700 [4][1]. Highlights that auditors' ethical judgment significantly affects materiality assessments, thereby impacting audit outcomes [17]. Additionally, emphasise that ethical considerations improve audit quality and enable auditors to identify misleading financial information effectively [18][19]. Thus, maintaining high ethical standards not only promotes auditor independence but also strengthens the credibility of audit opinions by ensuring fair assessments of financial statements [20]. Based on this, the second hypothesis is formulated as follows:

H2: Auditor ethics positively affect the accuracy of giving audit opinions.

2.3 Audit risk affects the auditor's professional skepticism

Audit risk can lead to reduced vigilance in assessing financial statements. High audit risk environments, compounded by pressures such as looming deadlines or complex transactions, often cause auditors to rely on management assertions without adequate scrutiny. Auditors must maintain a critical stance towards management assertions to mitigate auditing risks effectively [21]. Demonstrates a strong relationship between professional scepticism and the auditor's efficacy in identifying fraud and errors in financial statements [22].

Furthermore, indicates that heightened audit risk and additional workloads can exacerbate this issue, limiting auditors' ability to maintain their critical stance during evaluations [23]. Additionally, emphasises that rigid adherence to formalistic auditing methods in high-risk scenarios can further diminish auditors' intuitive and critical thinking, ultimately impacting their professional scepticism [24]. Therefore, managing audit risk and fostering an environment that encourages scepticism is essential for ensuring accurate and credible audit opinions. Based on these findings, the third hypothesis is formulated as follows:

H3: Audit risk negatively affects the auditor's professional scepticism.

2.4 Auditor ethics affect auditors' professional skepticism

Ethical standards compel auditors to critically evaluate financial statements and management assertions, fostering a questioning mindset that leads to better detection of discrepancies and fraud. Strengthening ethical conduct among auditors positively influences their decision-making abilities, thereby enhancing their professional scepticism [7]. This connection is echoed in the findings of those who posit that compliance with ethical standards enhances auditors' scepticism, ultimately contributing to higher audit quality [25]. Based on these theories and empirical findings, the fourth hypothesis is proposed as follows:

H4: Auditor ethics positively affect auditors' professional scepticism.

2.5 Auditors' professional skepticism affects the accuracy of giving audit opinions

Professional scepticism denotes an auditor's attitude characterised by a questioning mindset and critical assessment of audit evidence, vital for ensuring the reliability of financial statements. Research indicates that auditor competence, experience, and professional scepticism can positively influence the accuracy of auditors' opinions, enhancing the detection of misstatements and inaccuracies in financial reports [19][20].

Highlights a link between professional scepticism and audit opinion accuracy, emphasising the

importance of ethics and auditor competence in achieving reliable results [20]. Explores professional scepticism as a mediator between auditor ethics, experience, and audit quality, demonstrating its significant role in maintaining high audit quality standards [7].

However, the report suggests that professional scepticism may not be the main factor influencing audit opinion, suggesting that while it is an important trait, its direct impact on audit accuracy can vary [26]. This highlights the need for auditing standards and training programs to emphasise professional scepticism as a core practice. However, it also points to a complex relationship with other factors that contribute to audit quality. Based on this description, the fifth hypothesis is formulated as follows:

H5: Auditors' professional scepticism has a positive effect on the accuracy of audit opinions

2.6 The factors affecting the accuracy of audit opinions through professional scepticism

Professional scepticism acts as a vital mediator between audit risk and the accuracy of audit opinions. When auditors face higher audit risks, maintaining a sceptical mindset is essential to rigorously question management assertions, thereby enhancing the accuracy of their opinions. Research indicates that auditors who engage in professional scepticism are better equipped to identify discrepancies and fraud, which positively impacts their judgment quality and decision-making. The role of scepticism in audit judgments, but provides evidence that contradicts the assertion that professional scepticism directly affects audit opinion accuracy [26]. Therefore, while scepticism is important, its direct influence remains nuanced and must be interpreted carefully. Based on this, the sixth and seventh hypotheses are proposed as follows:

H6: Auditors' professional scepticism mediates the influence of audit risk on the accuracy of giving an audit opinion.

Additionally, professional scepticism mediates the relationship between auditor ethics and the accuracy of audit opinions. Auditors who adhere to strong ethical standards typically exhibit greater scepticism, leading them to evaluate financial statements more critically. This interplay suggests that ethical behaviour fosters a sceptical approach, enhancing the quality and accuracy of audit conclusions. The reference underscores the importance of professional scepticism in enhancing audit quality and the auditor's confidence in their assessments [22]. Furthermore, support the idea that scepticism positively affects audit judgments, suggesting a positive relationship between ethical standards and professional scepticism [27]. Based on

this, the sixth and seventh hypotheses are proposed as follows:

H7: The auditor's professional scepticism mediates the influence of auditor ethics on the accuracy of giving an audit opinion.

A summary of the research framework and hypotheses is shown in Figure 1, which illustrates a conceptual model regarding the influence of audit risk and auditor ethics on the accuracy of giving audit opinions, with auditors' professional scepticism as a variable that mediates the relationship between the three.

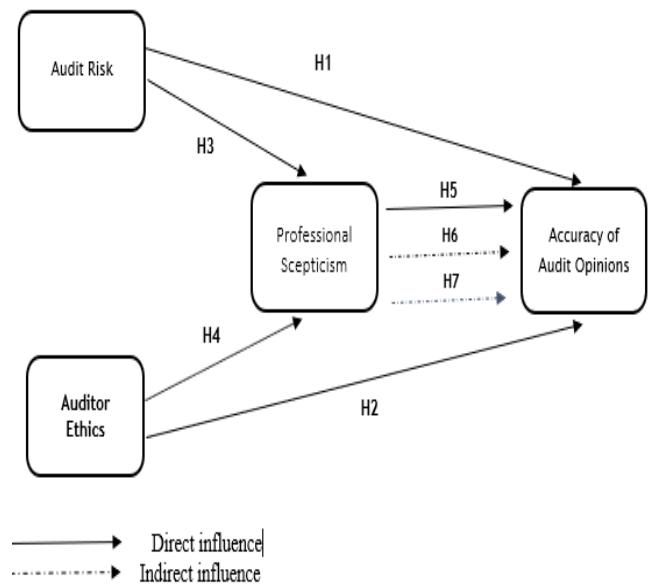


Figure 1. Research Framework

Source: by the author's

3. Research Methods

This study uses a quantitative approach to examine the influence of audit risk and auditor ethics on the accuracy of audit opinion, with auditor professional scepticism as an intervening variable. This approach was chosen because it explained the relationship between variables by analysing numerical data from questionnaires.

The research object was deliberately selected to consist of auditors working at Public Accounting Firms in DKI Jakarta, Indonesia, due to the region's high concentration of audit engagements, regulatory oversight, and diverse client characteristics, which make it a relevant setting for examining audit judgment behaviour. The research population comprises auditors listed in the *Directory of Public Accounting Firms and Public Accountants 2024*. DKI Jakarta was chosen as the research locus because it represents the core audit market in Indonesia, where auditors are more frequently exposed to complex audit risks and ethical dilemmas.

The sample was selected using the convenience sampling method, with inclusion

criteria requiring respondents to be junior or senior auditors who had direct involvement in audit engagements and audit opinion formulation, and who were willing to participate in the study. Primary data were collected by distributing a Google Form-based questionnaire to eligible auditors using a five-point Likert scale ranging from “strongly agree” to “strongly disagree”.

The research variables consisted of independent variables, namely audit risk (X1) and auditors' ethics (X2), dependent variables, namely the accuracy of giving audit opinions (Y), and intervening variables, namely auditor professional skepticism (Z). The research instruments are compiled based on indicators from relevant standards and literature, such as SPAP SA 700 [4], the code of ethics for the Public Accountant Professional [3], and previous research. The validity and reliability of the instruments were tested using convergent validity, discriminant validity, Cronbach's Alpha, and Composite Reliability, with a minimum value of 0.70.

Data analysis was carried out using the SmartPLS application through two stages, namely the outer model to test the validity and reliability of the construct, and the inner model to assess the relationship between variables using the R-Square, F-Square, and hypothesis tests [28][29]. The R² value of 0.75 indicates a strong, 0.50, and 0.25 indicate strong, moderate, and weak explanatory power, respectively, while F² values of 0.02, 0.15, and 0.35 indicate small, medium, and large effect sizes. Hypotheses were tested to assess both direct and indirect effects among variables at a significance level of P-value < 0.05 [28][29].

4. Results

4.1 Descriptive respondents

This study involved 101 auditors working in six Public Accounting Firms in the DKI Jakarta area, selected using the convenience sampling method. Of the 250 questionnaires distributed through Google Form, as many as 101 returned and were eligible for processing. Based on the characteristics of respondents, as many as 54% were female and 46% were male. The majority of respondents were 26–30 years old (46%), had a final S1 education (56%), and had a working period of 1–5 years (58%). The respondents' positions consisted of junior auditors (25%), senior auditors (19%), and partners (11%). The distribution of the most respondents came from Public Accounting Firms Bharata, Arifin, Mumajad & Sayuti (28%), which are predominantly located in East Jakarta (46%). These characteristics indicate that most of the respondents are young auditors with medium work experience,

representing the population of active auditors in metropolitan areas.

4.2 Descriptive Statistics

Descriptive statistics from 101 valid samples showed mixed results between variables. Audit risk (AR) had a significant adverse effect on the accuracy of the audit opinion (AO) ($\beta = 0.228$; $t = 1.986$; $p = 0.048$), while audit ethics (AE) had a significant positive effect ($\beta = 0.516$; $t = 4.140$; $p = 0.000$). Audit risk (AR) was insignificant to auditors' professional skepticism (PS) ($\beta = -0.167$; $p = 0.377$), while audit ethics (AE) had a significant positive effect ($\beta = 0.366$; $p = 0.006$). The auditor's professional skepticism (PS) also significantly improved the accuracy of the audit's opinion (AO) ($\beta = 0.447$; $t = 4.498$; $p = 0.000$). The mediation test showed that professional skepticism (PS) did not mediate the effect of audit risk (AR) ($p = 0.352$), but did mediate the effect of audit ethics (AE) on the accuracy of opinion (AO) ($p = 0.021$). These findings confirm the role of ethics and professional skepticism in improving the accuracy of auditors' opinions. Table 1 presents a summary of descriptive statistics.

Table 1. Descriptive Statistics

	N	Original	Stand.		T	P
			Statist	Sample		
	tics	Sample	e	ion	Statistics	Values
		(o)	(M)	(STD EV)	(O/STD EV)	
AR -> AO	101	-0,228	-0,165	0,115	1,986	0,048
AE -> AO	101	0,516	0,489	0,125	4,140	0,000
AR -> PS	101	-0,167	-0,156	0,188	0,885	0,377
AE -> PS	101	0,366	0,378	0,133	2,754	0,006
PS -> AO	101	0,447	0,443	0,099	4,498	0,000
AR-> PS -> AO	101	-0,074	-0,062	0,080	0,932	0,352
AEt -> PS-> AO	101	0,164	0,166	0,071	2,320	0,021
Valid N	101					

Source: analysis results from SmartPLS 4.

4.3 Descriptive Analysis of Research Variables

This study involved four main variables: audit risk (X1), professional ethics (X2), professional skepticism of auditors (Z), and accuracy of audit opinion (Y). Based on the questionnaire results, respondents generally gave a high rating on all indicators.

The response to the Audit Risk variable shows that most auditors agree and strongly agree on the importance of understanding the client's business type, organizational structure, and effectiveness of internal controls before conducting an audit. Similarly, Professional Ethics obtained a high response regarding integrity, responsibility, and confidentiality. Auditors demonstrate a strong ethical awareness, with more than 80% of respondents stating that audit reporting should be free from other parties' influence.

For Professional Skepticism, more than 70% of respondents stated that they constantly question the reliability of audit evidence, ask for additional evidence if needed, and are cautious about assessing contradictory information. Meanwhile, in the Accuracy of Giving Audit Opinions variable, most auditors agree that opinions can only be given after the evidence is considered sufficient and appropriate, and the financial statements are proven free from material misrepresentations. Overall, the descriptive results show that respondents have a high professional awareness of implementing accurate and ethical audits.

4.4 Evaluation of Measurement Models (Outer Model)

Validity and reliability tests were carried out with Partial Least Squares (PLS) using SmartPLS. The convergent validity results show that all indicators have outer loadings above 0.60, indicating convergent validity. Meanwhile, the discriminant validity test using the HTMT ratio produced a < value of 0.90, indicating a good construct difference between variables [28].

The reliability test resulted in Cronbach's Alpha and Composite Reliability values above 0.70 for the entire construct. In detail, the Composite Reliability score for Audit Risk is 0.954, Professional Ethics is 0.949, Auditor Professional Skepticism is 0.962, and Audit Opinion Accuracy is 0.936. The Average Variance Extracted (AVE) value is also above the limit of 0.50, so the entire construct is declared reliable and meets the requirements of the measurement model [29]. See Table 2 and Figure 2.

Table 2. Measurement model's convergent reliability and validity

	Cronbach's Alpha	rho_A α	Composite Reliability	Average Variance Extracted (AVE)
Audit Risks (AR)	0,949	0,961	0,954	0,597
Auditor Ethics(AE)	0,950	1,126	0,949	0,542
Audit Opinions(AO)	0,918	0,931	0,936	0,711
Professional Skepticism(PS)	0,954	0,961	0,962	0,783

Source: analysis results from SmartPLS 4

The model feasibility test can be carried out by the fit model test by analyzing the Standardized Root Mean Square Residual (SRMR) value of 0.105. In structural analysis to measure the difference between the covariance of the actual observation data and the covariance estimated by the model using the SRMR fit model test [28][29].

4.5 Evaluation of Structural Models (Inner Model)

The results of the R² test showed that the combination of the variables audit risk (AR) and auditor ethics (AE) explained 47% variation in the accuracy of giving audit opinions (AO) (R² = 0.470), and 8.5% variation in the auditor's professional skepticism (PS) (R² = 0.085). This suggests that the model can moderately explain the relationships between variables [28][29].

The F-square results showed that auditor ethics had a moderate effect on opinion accuracy (f² = 0.270) and a negligible effect on professional skepticism (f² = 0.087). audit risk had a small influence on both variables (f² < 0.06), while professional skepticism showed a strong influence on Opinion Accuracy (f² = 0.344). The fit model test showed an SRMR value of 0.105, still acceptable in complex models, indicating a fit between the structural model and the empirical data.

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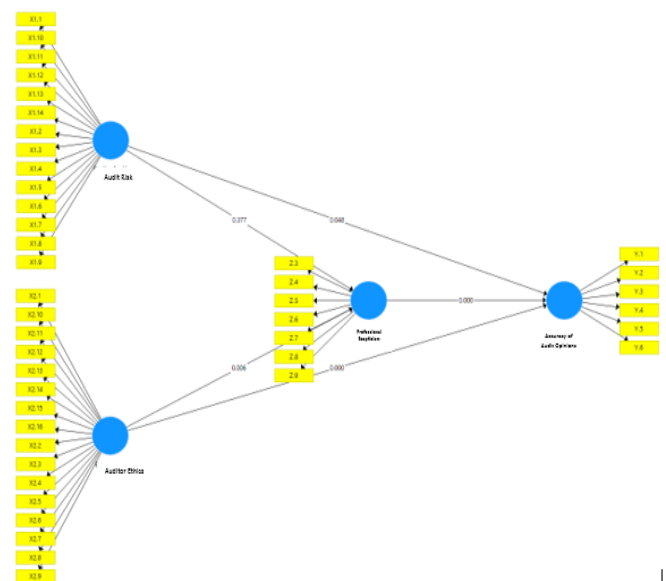


Figure 2 Outer Model

Source: analysis results from SmartPLS 4

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The results of the direct effect test provide strong support for most of the hypothetical relationships, as summarized in Table 3. It shows that: Audit Risk has a significant adverse effect on the accuracy of giving opinions ($\beta = -0.228$; $p = 0.048$; H1—Confirmed), Professional ethics has a significant positive effect on the accuracy of giving opinions ($\beta = 0.516$; $p < 0.001$; H2—Confirmed). Audit Risk does not affect Professional Skepticism ($\beta = -0.167$; $p = 0.377$; H3 — Rejected), Auditor Ethics has a positive effect on Professional Skepticism ($\beta = 0.366$; $p = 0.006$; H4—Confirmed), and Professional Skepticism has a positive effect on Accuracy of Opinion Giving ($\beta = 0.447$; $p < 0.001$; H5— Confirmed).

These results confirm that audit ethics and auditors' professional skepticism are important in supporting the accuracy of direct audit opinions. In contrast, audit risk shows a direct negative influence on the accuracy of opinions. Furthermore, the details of the effects of the mediation variables (H6–H7) are summarized in Table 4.

Table 4. Evaluation of indirect effects using SEM for the whole research sample

Indirect Effects Path coefficients	Original Sample (O)	P Values	Hipotesis
AR -> PS -> AO	- 0,074	0,352	H6-Rejected
AE -> PS -> AO	0,164	0,021	H7 Confirmed

Source: analysis results from SmartPLS 4

Table 4 presents the results of evaluating mediating variables (indirect effects) using SEM for the entire research sample. Auditors' professional skepticism did not mediate the impact of audit risk on the accuracy of opinion delivery ($\beta = -0.074$; $p = 0.352$; H6 — Rejected), but mediated the influence of audit ethics on the accuracy of opinion ($\beta = 0.164$; $p = 0.021$; H7— Confirmed). Thus, the effect of mediation occurs only on the path from audit ethics to professional skepticism, while the influence of audit risk is direct. These results confirm the role of professional skepticism as a mechanism that strengthens audit ethics' impact in improving auditor opinion delivery accuracy.

5. Discussion

This section discusses the results of hypothesis testing, including the relationships among research variables, both direct and indirect. Each hypothesis is described based on empirical results, then compared with previous research findings and analysed theoretically to provide a more comprehensive understanding of the phenomenon being studied.

The empirical results from this study validate hypothesis 1, indicating that audit risk significantly negatively impacts the accuracy of audit opinions, with a coefficient ($\beta = -0.228$) and p-value (0.048) supporting the hypothesis. Thus, H1 is accepted, suggesting that as auditors face increased audit risk, their accuracy in forming opinions declines. Specifically, an increase in audit risk is associated with reduced accuracy in issuing audit opinions. This suggests that increased audit risk correlates with diminished accuracy in forming opinions, highlighting a critical concern: high risk can pressure auditors into hasty decisions that compromise objectivity and precision in evaluating evidence. Assert that effectively identifying inherent, control, and detection risks is vital for maintaining opinion integrity [15].

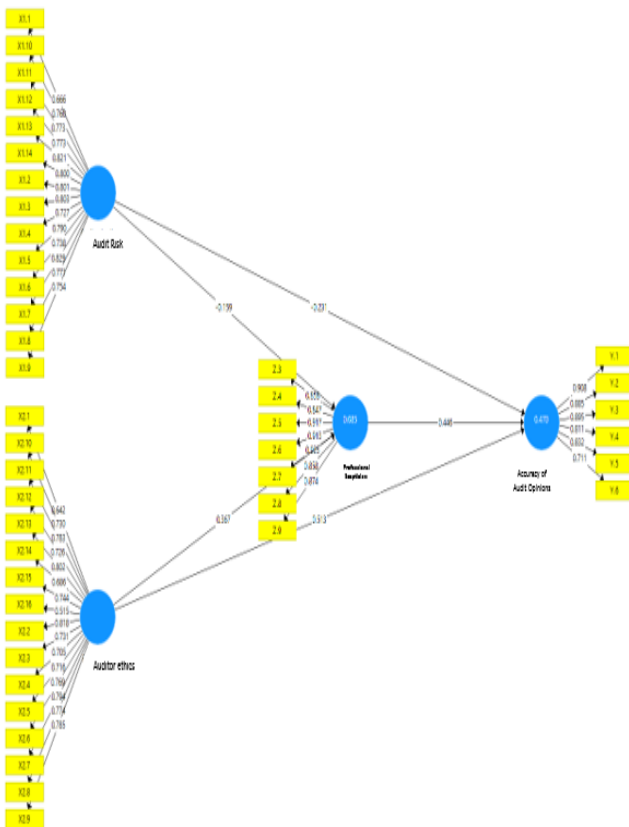


Figure 3 Inner Model

Source: analysis results from SmartPLS 4

Table 3. Evaluation of direct effects using SEM for the whole research sample

Direct Effects Path coefficients	Original Sample (O)	P Values	Hipotesis
AR -> AO	- 0,228	0,048	H1-Confirmed
AE -> AO	0,516	0,000	H2-Confirmed
AR -> PS	- 0,167	0,377	H3-Rejected
AE -> PS	0,366	0,006	H4-Confirmed
PS -> AO	0,447	0,000	H5-Confirmed

Source: analysis results from SmartPLS 4

Furthermore, elucidate that cybersecurity risks can influence audit fees, thus affecting auditors' perceptions of risk [14]. Further corroborating these findings, assert that due professional care and robust audit evidence are vital components that influence the appropriateness of audit opinions [13]. In a related vein, investigate how crucial attributes such as independence and professionalism enhance the accuracy of audit opinions, suggesting that these factors may mitigate the detrimental effects of high audit risks [20]. In conclusion, a collective understanding arises that heightened audit risk adversely influences the accuracy of audit opinions. The implementation of effective risk management strategies is paramount for navigating these challenges and upholding audit quality amid increasing complexity [13][14][15][20].

The empirical results of this research substantiate hypothesis 2, confirming that auditor ethics significantly enhances the accuracy of audit opinions, as evidenced by a β coefficient of 0.516 and a p-value of < 0.001 . Thus, H2 is accepted, underscoring that heightened adherence to ethical standards—such as integrity, objectivity, and independence—translates into more precise assessments by auditors [18][19]. Auditors who prioritize these ethical values tend to exercise greater care and responsibility when evaluating audit evidence, ultimately leading to better-informed opinions [19]. These findings are consistent with prior research that emphasizes the importance of ethical behaviour in auditing. For instance, highlights that professional scepticism, alongside ethics and competence, significantly impacts the accuracy of audit opinions [20][30].

Furthermore, reinforce that qualitative factors and auditors' personal characteristics play crucial roles in materiality judgments, reflecting the importance of ethical considerations in auditing practices [17]. Overall, this collective evidence supports integrating ethical training in auditors' professional development programs, thereby facilitating adherence to these principles and enhancing the quality of audit outcomes. Continuous reinforcement of ethical standards is essential for fostering trust among stakeholders and improving the reliability of financial reporting practices [19][20][17].

The test results showed that hypothesis 3, that audit risk had no significant effect on the auditor's professional scepticism, was supported, with a coefficient of $\beta = -0.167$ and a p-value of 0.377 (> 0.05). Thus, H3 was rejected, indicating that the negative relationship between audit risk and auditor scepticism is not statistically significant. This suggests a negative association where increased audit risk may paradoxically lower scepticism, although the effect is not statistically significant [23][22]. This aligns with the insights of those who argue that while vigilance in scepticism is essential for audit quality, factors such as

auditor workload and environmental conditions may overshadow the direct influence of audit risk [21]. Additionally, highlight the critical role of professional scepticism in detecting fraud and improving financial reporting accuracy [22]. They note that when faced with ambiguous situations involving heightened risk, auditors often struggle to maintain the level of scepticism required for effective evaluations, potentially due to organisational pressures. Underscores this complexity by examining how intuition can influence auditor judgment, advocating for a balanced approach in training auditors to utilize intuition without undermining their professional scepticism [24]. In summary, while audit risk appears to hinder scepticism, the dynamics at play involve broader interactions with workload and intuition, necessitating targeted strategies to enhance audit effectiveness.

The research findings showed that hypothesis 4, which posits that auditor ethics has a positive and significant effect on the auditor's professional scepticism, with a coefficient value of $\beta = 0.366$ and a p-value of $0.006 < 0.05$. Thus, H4 is accepted, meaning that the higher the auditor's ethics, the higher the level of professional scepticism applied. This suggests that higher ethical standards among auditors lead to increased professional scepticism, thereby enhancing critical scrutiny in evaluating audit evidence. The adoption of ethical principles, including integrity, objectivity, and independence, fosters a more diligent approach to audits, in which auditors are less likely to accept clients' information without verification, a crucial factor in ensuring reliable audit outcomes [25]. These results align with, assertion that auditor ethics, independence, and experience are pivotal for audit quality, reinforcing the notion that professional scepticism acts as a vital mediator [7]. Moreover, support these findings, emphasising the role of professional scepticism in moderating the relationship between ethics and audit quality [25]. Their research stresses that the combined influence of ethics and experience significantly improves audit outcomes, underlining the importance of maintaining a robust ethical framework within the profession. Overall, the significant relationship between professional ethics and scepticism underscores the need for ongoing ethical education in auditing to enhance audit credibility and quality, ultimately benefiting stakeholders and fostering trust in financial reporting.

The results analysis showed that hypothesis 5, which states that the auditor's professional scepticism had a positive and significant effect on the accuracy of giving audit opinions, with a coefficient value of $\beta = 0.447$ and a p-value of < 0.001 . Thus, H5 is accepted, meaning that the higher the auditor's scepticism, the more accurate the audit opinion. These findings confirm that auditors' critical attitude is an important

factor in improving the accuracy of financial statement assessments. Sceptical auditors do not readily accept audit information or evidence without verification, but instead critically evaluate the reliability of the evidence. This attitude enables the detection of errors and fraud indicators, leading to more objective and precise opinions. Emphasises that professional scepticism, when combined with ethical standards and auditor competence, is essential for generating accurate audit opinions [20][31]. Further, research shows that the influence of professional scepticism should be considered alongside integrity and independence to enhance the credibility of auditor conclusions [31][32]. Moreover, other studies suggest that both professional scepticism and expertise are necessary to improve the quality of audit opinions, highlighting a multifaceted approach in audit practices [11]. Overall, while professional scepticism plays a significant role in achieving high-quality audit outcomes, the research is nuanced regarding its impact on the accuracy of audit opinions.

The research findings reveal that hypothesis 6, which states that auditors' professional scepticism does not serve as a mediating factor in the relationship between audit risk and the accuracy of audit opinions.

The statistical analysis shows a path coefficient of -0.074 and a p-value of 0.352 (> 0.05). Thus, H6 was rejected, indicating that the risk of an audit does not affect the accuracy of the opinion through the mediation of professional scepticism. This outcome resonates with research which emphasises that professional scepticism is vital for detecting fraud and assessing internal controls; however, it does not inherently enhance auditors' effectiveness in high-risk scenarios [22]. The study highlights that professional scepticism should be developed independently of audit risk conditions, implying that mitigating biases and enhancing scepticism require targeted training and experience. Furthermore, suggest that factors such as integrity and independence are equally important in shaping the accuracy of audit opinions [26]. Their findings align with the argument that the auditor's inherent ethical qualities more effectively bolster audit opinions than the scepticism cultivated under risky conditions. In conclusion, while professional scepticism holds intrinsic value in maintaining audit quality, its effectiveness as a mediator between audit risk and opinion accuracy remains questionable. This insight underscores the importance of fostering a comprehensive framework that prioritises auditor ethics, education, and independence, alongside scepticism, to enhance overall audit outcomes [22][26].

The findings of this research confirm the test showed hypothesis 7, that auditors' professional scepticism mediates the relationship between auditor ethics and the accuracy of audit opinions, as indicated by a path coefficient of 0.164, a p-value of 0.021, and a

t-statistic of 2.320, which exceeds the critical value of 1.96. This acceptance of hypothesis H7 underscores the importance of ethical considerations in the auditing process and their impact on audit outcomes through the lens of professional scepticism [26]. Auditors who exhibit strong ethical principles, such as integrity and objectivity, may improve their critical evaluation of audit evidence, thereby influencing the accuracy of their opinions. Highlight the essential role of professional scepticism in fraud detection and the maintenance of financial reporting integrity, proposing that it promotes a diligent examination of financial statements [22]. However, highlight cognitive biases that can impair audit judgments, suggesting that professional scepticism can help mitigate these biases and improve decision-making [24][25]. Overall, while the notion exists that professional scepticism may contribute to more reliable audit opinions, the reference suggests that the influence of audit risk on this relationship may not be direct. Therefore, fostering ethical standards and enhancing professional scepticism within auditing practices is critical for improving the precision and trustworthiness of audit outcomes.

This study contributes to the auditing literature by advancing a mechanism-based explanation of audit opinion accuracy grounded in agency theory[12]. Specifically, it conceptualises professional scepticism as a behavioural governance mechanism through which auditor ethics and audit risk assessments are translated into audit judgments. This perspective extends prior auditing research that largely models ethics and audit risk as direct antecedents of audit outcomes by explicitly theorising the behavioural processes underlying auditors' monitoring role. By demonstrating that ethical compliance enhances audit opinion accuracy primarily through sceptical judgment behaviour, the study refines agency-based models of audit quality. It underscores the importance of auditor cognition in mitigating information asymmetry and managerial opportunism under conditions of heightened audit risk.

Practically, the results carry significant implications for public accounting firms (KAP), regulators, and auditor education. For audit firms, the findings highlight the importance of embedding professional scepticism within audit methodologies, training programs, and quality control systems, rather than relying solely on technical competence or compliance with ethical codes. For regulators, the evidence supports the need for policies that promote ethical enforcement and sceptical judgment as integral components of audit quality inspections. Furthermore, for auditor education and professional certification bodies, the study emphasises the necessity of integrating behavioural auditing, ethical reasoning, and sceptical judgment training into both formal education

and continuing professional development to enhance audit opinion reliability in increasingly complex audit environments.

6. Conclusion

This study concluded that audit risk had a significant, adverse effect on audit opinion accuracy, indicating that higher audit risk is associated with lower opinion accuracy. This confirms that the complexity and uncertainty inherent in audit risk can lower the accuracy of auditor assessments. On the other hand, auditor ethics have a positive and significant effect on the accuracy of audit opinions, indicating that auditors who uphold the values of integrity, objectivity, and professionalism are better able to issue correct opinions. In addition to these direct influences, the study results show that audit risk does not significantly affect professional scepticism. In contrast, auditor ethics positively and significantly affect auditors' professional scepticism. These findings confirm that auditor ethics is an important foundation in building a critical and cautious scepticism attitude in the audit process. In addition, auditors' professional scepticism has a positive and significant effect on the accuracy of giving audit opinions, indicating that auditors with a high scepticism attitude tend to be more thorough in evaluating audit evidence. The mediation analysis showed that professional scepticism did not mediate the relationship between audit risk and the accuracy of audit opinions, but rather significantly mediated the relationship between auditor ethics and the accuracy of audit opinions. Thus, professional scepticism is an important mechanism that strengthens the influence of ethics on the quality of audit results.

Theoretically, this study enriches auditing literature with a mechanism-based explanation of audit opinion accuracy rooted in agency theory. It positions professional scepticism as a behavioural governance tool, extending prior views of audit risk and ethics as direct predictors, and underscores auditor cognition's role in curbing information asymmetry and opportunism. Findings affirm ethics as a driver of sceptical behaviour, boosting opinion quality.

Practically, the results suggest that audit firms should strengthen ethical frameworks, training programs, and audit quality control systems that explicitly foster professional scepticism. Regulators and professional bodies are encouraged

to integrate sceptical judgment and behavioural auditing into auditor education and continuing professional development.

However, this study has some limitations. The research model included only four main variables: audit risk, auditor ethics, professional scepticism, and the accuracy of the opinion, so it did not consider other factors such as auditor experience, client pressure, or audit firm policies. In addition, using questionnaires as a data collection method can cause bias in respondents' perceptions. Further research is recommended to expand the variables and context of the research, using qualitative approaches such as in-depth interviews with auditors, and involving respondents from various firms and industry sectors, so that the findings obtained are more comprehensive and can be generalised more broadly.

Declarations

Author Contributions

Conceptualization, Trinandari; methodology, Trinandari and Agus Salim; software, Djoko Hanantijo; validation, Trinandari and Djoko Hanantijo; formal analysis, Agus Salim; investigation, Djoko Hanantijo; resources, Primadona; data curation, Djoko Hanantijo; writing—original draft preparation, Trinandari; writing—review and editing, Trinandari dan Primadona; visualization, Primadona; supervision, Djoko Hanantijo; project administration, Primadona; funding acquisition, Trinandari. All authors have read and agreed to the published version of the manuscript.

Data Availability Statement

The data presented in this study are available from the corresponding author upon reasonable request. The data are not publicly available due to privacy and confidentiality considerations.

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Conflicts of Interest

The authors declare no conflict of interest

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