

CHAPTER V

CLOSING

5.1 Summary

This study was conducted to obtain empirical evidence regarding the influence of auditors' human capital on audit quality performance, as well as the role of AI adoption as a moderating variable. The dimensions of auditors' human capital examined in this study consist of audit knowledge and skills, digital skills, analytical skills, and professional judgment. In addition, this study also examined the direct influence of AI adoption on audit quality performance. The study was conducted using a quantitative approach by distributing questionnaires to external auditors working at Public Accounting Firms (KAP) and the Audit Board of the Republic of Indonesia (BPK). The minimum sample size was determined using GPower, which indicated that at least 114 respondents were required. This study successfully collected 115 valid responses, meaning that the number of respondents fulfilled the minimum sample requirement. The data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS software version 4.1.1.8.

The measurement model results show that all constructs used in this study fulfilled the validity and reliability criteria. All indicators had outer loading values above 0.70, while the Average Variance Extracted (AVE) values of all constructs were above 0.50. In addition, the Composite Reliability values of all constructs were above 0.70. These results indicate that the indicators were valid and reliable in measuring their respective constructs. The discriminant validity test using the HTMT ratio and the Fornell-Larcker criterion also showed that all constructs were empirically distinct from one another. Therefore, the measurement model was considered appropriate for further structural model analysis.

The structural model results show that the R-square value of audit quality performance was 0.639. This means that 63.9% of the variance in audit quality performance can be explained by audit knowledge and skills, digital skills, analytical skills, professional judgment, AI adoption, and the

interaction effects included in the research model. Meanwhile, the remaining 36.1% is explained by other variables outside this research model. In addition, the Q-square value was 0.538, indicating that the model has predictive relevance. Thus, the research model has adequate explanatory and predictive capability in explaining audit quality performance. Based on the analysis and discussion presented in the preceding chapter, the conclusions of this study are as follows.

1. Research Objective 1: To examine the influence of audit knowledge, digital skills, analytical skills, and professional judgment on audit quality performance.

The results of this study indicate that audit knowledge and skills, analytical skills, and professional judgment significantly influence audit quality performance. Audit knowledge and skills emerged as the most influential factor, showing that auditors who possess strong technical expertise in auditing standards, procedures, and evidence evaluation are better equipped to execute audit tasks effectively and accurately. This aligns with Human Capital Theory, which emphasizes that knowledge and skills are forms of productive capital that contribute to improved individual performance (Schultz, 1961; Becker, 1964). As auditors develop these competencies, they are able to navigate the complexities of audit tasks and produce higher-quality audit results.

Similarly, analytical skills were found to significantly improve audit quality performance. The ability to analyze data, identify patterns, and assess risks is crucial, particularly in an audit environment that increasingly involves large volumes of data and complex transactions. Auditors with strong analytical skills are better able to detect anomalies and draw appropriate conclusions, which directly impacts the quality of audit work. This is consistent with Human Capital Theory's assertion that cognitive and analytical abilities enhance the efficiency and effectiveness of professional tasks.

Professional judgment also plays a key role in audit quality performance. Auditors who can apply sound judgment in evaluating

evidence, assessing materiality, and making informed decisions in uncertain situations tend to produce better audit outcomes. This finding supports existing literature on professional judgment, which underscores its importance in ensuring audit quality (Nelson, 2009; IAASB, 2009). Professional judgment requires not only technical knowledge but also experience, ethical reasoning, and the ability to manage ambiguity, core aspects of human capital.

While digital skills are important in the modern audit landscape, they were found to have a positive but insignificant effect on audit quality performance in this study. This suggests that digital skills alone are not sufficient to improve audit quality unless they are applied within the specific context of auditing tasks. Digital skills may serve as a supporting capability, but they are secondary to the core competencies of knowledge, analysis, and professional judgment. These findings underscore that Human Capital Theory is not just about possessing digital knowledge; it is about how this knowledge integrates with other competencies to create value in practice.

2. Research Objective 2: To examine the influence of Artificial Intelligence adoption on audit quality performance.

The results of this study show that artificial intelligence (AI) adoption has a positive and significant direct effect on audit quality performance. This indicates that integrating AI-based tools into the audit process, such as machine learning for anomaly detection or advanced analytics for processing large-scale data, directly supports auditors in improving their work quality. These findings are consistent with recent literature, which highlights that AI adoption improves efficiency, expands audit testing, and accelerates risk assessment (Seethamraju & Hecimovic, 2023; Fedyk et al., 2022). By automating routine tasks and providing broader data coverage, AI allows auditors to allocate more time and cognitive effort to complex evaluations, thereby elevating the overall quality of the audit (Rahman et al., 2024).

However, while AI acts as a powerful technological catalyst for performance, it remains an advanced supporting tool. Its true value in driving audit quality is realized when it complements the auditor's professional responsibilities and human capital, rather than functioning as an independent substitute for human judgment (Kokina et al., 2025).

3. Research Objective 3: To examine the moderating effect of AI adoption on the relationship between audit knowledge and skills, digital skills, analytical skills, professional judgment, and audit quality performance.

AI adoption was found to significantly moderate the relationship between audit knowledge and skills and audit quality performance. This suggests that AI tools enhance the effectiveness of auditors who possess strong foundational knowledge and skills. AI adoption allows auditors to process large amounts of data more efficiently, identify anomalies, and improve decision-making during the audit process. This finding aligns with Human Capital Theory, which posits that technology enhances the value of human capital when individuals possess the necessary skills and competencies to leverage technological tools effectively (Brynjolfsson & McAfee, 2014). Therefore, AI becomes most valuable when paired with strong audit knowledge and skills, facilitating better decision-making and more efficient audit work.

However, AI adoption did not significantly moderate the relationships between digital skills, analytical skills, or professional judgment and audit quality performance. This finding suggests that AI's impact is more profound when integrated with auditors' core technical competencies. It indicates that while AI can improve efficiency and provide insights, its contribution to audit quality performance is not as significant when the auditor's foundational skills are lacking or when there is a risk of automation bias overriding independent reasoning. AI should thus be seen as a complementary tool that enhances the effectiveness of auditors' existing knowledge, rather than replacing the need for professional judgment and core auditing capabilities.

In conclusion, this study emphasizes that audit knowledge and skills, analytical skills, and professional judgment are the primary determinants of audit quality performance, in line with Human Capital Theory. While AI adoption contributes to improving audit quality, its effectiveness is contingent upon auditors possessing strong foundational competencies. These findings reinforce the importance of developing auditors' human capital to ensure high-quality audits in an increasingly digitalized environment. AI, therefore, should be viewed as an essential complement to professional competence, supporting auditors in performing high-quality audits rather than substituting for their judgment or skills.

5.2 Research Implication

The findings of this study provide several theoretical and practical implications.

1. From a theoretical perspective, this study supports Human Capital Theory by showing that auditors' knowledge, skills, analytical ability, and professional judgment function as important forms of human capital that contribute to audit quality performance. The significant effects of audit knowledge and skills, analytical skills, and professional judgment confirm that audit quality is not merely determined by audit procedures or firm-level characteristics, but also by the individual capabilities of auditors who perform the audit work.
2. This study also contributes to the audit quality literature by using audit quality performance as a more direct approach to understanding audit quality at the individual auditor level. Instead of relying only on indirect audit quality proxies, this study focuses on how auditors perform audit procedures, evaluate evidence, apply professional judgment, and produce reliable audit conclusions. This perspective provides a more operational understanding of audit quality because it captures the actual performance of auditors during the audit process.

3. The finding that AI adoption has a positive effect on audit quality performance also provides theoretical implications for the literature on technology and auditing. This study shows that AI adoption can contribute to better audit quality performance when it is used to support audit activities. However, the moderation results indicate that AI does not automatically strengthen all dimensions of auditors' human capital. AI adoption only strengthens the relationship between audit knowledge and skills and audit quality performance. This finding suggests that AI is most effective when auditors have strong audit knowledge that enables them to interpret and evaluate AI outputs properly.
4. From a practical perspective, the significant effect of audit knowledge and skills indicates that audit institutions should continue to prioritize the development of auditors' technical competence. The findings of this study provide useful implications for Public Accounting Firms and BPK. Training programs should not only focus on general audit procedures, but also on risk assessment, evidence evaluation, audit documentation, communication, teamwork, and industry-specific knowledge. Strong audit knowledge and skills are important because they become the foundation that allows auditors to use technology more effectively.
5. The insignificant effect of digital skills on audit quality performance also provides an important theoretical insight. This result indicates that digital skills may not directly improve audit quality if they are not specifically connected to audit tasks, evidence evaluation, professional reasoning, and organizational support. Therefore, future theoretical models should distinguish between general digital literacy, audit technology proficiency, data analytics capability, and AI-specific competence.
6. The significant effect of analytical skills implies that audit institutions should strengthen auditors' ability to analyze data, identify patterns, detect anomalies, and interpret complex audit evidence. In the current audit environment, auditors increasingly deal with large volumes of data and digital evidence. Therefore, analytical training should be integrated

into audit development programs, especially training related to data interpretation, audit analytics, and critical reasoning.

7. The significant effect of professional judgment shows that audit institutions should provide more opportunities for auditors to develop judgment-based competence. This can be done through case-based training, audit simulation, mentoring, supervision, and exposure to complex audit engagements. Professional judgment is essential because auditors must make decisions in uncertain situations, assess the sufficiency of evidence, and determine appropriate audit responses.
8. The finding that AI adoption improves audit quality performance implies that KAP and BPK should consider the gradual and responsible integration of AI-based tools into audit activities. AI can support risk assessment, anomaly detection, document review, and data analysis. However, AI implementation should be accompanied by clear guidance, adequate training, data governance, and supervision. Auditors should be trained not only to operate AI tools, but also to evaluate the reliability, relevance, and limitations of AI-generated outputs.
9. For regulators and policymakers, this study suggests the need to develop competency standards that reflect the changing nature of audit work in the digital era. Professional development requirements for auditors should include audit technology, analytical competence, AI literacy, and professional judgment. Regulators may also provide guidance on the responsible use of AI in audit engagements to reduce the risk of overreliance and ensure that audit decisions remain under the responsibility of professional auditors.
2. For educational institutions, this study implies that accounting and auditing curricula should balance traditional audit knowledge with digital and analytical competencies. Students should be introduced not only to auditing standards and procedures, but also to audit analytics, digital audit tools, AI-assisted auditing, critical thinking, and professional judgment. This is important to prepare future auditors for a profession

that increasingly requires both technical audit competence and technological adaptability.

5.3 Research Limitation

This study has several limitations that should be considered when interpreting the results.

1. First, this study used a cross-sectional research design, meaning that the data were collected at one point in time. Therefore, this study can explain the relationship among variables, but it cannot fully capture changes in auditors' capabilities, AI adoption, and audit quality performance over time.
2. Second, this study used a purposive sampling technique with 115 respondents from KAP and BPK. Although the sample size meets the minimum requirement for SEM-PLS analysis, the use of non-probability sampling limits the generalizability of the findings. The results may not fully represent all external auditors in Indonesia, especially auditors from institutions or regions that were not included in the respondent distribution.
3. Third, the data in this study were collected through a self-administered questionnaire. Therefore, the responses reflect the perceptions and self-assessments of respondents. This may create the possibility of response bias, such as social desirability bias, where respondents may provide answers that appear more favorable or professionally acceptable.
4. Fourth, the respondent profile in this study was dominated by younger auditors and auditors with less than five years of work experience. This condition may influence the results because auditors with different levels of experience may have different levels of audit knowledge, professional judgment, technology exposure, and AI adoption. Therefore, the findings may reflect more strongly the perceptions of early-career auditors.

5.4 Suggestion for Future Research

Based on the findings and limitations of this study, several suggestions can be proposed.

1. First, future researchers are encouraged to use a larger and more diverse sample involving auditors from various regions, audit institutions, and levels of experience. A broader sample may improve the generalizability of the findings and provide a more complete understanding of audit quality performance in Indonesia.
2. Second, future studies may use a longitudinal research design to examine how auditors' human capital, AI adoption, and audit quality performance develop over time. This approach would be useful because auditor competence and technology adoption are dynamic and may change as auditors gain more experience, training, and exposure to digital audit tools.
3. Third, future researchers should consider using mixed methods by combining survey data with interviews, observations, or case studies. Qualitative data can provide deeper explanations regarding why certain variables, such as digital skills, do not significantly influence audit quality performance. Interviews with auditors may also reveal how AI is actually used in audit practice and what challenges auditors face when applying AI-based tools.
4. Fourth, future research may measure AI adoption more specifically by distinguishing between different forms of AI use in auditing. For example, future studies can examine machine learning for anomaly detection, natural language processing for document review, robotic process automation for routine audit tasks, and AI-based risk assessment tools separately. This would help identify which type of AI application contributes most strongly to audit quality performance.