

# **Investigative Audit Competencies and Mechanisms: Insights from Auditor Perceptions**

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## **Abstract**

This study examines the relationship between investigative audit competencies and the implementation of audit mechanisms among independent auditors in Malaysia. Grounded in Human Capital Theory (HCT), investigative audit competencies are conceptualised as a higher-order construct comprising knowledge and skills, investigative techniques, and professional experience. The increasing complexity of financial misconduct and fraud has heightened the need for auditors equipped with specialised competencies to support effective audit practices. A quantitative correlational research design was employed using data collected from 102 independent auditors practising in Klang Valley, Malaysia. Data were analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM). The findings suggest a significant positive relationship between investigative audit competencies and the implementation of audit mechanisms, indicating that auditors with stronger competencies tend to report greater implementation of audit mechanisms in professional practice. This study contributes to the investigative auditing literature by applying Human Capital Theory to explain the role of auditor competencies in audit mechanism implementation. Practically, the findings provide insights for audit practitioners, professional bodies, and policymakers regarding the importance of competency development in strengthening investigative audit practices. From an educational perspective, the findings suggest that competencies perceived as important by practising auditors may warrant greater emphasis within accounting education and professional development programs. This study is limited to independent auditors in Klang Valley and relies on self-reported perceptions, which may limit the applicability of the findings to other contexts. Future research may extend the investigation to different geographical regions and professional settings while examining the influence of organisational, technological, and regulatory factors on audit practice.

**Keywords:** Audit Mechanisms; Human Capital Theory; Independent Auditors; Investigative Audit Competencies.

## **1.0 Introduction**

The increasing incidence of financial misconduct and corporate fraud has intensified the need for effective audit mechanisms and auditors equipped with strong investigative competencies (Susanto & Kalsum, 2023). In Malaysia, growing concerns over white-collar crimes and financial irregularities have highlighted the importance of competencies such as forensic knowledge, auditing techniques, analytical skills, and practical experience in supporting effective audit practices (Tong *et al.*, 2023).

This issue is particularly significant within Malaysia's increasingly complex business environment, especially in Klang Valley, the country's primary economic and commercial hub. The concentration of audit firms, public listed companies, and financial institutions within this region creates greater demand for competent auditors capable of addressing emerging fraud risks and strengthening financial reporting integrity (Johari *et al.*, 2022).

However, despite the growing importance of investigative auditing, limited empirical evidence exists on how these competencies influence the implementation of audit mechanisms within the Malaysian auditing context. This gap raises concerns regarding whether current educational preparation adequately equips future auditors with the competencies required by the profession and industry.

This study is grounded in Human Capital Theory (HCT), which suggests that investments in knowledge, skills, and experience enhance individual performance and productivity (Becker, 1964 as cited in Na). Within the context of investigative auditing, HCT provides a useful theoretical lens for understanding how auditors' competencies are associated with the implementation of audit mechanisms.

Consequently, this study examines the relationship between investigative audit competencies and the implementation of audit mechanisms among independent auditors in Malaysia. Specifically, it examines the relationship between investigative audit competencies and the implementation of audit mechanism among independent auditors in Malaysia. By addressing this gap, this study contributes to the investigative auditing literature and provides practical insights for educators, professional bodies, and policymakers seeking to align accounting education with industry requirements and strengthen the preparedness of future auditing professional (Pramesti *et al.*, 2023).

### **1.1 Theoretical Foundation: Human Capital Theory**

Human Capital Theory (HCT) views education, training, and work experience as critical investments that enhance an individual's productivity and performance (Becker, 1964 as cited in Na, 2012). Within the auditing context, HCT suggests that specialised competencies acquired through education and professional development serve as valuable human capital that improves auditors' effectiveness in performing complex audit tasks (Chao *et al.*, 2020). Accordingly, investigative audit competencies represent critical human capital resources that support the effective implementation of audit mechanisms. Therefore, HCT provides a theoretical basis for explaining the relationship between investigative audit competencies and audit mechanisms implementation.

### **1.2 Investigative Audit Competencies and Mechanisms**

Investigative audit competencies refer to the knowledge, skills, techniques and professional experience required to identify and investigate fraud and financial irregularities effectively (Chindengwike, 2024; Tyas &

Budiwitjaksono, 2024). These competencies include auditing knowledge, forensic techniques, analytical reasoning, and investigative procedures used in fraud detection. Previous studies commonly classify investigative audit competencies into three dimensions: knowledge and skills, investigative techniques, and professional experience (Chindengwike, 2024).

Meanwhile, audit mechanisms refer to structured procedures and controls used to detect, assess, and address financial anomalies and fraudulent activities within an organisation (Anggraini *et al.*, 2019; Johari *et al.*, 2022). These mechanisms include forensic testing, risk assessment, internal control evaluations, and documentation review. The effectiveness depends largely on auditors' competencies, as auditors with greater knowledge, technical expertise, and investigative experience are better able to apply audit procedures and identify fraud risks effectively (Chao *et al.*, 2020; Oyerogba, 2021).

### **1.3 Competencies–Mechanisms Relationship**

Prior studies indicate that auditor competencies positively influence the effectiveness of audit mechanisms implementation, as competent auditors are better able to apply forensic techniques and detect financial irregularities (Oyerogba, 2021; Johari *et al.*, 2022). These competencies enhance auditor's ability to conduct investigative audits effectively, contributing to improved fraud detection and audit quality.

However, competencies alone may not guarantee effective audit mechanisms implementation. Factors such as limited resources, inadequate organisational support, and insufficient practical exposure may restrict auditors' ability to apply their competencies effectively (Arbutante, 2024; Rumasukun, 2024). Furthermore, inadequate institutional infrastructure may hinder the implementation of audit mechanism even among skilled auditors (Tyas and Budiwitjaksono, 2024). Therefore, this study examines the relationship between investigative audit competencies and audit mechanisms implementation within the context of professional auditing practice.

### **1.4 Educational Reflections**

Despite the growing demand for investigative auditing, prior studies report that many auditors receive limited exposure to forensic audit practices during their academic training, creating a gap between educational preparation and professional requirements (Sari *et al.*, 2022). Existing accounting curricula often lack practical learning components, such as simulations, case-based activities, and technology-driven investigative audit roles (Arbutante, 2024). Furthermore, embedding communication and analytical skills into forensic auditing education would help improve auditor confidence and performance in complex investigations (Steward, 2023). These findings highlight the need for accounting education to better align curriculum content and learning experiences with the competency requirements of contemporary auditing practice.

### 1.5 Purpose and Significant of the Study

Building on the theoretical foundation of Human Capital Theory and the growing need for effective investigative auditing practices, this study examines the relationship between investigative audit competencies and the implementation of audit mechanisms among independent auditors in Malaysia. Specifically, it investigates the relationship between investigative audit competencies and the implementation of audit mechanisms among independent auditors. The significance of this study lies in both its theoretical and practical contributions. Theoretically, it applies Human Capital Theory within the context of investigative auditing to explain how auditors' competencies contribute to audit effectiveness. Practically, the findings provide valuable insights for audit practitioners, professional bodies, and policymakers regarding the competencies required for effective audit mechanisms implementation. Furthermore, the findings may support professional training and competency development initiatives aimed at strengthening fraud detection capabilities and enhancing audit quality within the auditing profession.

### 1.6 Hypothesis and Research Framework

Human Capital Theory (HCT) posits that investments in knowledge, skills, and experience enhance professional effectiveness (Becker, 1964 as cited in Na, 2012). In this study, investigative audit competencies are conceptualised as a higher-order construct comprising knowledge and skills, investigative techniques, and professional experience, which collectively enhance auditors' ability to implement audit mechanisms effectively (Chao *et al.*, 2020; Oyerogba, 2021). Accordingly, HCT provides the theoretical basis by proposing the following hypothesis:

H1: Investigative audit competencies have a significant positive relationship with the implementation of audit mechanisms.

Figure 1 illustrates the research framework of this study, which positions investigative audit competencies as the independent variable and audit mechanisms as the dependent variable.

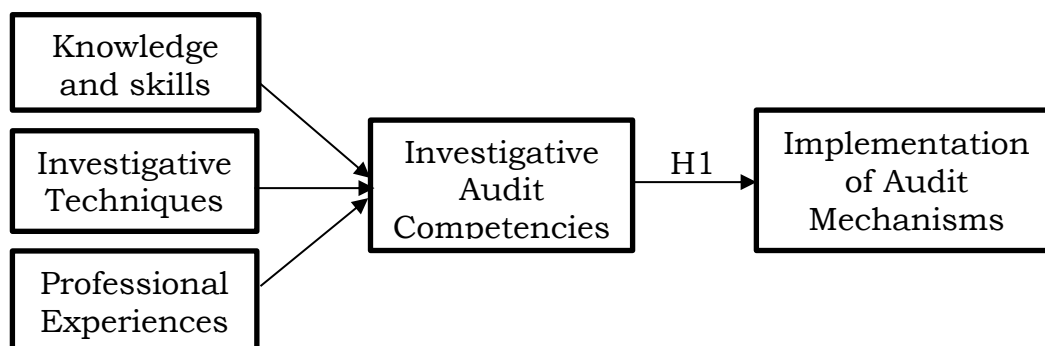


Figure 1: Conceptual Framework Based on Human Capital Theory

## **2.0 Methodology**

This study adopted a quantitative, correlational research design grounded in Human Capital Theory (HCT) to examine the relationship between investigative audit competencies and the implementation of audit mechanisms among independent auditors in Malaysia. In this study, investigative audit competencies were conceptualised as a higher-order construct comprising knowledge and skills, investigative techniques, and professional experience. Consistent with HCT, these competencies represent forms of human capital that enhance auditors' ability to implement audit mechanisms effectively in detecting and addressing financial irregularities.

The target population comprised independent auditors practising in Klang Valley, Malaysia, a region selected due to its high concentration of audit firms and diverse auditing practices. Purposive sampling was employed to ensure that respondents possessed relevant auditing experience. To be included in this study, respondents were required to be practising independent auditors with professional audit experience and exposure to investigative or fraud-related auditing activities. A total of 165 questionnaires were distributed, resulting in 102 valid responses and a response rate of 62 percent. This response rate is considered acceptable for survey-based research and indicates satisfactory participant engagement. Furthermore, the sample size exceeded the minimum requirement recommended for Partial Least Squares Structural Equation Modelling (PLS-SEM), indicating its adequacy for the proposed analysis (Hair *et al.*, 2022).

Data were collected using a structured questionnaire adapted from Oyerogba (2021). Items measuring investigative audit competencies were retained from the original instrument, while the dependent variable was reconceptualised from fraud detection to audit mechanisms implementation to better align with the objectives and theoretical focus of the present study. Accordingly, selected items were modified to reflect auditors' implementation of audit-related mechanisms and procedures within the Malaysian auditing context while preserving their original conceptual meaning. All items were measured using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

To establish content validity, the questionnaire was reviewed by five subject matter experts comprising one Chartered Accountant with extensive audit experience and four accounting academics. Their feedback was incorporated to improve the clarity, relevance, and appropriateness of the measurement items. Participation in this study was voluntary, and respondents were informed of this study objectives prior to completing the questionnaire. Informed consent was obtained from all participants, and the confidentiality and anonymity of responses were assured. To minimise common method bias, respondents were informed that there were no right or wrong answers and that all responses would remain confidential.

Data analysis was conducted using Partial Least Squares Structural Equation Modelling (PLS-SEM) via SmartPLS software. PLS-SEM was selected because this study aimed to examine predictive relationships between constructs and

involved a relatively modest sample size, making it suitable for exploratory and predictive research (Hair *et al.*, 2022). The measurement model was first assessed for reliability and validity using Cronbach's Alpha, Composite Reliability (CR), Average Variance Extracted (AVE), and discriminant validity tests. Subsequently, the structural model was evaluated using path coefficients ( $\beta$ ), coefficient of determination ( $R^2$ ), effect sizes ( $f^2$ ), and p-values to test the hypothesised relationship between investigative audit competencies and the implementation of audit mechanisms.

### **3.0 Result and Discussions**

The measurement model demonstrated satisfactory reliability and validity for all constructs. Cronbach's Alpha ( $\alpha$ ) and Composite Reliability (CR) values exceeded the recommended threshold of 0.70, indicating strong internal consistency. The Average Variance Extracted (AVE) value exceeded 0.50, supporting convergent validity. Discriminant validity was assessed using the Fornell-Larcker criterion and HTMT ratio, with all values satisfying the recommended thresholds, indicating adequate construct distinctiveness. These results suggest that the measurement instrument was appropriate for assessing investigative audit competencies and the implementation of audit mechanisms.

The structural model results supported Hypothesis 1. As presented in Table 1, investigative audit competencies exhibited a significant positive relationship with the implementation of audit mechanisms ( $\beta = 0.717$ ,  $p < 0.001$ ). The model explained 57.7 percent of the variance in audit mechanism implementation ( $R^2 = 0.577$ ), indicating that investigative audit competencies represent an important factor associated with auditors' implementation of audit mechanisms. These findings are consistent with Human Capital Theory, which posits that investments in knowledge, skills, and experience enhance professional effectiveness (Becker, 1964 as cited in Na, 2012). The results also support previous studies suggesting that auditors possessing stronger investigative competencies are better positioned to perform complex audit procedures and address financial irregularities effectively (Oyerogba, 2021; Johari *et al.*, 2022).

In this study, investigative audit competencies were conceptualised as a higher-order construct comprising knowledge and skills, investigative techniques, and professional experience. The significant relationship observed indicates that these competency dimensions collectively contribute to auditors' professional effectiveness in implementing audit mechanisms. This finding supports the theoretical proposition of Human Capital Theory that knowledge, skills, and experience function as valuable human capital resources that enhance professional performance within specialised auditing contexts.

The large effect size ( $f^2 = 1.056$ ) indicates that investigative audit competencies make a substantial contribution to explaining variations in audit mechanisms implementation within the proposed model. Although organisational support, resource availability, and workplace conditions may also influence auditors'

effectiveness (Rumasukun, 2024; Tyas & Budiwitjaksono, 2024), the present findings suggest that investigative audit competencies remain strongly associated with the implementation of audit mechanisms. This highlights the practical importance of competency development in preparing auditors to respond to increasingly complex fraud risks and evolving auditing requirements.

From an educational perspective, the findings suggest that competencies perceived as important by practising auditors may warrant greater emphasis within accounting education and professional development programmes. In particular, learning experiences that strengthen analytical reasoning, investigative techniques, and practical auditing exposure may better support the development of competencies required in contemporary auditing practice. These implications are derived from auditors' perceptions regarding professional competencies and should not be interpreted as a direct evaluation of existing accounting curricula.

**Table 1: Measurement and Structural Model Results**

Construct	$\alpha$	CR	AVE	R <sup>2</sup>	$\beta$	f <sup>2</sup>	p-value
Investigative Audit Competencies → Audit Mechanisms	0.953	0.959	0.659	0.577	0.717	1.056	< 0.001

#### **4.0 Conclusion**

This study examined the relationship between investigative audit competencies and the implementation of audit mechanisms among independent auditors in Malaysia. Grounded in Human Capital Theory (HCT), investigative audit competencies were conceptualised as a higher-order construct comprising knowledge and skills, investigative techniques, and professional experience. The findings suggest a significant positive relationship between investigative audit competencies and the implementation of audit mechanisms, suggesting that auditors with stronger competencies tend to report greater implementation of audit mechanisms in professional practice. These findings support the relevance of Human Capital Theory in explaining how knowledge, skills, and experience function as valuable forms of human capital associated with professional effectiveness within investigative auditing contexts.

This study contributes theoretically by applying Human Capital Theory to the domain of investigative auditing and empirically demonstrating the association between investigative audit competencies and audit mechanism implementation. This study further demonstrates that Human Capital Theory remains relevant in explaining how competency-based human capital is associated with professional effectiveness in investigative auditing context. Practically, the findings provide useful insights for audit practitioners, professional bodies, and policymakers regarding the importance of competency development in strengthening investigative audit practices and supporting effective audit mechanisms.

Several limitations should be acknowledged. First, this study was restricted to independent auditors practising in Klang Valley, which may limit the generalisability of the findings to other geographical regions and professional contexts. Second, this study employed a cross-sectional survey design based on self-reported perceptions, which limits conclusions regarding causality and changes in competencies or audit practices over time. Future studies may extend the investigation to auditors from different regions and professional settings, while examining contextual factors such as organisational support, technological adoption, and regulatory environments that may influence the relationship between investigative audit competencies and audit mechanisms implementation. Additionally, the role of emerging technologies, including artificial intelligence and data analytics tools, warrants further investigation to better understand their contribution to competency development and audit practice effectiveness.

From an educational perspective, the findings suggest that competencies perceived as important by practising auditors may warrant greater emphasis within accounting education and professional development programmes. In particular, learning opportunities that strengthen analytical reasoning, investigative techniques, and practical auditing exposure may better support the development of competencies required in contemporary auditing practice. These recommendations are derived from auditors' perceptions regarding professional competencies and should not be interpreted as a direct evaluation of existing accounting curricula.

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### **Author Contributions**

**W. M. W. A. Razak:** Conceptualisation of the research framework and study objectives; Development of the methodological design; Data collection, data curation, and analysis; Application and validation of the assessment instruments; Interpretation of results; Writing Original Draft Preparation; Writing Review and Editing; Visualisation of statistical outputs; and Overall Project Administration throughout the research process. **N. M. Anuar:** Reviewing & Collaborator.

### **Conflicts of Interest**

The author declares that the manuscript has not been published elsewhere and is not under consideration by any other journal. The author affirms that there is no conflict of interest associated with the conduct or reporting of this research, and all procedures, analysis, and interpretations were carried out independently and objectively.

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