



BRIDGING TECHNOLOGY AND QUALITY: A SYSTEMATIC REVIEW OF INFORMATION SYSTEM (IS) EFFECTIVENESS IN ENHANCING TAX AUDIT QUALITY

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Abstract:

In an era of accelerating digital transformation, the integrity and efficiency of tax audits have become more critical than ever. As governments confront increasing fiscal pressures, ensuring high-quality audits is essential to safeguarding national revenues and public trust. However, despite widespread implementation of Information Systems (IS) in audit processes, there remains a limited understanding of how IS effectiveness truly impacts tax audit quality. This systematic literature review seeks to address this pressing gap by synthesizing empirical evidence on the role of IS in enhancing tax audit performance. Guided by the PRISMA protocol, an advanced search strategy was applied across Scopus and Web of Science databases, yielding 25 eligible primary studies. Through thematic analysis, four dominant themes were identified: (1) System Quality and Technological Infrastructure, which highlights the importance of robust, integrated digital tools in improving audit efficiency; (2) Information Quality and Audit Decision-Making, emphasizing the role of reliable, timely, and relevant data in strengthening auditor judgment; (3) Service Quality and Auditor Support Systems, underlining the influence of technical support, training, and responsiveness on successful IS adoption; and (4) Intention to Use and Technology Acceptance in Auditing, focusing on behavioural and organizational factors shaping IS utilization. The review reveals that IS effectiveness is not solely a matter of system performance but also hinges on how well systems are aligned with user needs, organizational context, and audit objectives. These findings offer urgent and practical implications for tax authorities, developers, and policymakers seeking to enhance audit credibility through digital innovation. By bridging the gap between technology and audit practice, this review lays the groundwork for more targeted investments and informed strategies in digital audit reforms.

Keywords:

Information System, Audit Quality, Audit Effectiveness

Introduction

In the era of digital transformation, tax authorities worldwide are increasingly leveraging information systems (IS) or information technology (IT) to improve the quality and efficiency of tax audits. The Inland Revenue Board of Malaysia (IRBM), like many other tax agencies, faces mounting pressure to ensure transparency, compliance, and accountability amid growing complexities in taxpayer behaviour and cross-border transactions (Majdanska et al., 2017; Slemrod, 2018). IS play a crucial role in this context by enabling tax auditors to access real-time data, perform sophisticated analyses, and identify discrepancies with greater accuracy and speed (Blaufus et al., 2024; Hartanto & Rahmiati, 2025; Milojević & Radosavljević, 2019; Siti Kurnia Rahayu, 2020; Sriram, 2015). The effectiveness of such systems directly impacts the quality of tax audits defined by their ability to detect non-compliance, ensure fair assessments, and build public trust (Kartika & Aprilianita, 2022; Sari & Susanto, 2018; Setiawan et al., 2020). Given the critical nature of audit quality in maintaining fiscal sustainability and public confidence, understanding the extent to which IS contributes to this goal is both timely and significant.

Despite a growing body of literature exploring tax audit processes and IS adoption in public sector settings, there remains a lack of comprehensive synthesis on how and to what extent IS effectiveness enhances audit quality. Studies by DeLone and McLean (2003) (D&M ISSM) laid foundational models to evaluate IS success, emphasizing dimensions such as system quality, information quality, service quality, and user satisfaction (Al-Okaily, 2024; Le et al., 2020; Shagari et al., 2017; Simamora, 2019). More recent research integrates these models into public sector contexts, highlighting positive associations between IS quality and audit performance. However, findings remain fragmented, with inconsistencies in how IS effectiveness is conceptualized and measured across studies. Some scholars emphasize technical functionalities and user-friendliness, while others focus on organizational support and system integration. Additionally, few studies have addressed the moderating factors such as time pressure, KPIs, or auditors' digital literacy that may influence the IS–audit quality relationship. This article seeks to fill this gap through a systematic literature review (SLR), guided by the D&M ISSM, to answer the core research question: How effective are IS in enhancing tax audit quality, and what factors influence this relationship? The objective is to map current findings, identify theoretical and empirical gaps, and propose a refined understanding of IS effectiveness in the tax audit context. This study not only contributes to the academic discourse by integrating multi-theoretical perspectives but also offers practical insights for policymakers and tax administrators seeking to optimize digital tools for higher audit standards.

Literature Review

The integration of IS into audit practices has emerged as a strategic enabler of audit quality. Technological advancements have been shown to enhance audit efficiency, accuracy, and adaptability. Research by Betti and Sarens (2021), Huh et al. (2021), Rahman and Ziru (2023) confirms that strong IS audit inputs particularly within digitally capable firms correlate with improved detection of anomalies, better data handling, and responsiveness to complex

reporting environments. These findings suggest that modern auditing increasingly depends on digital tools that support real-time analysis and risk-based approaches. However, challenges remain, particularly in less developed contexts. Studies by Allami et al. (2024) and Feliciano and Quick (2022) reveal a gap between the recognized importance of audit technologies and auditors' actual digital proficiency. Thottoli and K.V (2022) further report that while IS adoption and training support audit practices, low confidence in technology use limits its effectiveness. These insights underscore the need for structured training, ongoing support, and a culture that encourages technological confidence to fully harness IS capabilities in auditing.

Beyond individual competence, the organizational environment serves as a vital mediator in determining audit outcomes. Research by Alqaraleh et al. (2022), Zainudin et al. (2021), and Risanti and Aswar (2021) highlights that organizational culture, system understanding, and professional scepticism significantly influence IS adoption effectiveness in audits. Supportive environments that foster continuous learning and provide appropriate technological infrastructure are associated with enhanced audit quality. Additionally, studies by Le et al. (2022), Al-Temimi and Abdullah (2023), and Shin and Park (2022) confirm that integrating IT systems with human expertise improves audit planning, expedites fieldwork, and strengthens financial reporting accuracy.

The digital transformation of the audit field has also reshaped auditors' roles, requiring new digital competencies. Findings from Rahman and Ziru (2023), Alkabbji et al. (2023), and Zhu and Xie (2024) show that auditors proficient in IT maintain audit quality more effectively during disruptions, such as public emergencies. These studies emphasize that digital readiness including familiarity with automation and AI tools enhances audit resilience. Similarly, Stoel and Havelka (2021) and Goicoechea et al. (2021) stress that organizational support, effective communication, and strategic planning are just as essential as technical systems in optimizing IT audit outcomes. Nugrahanti et al. (2024), Chóez (2022), and Drogalas et al. (2024) emphasize that supportive work environments, collaborative IT use, and ongoing professional development enhance internal audit effectiveness and decision-making. Nonetheless, regional disparities and technological access remain significant obstacles. As noted by Al-Sayyed et al., (2021), Allami et al. (2024), and Mohd Noor et al. (2022), digital adoption is often constrained by infrastructure limitations, restricted access to advanced tools, and insufficient institutional support.

In summary, current literature underscores the multifaceted role of IS in enhancing audit quality, which extends beyond system implementation to include organizational dynamics, auditor readiness, and cultural alignment. Despite its potential, digital transformation faces hurdles such as skills gaps and environmental constraints. Addressing these challenges through targeted training, improved methodologies, and supportive policies is essential to fully realize the benefits of IS innovations and ensure lasting improvements in audit quality.

Research Question

Research questions are essential to a systematic literature review (SLR), as they define its scope, focus, and methodology. They guide study selection, ensure consistency, and reduce bias, enabling a comprehensive and structured search for evidence. Well-defined questions also facilitate clear data analysis, enhance transparency, and support reproducibility. Ultimately, strong research questions align the review with its objectives, whether identifying gaps, assessing effectiveness, or tracking trends. Formulating research questions is a critical step in

planning an SLR, as it drives the entire review process (Kitchenham, 2007). In this study, the PICO framework—a tool suited for qualitative reviews—was used to structure the research questions. PICO stands for:

1. **Population (P):** The specific group or participants under study, such as a professional community or organizational setting.
2. **Interest (I):** The key phenomenon or issue being explored, like a process, behavior, or intervention.
3. **Context (Co):** The environment or setting in which the population and interest are situated, including geographic, institutional, or sectoral conditions.

The PICO framework structures research questions by organizing these core elements, ensuring clarity and focus. This method streamlines literature identification and supports coherent study design. Using this approach, four research questions were developed.

1. How does the quality of technological infrastructure and system reliability influence the effectiveness of tax auditors in delivering high-quality tax audits?
2. To what extent does the quality of information systems impact tax auditors' decision-making accuracy and effectiveness in audit procedures?
3. How does the quality of IS-related support services affect auditors' capability to perform reliable and timely tax audits?
4. What factors influence tax auditors' intention to adopt and use information systems in improving tax audit quality?

Material and Methods

Identification

Essential phases of the systematic review process were used in this study to gather a substantial amount of pertinent literature. Keyword selection was the first step in the procedure, which was then followed using dictionaries, thesauri, encyclopaedias, and prior research to find similar terms. As indicated in Table 1, all pertinent phrases were found, and search strings were created for the Web of Science and Scopus databases. From the two databases, 1,671 papers pertinent to the study issue were found at this first stage of the systematic review.

Screening

The screening process represents the second crucial stage in conducting a Systematic Literature Review (SLR). During this phase, records were carefully evaluated against predetermined exclusion criteria to ensure the relevance and quality of the selected studies. The identification phase marks the initial step in the systematic literature review (SLR) process. In this study, searches were conducted using two prominent databases, Scopus and Web of Science (WoS), with the keywords "information technology", "information systems", "audit quality", "audit effectiveness", "audit performance" and "auditor". This comprehensive search strategy ensured a wide coverage of relevant literature and provided a solid foundation for the subsequent screening and selection stages of the review. A total of 1,302 records were initially screened. Exclusion criteria included non-English publications, studies published before 2021, conference papers, book chapters, review articles, in-press articles, and works categorized under Business, Management and Accounting, Economics, Econometrics and Finance, and

Social Sciences. After applying these filters, 133 studies from Scopus and 46 from Web of Science were retained, resulting in 158 unique records. A subsequent duplication check identified and removed 22 duplicate papers (see Table 2). This rigorous screening ensured that only the most relevant, current, and high-quality studies were included, strengthening the reliability and validity of the SLR findings.

Table 1: The Search String

Scopus	TITLE-ABS-KEY (("information system" OR "information technology") AND ("audit quality" OR "audit effectiveness" OR "audit performance" OR " auditor")) AND PUBYEAR > 2021 AND PUBYEAR < 2025 AND (LIMIT-TO (SUBJAREA , "BUSI") OR LIMIT-TO (SUBJAREA , "ECON") OR LIMIT-TO (SUBJAREA , "SOCI")) AND (LIMIT-TO (DOCTYPE , "ar")) Date of Access: May 2025
WoS	("information system" OR "information technology") AND ("audit quality" OR "audit effectiveness" OR "audit performance" OR " auditor") (Topic) Date of Access: May 2025

Eligibility

The third step in the systematic literature review process is the eligibility phase, during which 158 articles were shortlisted for detailed evaluation. At this stage, the titles, abstracts, and key content of each article were meticulously reviewed to determine their alignment with the predefined inclusion criteria and the specific objectives of the current study. Each article was critically assessed for relevance, methodological rigor, and empirical grounding. As a result of this thorough screening, 132 articles were excluded based on the following criteria: (i) the study fell outside the scope of the research domain, (ii) the title did not accurately reflect the study's focus, (iii) the abstract was not aligned with the research objectives, or (iv) full-text access was unavailable, precluding a comprehensive assessment of empirical validity. Ultimately, 25 articles met all eligibility requirements and were retained for inclusion in the systematic review. These selected studies form a focused and methodologically sound foundation for subsequent analysis, ensuring that the review's findings are both credible and directly aligned with the research objectives.

Table 2: The Selection Criterion is Searching

Criterion	Inclusion	Exclusion
Language	English	Non-English
Timeline	2021 – 2025	< 2021
Literature type	Journal (Article)	Conference, Book, Review
Publication Stage	Final	In Press

Subject Area	Business, Management and Accounting Economics, Econometrics and Finance Social Sciences	Besides : Business, Management and Accounting Economics, Econometrics and Finance, Social Sciences
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Data Abstraction and Analysis

An integrative analysis approach was adopted to synthesize findings from the 25 selected quantitative studies, aiming to identify key themes and subthemes related to audit quality in Malaysia. Thematic development began during data collection and involved a systematic review of each study's methodology and findings. The lead author, in collaboration with co-authors, engaged in reflective discussions to derive meaningful themes grounded in the research context. A reflective log was maintained throughout to record analytical decisions and emerging insights. To ensure reliability, the results were cross-checked for consistency, with any discrepancies resolved through group consensus. This collaborative and transparent process strengthened the credibility and depth of the thematic analysis.

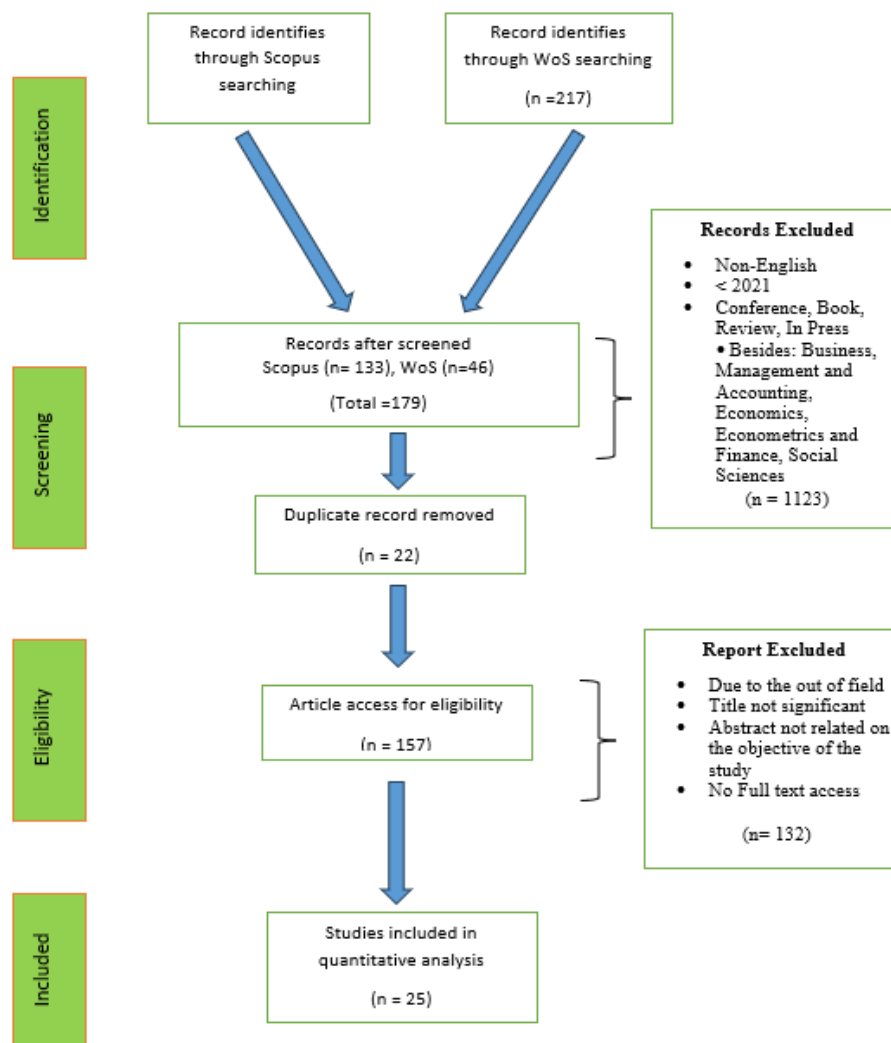


Figure 1: Flow Diagram of the Proposed Searching Study

Source: Moher (2009)

Table 3: Number And Details of Primary Studies Database

No	Authors	Title	Year	Journal	Scopus	WoS
1	Goicoechea et al., (2021)	Improving Audit Reports: A Consensus Between Auditors and Users	2021	International Journal of Financial Studies	/	
2	Al-Temimi and Abdullah (2023)	The Impact of Accounting Conservatism and Information Technology on Audit Performance and Quality of Financial Reporting: Empirical Analysis in the Oil Industry in Iraq	2023	Cuadernos De Economia	/	
3	Thottoli and K.V, (2022)	Characteristics Of Information Communication Technology and Audit Practices: Evidence from India	2022	Journal of Information and Knowledge Management Systems	/	
4	Weshah (2021)	Adopting Modern IT Systems Is Vital in Employing Accountants and Internal Auditors (Educational Perspective): A Case Study in Jordan Cement Company – Lafarge	2021	Jordan Journal of Business Administration	/	
5	Betti and Sarens (2021)	Understanding The Internal Audit Function in A Digitalised Business Environment	2021	Journal Of Accounting and Organizational Change	/	
6	T. T. Le et al., (2022)	Risk-Based Approach and Quality of Independent Audit Using Structure Equation Modelling – Evidence from Vietnam	2022	European Research on Management and Business Economics	/	
7	Zainudin et al., (2021)	Analysis Of Potential Factors Influencing Audit Quality: The Moderating Effect of Time Budget Pressure	2021	Problems And Perspectives in Management	/	
8	Shin and Park (2022)	Does Human Resource Investment in Internal Controls and Information Technology Improve Audit Efficiency?	2022	International Journal of Auditing	/	
9	Rahman and Ziru (2023)	Clients' Digitalization, Audit Firms' Digital Expertise, And Audit Quality: Evidence from China	2023	International Journal of Accounting and Information Management	/	/

10	Al-Sayyed et al., (2021)	The Effect of Artificial Intelligence Technologies on Audit Evidence	2021	Accounting	/	
11	Alkabbji et al. (2023)	The Impact of the Digital Revolution on The Efficiency of Auditors in Auditing Computerized Programs	2023	Information Sciences Letters	/	
12	Stoel and Havelka (2021)	Information Technology Audit Quality: An Investigation of the Impact of Individual and Organizational Factors	2021	Journal Of Information Systems	/	
13	Risanti and Aswar (2021)	Determinants Influencing the Audit Quality: Empirical Evidence from Indonesia	2021	Universal Journal of Accounting and Finance	/	
14	Alqaraleh et al. (2022)	The Mediating Role of Organizational Culture on The Relationship Between Information Technology and Internal Audit Effectiveness	2022	Corporate Governance and Organizational Behavior Review	/	
15	Feliciano and Quick (2022)	Innovative Information Technology in Auditing: Auditors' Perceptions of Future Importance and Current Auditor Expertise	2022	Accounting In Europe	/	
16	Allami et al.(2024)	Factors Associated with the Intention to Use Information Technology in Audit in Iraq	2024	Information Discovery and Delivery	/	
17	Huh et al. (2021)	The Impact of the Input Level of Information System Audit on the Audit Quality: Korean Evidence	2021	International Journal of Accounting Information Systems	/	/
18	Nugrahanti et al. (2024)	Auditor Work Environment and Professional Judgment in Audit: Evidence from Indonesia	2024	Australasian Accounting, Business and Finance Journal	/	/
19	Lawal et al. (2022)	The Role of Accounting Information Systems in Firms' Performance During the Covid-19 Pandemic	2022	Journal Of Governance and Regulation	/	
20	Drogalas et al., (2024)	The Important Role of Information Technology and Internal Auditing in Risk Management: Evidence from Greece	2024	Journal Of Operational Risk	/	/

21	Sujana and Dharmawan, (2023)	Audit Quality Improvement and The Role of Risk: Audit as A Moderator	2023	Australasian Accounting Business and Finance Journal		/
22	Zhu and Xie (2024)	Do Major Public Emergencies Affect Audit Quality? - Evidence From China	2024	Applied Economics		/
23	Ghani and Jahim (2023)	Can Auditors' Attributes and Organisational Resources Influence Information Technology Audit Quality in the Public Sector?	2023	Electronic Government- An International Journal	/	/
24	Noor et al. (2022)	An Examination of The Utilization of Audit Technology in Influencing Audit Job Performance	2022	Asia-Pacific Management Accounting Journal	/	/
25	Chóez (2022)	Informatics Audit Activity and Its Impact on Internal Audit Performance. A Competency-Based Study	2022	Revista Universidad Y Sociedad		/

Quality Appraisal

Following the systematic review protocol by Kitchenham (2007), a rigorous quality assessment was conducted after selecting the primary studies to ensure research reliability and validity. This study applied the framework developed by , which consists of six quality assessment (QA) criteria to evaluate the methodological robustness of each included study. QA1 examines whether the study's purpose is clearly articulated, while QA2 assesses the relevance and potential contribution of the research. QA3 focuses on the clarity and appropriateness of the methodology, and QA4 evaluates the definition of key concepts and theoretical frameworks. QA5 checks whether the study has been benchmarked against similar research, and QA6 reviews whether limitations are clearly acknowledged. These criteria collectively provide a comprehensive view of each study's rigor and relevance. Each paper was independently reviewed by three experts using a standardized scoring system: "Yes" (1), "Partly" (0.5), and "No" (0). Studies with a total score above 3.0 qualified for inclusion in the next phase. This threshold ensured that only high-quality studies proceeded to synthesis. The quality assessment of all 26 primary studies (PS1–PS25) revealed key strengths and gaps across the literature, contributing essential insights to this systematic review.

Clarity of Purpose and Usefulness (QA1 and QA2)

A strong majority of the studies demonstrated clarity in stating their objectives and the usefulness of their work. All 25 papers scored full marks ($Y = 1$) for QA1 and QA2, showing that authors clearly communicated their research aims and the practical implications of their findings. This consistency reflects a robust foundation in relevance and direction, essential for studies dealing with audit quality, information systems, and technology in auditing. Such clarity enhances the ability of other researchers and policymakers to grasp the contribution and contextual significance of the research.

Methodology (QA3)

The methodology criterion revealed greater variation. While some studies, such as PS2, PS5, PS9, PS10, and PS13, outlined their research design and data analysis techniques effectively, others provided only partial detail. About half the studies received a partial score ($P = 0.5$) for QA3, suggesting that while methodology was presented, it often lacked sufficient transparency or depth for replication. A few studies scored low due to vague descriptions of data sources, sampling methods, or analytical techniques. This inconsistency affects the reliability and generalizability of the research findings, making it harder to reproduce or compare outcomes.

Conceptual Clarity (QA4)

Most studies performed well in QA4, receiving full or partial credit. The clear definition of theoretical constructs and variables was evident in studies applying established models like the D&M ISSM. However, some papers lacked depth in operationalizing core concepts, affecting the interpretability of results. Well-defined conceptual frameworks are crucial for building coherent arguments, particularly in multidisciplinary fields like audit and information technology.

Comparison with Similar Work (QA5)

This was one of the weaker areas overall. Many papers did not thoroughly situate their findings within the broader academic discourse. Only a few studies (e.g., PS2, PS10, and PS20) demonstrated strong literature integration and comparative analysis. Most received partial or zero scores, highlighting a tendency to treat their findings in isolation. A lack of comparison

with prior studies reduces the paper's academic value and its potential to inform cumulative knowledge or identify consistent patterns across studies.

Acknowledgement of Limitations (QA6)

Another common shortfall was the limited acknowledgment of study limitations. Very few studies fully discussed their constraints, with many omitting them entirely or providing only minimal commentary. This omission is concerning, as it undermines the critical evaluation of the work and may lead to overinterpretation of findings. Acknowledging limitations not only enhances credibility but also guides future researchers in refining methodologies and exploring unresolved issues.

Overall Quality and Implications

The overall quality of the studies ranged from moderate to high. Several papers achieved scores above 80%, indicating strong adherence to most quality criteria. These studies can be considered methodologically sound and conceptually clear, offering reliable insights into the role of information technology and auditor characteristics in influencing audit quality. However, a few studies fell below 60%, largely due to unclear methodologies or a lack of engagement with existing literature. This variability suggests the need for more standardized reporting and stronger methodological rigor in future research. In conclusion, the quality assessment reveals that while the literature offers valuable insights into audit quality and digital integration, there remains room for improvement particularly in methodological clarity, conceptual transparency, and critical self-evaluation. Addressing these areas will enhance the robustness of future studies and contribute to a more coherent and impactful body of knowledge in the field of audit quality and information systems.

Table 4: Number And Details of Primary Studies Database

Primary Study	QA1	QA2	QA3	QA4	QA5	QA6	Total Mark	Percentage (%)
PS1	Y	Y	Y	Y	P	P	5	83.30%
PS2	Y	Y	Y	Y	Y	Y	6	100.00%
PS3	Y	Y	P	Y	P	P	4.5	75.00%
PS4	Y	Y	Y	P	P	P	4.5	75.00%
PS5	Y	Y	P	Y	P	N	4	66.70%
PS6	Y	Y	Y	Y	Y	Y	6	100.00%
PS7	Y	Y	Y	Y	Y	Y	6	100.00%
PS8	Y	Y	Y	P	Y	P	5	83.30%
PS9	Y	Y	Y	Y	P	P	5	83.30%
PS10	Y	Y	Y	Y	Y	Y	6	100.00%
PS11	Y	Y	P	P	P	N	3.5	58.30%
PS12	Y	Y	Y	Y	P	N	4.5	75.00%
PS13	Y	Y	Y	Y	P	P	5	83.30%
PS14	Y	Y	Y	Y	Y	P	5.5	91.70%
PS15	Y	Y	P	P	N	N	3	50.00%
PS16	Y	Y	Y	Y	Y	Y	6	100.00%
PS17	Y	Y	Y	Y	P	P	5	83.30%
PS18	Y	Y	Y	Y	P	Y	5.5	91.70%
PS19	Y	Y	P	Y	P	P	4.5	75.00%

PS20	Y	Y	Y	Y	Y	Y	6	100.00%
PS21	Y	Y	Y	P	Y	P	5	83.30%
PS22	Y	Y	Y	Y	P	N	4.5	75.00%
PS23	Y	Y	Y	Y	P	Y	5.5	91.70%
PS24	Y	Y	Y	Y	Y	Y	6	100.00%
PS25	Y	Y	P	P	P	P	4	66.70%

Result and Finding

The growing reliance on digital systems in tax administration has positioned Information Systems (IS) as a critical factor in enhancing tax audit quality. As financial processes become increasingly complex and data-driven, tax authorities are integrating advanced technologies to improve audit accuracy, efficiency, and transparency. In response to these shifts, the effectiveness of IS in supporting audit functions has gained considerable academic and practical interest. Despite widespread IS adoption, existing research remains fragmented, lacking a cohesive understanding of how IS improves tax audit outcomes. To address this gap, this study conducts a systematic literature review using the PRISMA protocol, based on 25 primary studies sourced from Scopus and Web of Science databases. The review aims to evaluate how IS contributes to audit quality within tax environments. Four major themes emerged from the analysis: (1) System Quality and Technological Infrastructure, which involves system functionality, integration, and reliability; (2) Information Quality and Audit Decision-Making, focusing on the relevance and accuracy of data outputs; (3) Service Quality and Auditor Support Systems, including IT support, responsiveness, and training; and (4) Intention to Use and Technology Acceptance in Auditing, which covers user attitudes, system usability, and organizational readiness. These themes reflect the interplay between technology and human factors in shaping audit effectiveness.

Theme 1: System Quality and Technological Infrastructure

System quality and technological infrastructure form the technical backbone of any information system and are essential components in enhancing tax audit quality. This theme emphasizes reliability, integration, automation, and the digital maturity of auditing environments. A key study by Betti and Sarens (2021) examined how internal audit functions are being reshaped in digitally advanced organizations. Their findings pointed out that agility in internal audit planning and digital proficiency, particularly in cybersecurity, are now prerequisites. Similarly, Le et al. (2022) and Mohd Noor et al. (2022) highlighted that the deployment of a risk-based audit approach is heavily influenced by IT support and client system infrastructure. Their structural equation modelling revealed a strong link between audit quality and the systemic capabilities provided by audit software and risk evaluation tools. Zainudin et al. (2021) extended this view by emphasizing how IS comprehension and system integration significantly impact auditors' performance, especially under pressure from time constraints.

Furthermore, Stoel and Havelka (2021) reinforced that both individual competencies and organizational system support are crucial for high-quality IT audits. Their research delineated that while IT knowledge is important, real gains in quality occur when audit systems are well-designed, intuitive, and embedded into audit planning processes. Al-Sayyed et al. (2021) explored how artificial intelligence tools particularly expert systems contribute to collecting and validating audit evidence. These findings suggest that AI-enhanced systems can significantly reduce manual errors and time consumption. Similarly, Rahman and Ziru (2023) asserted that digital sophistication at both client and audit firm levels is a strong predictor of

audit quality, especially when IT audit expertise is embedded within teams. In another relevant work, Alkabbji et al. (2023) and Sujana and Dharmawan (2023) stressed the value of system readiness and digital auditing environments in boosting auditor efficiency, especially in computerized program auditing. Their findings confirm that the quality of system architecture and its responsiveness directly impacts auditor effectiveness. Chóez (2022) expanded this perspective by illustrating that both system design and collaborative use within audit teams determine the efficacy of audit outcomes. In line with this, Alqaraleh et al. (2022) proposed that robust organizational systems mediated by IT culture play a pivotal role in enhancing internal audit effectiveness. Moreover, the study by Drogalas et al. (2024) showed that system quality in terms of real-time monitoring and data availability supports superior risk management and audit assurance.

Finally, Shin and Park (2022) contributed to this theme by providing empirical evidence that system input levels such as the experience of internal control personnel and the amount of time invested in IT audit—are inversely related to fieldwork lags, indicating greater audit efficiency. Risanti and Aswar (2021), Thottoli and K.V (2022), Al-Temimi and Abdullah (2023) and Rahman and Ziru (2023) similarly supported the notion that robust technological infrastructure and integration with core audit activities reduce audit risk and enhance output accuracy. Together, these studies establish that system quality is not an isolated variable but an enabler of broader audit success when properly aligned with auditor capability and organizational needs.

Theme 2: Information Quality and Audit Decision-Making

The theme of information quality and its influence on audit decision-making emphasizes the accuracy, timeliness, relevance, and completeness of data provided through audit information systems. High-quality information is a fundamental prerequisite for audit effectiveness, as it directly supports auditors' ability to interpret findings and make well-grounded judgments. Shin and Park (2022) revealed that experienced internal control personnel contribute to higher-quality outputs by effectively filtering and structuring audit-relevant data. Their findings suggest that the usefulness of audit reports is significantly heightened when the information flow from internal departments is streamlined and supported by quality systems. Rahman and Ziru (2023) explored this dynamic by investigating the effects of digitalization on both the client and auditor sides. They discovered that firms with higher levels of IT sophistication and data governance mechanisms are better positioned to support accurate and reliable audit decisions. The moderating role of audit firm expertise in utilizing digital information systems was found to further strengthen audit quality, highlighting the importance of information quality as a mediating factor. Additionally, Huh et al. (2021) found that investment in system audits, especially in terms of audit personnel and audit hours, was significantly related to conservative financial reporting and reduced discretionary accruals. This outcome was interpreted as a reflection of how superior information integrity leads to more defensible audit findings. The contribution of Risanti and Aswar (2021) also aligns with this theme. Their study concluded that understanding of information systems among auditors correlates positively with audit quality. Auditors who can assess the completeness and logic of information inputs are better equipped to perform effective audits. However, their study also found that motivation alone, without high-quality information support, does not yield meaningful improvements in audit results. This reinforces the argument that the quality of audit outcomes is contingent on both human and informational inputs.

In sum, the reviewed literature under this theme demonstrates that accurate, consistent, and timely information from digital systems enhances the auditor's interpretive accuracy and reduces the risk of errors. Information quality serves as both a foundation and a multiplier for other audit attributes, underscoring its indispensable role in the digital audit environment.

Theme 3: Service Quality and Auditor Support Systems

Service quality, while often overshadowed by hardware or software considerations, is an essential determinant in the effectiveness of audit functions. This dimension includes the responsiveness of IT support teams, the quality of auditor training, the availability of user manuals and troubleshooting mechanisms, and the reliability of continuous technical assistance. When auditors face complex, time-sensitive tasks, the presence of a dependable support system often determines whether a system's capabilities are fully utilized. Stoel and Havelka (2021) identified that the organizational dimension especially in the context of planning and client-auditor relationships often surpasses technical functionality in driving information systems audit quality. Their findings suggest that without supportive organizational infrastructure, even the most advanced IT systems may fall short of delivering consistent audit value. This emphasis on the auditor's working environment is also explored by Nugrahanti et al. (2024), who demonstrated that the quality of the audit work environment including access to effective IT support positively correlates with professional judgment in audit activities. Their study highlighted how well-supported auditors, equipped with timely guidance and collaborative internal systems, are better positioned to exercise informed discretion in evaluating audit evidence. Similarly, Allami et al. (2024) focused on the factors influencing the intention to use IT in audits, but their findings also point to the significant role of professional support and the presence of technically equipped personnel in fostering confidence among auditors. Although organizational support alone may not drive system usage, its absence creates barriers to technology adoption and can diminish the expected benefits of IS deployment in auditing. Furthermore, Feliciano and Quick (2022) discussed the mismatch between auditors' perceived importance of advanced IT tools and their current expertise in using them. Their study revealed an "importance knowledge gap," emphasizing that although auditors recognize the value of tools such as data mining and digital analytics, insufficient training or institutional support prevents them from utilizing these tools effectively. Inadequate auditor training and delayed technical assistance can therefore limit the effectiveness of IT systems, even in technologically advanced firms. This shows that service quality is not only about responsiveness but also includes strategic investment in training and capacity building, both of which are instrumental in achieving high-quality audit outcomes (Goicoechea et al., 2021; Weshah, 2021).

Theme 4: Intention to Use and Technology Acceptance in Auditing

The intention to use and the actual adoption of technology within the audit process are deeply rooted in behavioural, organizational, and technological factors. This theme captures the attitudes, perceived usefulness, and social influences that shape auditors' readiness to integrate new technologies into their workflows. Allami et al. (2024) reported that among Iraqi auditors, the intention to use audit related IT tools was significantly influenced by social and external pressures, particularly in environments where digital infrastructure is still developing. However, organizational support and professional training showed only marginal effects. These findings indicate that perceived norms and expectations, rather than formalized institutional support, often serve as primary motivators for IT adoption in developing economies. Feliciano and Quick (2022) similarly identified a significant gap between the

recognized importance of IT tools especially emerging technologies such as big data and artificial intelligence and the auditors' self-assessed competencies in using them. Younger auditors and those in Big Four firms demonstrated higher acceptance levels and confidence in handling these tools, indicating that demographic and organizational factors are critical enablers of technology acceptance. Their results point to the need for more structured education and professional development initiatives tailored to bridge this expertise gap, thereby transforming intention into consistent usage. Additionally, Alqaraleh et al. (2022) highlighted the role of organizational culture in mediating the relationship between IT capabilities and internal audit effectiveness. Their study demonstrated that even when auditors possess the technical knowledge and intention to use IS, the broader organizational context especially one that encourages innovation, and continuous improvement greatly influences actual system utilization. In organizations where IT is embraced as a strategic asset rather than a compliance tool, the likelihood of successful system adoption is significantly higher. Therefore, a key insight from this theme is that behavioural intention alone is insufficient; for technology to be effectively adopted, it must be reinforced by conducive institutional structures and auditor empowerment strategies.

Discussion

The findings of this systematic literature review reveal that IS effectiveness plays a multifaceted role in shaping tax audit quality, with the analysis of 25 primary studies uncovering four dominant themes: System Quality and Technological Infrastructure, Information Quality and Audit Decision-Making, Service Quality and Auditor Support Systems, and Intention to Use and Technology Acceptance in Auditing. The most prominent trend observed is the rising emphasis on system quality as a foundational element for audit effectiveness. A significant portion of the reviewed literature highlights that robust digital infrastructure, characterized by interoperability, integration, and automation, enhances the accuracy and timeliness of audit procedures. For instance, studies such as those by Betti and Sarens (2021), Le et al. (2022), and Rahman and Zirur (2023) consistently emphasize the value of technologically advanced environments in enabling auditors to perform with greater precision and efficiency. These systems, when embedded within the audit lifecycle from planning to reporting reduce the occurrence of manual errors and facilitate more informed judgment. Furthermore, papers such as Shin and Park (2022), Zainudin et al. (2021), and Alkabbji et al. (2023) support the notion that auditors benefit from responsive systems with real-time capabilities, particularly in high-pressure or resource-constrained audit environments. These patterns signal a shift from viewing IS as mere tools to recognizing them as strategic enablers that influence audit performance, particularly when paired with internal control capabilities and human capital investment.

In addition to system reliability and architecture, the review reveals that the quality of information extracted and utilized from these systems is equally crucial. Information quality defined through the dimensions of relevance, accuracy, timeliness, and completeness emerged as a central pillar influencing audit decision-making processes. Scholars such as Huh et al. (2021), Risanti and Aswar (2021), and Chen et al. (2024) collectively show that audit quality is amplified when auditors have access to trustworthy data streams, structured reporting, and standardized analytics embedded within IS platforms. Interestingly, the value of high-quality information extends beyond technical accuracy; it enhances auditors' interpretive abilities and professional scepticism, reducing

dependence on personal judgment alone. These insights suggest that decision-making in audits is no longer a purely subjective function but is increasingly being shaped by structured digital inputs. Equally important is the service quality associated with IS, which includes auditor training, system support, and organizational responsiveness. The effectiveness of an IS is frequently hindered not by technological limitations but by the absence of adequate support structures. Studies by Stoel and Havelka (2021), Nugrahanti et al. (2024) and Feliciano and Quick (2022) all underline the importance of institutional backing, ongoing technical assistance, and upskilling initiatives to ensure system adoption and effectiveness. In this regard, professional development programs and responsive IT service channels act as bridges between system capabilities and auditor performance. Moreover, these studies illustrate that misalignment between perceived usefulness and user knowledge often leads to underutilization of advanced IS functionalities. Therefore, a successful IS strategy should not only include software and system investment but also holistic support mechanisms that enable users to interact confidently and effectively with these tools.

The review further uncovers important behavioural dimensions tied to technology acceptance and the intention to use IS in auditing, which are often shaped by organizational culture, peer influence, and perceived ease of use. Scholars such as Allami et al., (2024), Alqaraleh et al. (2022), and (Feliciano and Quick (2022) point out that auditors' readiness to adopt new technologies is deeply influenced by social and organizational norms, particularly in less digitized regions. These behavioural insights reveal that user intention cannot be assumed merely from system availability or training provision. Instead, active participation, motivation, and a positive digital culture are necessary to cultivate sustained usage. Furthermore, the mismatch between auditor expectations and institutional structures often results in resistance or partial adoption, which hinders the realization of IS effectiveness in audit practices. As such, the review highlights that IS deployment in auditing is not a one-size-fits-all approach; it must be accompanied by change management, stakeholder engagement, and digital leadership. From a practical standpoint, the findings advocate for strategic alignment between IS investments and broader organizational goals. Tax authorities and audit institutions should adopt policies that incorporate both technical and behavioural metrics when assessing IS outcomes. For instance, KPIs for IS usage should extend beyond frequency of use to include impact metrics such as error detection rate, audit cycle time, and auditor satisfaction. Furthermore, to ensure continued relevance and adaptability, IS platforms must incorporate features that allow for contextual customization, interoperability with legacy systems, and ongoing updates that reflect regulatory shifts. The review also indicates that future research should focus more intensively on cross-jurisdictional comparisons and longitudinal studies that examine how IS effectiveness evolves over time in relation to technological advancements, organizational maturity, and auditor capability development. This would provide a richer understanding of contextual influences on IS success and audit quality outcomes.

Conclusion

The purpose of this systematic literature review was to examine how IS effectiveness contributes to enhancing tax audit quality, with a focus on four distinct themes: system quality and technological infrastructure, information quality and audit decision-making, service quality and auditor support systems, and intention to use and technology acceptance in auditing. Drawing from 25 selected articles indexed in reputable databases, the study sought to identify

dominant trends, evaluate technological contributions, and assess how IS elements support audit integrity and operational performance. The findings show that well-structured IS, when implemented with robust infrastructure and aligned with user needs, have a significant impact on the accuracy, efficiency, and reliability of tax audits. Furthermore, the integration of real-time data access, automation, and system responsiveness were found to reduce manual workload, enhance fraud detection, and improve the auditor's judgment process. These results underscore the role of IS not only as functional tools but also as strategic mechanisms that shape audit processes and compliance outcomes in the modern auditing environment.

In addition to its theoretical contribution, this review provides practical insights for public institutions and audit firms aiming to improve audit performance through IS implementation. The synthesis highlights that while technological features are essential, the success of IS also depends on factors such as user training, system support, and institutional readiness. The findings suggest that comprehensive adoption strategies, which involve continuous system development and auditor engagement, are crucial for maximizing IS benefits. Nevertheless, this review is subject to certain limitations, including the scope of databases and language restrictions, which may have excluded relevant studies outside the selection criteria. Future research should consider expanding the geographical scope, integrating longitudinal studies, and evaluating emerging technologies such as blockchain and AI in audit practices. Despite these limitations, this review contributes a structured understanding of IS dimensions that influence audit quality, offering a foundation for future exploration and policy enhancement. The significance of this research lies in highlighting IS as a critical factor in advancing audit practices, particularly within tax environments where transparency, accuracy, and efficiency remain fundamental.

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