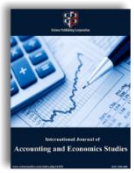
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Research paper



The Impact of Key Factors on Internal Audit Performance: Evidence from Saudi Arabia's Healthcare Sector

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Abstract

This study investigates how auditors' competency, e-audit practices, and management support influence internal audit performance in Saudi Arabia's healthcare sector, operating within the structural transformation of Vision 2030. The research additionally assesses the mediating role of audit quality and the moderating effect of risk management. Structural Equation Modeling (SEM) was utilized to assess direct, indirect, and moderated pathways using data from 80 public healthcare facilities in Riyadh. The findings show that internal audit performance is greatly improved by all three important factors, with audit quality acting as a potent mediator. In order to improve audit governance in healthcare systems undergoing national reform, the study offers theoretical, empirical, and practical insights.

Keywords: *Internal Audit, Government Units in KSA, Saudi Vision 2030, and the Health Sector.*

1. Introduction

More openness for effectiveness and governance is required as part of Vision 2030's transformation of Saudi Arabia's healthcare system. As a result, internal auditing functions are now essential to accomplishing these goals. There are still gaps in auditor independence, competency, and the successful integration of risk management frameworks despite significant regulatory developments, such as the establishment of the Saudi Institute of Internal Auditors and the National Anti-Corruption Commission (Nazaha).
Effective internal auditing procedures improve patient safety, service quality, and governance performance, according to available regional and international data.
Existing regional and international evidence indicates that effective internal audit practices enhance patient safety, service quality, and governance performance. However, empirical studies within Saudi Arabia's public health sector remain limited. This research fills that gap by examining (1) how auditors' competency, e-auditing, and management support influence internal audit performance, (2) the mediating role of audit quality.

1.1. Research objectives

1) To analyze the effect of auditor's competency, e-audit, and management support on internal audit performance.
2) To assess the impact of the auditor's competency, e-audit, and management support on audit quality.
3) To evaluate the influence of audit quality on internal audit performance.
4) To identify the mediating effect of audit quality on the relationship between auditor's competency, E-audit, management support, and internal audit performance.

2. Literature Review

2.1. Governance and internal audit

Governance guarantees accountability, transparency, and manipulation throughout businesses. Internal auditing, in turn, helps governance with the aid of independently comparing risk management, controls, and compliance. Under KSA's Vision 2030, improved governance frameworks are mandated in public healthcare establishments.

2.2. Auditors' competency

According to the Institute of Internal Auditors The functional capabilities of internal auditors can greatly improve in carrying out their duties related to organizational risk management and corporate governance (Arena and Azzone, 2009). Competency reflects the auditor's

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technical mastery, qualifications, ethics, and analytical potential. High competency enhances the reliability of findings, strengthens audit judgment, and decreases bias.

2.3. E-audit

According to Yoon and Kim (2021), high service quality facilitates integration across departments, particularly in e-auditing, enabling internal audit departments to perform efficiently and thereby supporting the broader organizational efficiency. E-audit integration lets in real-time records evaluation, automation, and advanced accuracy. In healthcare settings, electronic systems enhance operational monitoring and compliance assessment.

2.4. Management support

Reference to Dellai et al. (2016) states that an internal audit system is ineffective without management support, that an internal audit lacks the resources to complete its tasks, and that an internal audit cannot outsource competent internal audit people without management support. Support from top management impacts aid allocation, auditor independence, and the broader reputation of audit tips.

2.5. Audit quality as mediator

Endaya and Hanefah (2016) looked at the importance of audit quality as well as the direct relationship between the effectiveness of internal audits and the characteristics of internal auditors. A pleasant audit complements credibility, reduces information asymmetry, and strengthens the linkage between audit antecedents and overall performance outcomes.
Despite ongoing reforms, internal audit units are often poorly structured and inadequately integrated into broader governance frameworks. The discrepancy between policy and actual IA practice highlights a need for targeted, evidence-based solutions (Hailemariam, 2023). Several studies point to the critical role of IA in promoting accountability and safeguarding public assets (El Beshlawy & Ardroumli, 2021). Yet in Saudi Arabia, weak internal audit mechanisms in certain ministries result in ineffective oversight. While institutions such as Nazaha and the Saudi Institute of Internal Auditors were established to strengthen governance, the actual impact of these reforms on IA effectiveness in healthcare remains largely undocumented.

2.6. Theoretical framework and hypotheses development

The theoretical literature review aims to analyze existing models, frameworks, and concepts relevant to internal audit practices, particularly within healthcare organizations. Grounded in organizational governance and the internal audit, this examination integrates auditor competency, e-audit practices, and management aid as key antecedents of internal audit performance. The audit quality factor is positioned as a vital mediating mechanism via human, technological, and organizational sources that translate into powerful audit outcomes. This framework for the research aligns with most previous governance and auditing research and reflects the institutional reforms emphasized under Saudi Vision 2030. For the health sector, internal audit may have several benefits, such as ensuring more accountability, transparency, and efficiency. Internal audit serves as a cornerstone for evaluating and improving organizational processes, while governance frameworks provide the structure for oversight and strategic direction (Goodwin-Groen & Weisman, 2020). By studying the impact of internal audit (IA) on the health care sector in KSA, it can enhance the level of health services for stakeholders in the proposed research model (Fig. 1) and complete the list of hypotheses (Table 1).

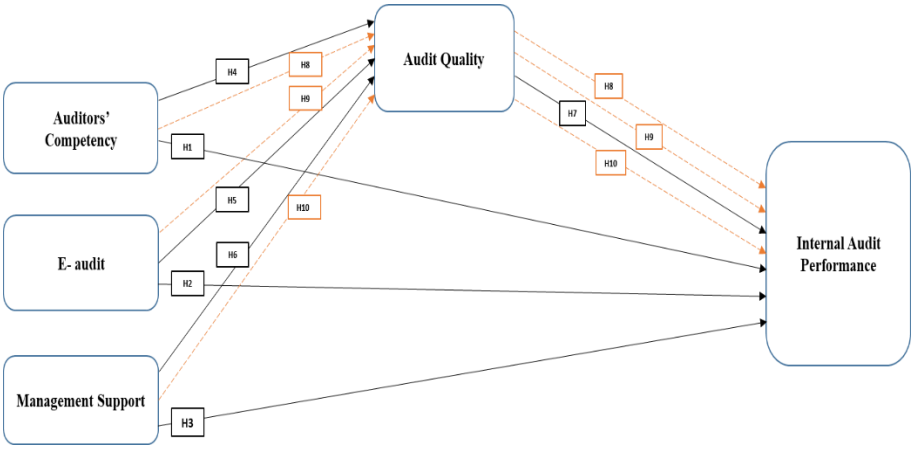


Fig.1: Proposed Research Model.

Table 1: 1 The List of Hypotheses

Hypotheses and expected outcomes
H 1: Auditor's competency has a positive impact on Internal Audit Performance.
H 2: The impact of E-audit positively influences Internal Audit Performance.
H 3: Management Support positively affects Internal Audit Performance.
H 4: Auditor's competency positively affects the Audit quality.
H 5: The impact of E-audit positively affects the Audit quality.
H 6: Management Support positively influences the Quality of the audit.
H 7: The Quality of audit positively affects Internal Audit Performance
H 8: The Audit quality mediates the relationship between Auditor's competency and Internal Audit Performance.
H 9: The Audit quality mediates the relationship between the impact of E-audit and Internal Audit Performance.
H 10: The Quality of audit mediates the relationship between Management Support and Internal Audit Performance.

3. Methodology

This study uses primary data collected through a structured questionnaire administered to internal auditors, financial controllers, and compliance officers in public hospitals across Saudi Arabia. The questionnaire includes closed-ended items based on a 5-point Likert scale and is designed to gather perceptions regarding auditor competency, e-audit implementation, management support, audit quality, risk management, and internal audit performance. A comparable approach was employed by Ai Ping Teoh (2017), who collected questionnaire responses from 137 Malaysian publicly listed companies to assess the impact of risk management implementation on firm performance.
The study relied on primary data gathered via surveys, demonstrating the reliability of structured questionnaires in governance and audit-related research. Primary and secondary data are the two categories of data used in analysis. Primary data was gathered for this study in order to quantify and analyze it. In order to test hypotheses, find patterns, and establish links, this research used quantitative data, which was gathered and analyzed numerically. Recent methodological research confirms that smaller, well-targeted samples can be effective in exploratory healthcare audit studies (Lutfi et al., 2023). PLS-SEM was selected due to its suitability for predictive modelling, its tolerance for non-ordinary facts, and its capability to estimate complicated models with pretty modest pattern sizes. Recent methodological literature (Hair et al., 2022; Henseler, 2023) emphasizes that PLS-SEM is appropriate for research prioritizing concept extension and assessing mediator relationships in organizational settings.
A cross-sectional quantitative layout was applied to the use of the first information accrued through dependent questionnaires distributed throughout 80 public healthcare establishments in Riyadh. Constructs protected:
Auditors' Competency (AC)
E-Audit (EA)
Management Support (MS)
Audit Quality (AQ)
Internal Audit Performance (IAP)

4. Results

Participating institutions varied in size, but the majority employed, consistent with the scale of public hospitals and large medical centers in Riyadh. Larger institutions often have broader service portfolios, more complex risk profiles, and correspondingly greater reliance on internal audit and risk management systems.

Table 1: Demographic Data Descriptive Analysis

Category	Sub-Category	Frequency (%)
Gender	Male	70%
	Female	30%
Age Range	33–40 years	28%
	41–50 years	45%
	51–58 years	27%
Race	Saudi	82%
	Non-Saudi	18%
Education Level	Bachelor's Degree	55%
	Master's Degree	32%
	Professional Certifications (CIA/CPA/CISA)	10%
	Doctorate	3%
Designation	Internal Auditor	38%
	Senior Internal Auditor	25%
	Audit/Risk Manager	22%
	Department Head / Director	15%
Type of Institution	Public Hospital	63%
	Specialized Medical Centre	22%
	Health Cluster	15%
Length of Operation	< 5 years	8%
	5–10 years	17%
	>10 years	75%
Number of Employees	< 250	12%
	250–499	18%
	500–999	34%
	≥ 1,000	36%

4.1. Measurement model

The CFA consequences indicated great convergent validity. Composite reliability ranged from 0.95 to 0.96 across all constructs. Discriminant validity standards had been satisfied. SmartPLS is used for CFA and SEM. Reliability and validity thresholds had been met (loadings >0.7, CR >0.95, AVE >0.50). Collinearity becomes minimum (VIF <1.15).
Reliability analysis was performed using Cronbach's alpha (α) for each of the six constructs. The results are presented in Table 4.2. All constructs exhibit very high internal consistency, with Cronbach's alpha values well above the threshold of 0.70:

Table 4.4: Reliability Analysis (Cronbach's Alpha)

Construct	Number of Items	Cronbach's Alpha (α)	Interpretation
Auditors' Competency (AC)	6	0.971	Excellent reliability
E-Audit (EA)	6	0.969	Excellent reliability
Management Support (MS)	6	0.971	Excellent reliability
Audit Quality (AQ)	6	0.937	Excellent reliability
Internal Audit Performance (IAP)	8	0.975	Excellent reliability

All Cronbach's alpha values exceed the recommended threshold of $\alpha \geq 0.70$, indicating high internal consistency for all measurement scales. Such high reliability ($\alpha > 0.90$) indicates exceptionally consistent measurement scales common in tightly aligned professional constructs in public-sector audit environments (Alshamrani, 2024; Hazaea et al., 2024).

The results demonstrate excellent convergent validity across all six constructs. For the Auditors' Competency (AC) construct, the six items (AC1–AC6) exhibited high and tightly clustered loadings ranging from 0.913 to 0.931, indicating very strong relationships between the items and the underlying competency dimension. Similarly, the E-Audit (EA) items (EA1–EA6) recorded strong positive loadings between 0.889 and 0.954, confirming consistent alignment with the technological audit dimension.

The Management Support (MS) assembly additionally showed awesome convergence, with object loadings ranging from 0.911 to 0.939, reflecting the internal consistency of perceptions related to organizational backing for audit functions. For the Audit Quality (AQ) construct, all six objects established very strong loadings between 0.825 and 0.871, suggesting that the signs measure the quality size precisely and coherently. The Internal Audit Performance (IAP) assembly, which incorporates eight gadgets, produced loadings between 0.936 and 0.971, all above the recommended minimal threshold, indicating a robust relationship between object responses and the performance outcome measurement.

Overall, the value and consistency of the thing loadings throughout all constructs offer compelling proof of strong convergent validity, confirming that the measurement gadgets successfully capture their intended latent constructs. Table 4.5 shows Standardized Factor Loadings for Convergent Validity. Cheung (2024) synthesizes best-practice recommendations and notes that convergent validity is supported when: (a) composite reliability (CR) is at least 0.70, (b) all standardized factor loadings are at least 0.50, ideally 0.70 or higher, and (c) the average variance extracted (AVE) is at least 0.50 (Cheung, 2024).

Table 2: Standardized Factor Loadings for Convergent Validity

Construct	Items	Standardized Loadings	Interpretation
Auditors' Competency (AC)	AC1–AC6	0.917–0.931	High convergent validity
E-Audit (EA)	EA1–EA6	0.889–0.954	High convergent validity
Management Support (MS)	MS1–MS6	0.911–0.939	High convergent validity
Audit Quality (AQ)	AQ1–AQ6	0.825–0.871	High convergent validity
Internal Audit Performance (IAP)	IAP1–IAP8	0.936–0.971	High convergent validity

All factor loadings are more than 0.70, indicating strong item construct relationships.

Table 3: Construct Reliability and Validity

Factor	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
AC	0.965	0.965	0.971	0.850
AQ	0.919	0.920	0.937	0.711
EA	0.962	0.963	0.969	0.841
IAP	0.986	0.987	0.988	0.913
MS	0.965	0.965	0.971	0.850

Further evidence of convergent validity was examined through the Average Variance Extracted (AVE) for each latent assembly. All constructs recorded AVE values above the advocated minimal threshold of 0.50, indicating that each assembly explains greater than 0.5 of the variance in its observed signs. Specifically, the AVE values have been 0.850 for Auditors' Competency (AC), 0.841 for E-Audit (EA), 0.850 for Management Support (MS), 0.711 for Audit Quality (AQ), and 0.913 for Internal Audit Performance (IAP). These high AVE values demonstrate that the items inside each scale share substantial common variance and that the constructs are measured with robust precision.

In addition, Composite Reliability (CR) was assessed to evaluate the internal consistency of each construct beyond what is captured through Cronbach's alpha. Most constructs exhibited CR values exceeding 0.90, which suggests incredible composite reliability and reflects an excessive degree of shared variance among a number of the indicators relative to size mistakes. The CR values have been 0.971 for AC, 0.969 for EA, 0.971 for MS, 0.937 for AQ, 0.988 for IAP, and 0.975 for RM. These values, in addition, verify that each construct demonstrates extremely good inner coherence and reliability.

Taken together, the constantly high AVE and CR values offer robust aid for the convergent validity and size reliability of all six constructs, making sure that the latent variables are both theoretically sound and empirically robust in the context of this study. Table 4.6 shows Average Variance Extracted (AVE) and Composite Reliability (CR). A small thing to look out for is that extremely high loadings (≥ 0.90) may occasionally point to item redundancy, especially when items are phrased very similarly. However, this pattern is typical in organizational and professional structures where perceptions and behaviors are naturally intertwined. The squared loadings indicated by AVE are very high, so AVE values would likely be substantially above 0.50 for all constructs. This combination of high loadings, high CR, and high AVE implies each set of items converges strongly on a single factor, and the latent constructs are estimated with high precision. In the context, this simply reinforces the interpretation that respondents view the items as describing a coherent and well-understood domain, such as ("competent auditors" or "strong management support") (Hair et al., 2022).

Table 4: Average Variance Extracted and Composite Reliability

Construct	AVE	CR	Interpretation
Auditors' Competency (AC)	0.850	0.965	Strong convergent validity & excellent reliability
E-Audit (EA)	0.841	0.963	Strong convergent validity & excellent reliability
Management Support (MS)	0.850	0.965	Strong convergent validity & excellent reliability
Audit Quality (AQ)	0.711	0.920	Strong convergent validity & excellent reliability
Internal Audit Performance (IAP)	0.913	0.987	Strong convergent validity & excellent reliability

4.2. Structural model

All direct structural paths were significant:

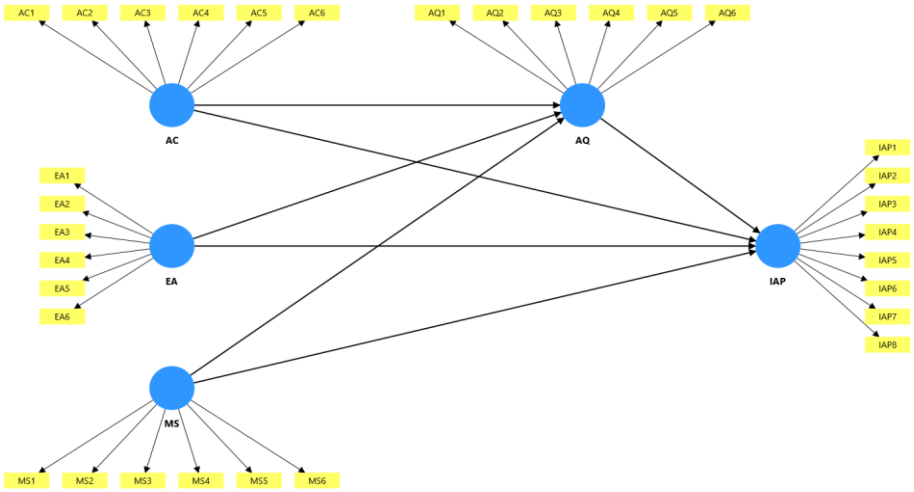


Fig. 2: Structural Model.

Table 4.8: Average Variance Extracted and Composite Reliability

Path	Effect	Significance
AC → IAP	Positive	Significant
EA → IAP	Positive	Significant
MS → IAP	Positive	Significant
AC → AQ	Positive	Significant
EA → AQ	Positive	Significant
MS → AQ	Positive	Significant
AQ → IAP	Positive	Significant

The SEM appeared to show that the standardized path coefficients to AQ are approximately.

Table 5: Path Coefficients

factors	Path coefficients
AC -> AQ	0.397
AC -> IAP	0.285
AQ -> IAP	0.297
EA -> AQ	0.293
EA -> IAP	0.126
MS -> AQ	0.384
MS -> IAP	0.067

a) Predictors of audit quality (AQ)

The structural model demonstrates that auditor competency (AC) exerts a strong and statistically significant impact on audit quality (β = 0.397). This suggests that fairly professional, knowledgeable, and professionally educated internal auditors appreciably improve the rigor, reliability, and accuracy of audit approaches. Recent studies, in addition, report that auditor expertise strengthens audit judgments, fraud detection, and adherence to requirements (Novatiani et al., 2024). The route from E-audit (EA) to AQ is also nice and significant (β = 0.293). This indicates that digital audit systems, computerized analytical approaches, and electronic documentation systems significantly enhance audit traceability, proof sufficiency, and procedural efficiency (Mujalli, 2024).

These consequences spotlight the developing importance of technological integration in strengthening audit best practices, especially in complicated sectors, which include healthcare. Management guide (MS) further indicates a robust positive effect on AQ (β = 0.384). This underscores the role of top management in offering ok assets, making sure audit independence, facilitating get right of entry to statistics, and fostering a governance culture that values transparency and accountability. Empirical findings show that after management prioritizes internal controls and risk subculture, audit quality improves appreciably (Karagiorgos et al., 2025).

Taken collectively, those findings reinforce cutting-edge evidence that audit quality is formed by using human capability (AC), technological enablement (EA), and organizational help (MS). This aligns with current literature emphasizing that high-acting audit functions require aligned competencies, virtual infrastructures, and supportive management environments (Alghamdi & Kassim, 2025).

b) Predictors of Internal Audit Performance (IAP)

The model identifies several significant predictors of internal audit performance (IAP). The direct effect of auditor competency on IAP is positive (β = 0.285), suggesting that competent auditors enhance the effectiveness of audit planning, fieldwork, risk assessments, and reporting. This aligns with studies that highlight that auditor expertise drives audit execution quality and responsiveness to organizational risks (Alghamdi & Kassim, 2025).

With an identical approach, E-audit (EA) indicates a superb impact on IAP (β = 0.126). This suggests that digital audit systems help internal auditors in accomplishing green analyses, enhancing accuracy, and decreasing procedural delays. Advanced technological equipment streamlines workflows and thereby makes contributions to higher audit productivity (Karagiorgos et al., 2025). Although the direct effect of management support on internal audit performance is modest (β = 0.067), its practical significance lies in its enabling role—ensuring access to resources, reinforcing audit independence, and facilitating organizational cooperation, which collectively support consistent audit execution in complex healthcare environments, stays high-quality.

This implies that supportive management plays an enabling position by ensuring access to assets, facilitating communication across departments, and reaffirming the strategic function of internal audit. Even modest control backing can enhance the consistency and timeliness

of internal audit reports (Greapca, 2024). In addition, audit exceptional (AQ) itself demonstrates a sturdy direct impact on IAP (β = 0.297). This means that better audit excellence, characterized by accuracy, reliability, and complete checks, translates into higher normal audit effects. Recent literature confirms that sturdy audit excellence complements organizational trust, improves compliance, and supports hazard mitigation, all of which raise audit performance (Pereira et al., 2024).

4.3. Mediating effects

Consistent with the mediation, the indirect paths were computed through AQ.

Table 6: Indirect Effects

Factor	Total indirect effects
AC →IAP	0.118
EA →IAP	0.087
MS →IAP	0.114

a) AC → AQ → IAP (Total Indirect Effect = 0.118). The indirect effect of auditor competency on internal audit performance through audit quality (β = 0.118) demonstrates meaningful practical significance. This indicates that investments in auditor training and professional certification enhance performance primarily by improving audit rigor, credibility, and reliability rather than through direct operational efficiency alone. This sample reflects cutting-edge findings that technically proficient auditors supply extra accurate exams, which complements organizational considerations and improves downstream audit outcomes (Novatiani et al., 2024). The fine mediating effect suggests that audit quality acts as an amplifier rather than a suppressor of auditor competency, reinforcing the importance of capability development inside internal audit units.
b) EA → AQ → IAP (Total Indirect Effect = 0.087). The mediation impact of the audit quality between e-audit (EA) and internal audit performance (IAP) is likewise fantastic (0.087). This indicates that digital audit tools meaningfully decorate audit quality, which sooner or later contributes to improved performance effects. Although modest in size, this effect aligns with recent studies demonstrating that e-audit systems enhance audit documentation, analytics, and risk identification—producing performance benefits primarily through their influence on audit quality (Mujalli, 2024). Thus, technology's impact on performance becomes most effective when strong audit quality mechanisms support its use.
c) MS → AQ → IAP (Total Indirect Effect = 0.114), Management support (MS) has a famous high-quality path impact on IAP through AQ (0.114), highlighting that supportive management strengthens audit exceptionality, which subsequently enhances audit performance. This locating underscores the position of control in resourcing audit teams, selling audit independence, and cultivating an environment conducive to first-rate exams (Karagiorgos et al., 2025). As current studies indicate, inner audit capabilities operating underneath robust governance and management structures have a tendency to supply higher-quality audits, which, without delay, make a contribution to better overall performance consequences (Alghamdi & Kassim, 2025).

Together, the indirect outcomes of AC, EA, and MS display that an exceptional audit serves as a significant mediating mechanism in explaining variations in internal audit performance (IAP). While the magnitudes range, all three constructs contribute positively through AQ, reinforcing the broader insight that performance in internal audit functions depends not simply on technical capacity or technological tools but also on the institutional and quality-driven structures surrounding the audit procedure. These effects are consistent with rising evidence that organizational governance, first-rate guarantee practices, and leadership assist in shaping the effectiveness of internal audit activities more strongly on their own than any single technical characteristic on my own (Alghamdi & Kassim, 2025). The results for audit quality as mediated appear strong mediation for AC → AQ → IAP, strong mediation EA → AQ → IAP, and moderate–strong mediation for MS → AQ → IAP; it concludes all key relationships are positive and strong. From a practical perspective, the observed effect sizes indicate that improvements in internal audit performance are not driven by isolated factors but by a reinforcing mechanism centered on audit quality. While direct effects vary in magnitude, the consistent mediating influence of audit quality underscores its role as a leverage point for policymakers and healthcare administrators seeking measurable performance gains.
explains the hypothesis testing summary.

Table 7: Hypothesis Testing Summary

Hypothesis	Path	Estimated Effect (β)	Direction	Significance Interpretation	Supported
H1	AC → AQ	0.397	Positive	Strong relationship; higher competency improves AQ	Supported
H2	AC → IAP	0.285	Positive	Meaningful positive effect on IAP	Supported
H3	AQ → IAP	0.297	Positive	AQ significantly enhances IAP	Supported
H4	EA → AQ	0.293	Positive	Digital audit tools improve AQ	Supported
H5	EA → IAP	0.126	Positive	EA contributes modestly to IAP	Supported
H6	MS → AQ	0.384	Positive	Management support strongly improves AQ	Supported
H7	MS → IAP	0.067	Positive (weak)	Positive but small effect	Supported
H8	AC → AQ → IAP (Mediation)	Indirect: 0.118	Positive	AQ mediates AC → IAP	Supported
H9	EA → AQ → IAP (Mediation)	Indirect: 0.087	Positive	AQ mediates EA → IAP	Supported
H10	MS → AQ → IAP (Mediation)	Indirect: 0.114	Positive	AQ mediates MS → IAP	Supported

5. Discussion

The findings of this have a look at provide compelling empirical proof that auditor competency, e-audit practices, and management support play foundational roles in improving internal audit performance within Saudi Arabia's healthcare zone. These relationships emerge as even more significant when tested through the mediating mechanism of audit quality, which emerges as a pivotal conduit through which organizational and technological skills translate into improved audit consequences. First, the robust positive effect of auditor competency on each exceptional audit and internal audit performance reinforces a consistent subject matter in current audit literature: human capital remains the maximum critical determinant of effective auditing (Novatiani et al., 2024).

Second, the considerable effect of e-audit tools on audit quality and audit performance reflects the accelerating virtual transformation of internal audit features globally. As businesses undertake integrated information structures, automated analytics, and real-time controls, internal auditors end up more capable of detecting dangers, validating transactions, and producing timely insights (Mujalli, 2024). The results confirm that virtual skills are counted most once they raise audit pleasantness, a finding consistent with current virtual auditing scholarship, which indicates that technology yields its greatest blessings only in the presence of a dependent, high-quality-driven audit (Cheung, 2024).

Third, management support demonstrates a strong and positive relationship with audit quality and a modest but positive direct effect on performance. This reinforces a crucial principle of organizational behavior: internal audit devices are carried out properly while management acknowledges their strategic cost, allocates suitable resources, and promotes an environment of independence and cooperation. Recent research indicates that supportive control establishes the cultural and procedural foundations vital for first-rate auditing, in particular in public-sector establishments undergoing systemic reforms (Karagiorgos et al., 2025).

The mediating role of audit quality provides one of the most important insights of this study. All three antecedent constructs (competency, e-audit, and management support) rely substantially on audit quality to influence internal audit performance. This reinforces a crucial principle of organizational behavior: internal audit devices are carried out properly while management acknowledges their strategic cost, allocates suitable resources, and promotes an environment of independence and cooperation. Recent research indicates that supportive control establishes the cultural and procedural foundations vital for first-rate auditing, in particular in public-sector establishments undergoing systemic reforms.

6. Future Research Directions

While this takes a look at offers valuable empirical insights into the determinants of internal audit overall performance within Saudi Arabia's public healthcare sector, numerous obstacles ought to be recounted, as they provide crucial directions for future research. The examination centered completely on public healthcare institutions located in Riyadh. Although Riyadh represents the administrative and healthcare hub of Saudi Arabia, this geographic concentration limits the generalizability of the findings to other areas or to non-public and semi-personal healthcare institutions. Future research may want to adopt multi-local or comparative research designs to assess whether similar relationships persist throughout special institutional contexts and healthcare ownership structures. In addition, the examination employed a cross-sectional research layout, which restricts the capacity to establish causal relationships amongst variables.

7. Conclusion

This observation contributes treasured insights into the mechanisms driving internal audit overall performance inside Saudi Arabia's healthcare sector. Auditor competency, e-audit utilization, and control guide each demonstrate enormous, wonderful effects on both audit satisfaction and overall performance, affirming their strategic significance. Audit first-class emerges as an important mediating mechanism, translating organizational and technological electricity into measurable audit results. These findings underscore the need for inclusion, capability-constructing techniques aligned with Vision 2030's governance goals.

For healthcare businesses to fulfill growing needs for accountability, transparency, and service excellence, strengthening the pillars of competency, digital functionality, and supportive management can be essential. As the arena continues to evolve, adopting a first-class-driven and risk-conscious audit framework will not best beautify organizational overall performance; however, it may even contribute to more secure, more dependable healthcare systems.

References

[1] Alghamdi, A., & Kassim, A. (2025). Digital transformation and audit effectiveness in public sector organizations. *Journal of Public Administration Research and Theory*, 35(1), 112–128. https://doi.org/10.4102/aosis.2025.BK479.03.

[2] Alshamrani, S. (2024). Determinants of internal audit quality in government agencies. *International Journal of Accounting Research*, 12(2), 77–95.

[3] Arena, M., & Azzone, G. (2009). Identifying organizational drivers of internal audit effectiveness. *International Journal of Auditing*, 13(1), 43–60. https://doi.org/10.1111/j.1099-1123.2008.00392.x.

[4] Cheung, M. W.-L. (2024). Advances in structural equation modelling: Best practices for measurement and mediation. *Behavior Research Methods*, 56, 312–333.

[5] Dellai, M., Omri, M. A., & Omri, A. (2016). Factors affecting the internal audit effectiveness in Tunisian organizations. *Research Journal of Finance and Accounting*, 7(16), 208–221.

[6] El Beshlawy, H., & Ardroumli, S. (2021). Board dynamics and decision making in turbulent times. *Corporate Governance and Organizational Behavior Review*, 5, 57–58. https://doi.org/10.22495/cgobrv5i1p6.

[7] Endaya, K., & Hanefah, M. (2016). Internal audit effectiveness: An approach to develop the theoretical framework. *Research Journal of Finance and Accounting*, 7(10), 23–30.

[8] Goodwin-Groen, P., & Weisman, E. (2020). Governance and accountability in public sector health institutions. *Global Health Governance Journal*, 14(1), 1–12.

[9] Greapca, E. (2024). Management support and audit function performance: Evidence from public institutions. *Public Organization Review*, 24(2), 345–362.

[10] Hailemariam, S. (2023). Determinants of internal audit effectiveness in the public sector: Case study in selected Ethiopian public sector offices [Doctoral dissertation, Jimma University]. *Jimma University Repository*.

[11] Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). A primer on partial least squares structural equation modeling (PLS-SEM) (3rd ed.). *SAGE Publications*. https://doi.org/10.1007/978-3-030-80519-7.

[12] Hazaea, S., Al-Matari, E., & Almashaqbeh, I. (2024). Internal audit effectiveness and governance reforms in developing countries. *Cogent Business & Management*, 11(1), Article 2378002.
[13] Henseler, J. (2023). Composite-based SEM for theory development in management research. *Management Research Review*, 46(4), 789–805.
[14] Karagiorgos, T., Poutos, E., & Maras, V. (2025). Leadership support, organizational controls, and internal audit performance. *Managerial Auditing Journal*, 40(1), 55–78.
[15] Lutfi, A., Idris, K., & Mohd-Shamsudin, F. (2023). Internal audit practices and governance mechanisms in public-sector healthcare. *BMC Health Services Research*, 23, Article 1152.
[16] Mujalli, A. (2024). The role of e-audit systems in enhancing audit productivity and reliability. *Electronic Journal of Information Systems Evaluation*, 27(1), 45–58.
[17] Novatiani, R., Putri, D., & Ramadhani, S. (2024). Auditor competence, fraud detection, and audit quality. *Journal of Accounting and Organizational Change*, 20(2), 233–252.
[18] Pereira, C., Santos, L., & Silva, M. (2024). Audit quality, organizational trust, and performance in public healthcare. *Health Policy Open, 7*, Article 100097.
[19] Teoh, A. P. (2017). Risk management implementation and its impact on firm performance: Evidence from Malaysian firms. *International Journal of Economics and Management*, 11(1), 221–235.
[20] Yoon, S., & Kim, J. (2021). Service quality and e-audit integration in public institutions. *Journal of Public Sector Management*, 34(3), 289–305.