





Identification and Modeling of Factors Affecting the Effectiveness of Internal Audit and Its Impact on the Quality of Financial Reporting Considering the Role of Senior Management Support

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ABSTRACT

The main objective of this study is to identify and model the factors affecting the effectiveness of internal audit and its impact on the quality of financial reporting, taking into account the role of senior management support. In terms of nature, this research is exploratory, and in terms of purpose, it falls under applied research. The statistical population of this study consists of 179 managers of listed and over-the-counter (OTC) companies in Iran. To collect the required data, interviews and questionnaires were employed. To test the hypotheses, inferential statistics and structural equation modeling (SEM) tests were applied. The results of the study showed that organizational structure (0.803), risk management (0.780), audit committee (0.774), board of directors and managers (0.764), accounting information systems (0.688), working relationships (interactions) between internal and external auditors (0.611), independence (0.536), moral courage (0.527), technological capabilities (0.470), professional commitment (0.440), auditor competence (0.366), and internal control (0.359) had the highest coefficients of impact on the effectiveness of internal audit, respectively. The findings further revealed that the effectiveness of internal audit and senior management support have a positive impact on the quality of financial reporting. Additional results indicated that senior management support has a moderating effect on the relationship between internal audit effectiveness and the quality of financial reporting.

Keywords: Internal Audit Effectiveness, Financial Reporting Quality, Senior Management Support.

1. Introduction

The quality of financial reporting and the effectiveness of internal audit functions are among the most critical

pillars of corporate governance, organizational transparency, and investor confidence. In recent years, the growing complexity of business environments, globalization of financial markets, and the increasing use of advanced

technologies have reshaped expectations of stakeholders regarding audit quality and financial reporting reliability. As such, scholars and practitioners alike have sought to understand the determinants of audit effectiveness and how they influence financial reporting quality, particularly when moderated by the role of senior management support. The literature on this subject has grown significantly, revealing the interplay between independence, competence, audit committees, internal control systems, and technological innovation in shaping audit quality and its outcomes (Abbott et al., 2016; Mohseni Nia & Babajani, 2020; Nikbakht et al., 2017).

The independence and competence of auditors represent foundational requirements for effective internal audit and financial reporting quality. Internal audit units are expected to safeguard against bias, misrepresentation, and fraudulent financial practices by ensuring objectivity in the review process and the technical ability to evaluate complex financial systems. Abbott et al. (Abbott et al., 2016) emphasized the joint importance of independence and competence in internal audit, finding that both dimensions significantly enhance financial reporting quality. Similarly, Mohseni Nia and Babajani (Mohseni Nia & Babajani, 2020) highlighted that in the Tehran Stock Exchange context, audit quality was strongly correlated with improved financial reporting quality, underscoring the role of well-functioning internal audit mechanisms in emerging markets. Nikbakht, Rezaei, and Manti (Nikbakht et al., 2017) further proposed a structured model of internal audit quality, noting that dimensions such as organizational support, auditor expertise, and systemized procedures collectively determine audit performance.

Financial reporting quality has been widely studied in the broader framework of corporate governance and earnings management. Numerous studies have examined how audit quality constrains opportunistic managerial behaviors such as earnings management, thereby fostering more reliable financial disclosures. For instance, Le and Moore (Le & Moore, 2023) demonstrated that higher levels of audit quality mitigate earnings management and lower the cost of equity capital in developing markets. Their findings are supported by Mardnly, Badran, and Mouselli (Mardnly et al., 2021), who investigated the Damascus Securities Exchange and observed that managerial ownership and audit quality significantly shape earnings management practices. Similarly, Nguyen (Nguyen, 2023) examined the role of women in top executive positions in Vietnam, concluding

that leadership diversity combined with external audit quality strengthens financial reporting outcomes.

The role of audit committees, internal control systems, and organizational oversight structures also emerges as critical determinants of financial reporting quality. Sem and Hastuti (Sem & Hastuti, 2024) argued that audit quality, audit committee functions, and effective internal control systems are complementary forces in ensuring financial report reliability, particularly in the finance sector. This view is consistent with Hasan, Kassim, and Hamid (Hasan et al., 2020), who found strong evidence from Malaysia that audit quality and audit committee effectiveness jointly improve the reliability of financial reporting. Mardessi (Mardessi, 2021) extended this argument to the Dutch context, showing that audit committee characteristics, when moderated by audit quality, significantly impact financial reporting quality. Collectively, these studies reinforce the idea that oversight mechanisms at both board and committee levels are indispensable in shaping the integrity of financial statements.

Another stream of research emphasizes the impact of internal audit quality on company performance through its role in mitigating fraudulent reporting and enhancing comparability across firms. Jamtir (Jamtir, 2020) investigated how audit quality and financial stability objectives influence fraudulent reporting behaviors, concluding that strong audit practices play a preventive role against manipulation. Hajiha and Chenari (Hajiha & Chenari, 2023) further explored the effect of accounting comparability on financial reporting quality, emphasizing audit quality as a mediating mechanism. Their study revealed that when accounting systems are comparable across firms, the role of audit quality in enhancing reporting outcomes becomes even more pronounced. Khalilian (Khalilian, 2023) also contributed by analyzing the relationship between audit quality, financial reporting opacity, and stock price crash risk, noting that opaque reporting environments amplify market risks, which can be mitigated by higher-quality auditing.

Senior management support is increasingly recognized as a crucial moderating factor in ensuring internal audit effectiveness and financial reporting quality. Without adequate support from top management, internal audit functions may lack the authority, resources, and organizational backing required to operate effectively. Madawaki, Ahmi, and Ahmad (Madawaki et al., 2021) provided empirical evidence that senior management support significantly strengthens the positive relationship

between internal audit functions and financial reporting quality. Similarly, Al-Yazidi et al. (Al-Yazidi et al., 2023) studied Yemeni commercial banks and found that senior management support acts as a moderator that enhances the effectiveness of internal audit functions in achieving corporate governance goals. These insights point to the critical importance of leadership in embedding audit practices within the organizational culture and decision-making structures.

Audit quality is also shaped by the competence and professional attitudes of auditors themselves. Nurmawanti, Lenggogeni, and Yanti (Nurmawanti et al., 2024) found that competence, time budget pressure, and professional attitudes directly influence internal audit quality, with role conflict acting as a significant moderating variable. Their results suggest that internal and external pressures on auditors can affect the quality of auditing unless balanced by professional ethics and proper organizational alignment. Athavale et al. (Athavale et al., 2022) echoed this argument in their study of auditor diversity in China, showing that diversity among signing auditors contributes to higher audit quality by reducing groupthink and broadening perspectives. These findings highlight the importance of human capital in the auditing profession and its impact on financial reporting outcomes.

In addition to organizational and human factors, technological advancements are increasingly reshaping audit practices. The application of artificial intelligence, machine learning, and big data analytics has opened new opportunities for detecting anomalies and enhancing audit accuracy. Farhadi Touski and Doustian (Farhadi Touski & Doustian, 2025) demonstrated how deep learning algorithms enable internal auditors to detect anomalies in financial accounting data, improving both efficiency and reliability. Their work underscores the transformative potential of digital technologies in modern auditing, aligning with global trends in digital finance and data-driven governance. Xanthopoulou (Xanthopoulou, 2024) expanded this discussion to the university sector, finding that internal audit functions enhanced by technological tools significantly improve institutional reliability and performance. Together, these studies highlight the intersection of technology and auditing as a promising frontier for research and practice.

Audit quality also plays a role in shaping broader firm outcomes, including firm value and audit fees. Saleh Aly, Diab, and Abdelazim (Saleh Aly et al., 2023) examined Egyptian firms and found that audit tenure, audit quality, and audit fees are interrelated in influencing firm value. Their

findings show that long audit tenures, combined with high-quality auditing, can lead to improved market valuation of firms. Abu Afifa, Saleh, and Haniah (Abu Afifa et al., 2021) similarly revealed that audit quality affects company performance, with earnings management serving as a mediating mechanism. These insights illustrate the multifaceted role of audit quality, not only in enhancing reporting integrity but also in influencing broader organizational performance indicators.

The global nature of audit research highlights both similarities and differences across contexts. While developed markets often emphasize technological integration and governance structures, emerging markets highlight the challenges of limited resources, institutional weaknesses, and the need for stronger leadership support. Mohseni Nia and Babajani (Mohseni Nia & Babajani, 2020) underscored the importance of internal audit quality in Iran, while Nguyen (Nguyen, 2023) provided evidence from Vietnam on how gender diversity in leadership complements audit quality. Ismail, Abdou, and Ibrahim (Ismail et al., 2025) extended the scope by examining the role of internal auditors in anti-money laundering practices in the MENA region, proposing that internal auditors could also serve as forensic accountants in financial institutions. Such studies illustrate how audit functions extend beyond traditional boundaries, addressing both compliance and governance challenges.

Despite the diversity of contexts and findings, a central theme emerges: audit quality and internal audit effectiveness are deeply intertwined with financial reporting quality, organizational governance, and stakeholder trust. Whether through the independence and competence of auditors (Abbott et al., 2016), the support of senior management (Al-Yazidi et al., 2023; Madawaki et al., 2021), the characteristics of audit committees (Hasan et al., 2020; Mardessi, 2021), or the integration of technology (Farhadi Touski & Doustian, 2025; Xanthopoulou, 2024), the determinants of audit effectiveness collectively shape the landscape of corporate accountability. As organizations continue to face pressures from globalization, digital transformation, and regulatory changes, the importance of robust auditing practices will only intensify.

Given this background, the present study aims to identify and model the factors influencing the effectiveness of internal audit and to examine its impact on the quality of financial reporting, with particular attention to the moderating role of senior management support.

2. Methods and Materials

The present study aims to identify and model the factors affecting the effectiveness of internal audit and its impact on the quality of financial reporting, considering the role of senior management support. Therefore, this research introduces a new model. For this reason, the study is exploratory in nature. Exploratory research is used to understand unfamiliar phenomena and expand knowledge through theory building. Since this research is exploratory, qualitative methods such as observation and interviews were used to collect the required data. Accordingly, this study was conducted using a qualitative approach, and in parallel, by reviewing the literature, the factors influencing the effectiveness of internal audit were identified, followed by quantitative studies in the next steps. In this sense, the research was conducted using both qualitative and quantitative methods simultaneously. Considering the combined use of qualitative and quantitative approaches, this study falls under mixed-methods research and specifically employs the exploratory mixed-methods design.

In this research, among the available strategies in mixed-methods studies (mixed-methods strategy and action research strategy), the mixed-methods research strategy was chosen. This is because, in this strategy, the researcher collects qualitative and quantitative information to explain, analyze, and understand an event. The combination of these two types of information provides a better understanding of the issue compared to focusing solely on one type of data. The mixed-methods strategy includes: explanatory mixed-methods design, exploratory mixed-methods design, nested

mixed-methods design, and pluralistic mixed-methods design. The researcher applied the exploratory mixed-methods design and, additionally, may combine the categories of information obtained from exploratory qualitative data with quantitative data.

The statistical population of this study consists of managers of listed and over-the-counter (OTC) companies in Iran. To determine the sample size, random sampling was employed, and Cochran's formula was used to calculate the sample size, resulting in 179 individuals whose information was analyzed. Data collection in this research was carried out through interviews and questionnaires. Initially, interviews were used to identify and model the factors and components affecting the effectiveness of internal audit. After identifying these factors and components, standard questionnaires were designed for each factor, along with the variables of financial reporting quality and senior management support, following consultation with the supervisor and other experts, tailored to the main research questions and statements aligned with the intended activities in the dimensions, using a five-point Likert scale.

For the analysis of content and face validity, the questionnaire was reviewed by several experts and the supervisor, who provided feedback and suggestions for revisions. The reliability of the questionnaire was also examined at the beginning of the research process after the pilot implementation and collection of preliminary questionnaires, using Cronbach's alpha technique. The results of the reliability test of the questionnaires are presented in Table (1).

Table 1

Cronbach's Alpha Coefficient of Questionnaires

Dimensions of the Questionnaire	Cronbach's Alpha Coefficient	Number of Items
Effectiveness of Internal Audit	0.835	77
Senior Management Support	0.785	6
Quality of Financial Reporting	0.873	20

Based on the results of Table (1), the reliability coefficients for the research questionnaires were measured, all of which were above 0.70, indicating the high accuracy of the measurement instrument employed in this study.

3. Findings and Results

This research was carried out in five stages as follows:

Stage One: Extraction of initial indicators from theoretical foundations (literature review)

In the first step, the researcher reviewed all written sources, including articles, books, and related dissertations, to achieve theoretical sufficiency on the subject under study. Accordingly, all existing models in the field of factors affecting the effectiveness of internal audit were examined, and measurement indicators for this variable and its influencing factors were extracted.

Stage Two: Identification of indicators affecting the effectiveness of internal audit using questionnaires and

classification of model components

Since this research was conducted at the organizational level, experts were selected to complete the questionnaires. All questionnaires distributed among the experts were collected, and the Delphi technique was used to determine the weights of the factors. At this stage, the conceptual model of the research was presented. For the final formulation of the conceptual model, components from previous studies could also be utilized.

Stage Three: Determination of the intensity of relationships among indicators and model components, and ranking of factors influencing the effectiveness of internal audit using structural equation modeling

In this stage, to determine the strength of the relationships among the components and indicators of the conceptual model, the data obtained from the second stage were analyzed using the concepts of structural equation modeling. The output of this stage led to the presentation of the model of factors influencing the effectiveness of internal audit.

Stage Four: Determination of the impact of internal audit effectiveness on the quality of financial reporting

In this stage, after identifying the factors affecting the effectiveness of internal audit, a qualitative questionnaire was designed to determine the impact of internal audit effectiveness on the quality of financial reporting, considering the moderating effect of senior management support. Using structural equation modeling, the impact of each factor influencing the effectiveness of internal audit on the quality of financial reporting was analyzed, and the degree of influence of each factor was evaluated. Additionally, regression analysis could be used to examine the relationship between internal audit effectiveness and the quality of financial reporting.

Stage Five: Determination of the moderating effect of senior management support on the relationship between internal audit effectiveness and financial reporting quality

In this stage, structural equation modeling was used to analyze the moderating effect of senior management support on the relationship between internal audit effectiveness and the quality of financial reporting. Regression analysis could also be applied to investigate the moderating effect of senior management support on the relationship between these two variables.

In the present study, first, by reviewing written sources including articles, books, and related dissertations, all existing models in the field of factors affecting the effectiveness of internal audit in listed and over-the-counter (OTC) companies were examined, and the measurement indicators of this variable and its influencing factors were extracted. Since this research was conducted at the organizational level, experts were selected for interviews. For selecting experts for interviews, the snowball sampling method was used. According to this method, one of the managers with sufficient expertise and experience relevant to the subject was first selected and interviewed, and at the end of the interview, he was asked to introduce other informed and knowledgeable individuals regarding the research topic. To enrich the research, efforts were made to interview individuals who had personally experienced the subject of the research and possessed high levels of knowledge and expertise. This process continued until theoretical data saturation was achieved, and finally, after interviewing 15 individuals, the data collection process was completed. At the beginning of the interviews, the general purpose of the research was explained, emphasizing that the interviews would be used only for research purposes and that the identity of participants would not be disclosed in research reports or published articles. After conducting interviews with experts, the factors influencing the effectiveness of internal audit were identified. The demographic characteristics of the interviewees are as follows:

Table 2

Demographic Information of Interviewees

Main Criteria	Gender	Field of Study	Degree	Work Experience
Subclassification Criteria	Male	Female	Accounting & Auditing	Finance
Frequency	13	2	14	1

The aim of this study is to identify and model the factors affecting the effectiveness of internal audit and its impact on the quality of financial reporting, considering the role of

senior management support. Descriptive statistics of the research variables are as follows:

Table 3

Mean and Standard Deviation of the Main Research Variables

Scale	Mean	Standard Deviation
Effectiveness of Internal Audit	3.77	0.39
Management Support	4.02	0.54
Quality of Financial Reporting	3.69	0.50

To assess validity, construct validity (convergent and discriminant validity) was used, and to evaluate the reliability of the research variables, Cronbach's alpha test

and composite reliability test were applied. The results of the validity and reliability of the research variables are presented in Table (4).

Table 4

Cronbach's Alpha, Composite Reliability Test, and Average Variance Extracted (AVE) of Research Variables

Construct	Cronbach's Alpha	Composite Reliability	AVE	Confirm/Reject
Effectiveness of Internal Audit	0.835	0.863	0.565	Confirmed
Senior Management Support	0.785	0.849	0.591	Confirmed
Quality of Financial Reporting	0.873	0.914	0.726	Confirmed

According to Table (4), it was determined that the Cronbach's alpha of all constructs exceeded 0.70, which is the threshold value for the acceptance of Cronbach's alpha, indicating the appropriate reliability of the model. Furthermore, the results in Table (4) show that the composite reliability values, which should be greater than 0.70 for an acceptable model fit, were met for all constructs. In addition,

the results from Table (4) indicate that the Average Variance Extracted (AVE), used to evaluate convergent validity, was above 0.50 for all constructs, demonstrating that the model constructs had a satisfactory fit.

Finally, discriminant validity was the third criterion for assessing the fit of measurement models in the PLS method. Discriminant validity in PLS is evaluated in two ways:

Table 5

Fornell and Larcker Table

	1	2	3
1. Effectiveness of Internal Audit	0.604		
2. Senior Management Support	0.400	0.701	
3. Quality of Financial Reporting	0.559	0.461	0.852

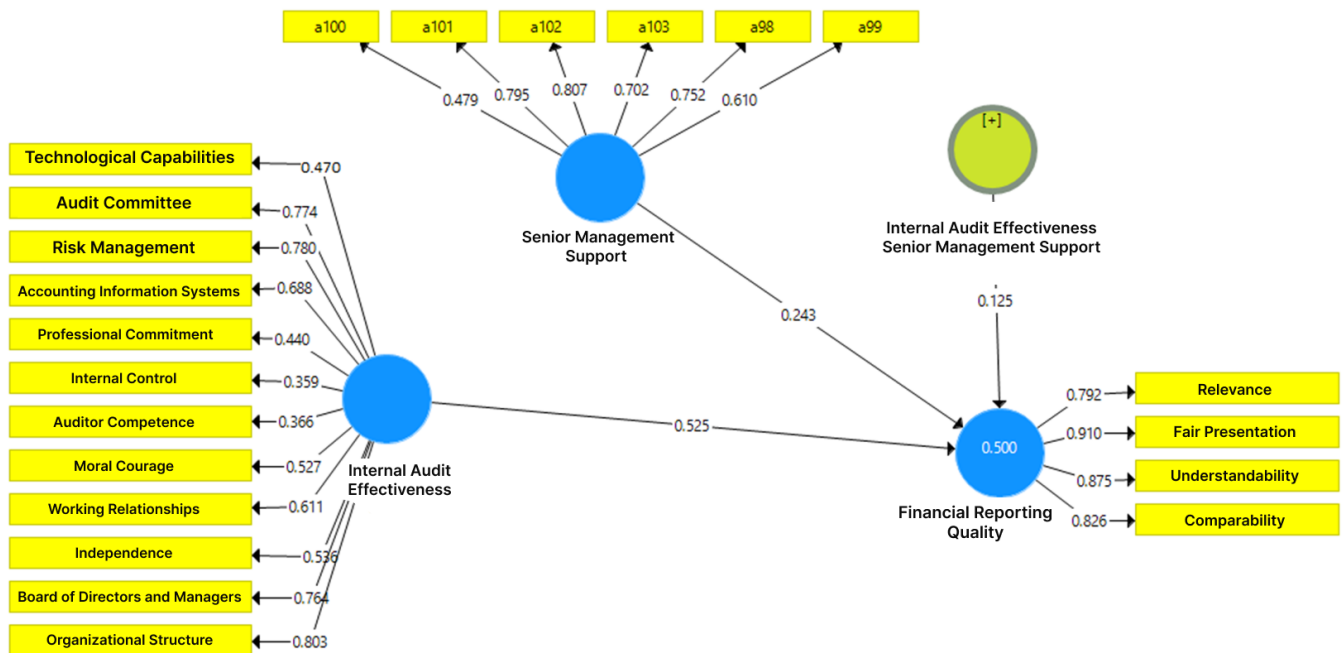
As shown in the table above, based on Fornell and Larcker (1981), the square root of the Average Variance Extracted (AVE) for the latent variables in this study, located in the cells along the main diagonal of the matrix, is greater than the correlations between them, which are presented in the cells below and to the left of the diagonal. Therefore, it can be stated that in this study, the constructs had stronger interactions with their own indicators than with other constructs. In other words, the discriminant validity of the model is at an acceptable level.

The first factor to be considered in the evaluation of the model is the unidimensionality of the model's indicators.

This means that each indicator among the set of indicators must load with a high factor loading onto only one latent variable. For this purpose, the factor loading value should be greater than 0.60. It should be noted that a factor loading value below 0.30 is considered small and must be removed from the set of indicators. This process is performed manually by eliminating indicators with factor loadings less than 0.30. The evaluation of factor loadings for the measurement model of the research is shown in the figure below.

Figure 1

Assessment of Factor Loadings (Measurement Model of the Research)



As shown in Figure (1), the factor loadings of the variables must be greater than 0.30 to remain in the model; otherwise, they are eliminated from the model. However, in the current model, no variable was removed. In other words, the research findings and the results obtained from interviews with experts indicated that the factors affecting the effectiveness of internal audit in listed and over-the-counter (OTC) companies include: (1) technological capabilities; (2) professional commitment; (3) internal control; (4) auditor competence; (5) moral courage; (6) working relationships between internal and external auditors; (7) independence; (8) board of directors and managers; (9) organizational structure; (10) audit committee; (11) risk management; and (12) accounting information systems. According to the interviewees, the aforementioned factors are those that most influence the effectiveness of internal audit in listed and OTC companies.

Based on the results obtained from Figure (1), organizational structure (0.803), risk management (0.780), audit committee (0.774), board of directors and managers (0.764), accounting information systems (0.688), working relationships (interactions) between internal and external

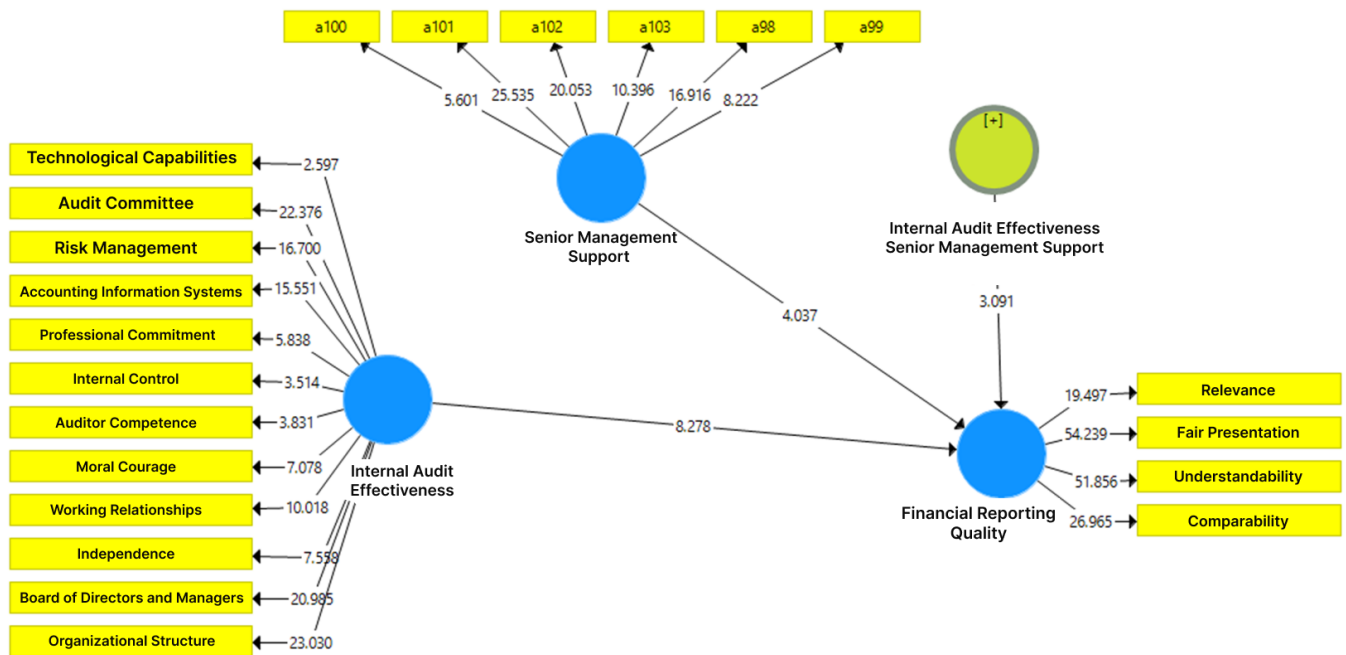
auditors (0.611), independence (0.536), moral courage (0.527), technological capabilities (0.470), professional commitment (0.440), auditor competence (0.366), and internal control (0.359) had the highest coefficients of impact on the effectiveness of internal audit, respectively.

In this section, the structural equation modeling (SEM) of the study is examined. First, the goodness-of-fit of the model is studied. Next, the model is analyzed in the significance numbers mode (testing hypothesis acceptance or rejection). Finally, the model is assessed in terms of path coefficients and the coefficient of determination.

The criterion for measuring the goodness-of-fit of the model in PLS software is studied using the Goodness of Fit (GoF) index. This index allows the researcher, after examining the fit of both the measurement model and the structural model, to also evaluate the overall model fit. Wetzels et al. (2009) introduced the values 0.01, 0.25, and 0.36 as weak, medium, and strong levels of goodness-of-fit, respectively. Based on the calculations, the goodness-of-fit value for this research model was computed as 0.418. Since this value is greater than 0.25, the model fit is evaluated as desirable.

Figure 2

T-Statistic Related to the Impact of Internal Audit Effectiveness, Senior Management Support, and Financial Reporting Quality



The results of hypotheses testing reveal that all three proposed hypotheses were confirmed. The first hypothesis indicated that internal audit effectiveness significantly and positively impacts financial reporting quality, with a path coefficient of 0.525 and a high level of statistical significance ($p < 0.01$). The second hypothesis demonstrated that senior management support also has a positive effect on financial reporting quality, with a path coefficient of 0.243 and significance at the 0.011 level. The third hypothesis

confirmed the moderating role of senior management support in the relationship between internal audit effectiveness and financial reporting quality, where the interaction effect showed a path coefficient of 0.125 and statistical significance ($p < 0.01$). Collectively, these findings highlight the critical role of both internal audit effectiveness and senior management support, independently and interactively, in enhancing the quality of financial reporting.

Table 6

Results of Hypotheses Testing

Hypothesis	Predictor Variable	Criterion Variable	Path Coefficient	R ²	T-Statistic	Significance Level	Result
1	Internal Audit Effectiveness	Financial Reporting Quality	0.525	0.275	8.278	0.001	Confirmed
2	Senior Management Support	Financial Reporting Quality	0.243	0.060	4.037	0.011	Confirmed
3	Internal Audit Effectiveness * Senior Management Support	Financial Reporting Quality	0.125	0.016	3.091	0.002	Confirmed

4. Discussion and Conclusion

The results of the present study reveal that internal audit effectiveness has a significant and positive impact on financial reporting quality, with senior management support exerting both a direct effect and a moderating role. Specifically, organizational structure, risk management, audit committee, board of directors and managers, and accounting information systems emerged as the most influential determinants of internal audit effectiveness.

These findings align with earlier studies that emphasize the centrality of independence, competence, and organizational support in strengthening the role of internal auditing in enhancing financial transparency and accountability (Abbott et al., 2016; Mohseni Nia & Babajani, 2020; Nikbakht et al., 2017). The results highlight that audit quality is not simply a function of technical procedures but is also shaped by organizational culture, leadership involvement, and structural conditions.

The strong effect of organizational structure and governance-related variables on audit effectiveness is

consistent with the findings of Madawaki, Ahmi, and Ahmad (Madawaki et al., 2021), who showed that internal audit functions enhance financial reporting quality particularly when supported by top management. Similarly, Al-Yazidi et al. (Al-Yazidi et al., 2023) demonstrated that determinants of internal audit quality, including competence, independence, and organizational backing, become most effective when senior management actively supports audit processes. The present study further confirms that without senior management support, the benefits of robust internal auditing mechanisms are weakened. This is especially relevant in environments where resource constraints or cultural factors may undermine audit independence.

The findings also reinforce the critical role of audit committees and risk management systems in enhancing audit effectiveness. Sem and Hastuti (Sem & Hastuti, 2024) demonstrated that the presence of strong audit committees, supported by internal controls, significantly improves the quality of financial reporting. Similarly, Hasan, Kassim, and Hamid (Hasan et al., 2020) highlighted that audit quality and audit committee effectiveness jointly enhance reporting reliability in Malaysia. In this study, audit committees and risk management mechanisms were found to be among the strongest contributors to audit effectiveness, aligning with the notion that these structures provide oversight, ensure compliance, and create accountability mechanisms that constrain opportunistic managerial behavior.

The results also underscore the importance of accounting information systems in supporting audit quality. With a coefficient loading of 0.688, accounting information systems emerged as one of the top factors influencing audit effectiveness. This finding is consistent with studies emphasizing the integration of technology into auditing processes. For instance, Farhadi Touski and Doustian (Farhadi Touski & Doustian, 2025) showed that artificial intelligence and deep learning can significantly improve anomaly detection in financial data, making auditing more efficient and precise. Likewise, Xanthopoulou (Xanthopoulou, 2024) noted that in the higher education sector, technologically supported internal auditing substantially improves institutional reliability and performance. The present study therefore adds to the growing body of evidence that information systems and digital tools are indispensable in strengthening the audit function.

Another noteworthy finding concerns the role of independence, moral courage, and professional commitment. Although these factors showed lower

coefficients compared to governance and structural elements, they remain crucial in determining audit effectiveness. Abbott et al. (Abbott et al., 2016) stressed that independence and competence jointly enhance financial reporting quality, while Nurmawanti et al. (Nurmawanti et al., 2024) highlighted the role of auditor competence, time budget pressure, and professional attitudes in shaping internal audit quality. The relatively lower statistical impact of these variables in this study may suggest that individual attributes of auditors, while important, must be embedded within strong organizational systems and supported by top management to yield maximum impact. This interpretation resonates with Athavale et al. (Athavale et al., 2022), who found that auditor diversity contributes to audit quality by reducing bias, but such diversity only matters when organizational conditions empower auditors to act independently.

The results concerning financial reporting quality also warrant discussion. The study confirms that internal audit effectiveness directly improves reporting quality, consistent with findings across diverse contexts. Mohseni Nia and Babajani (Mohseni Nia & Babajani, 2020) found similar results in Iran, while Nguyen (Nguyen, 2023) demonstrated that external audit quality, combined with gender diversity in leadership, strengthens financial reporting quality in Vietnam. Le and Moore (Le & Moore, 2023) also showed that improved audit quality reduces earnings management and the cost of equity capital. Taken together, these findings reinforce that audit quality—whether internal or external—is a key determinant of financial reporting integrity across markets.

The moderating role of senior management support represents one of the most important contributions of this study. The results indicate that senior management support not only has a direct positive effect on financial reporting quality but also strengthens the link between internal audit effectiveness and reporting outcomes. This confirms the arguments of Madawaki et al. (Madawaki et al., 2021) and Al-Yazidi et al. (Al-Yazidi et al., 2023), who both stressed the moderating role of leadership in enabling audit functions to realize their potential. Without such support, internal audit units may face role conflict, lack of authority, or insufficient resources, undermining their ability to act independently and effectively. This is consistent with the study of Nurmawanti et al. (Nurmawanti et al., 2024), which highlighted how role conflict can weaken audit quality, especially when auditors face organizational pressure. The findings of this research thus affirm that senior management support is indispensable

for sustaining audit independence, ensuring adequate resourcing, and embedding audit practices within strategic decision-making processes.

The results also shed light on the broader implications of audit quality for firm performance and market outcomes. Saleh Aly et al. (Saleh Aly et al., 2023) demonstrated that audit quality influences firm value and audit fees, particularly in relation to audit tenure, while Abu Afifa et al. (Abu Afifa et al., 2021) found that audit quality affects performance through the mediation of earnings management. The findings of this study resonate with these results, as financial reporting quality—strengthened by audit effectiveness and management support—ultimately contributes to more reliable financial information, reduced information asymmetry, and improved stakeholder trust. This, in turn, has downstream effects on firm valuation and capital market performance.

The connection between audit quality and fraud prevention is another dimension supported by this study. Jamtir (Jamtir, 2020) emphasized that audit quality constrains fraudulent reporting, while Hajiha and Chenari (Hajiha & Chenari, 2023) demonstrated that accounting comparability enhances reporting quality when audit quality is high. By confirming the link between internal audit effectiveness and reporting reliability, the present study contributes additional evidence that strong audit practices reduce opportunities for manipulation, enhance comparability, and improve stakeholder confidence. Moreover, Khalilian (Khalilian, 2023) showed that audit quality mitigates financial reporting opacity and stock price crash risk, suggesting that the broader capital market also benefits from enhanced audit practices.

Collectively, the findings of this study integrate with the global literature on audit quality and financial reporting. From the developed markets of the Netherlands (Mardessi, 2021) to emerging markets such as Yemen (Al-Yazidi et al., 2023), Jordan (Abu Afifa et al., 2021), Vietnam (Nguyen, 2023), Malaysia (Hasan et al., 2020), and Iran (Mohseni Nia & Babajani, 2020), evidence consistently points to the critical role of internal audit, governance structures, and leadership support in shaping reporting quality. By identifying the relative influence of structural, organizational, and individual factors on audit effectiveness, the present study not only reinforces existing theory but also offers practical insights into the conditions necessary for audit quality to translate into financial reporting reliability.

Despite its contributions, this study is not without limitations. First, the research focused on companies listed

on the Iranian stock market, which may limit the generalizability of findings to other contexts. Institutional environments, regulatory frameworks, and cultural norms differ across countries, and these factors may influence both internal audit effectiveness and financial reporting quality. Second, the study relied on cross-sectional data, which may constrain the ability to capture dynamic changes in audit practices or the long-term effects of senior management support. Third, the use of self-reported data from managers and auditors introduces the risk of response bias, as participants may have presented more favorable views of their organizational practices. Finally, while structural equation modeling provides robust insights into relationships among variables, it does not fully capture the qualitative nuances of how management support interacts with internal audit functions in practice.

Future research could expand upon these findings in several ways. Cross-country comparative studies would allow for testing the generalizability of results across different regulatory environments, cultural contexts, and governance systems. Longitudinal research designs would also help capture how changes in audit practices, management support, or technological adoption influence financial reporting quality over time. In addition, qualitative studies involving in-depth interviews with auditors, managers, and regulators could provide richer insights into the dynamics of management support and audit independence. Future studies could also examine the impact of emerging technologies, such as blockchain and AI-driven analytics, on audit effectiveness and reporting quality. Finally, expanding the scope of research to include non-listed firms, public sector organizations, or not-for-profit institutions would provide a more comprehensive understanding of audit practices across diverse organizational settings.

From a practical perspective, the findings of this study underscore the need for organizations to strengthen their internal audit functions through structural and technological investments while ensuring consistent support from senior management. Companies should prioritize the establishment of strong audit committees, effective risk management frameworks, and robust accounting information systems to enhance audit effectiveness. Training and capacity-building initiatives should be implemented to improve auditor competence, independence, and professional commitment. Equally important, senior management must actively support audit functions by allocating resources, ensuring independence, and embedding audit practices into strategic

decision-making processes. By fostering a culture of accountability and transparency, organizations can significantly improve the quality of financial reporting, strengthen investor trust, and enhance overall corporate governance.

Authors' Contributions

Authors contributed equally to this article.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

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Declaration of Interest

The authors report no conflict of interest.

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Ethics Considerations

In this research, ethical standards including obtaining informed consent, ensuring privacy and confidentiality were considered.

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