

The Effect of Internal Auditors' Reliance on External Auditors' Work on Accounting Information Quality: Evidence from Algerian Internal Auditors

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ABSTRACT

This study aims to explore the impact of internal auditors' utilization of external auditors' work on enhancing accounting information quality in Algeria, based on the perceptions of internal auditors within the selected sample. To achieve the practical objectives of the study, a descriptive analytical approach was adopted, and a questionnaire was designed and distributed to internal auditors as the primary data collection instrument. The study reached several key findings, including the existence of a statistically significant effect of internal auditors' utilization of external auditors' work in the areas of audit strategy and internal control system evaluation, thereby contributing to the enhancement of financial data quality. However, this utilization did not demonstrate a significant effect in the areas of exercising due professional care and report preparation. Furthermore, internal auditors' perceptions regarding the importance of utilizing external auditors' work and the qualitative attributes of accounting information quality were found to be positive.

Keywords: external audit, Internal audit, quality of financial data

Jel Classification: M4;M42

INTRODUCTION

The emergence of major global institutions and the diversification of their activities, coupled with financial fraud cases such as the Enron and WorldCom scandals, have contributed to the weakening of internal control mechanisms and the increasing occurrence of fraudulent practices and misrepresentations in financial statements. This situation has resulted in accounting outputs that fail to accurately reflect the actual financial position of organizations, leading to a decline in investor confidence in the fields of accounting and auditing, and consequently affecting the quality of accounting information.

Accordingly, accounting information systems are considered the primary source for generating reliable and credible information, thereby strengthening trust among both internal and external stakeholders. Increasing attention has been directed toward both types of auditing, as organizations require internal auditing as a continuous monitoring mechanism, in addition to external auditing as an independent function responsible for verifying the accuracy and reliability of financial records.

This situation has highlighted the importance of cooperation and integration between internal and external auditing functions, encouraging the Institute of Internal Auditors to issue the International Internal Auditing Standard 2050. This standard emphasizes the necessity of information sharing and coordination between internal and external auditors to prevent duplication of efforts and ensure sufficient audit coverage.

Based on this context, the following research problem is formulated:

Research Problem: To what extent does the internal auditor's use of the external auditor's work contribute to improving the quality of accounting information?

Significance of the Study: The scientific significance of this study lies in addressing a relatively underexplored dimension within the auditing literature. While most previous studies have focused on the external auditor's reliance on internal audit work, this research examines the "reverse relationship" by investigating how internal auditors utilize and benefit from the expertise, reports, and recommendations provided by external auditors. In doing so, it contributes to the accounting literature by highlighting how such professional reliance can enhance the qualitative characteristics and overall quality of financial accounting outcomes.

Practically, the significance of this study is reinforced by the continuous efforts of Algerian economic institutions to modernize their internal control systems in accordance with the Financial Accounting System (SCF). Utilizing external audit outcomes enables Algerian internal auditors to overcome professional gaps, improve internal control assessments, and reduce unnecessary duplication and costs associated with audit procedures. Ultimately, this collaborative relationship plays a significant role in protecting institutional assets and enhancing the transparency and credibility of financial statements within the Algerian business environment.

Study Objectives: The primary objectives of this study are as follows:

- To assess the extent to which internal auditors benefit from utilizing the work performed by external auditors.
- To examine how quality is achieved in the accounting information generated by the financial accounting system within an organization.
- To test the impact hypotheses in order to derive findings regarding the reliance of internal auditing on external auditing work to enhance accounting information quality.

Methodology: To achieve a comprehensive understanding of the research variables and to test the validity of the proposed hypotheses, this study adopts a descriptive analytical approach. This methodology is highly suitable for investigative empirical research, as it facilitates the grounding of theoretical concepts before systematically analyzing and interpreting field data. A structured questionnaire was developed and utilized as the primary tool for data collection from the targeted participants. To transform the empirical data into quantifiable findings and test the impact hypotheses, statistical processing was conducted using the Statistical Package for the Social Sciences (SPSS v24). This systematic approach ensures robust statistical analysis, allowing for practical conclusions and recommendations that reflect the empirical reality of the studied economic environment.

Paper Structure: To comprehensively address all dimensions of the research topic and ensure a rigorous academic presentation, this paper is organized into five logically connected sections. Section 1 presents the general introduction, including the research problem, hypotheses, objectives, and significance of the study. Section 2 focuses on the literature review and hypotheses development, critically examining the conceptual relationship between internal and external auditing, as well as the dimensions of accounting information quality. Section 3 describes the empirical methodology, including questionnaire design, validity, reliability, and sample characteristics. Section 4 presents the empirical findings, statistical analyses, hypothesis testing, and a critical discussion of the results in relation to previous studies. Finally, Section 5 concludes the paper by summarizing the main findings, providing practical recommendations for the Algerian auditing environment, and suggesting potential directions for future research.

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Review of Related Literature

(Dhneibat & Shnaq, 2006, pp. 254–276) assessed the application of auditing standards related to reliance, demonstrating that organizational status and independence represent fundamental pillars for establishing effective coordination and mutual reliance between both audit functions. Within the Algerian context, (Ben Ldgham, 2018) confirmed that the integration of internal and external audit activities through effective cooperation, coordination, and continuous consultation significantly improves the structural effectiveness of

internal control systems within economic institutions. Furthermore, (Chadri & Racham, 2022, pp. 185–204) examined the technical determinants of auditing, concluding that professional competence, objectivity, and work quality constitute essential criteria governing the reliability of audit reports and reliance decisions.

Regarding the operational and procedural aspects of this relationship, (Gritli & Bouazza, 2021, pp. 632–651) investigated the practical application of audit integration, revealing a statistically significant positive effect of this integration on “audit planning” and “internal control evaluation”; however, the study found no significant impact on “report preparation.” From an international perspective, (Saidin, 2014, pp. 641–646) examined the economic and practical implications of mutual reliance, concluding that although reliance did not substantially reduce external audit fees, it significantly improved operational efficiency by decreasing the scope of repetitive audit testing and procedures.

Critical Commentary and Research Gap

A critical synthesis of the aforementioned studies indicates a strong consensus regarding the strategic importance of audit coordination in enhancing control mechanisms. However, a significant methodological and conceptual gap remains insufficiently addressed in the existing literature.

The present study distinguishes itself by addressing this research gap through the following critical dimensions:

The Critical Reverse Dimension: The majority of previous empirical studies ((Dhneibat & Shnaq, 2006)& (Ben Ldgham, 2018), (Chadri & Racham, 2022); (Saidin, 2014),) have primarily examined the traditional “forward relationship,” particularly the factors influencing external auditors’ reliance on internal audit work. In contrast, empirical investigations of the “reverse relationship” remain limited. This study addresses this gap by examining the extent to which internal auditors rely on and systematically benefit from the work, expertise, and outputs provided by external auditors.

Four-Dimensional Operational Scope: Unlike previous studies that addressed coordination from a conceptual perspective, this research empirically evaluates reverse reliance across four specific operational dimensions: audit planning, internal control evaluation, exercising due professional care, and report preparation.

Direct Link to Accounting Information Quality: While previous research has mainly focused on audit fees or internal control effectiveness separately, this study develops an empirical model to examine how reverse reliance (as an independent variable with its four dimensions) directly influences the qualitative attributes of accounting information quality (as the dependent variable) from the perspective of internal auditors within the Algerian economic environment.

Hypotheses Development: The Operational Reliance and Internal Audit Outcomes:

The relationship between internal and external auditing has traditionally been considered a mechanism for optimizing resources and ensuring comprehensive institutional oversight. When internal auditors operate in an environment where they can access, understand, and utilize the comprehensive findings of external auditors, a significant transfer of professional expertise takes place. This structural synergy enables internal auditors to validate their risk assessments and benchmark their control methodologies against rigorous international standards applied by external audit firms.

Within the Algerian economic context, where economic entities seek to achieve full compliance with the Financial Accounting System (SCF), this reliance is expected to enhance the operational performance and capabilities of the internal audit function. Therefore, before assessing the ultimate impact on financial data quality, it is essential to determine whether internal auditors structurally benefit from this interaction. Based on this theoretical foundation, the first hypothesis is proposed:

H₁: Internal auditors in Algerian economic institutions benefit significantly from the professional work executed by external auditors.

Furthermore, the ultimate goal of implementing rigorous auditing mechanisms within an enterprise is to refine the accounting data system, ensuring that it reflects the true economic reality of the organization. According to accounting frameworks, the qualitative attributes of financial information—such as relevance, reliability, and comparability are heavily dependent on the strength of the internal and external verification processes. If the

collaborative auditing environment is functioning effectively, the generated financial outcomes should exhibit high qualitative characteristics. Consequently, to test the perceived quality of accounting information within these institutions, we state our second hypothesis:

H₂: The accounting data in the surveyed Algerian economic institutions possesses the qualitative characteristics of accounting information quality from the perspective of internal auditors.

The Impact of Reverse Reliance on Accounting Information: Moving beyond descriptive advantages, the primary contribution of this study is to assess the direct statistical impact of reverse reliance on the qualitative attributes of financial reporting. This impact is not consistent across all areas; rather, it is reflected through four distinct operational dimensions: audit planning, internal control evaluation, exercising due professional care, and report preparation.

First, incorporating external audit plans into internal audit planning enables internal auditors to focus their efforts on high-risk areas previously identified. Second, utilizing the external auditor's independent assessments during the evaluation of internal controls helps identify systemic weaknesses and reduce opportunities for financial manipulation. Third, adopting external audit methodologies encourages internal auditors to apply a higher level of due professional care. Finally, the rigorous standards followed during report preparation ensure that financial statements are clear, transparent, and free from material misstatements, thereby directly enhancing the overall quality of accounting information. Therefore, to empirically assess this causal relationship across its specific operational dimensions, the final major impact hypothesis is formulated as follows:

H₃: There is a statistically significant effect (at a significance level of $\alpha \leq 0.05$) of the internal auditor's reliance on the external auditor's work across specific dimensions (audit planning, evaluation of the internal control system, exercising due professional care, and report preparation) on enhancing the quality of accounting information.

INTEGRATION BETWEEN INTERNAL AND EXTERNAL AUDITING

The relationship between internal and external auditing is essential for both auditors and organizations due to its significant positive contribution to achieving organizational objectives. This integration aims to strengthen cooperation and coordination between auditors throughout the audit process, resulting in comprehensive audit coverage, reduced duplication of efforts, and an appropriate distribution of tasks that fulfills audit objectives while maximizing organizational benefits. External auditors also seek to utilize the results of internal auditors' work to ensure audit quality while preserving their independence and operational efficiency (Matariah, 2017, p. 48).

The objectives of the relationship between both types of auditing include:

- Covering all audit activities conducted within the organization.
- Performing audits with a high level of quality to ensure reliable accounting information.
- Reducing duplication of work and minimizing audit costs.
- Supporting organizations in effectively achieving their objectives.

The aspects of internal auditors' utilization of external auditors' work are diverse, with the most significant including the following: (Abusrah, 2010, pp. 121-124)

The internal auditor benefits from the experience of the external auditor, who is typically more experienced. The personnel at the external auditing firm are highly qualified both academically and practically, and they operate according to principles and standards of high quality in the field of auditing. Additionally, they possess extensive experience in internal auditing and utilize advanced information systems.

When the external auditor evaluates the work of the internal auditor, it highlights the shortcomings that may exist in the latter's work, thereby suggesting various appropriate solutions. This is beneficial for the internal auditor as it facilitates continuous development and improvement in their work.

The external auditor's complete independence makes them an important and complementary necessity for the internal auditor. The internal auditor gains insights from the external auditor's work regarding the objectives of external auditing, as well as an understanding of accounting standards, auditing standards, and any amendments to them.

The benefits of internal and external auditing can be achieved through several measures, including: (Avram, 2013, p. 12)

- Exchanging files and reports between auditors.
- Ensuring direct communication channels through clear agreements.
- Relying on each other's expertise.
- Organizing regular meetings to exchange information regarding planning and distribution.
- Informing each other about inherent risks.
- Dividing roles and objectives with collaboration at least once a year.
- Performing consulting tasks to identify planned audit operations.
- Developing a joint plan to improve audit efficiency and effectiveness.
- Reporting weaknesses in internal controls and providing appropriate recommendations.

ACCOUNTING INFORMATION QUALITY

Accounting information quality is defined as the essential Attributes that useful accounting information must possess (Ben Aishi, June 2016, p. 122), which are used to evaluate the quality of this information and support officials in setting accounting standards and preparing financial statements (Saidi & Hamdi, 2018, p. 391).

Accounting information quality is also considered to be linked to its credibility and usefulness for various users, as well as its freedom from any distortion or misleading content. Additionally, it should be prepared according to A framework of legal, regulatory, and professional standards for its intended use (Ben Qatib & Qasimi, 2016, p. 206).

Accounting information quality is essential for rational decision-making and has received significant attention from researchers and users, some researchers link the quality of information to good disclosure by transforming private information into public information to reduce asymmetry in accounting information (Al-Saffar, 2009, p. 30).

Based on these definitions, we conclude that the quality of accounting information is manifested in the availability of a set of useful characteristics that must be present in the information to enhance its quality and meet the needs of its users.

APPLIED STUDY

This study discusses the steps and procedures we followed, starting with clarifying the study population, moving through the sample and research tool, and culminating in the various statistical tools used.

Study Population and Sample

The study population consists of internal auditors and their assistants in major economic institutions where internal audit units are present. Due to the difficulty of obtaining accurate data on all members of the research population, a simple random sample was selected. A total of 110 questionnaires were distributed to internal auditors across 38 institutions, with 80 questionnaires returned. 19 questionnaires were discarded because they were completed by quality reviewers, accountants, department heads, and university professors. Consequently, the number of questionnaires from internal auditors that were subjected to analysis totaled 61. The following table presents the statistics related to the targeted sample in this study:

Table 1: Distribution of the Internal Auditor Questionnaire

Statement	Internal Auditor Questionnaire	
	Frequency	Percentage
Distributed Questionnaires	110	100%
Unreturned Questionnaires	30	27.27%
Returned Questionnaires	80	72.72%
Discarded Questionnaires	19	17.27%
Questionnaires Valid for Analysis	61	55.45%

Source: Prepared by the researcher.

Based on the table above, it can be observed that the number of valid questionnaires obtained from the internal auditor sample reached 61, representing 55.45% of the total distributed questionnaires. This response rate is generally considered acceptable for statistical analysis according to researchers and scholars in the field of statistics.

The study questionnaire was divided into two main sections. The first section addressed the benefits that internal auditors obtain from external auditors' work, represented through four dimensions reflecting the internal auditor's utilization of external audit work. This section consisted of 15 statements directed to internal auditors. The second section focused on the qualitative characteristics of accounting information and included four dimensions describing these characteristics. This section contained 17 statements designed to assess the extent to which these characteristics are applied within the studied institutions, based on the perspectives of internal auditors in the targeted sample.

Regarding the study sample, 61 valid responses were collected from internal auditors working in 38 different private and public economic enterprises distributed across various Algerian provinces. It should be noted that collecting data from internal auditors within the Algerian business environment involved considerable field challenges. This difficulty is mainly attributed to the fact that many Algerian institutions either lack a dedicated and independent internal audit department or apply strict confidentiality policies regarding audit-related practices. Therefore, obtaining 61 specialized responses from 38 distinct institutions represents a significant empirical effort, making the collected data highly relevant and reflective of actual professional practices.

Questionnaire Design and Data Collection

The research instrument was developed through a rigorous multi-stage process to ensure its reliability, validity, and contextual suitability:

- **Initial Structural Construction:** The questionnaire items were initially developed based on an extensive review of contemporary auditing literature and established internal control practices, ensuring that all measurement items were directly aligned with the research hypotheses.
- **Expert Academic Panel (Arbitration):** To establish content and face validity, the initial version of the questionnaire was reviewed by a panel of academic experts and senior professors specializing in auditing and accounting. Based on their valuable feedback, several items were modified, reworded, or removed to enhance clarity, reduce ambiguity, and improve the applicability of the instrument for practitioners.
- **Final Adaptation and Translation:** The final questionnaire was prepared in Arabic and carefully translated into French to reflect the linguistic characteristics of the Algerian corporate environment, where French is extensively used in professional accounting practices. Both versions were distributed electronically through Google Forms, in addition to printed copies.
- **Sampling and Distribution:** The target population consisted of internal auditors working within Algerian economic institutions. Data collection was conducted through a combination of direct personal interviews, telephone follow-ups, professional emails, and targeted professional networks such as LinkedIn. Furthermore, a snowball sampling technique was applied by requesting initial respondents to identify qualified colleagues, which contributed to increasing the response rate and obtaining 61 valid responses.

The questionnaire was divided into three main sections:

- **Section One (Independent Variable):** This section measures internal auditors' reliance on external auditors' work. Based on professional guidelines (such as auditing standards and previous literature, including Gritli, 2021), this variable is operationalized through four distinct dimensions: Audit Planning (4 items), Evaluation of the Internal Control System (4 items), Exercising Due Professional Care (4 items), and Report Preparation (4 items).
- **Section Two (Dependent Variable):** This section measures the enhancement of accounting information quality. Consistent with the conceptual framework of accounting standards, this variable is operationalized through its main qualitative characteristics: Relevance (4 items), Reliability (4 items), Comparability (4 items), and Understandability (4 items).

All items in the questionnaire were measured using a five-point Likert scale, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). This continuous interval scale enables the application of robust parametric statistical analyses.

Data Analysis Techniques (Statistical Techniques & Rationale)

To process the empirical data, quantitative responses were coded and analyzed using the Statistical Package for the Social Sciences (IBM SPSS v24), complemented by Microsoft Excel for the preparation of demographic charts. The selection of statistical techniques was scientifically justified according to the descriptive and inferential requirements of the study. The adopted statistical methods were determined based on the nature of the research hypotheses and the characteristics of the collected data, as follows:

Descriptive Statistical Tools

Absolute and Relative Frequencies: Used to organize, present, and describe the demographic characteristics of respondents and organizational attributes.

Mean and Standard Deviation: Calculated to evaluate the central tendency and level of variation in respondents' perceptions regarding each questionnaire item, providing an initial assessment of response patterns and compliance levels.

Cronbach's Alpha and Pearson Correlation: Applied to assess the internal consistency, reliability, and construct validity of the research scales, ensuring that the measurement dimensions are stable and statistically reliable.

Inferential Statistical Tools:

Kolmogorov-Smirnov Test (Normality Test): Executed to determine the nature of data distribution, ensuring the appropriateness of subsequent parametric tests.

One-Sample T-Test: Utilized to verify whether the mean scores of the responses significantly differ from the neutral mid-point score of 3 on the 5-point Likert scale.

Linear and Multiple Regression Analysis: Employed as the core inferential mechanism to test the impact hypotheses. Regression analysis is scientifically justified as it establishes linear mathematical equations that quantify how variations in the independent variable (internal auditors' reliance dimensions) predict and explain the variance in the dependent variable (accounting information quality).

Validity and Reliability of the Study Questionnaire

The validity of the questionnaire was confirmed through external validity by submitting the instrument for evaluation by academic professors specializing in accounting and finance. Following the incorporation of their comments and suggestions, the final version of the questionnaire was prepared. Construct validity was also assessed as follows:

A. Construct Validity of Internal Consistency for Axis One: Pearson correlation coefficients were calculated for the dimensions of Axis One with its overall average, reflecting the values in the table as indicators of internal construct consistency for this axis.

Table 2: Construct Validity of the First axis

Use of internal auditor for external auditor's work in the following areas:	Internal Auditor Questionnaire		
	Pearson Correlation	Sig (Two-tailed)	Statistical Significance
Planning the audit process	0,871	0,000	Statistically significant
Evaluation and study of the control system	0,862	0,000	Statistically significant
Exercising due professional care	0,903	0,000	Statistically significant
Report preparation	0,901	0,000	Statistically significant

Source: Prepared by the researcher based on SPSS V24 results.

The values presented in the table above indicate that the Pearson correlation coefficients for the dimensions of the first axis are statistically significant at the 0.05 significance level. The p-values for all dimensions are equal to 0.000, which is below the significance threshold of 0.05. This confirms the existence of positive relationships among the dimensions of the first axis and demonstrates that these dimensions are valid measures of the constructs they were designed to assess.

B. Internal Consistency Validity of the Second Dimension: The values in the table represent the internal consistency coefficient for the second dimension as follows:

Table 3: Construct Validity of the Second axis

Quality of accounting information	Internal Auditor Questionnaire		
	Pearson Correlation	Sig (Two-tailed)	Statistical Significance
Adequacy	0,873	0,000	Statistically significant
Reliability	0,742	0,000	Statistically significant
Comparability	0,810	0,000	Statistically significant
Understandability	0,795	0,000	Statistically significant

Source: Prepared by the researcher based on SPSS V24 results.

The values in the table above indicate that the Pearson correlation coefficients for the second dimension related to internal auditors are statistically significant at a significance level of 0.05, as the p-values for each dimension are equal to 0.000, which is less than the specified significance level. This demonstrates A strong positive relationship among the second axis dimensions enhances credibility the tool in measuring what it was designed for.

Regarding the construct validity of the study axes, this measure is considered one of the most important indicators of tool validity, as it assesses the degree to which the intended objectives are Achieved. Additionally, it illustrates how well the average scores of the study axes correlate with the questionnaire's overall score items, as indicated in the table below:

Table 4: Construct Study Validity Axes

Axis Title	Pearson Correlation		
	Pearson Correlation	Sig (Two-tailed)	Statistical Significance
Use of internal auditor for external auditor's work	0,869	0,000	Statistically significant
Quality of accounting information	0,895	0,000	Statistically significant

Source: Prepared by the researcher based on SPSS V24 results.

The values in the table above indicate that the Pearson correlation coefficients for the axes of the internal auditors' questionnaire are statistically significant at a level of 0.05, with p-values for each study axis being 0.000, which is below the required significance level. This enhances the credibility of the distributed questionnaire for both internal and external auditors.

C. Reliability of the Questionnaire: As for the reliability of the internal auditors' questionnaire, we relied on Cronbach's Alpha coefficient, which is one of the most common methods for measuring reliability. This coefficient is considered acceptable if it is 0.6 or higher. The following table presents the reliability coefficients for the study axes as follows:

Table 5: Reliability Coefficient (Alpha Coefficient)

Axis	Internal Auditors
Use of internal auditor for external auditor's work	0,911
Quality of accounting information	0,906
Overall Axes	0,934

Source: Prepared by the researcher based on SPSS V24 results.

The values presented in the table above indicate that the reliability coefficients for the study axes exceed the acceptable statistical threshold of 0.6. The overall reliability coefficient for the internal auditors' questionnaire is 0.934, which is very close to one. This suggests that the reliability of the questionnaire items is very high, meaning that if the questionnaire were redistributed multiple times, similar results would be obtained. Therefore, we can affirm the reliability of the questionnaire and its ability to contribute to the study and analysis, allowing us to test hypotheses with confidence.

Presentation and Analysis of Internal Auditors' Responses Regarding the Independent Variable: (Use of internal auditor for external auditor's work)

The Kolmogorov-Smirnov test was selected as one of the most commonly used methods to determine whether the data follow a normal distribution, as shown in the following table:

Table 6: Normality Test

Axis Number	Z Value	P-value (sig)
First	0,085	0,200*
Second	0,089	0,200*
All Axes	0,097	0,200*

Source: Prepared by the researcher based on SPSS V24 results.

The table above shows that the p-values for the study axes exceed the significance level of 0.05, indicating that the data follows a normal distribution according to the Kolmogorov-Smirnov test. This allows us to use parametric tests for data analysis. Additionally, a five-point Likert scale was employed to determine how data was measured.

The responses of the sample individuals (internal auditors) were analyzed using a one-sample T-test, as illustrated in the following table, to assess their level of agreement and direction regarding these statements.

Table 7: Presentation and Analysis of Internal Auditors' Responses Regarding the Independent Variable.

Axis 1: Use of internal auditor for external auditor's work						
No	Statement	Mean	Standard Deviation	Calculated T	Level of Agreement	Agreement Direction
1	The external auditor's assessment of internal audit work benefits the internal auditor in improving and developing their performance.	3,90	0,790	8,918	Agree	High
2	The internal auditor benefits from the experience and previous reports of the external auditor when planning their program	3,89	0,777	8,902	Agree	High
3	The internal auditor's coordination of their work program with that of the external auditor helps streamline many of the common audit procedures between them	3,70	0,955	5,767	Agree	High
4	The internal auditor relies on previous recommendations from the external auditor when preparing the annual internal audit plan	3,69	0,867	6,204	Agree	High
	Use in the planning of the internal audit process	3,79	0,644	9,632	Agree	High
1	The presence of the external auditor enhances the internal auditor's understanding of procedures. control system	3,59	0,990	4,658	Agree	High
2	Coordination and integration between the internal auditor and the external auditor in the area of internal control assessment help prevent deviations and protect assets	3,89	0,933	7,413	Agree	High
3	The external auditor collaborates with the internal auditor in evaluating the internal control system to identify its strengths and weaknesses	3,67	0,961	5,461	Agree	High
4	The internal auditor refers to previous recommendations from the external auditor to implement continuous improvements in the internal control system	3,82	0,847	7,561	Agree	High
	Use in the study and evaluation of the internal control system	3,74	0,758	7,641	Agree	High
1	The internal auditor takes into account the necessary evidence provided by the external auditor	3,52	0,924	4,435	Agree	High
2	the internal audit activities have been properly supervised, audited, and documented contributes to achieving the objectives of the internal audit function	3,80	0,928	6,763	Agree	High
3	The external auditor assists the internal auditor in resolving the issues encountered in the internal auditor's work	3,30	1,085	2,123	Neutral	Moderate
	Use in the field of professional care required	3,56	0,761	5,475	Agree	High
1	The internal auditor refers in his report to various reservations made by the external auditor that have not yet been addressed	3,59	0,920	5,012	Agree	High
2	The internal auditor follows up on the reservations raised in the external auditor's report and ensures that the identified deficiencies are corrected in collaboration with the relevant departments.	3,82	0,885	7,232	Agree	High
3	The internal auditor discusses the recommendations with the external auditor before including them in his final report	2,92	1,295	0,494	Neutral	Moderate
4	The external auditor's follow-up on the reservations raised in the internal audit report helps him understand the extent of the management's responsiveness	3,93	1,854	8,548	Agree	High
	Use in the preparation of the internal audit report	3,56	0,754	6,858	Agree	High
	The overall average of the first axis	3,66	0,638	8,181	Agree	High

Source: Prepared by the researcher based on SPSS V24 results.

The data presented in the table above indicate that the responses of the study sample members regarding all statements related to the first dimension of the first section, concerning the utilization of external auditors' work in the area of planning the internal audit process, as well as the statements related to the second dimension (evaluation and study of the internal control system) and the third dimension (exercising due professional care), were at an acceptable level. This is evidenced by the mean values falling within the range of the fourth response category on the five-point Likert scale [3.40–4.20], indicating that the most frequent response was "strongly agree." This was accompanied by a high standard deviation, reflecting a considerable degree of variation among respondents' opinions around the mean value. In other words, internal auditors demonstrated a strong level of agreement with these statements.

Regarding the responses of the study sample members to the statements related to the fourth dimension of the first section (utilization in the area of preparing the external audit report), the results also revealed a high level of agreement, with mean values falling within the fourth response category of the Likert scale [3.40–4.20] and a high standard deviation indicating substantial variability in respondents' perceptions. However, statement number 3 represented an exception, as it recorded a mean value of 2.92. The calculated t-value for this statement was 0.494, which is lower than the tabulated value of 2.001, while the p-value exceeded the significance level of 0.05. This indicates that internal auditors did not agree with this statement, whereas they expressed strong agreement with the remaining statements.

Based on the above findings, it can be concluded that statement number 1 within the fourth dimension (the external auditor's evaluation of the aspects related to internal auditor's work contributes to improving and developing the internal auditor's performance) achieved the highest mean value of 3.93. This result suggests that the external auditor's assessment of the objectivity and effectiveness of the internal audit function contributes to the continuous improvement and development of internal auditors' practices. Conversely, statement number 4 within the same dimension (the internal auditor discusses recommendations with the external auditor before incorporating them into the final report) recorded the lowest mean value of 2.92. This result may be attributed to the principle of individual professional responsibility assumed by auditors during the preparation of audit reports.

Presentation and analysis of the internal auditors' responses regarding the dependent variable (Quality of Accounting Information)

Table 8: Presentation and Analysis of Internal Auditors' Responses Regarding the Dependent Variable

Second Axis: Quality of Accounting Information						
No	Statement	Mean	Standard Deviation	Calculated T	Level of Agreement	Agreement Direction
1	Organizations strive to present accounting information that is clear and concise, facilitating users' economic decision-making	3,61	0,954	4,968	Agree	High
2	Organizations present accounting information with predictive value, enabling decision-makers to anticipate future financial events	3,70	0,989	5,567	Agree	High
3	Accounting information assists decision-makers in evaluating the accuracy of their prior expectations	3,80	0,792	7,921	Agree	High
5	The accounting information presented is characterized by its verifiability and the ability to reach the same results that any other person would obtain using the same measurement and disclosure methods.	3,95	0,902	8,230	Agree	High
	Suitability	3,73	0,731	9,161	Agree	High
1	The accounting information presented is characterized by neutrality and impartiality	3,75	0,925	6,369	Agree	High
2	"The organization provides accounting information that is free from errors	3,25	0,925	1,737	neutral	Moderate
3	The organization provides accounting information that is secure and free from any manipulation	3,62	1,105	4,774	Agree	High
4	The accounting information in financial statements accurately reflects the reality or phenomenon it represents during the current financial year	3,51	1,019	3,695	Agree	High
6	Accounting information contains a high degree of uncertainty		1,131	2,039	Neutral	Moderate

	in measurement (valuation)	2,70				
7	Useful accounting information is based on the principle of prudence	3,97	0,752	10,045	Agree	High
	Fair presentation (reliability)	3,36	0,929	5,603	Neutral	Moderate
1	The accounting information in the financial statements is comparable to the results of the same organizations over different periods	3,93	0,929	7,859	Agree	High
2	The accounting information presented in the financial statements is comparable with that of organizations operating in the same field	3,77	1,038	5,302	Agree	High
3	Accounting information is characterized by consistency in the use of the same measurement and communication methods over time	3,70	0,920	6,541	Agree	High
4	The consistency of the methods and techniques for measuring and communicating accounting information provides significant benefits for financial information	3,97	1,038	5,302	Agree	High
5	The accounting information presented is characterized by its verifiability, allowing others to achieve the same results using the same measurement and disclosure methods	3,67	0,912	8,281	Agree	High
	Comparability	3,68	0,768	8,146	Agree	High
1	The accounting information presented in the financial statements is prepared and communicated to users in a timely manner	3,89	0,915	7,559	Agree	High
2	The accounting information presented in the financial statements is useful when it is of a high degree of understandability	4,08	0,759	11,130	Strongly agree	Very high
	Understandability	3,88	0,762	10,213	Agree	High
	The overall average of the quality of accounting information	3,71	0,616	9,107	Agree	High

Source: Prepared by the researcher based on SPSS V24 results.

The responses of internal auditors regarding the statements related to the dimensions of the first axis of the dependent variable are distributed as follows:

The responses of internal auditors regarding the first dimension, "Relevance," indicate a preference for the fourth response option on the five-point Likert scale, with a mean value falling within the range of [3.40–4.20], suggesting that the study sample members strongly agree with the statements related to this dimension. Similarly, the responses concerning the statements of the second dimension, "Fair Presentation," demonstrate a high level of agreement, as the mean value also falls within the fourth response category [3.40–4.20], accompanied by a high standard deviation, indicating a considerable dispersion in respondents' opinions around the mean value. This reflects their strong agreement with the statements of this dimension, except for statement number 5, which recorded a neutral mean value of 2.70. The calculated t-value for this statement was lower than the tabulated value (2.001), while the p-value exceeded the significance level of 0.05, resulting in the rejection of this statement.

Regarding the third dimension, "Comparability," and the fourth dimension, "Understandability," the responses of internal auditors were also concentrated around the fourth option on the Likert scale, with mean values falling within the fourth agreement category [3.40–4.20]. This indicates that respondents tended to strongly agree with the statements related to these two dimensions. The results were also associated with a high level of variation in respondents' opinions, as reflected by the standard deviation values.

HYPOTHESIS TEST

A. Testing the first main hypothesis:

The first main hypothesis is stated as follows:

H0: The internal auditor does not benefit from the external auditor's work, as seen by internal auditors in the study sample.

H1: The internal auditor benefits from the external auditor's work, as seen by internal auditors in the study sample.

The following table presents the results of the one-sample T-test for testing this main hypothesis related to the first axis of the internal auditors' survey.

Table 9: Results of the T-Test for Testing the First Main Hypothesis

Decision	Degree of Agreement	p-value (sig)	Tabulated t-value	Calculated t-value	Standard Deviation	Arithmetic mean	Hypothesis
H ₁	3,70	0,619	8,897	2.001	0.000	High	Accept the hypothesis
Adopted significance level:0.05=α							

Source: Prepared by the researcher based on SPSS V24 results.

It is evident from the values in the table above that the mean of the variable 'the complementary relationship between internal auditors and external auditors' falls within the range of the fourth category on a five-point scale, reflecting a high degree of agreement with this hypothesis from the perspective of internal auditors. The calculated t-value was 8.181, which is greater than the tabulated value of 2.001, while the p-value was less than the significance level of 0.05. Accordingly, the null hypothesis is rejected, and the alternative hypothesis H1 is accepted, indicating that: The internal auditor benefits from the external auditor's work, as seen by internal auditors in the study sample.

B. Testing the second main hypothesis:

H0: The accounting information in organizations does not exhibit the qualitative characteristics of accounting information quality from the perspective of internal auditors in the studied sample.

H1: The accounting information in organizations is characterized by the qualitative characteristics of accounting information quality from the perspective The internal auditors within the examined sample.

The following table presents the results of the one-sample T-test for testing the second main hypothesis related to the mean of the second axis Regarding the questionnaire designed for internal auditors.

Table 10: Results of the T-Test for Testing the Second Main Hypothesis

Decision	Degree of Agreement	p-value (sig)	Tabulated t-value	Calculated t-value	Standard Deviation	Arithmetic mean	Hypothesis
H1	3.66	0.638	8.181	2,001	0,000	High	Accept the hypothesis
Adopted significance level :0.05=α							

Source: Prepared by the researcher based on SPSS V24 results

It is evident from the table above that the mean of the variable quality of accounting information, from the perspective of internal auditors, falls within the fourth Category on a five-point scale, indicating a strong level of agreement with this hypothesis. The calculated t-value was 8.897, which is greater than the tabulated value of 2.001, and the p-value was less than the significance level of 0.05. Accordingly, the null hypothesis is rejected, and the alternative hypothesis H1 is accepted, indicating that the accounting information in economic institutions within the studied sample exhibits the qualitative characteristics of accounting information quality, according to the opinions of the sample members.

C. Testing the hypotheses related to the study of the relationship and effect between the study variables:

The study hypotheses related to the relationship and effect between the study variables are tested using the statistical model of simple and multiple linear regressions. This model aims to examine the extent to which these variables are related to one another, as well as to analyze the effect between the independent variables and the dependent variable, by deriving a linear equation that expresses the dependent variable in relation to these independent variables is defined as follows:

$$Y = Ax + b$$

Testing the goodness of fit and linearity of the relationship for the third main hypothesis

The analysis of variance (ANOVA) method was used to verify the existence of a linear relationship between

the independent variable and the dependent variable, and to ensure the validity of the regression model for testing the third main hypothesis, as shown in the following table:

Table 11: Results of the regression analysis of variance to verify the validity of the model for testing the *third main hypothesis*.

Dependent Variable	Independent Variables	Source	Sum of Squares	Degrees of Freedom	Mean Square	F Value	Significance Level	R
Testing the goodness of fit and linearity of the relationship for the internal auditors' questionnaire								
Quality of Accounting Information	Use of internal auditor for external auditor's work.	Regression SSR	5,472	1	5,472	16,697	0,000	0,488 ^a
		Residuals SSE	17,539	59	0,297			
		Total SST	23,011	60				

Source: Prepared by the researcher based on SPSS V24 results.

The hypothesis states:

H0: There is no statistically significant effect at the significance level of $\alpha \leq 0.05$ of the internal auditor's use of the external auditor's work on improving the quality of accounting information, according to the opinions of the members of the studied sample.

H1: There is a statistically significant effect at the significance level of $\alpha \leq 0.05$ of the internal auditor's use of the external auditor's work on improving the quality of accounting information, according to the opinions of the members of the studied sample.

The table below shows the results of the simple linear regression analysis for the independent variable (Use of internal auditor for external auditor's work) on the dependent variable (quality of accounting information).

Table 12: Results of the simple linear regression analysis for the main hypothesis as assessed by internal auditors

Interpretation of Values R=0,488				Properties and Limitations R²=0,238		
Significance Level 0,05						
Dependent Variable	Independent Variable	Unstandardized Coefficients		Standardized Coefficients	t-value	Significance of t
		B	Seb	Beta		
Dependent Quality of Accounting Information	Constant	2,064	0,410	–	4,785	0,000
	Use of internal auditor for external auditor's work.	0,473	0,110	0,488	4,290	0,000
Interpretation of Values R=0,488				Properties and Limitations R²=0,238		

Source: Prepared by the researcher based on SPSS V24 results.

The simple linear regression analysis provides strong empirical support for the main research hypothesis. Statistically, the model is highly significant ($p = 0.000$, $t = 4.290$), and the positive slope coefficients (Beta = 0.488, B = 0.473) confirm the existence of a direct and positive relationship between the variables. Accordingly, the alternative hypothesis H_1 is formally accepted, demonstrating that internal auditors' reliance on external auditors' work has a statistically significant positive effect on enhancing accounting information quality within the surveyed Algerian institutions.

However, a deeper critical interpretation of the regression coefficients reveals more complex structural dynamics:

The Explanatory Power Limitation ($R^2 = 0.238$): The coefficient of determination indicates that the independent variable explains only 23.8% of the variation in accounting information quality. Although this effect is statistically significant, its explanatory power can be considered relatively limited. This finding suggests that approximately 76.2% of the variation in financial reporting quality within Algerian firms is influenced by other internal and external factors that were not included in this model, such as the effectiveness of Enterprise Resource Planning (ERP) accounting systems, the degree of independence of audit committees, management integrity, and continuous developments in Financial Accounting System (SCF) regulations.

The Contextual Interpretation of the Intercept (Constant = 2.064): The highly significant constant term ($p = 0.000$) provides an important institutional interpretation. It indicates that even in the absence of internal auditors' reliance on external audit work, accounting information maintains a moderate level of quality. This finding demonstrates that internal audit functions and internal accounting control mechanisms have independent capabilities to preserve data reliability and integrity.

Consequently, the significance of the regression parameters confirms the importance of the independent variable in explaining variations in the dependent variable, indicating a statistically significant but relatively limited positive effect. Therefore, the alternative hypothesis H_1 is accepted, which states that: "There is a statistically significant effect at a significance level of $\alpha \leq 0.05$ of the internal auditor's utilization of the external auditor's work on improving the quality of accounting information in the study sample, from the perspective of internal auditors."

In conclusion, although the acceptance of H_1 confirms that integrating external audit outcomes into internal audit processes represents an effective strategic approach for enhancing financial data quality, it should not be considered a standalone solution. To maximize the quality of accounting information, Algerian economic institutions should consider this reliance as a complementary mechanism within a broader and multidimensional corporate governance framework.

D. Testing the Sub-Hypotheses From the internal auditors' perspective:

After confirming the effect of the independent variable on the dependent variable through simple linear regression analysis, the sub-hypotheses related to the third main hypothesis are tested. The Analysis of Variance (ANOVA) method was employed to verify the existence of a linear relationship between the independent variables and the dependent variable, as well as to assess the validity of the regression model for testing the sub-hypotheses, as presented in the following table:

Table 13: Results of the ANOVA Analysis for Regression to Verify the Model's Validity for Testing

Dependent Variable	Independent Variables	Source	Sum of Squares	Sum of Squares	Degrees of Freedom (df)	F-value	Significance Level (Sig.)	Correlation Coefficient (R)
Quality of Accounting Information	Use of internal auditor for external auditor's work	Regression SSR	5,868	4	1,467	4,792	0,002	0,510 ^a
		Residual SSE	17,143	56	0,306			
		Total Sum of Squares SST	23,011	60	-			

Source: Prepared by the researcher based on SPSS V24 results.

The data presented in the ANOVA table above indicate that the linear correlation coefficient (R) is 51%, demonstrating a moderate relationship between the independent variables and the dependent variable, specifically between the four dimensions of internal auditors' utilization of external auditors' work and the quality of accounting information. Furthermore, the significance level of the F-test is lower than 0.05, indicating that the regression model is statistically significant. Therefore, a statistically significant linear relationship exists between the independent variables and the dependent variable. Accordingly, multiple linear regression analysis can be applied to test the sub-hypotheses from the perspective of internal auditors, as presented in the following table:

Correlation Coefficient R =0,510		Coefficient of Determination R²= 0,255			
Variable	Unstandardized	Standardized		t-value	Significance t
	Coefficients	Coefficients			
	B	Seb	Bêta		
Constante	1,854	0,441	–	4,206	0,000
Planning area for internal audit function.	0,245	0,163	0,255	2,505	0,039
Evaluation and study of the internal control system.	0,046	0,149	0,051	2,277	0,048
The area of professional care required.	0,030	0,132	0,026	0,149	0,882
Area of preparation of internal audit report.	0,273	0,153	0,283	1,518	0,135

Table 14: Multiple regression analysis results for Sub-Hypotheses

Source: Prepared by the researcher based on SPSS V24 results.

The impact can be summarized through the implementation of regression analysis using the AMOS program,

which involves analyzing the extent of influence of various dimensions on the dependent variable "information quality" The validity of the model is confirmed through the following diagram:

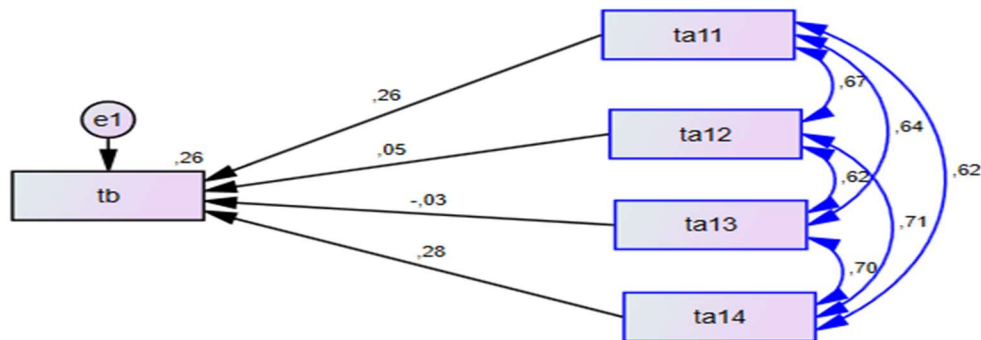


Figure 1: Multiple Regression Model for the Sub-Hypotheses of Internal Auditors Using AMOS Software

Source: Prepared by the researcher based on the outputs of the amous program.

Advanced Critical Discussion of Sub-Hypotheses:

The multiple linear regression model (Table 15) evaluates the simultaneous impact of the four dimensions of internal auditors' reliance on external auditors' work on accounting information quality. The coefficient of determination ($R^2 = 0.255$) indicates that these four dimensions collectively explain 25.5% of the variation in the dependent variable, while the remaining proportion is attributed to other internal and external corporate governance mechanisms. The critical analysis of each sub-hypothesis reveals important professional implications:

Planning Dimension (H_{3a})- Accepted): The regression results show a positive and statistically significant impact for planning ($B = 0.245$, $t = 2.505$, $p = 0.015 < 0.05$). This indicates that a one-unit increase in reliance during the planning phase improves accounting information quality by 0.245. Dynamically, joint audit planning allows internal auditors to align their internal audit scope with external risk assessments, preventing audit gaps and optimizing resource allocation.

Internal Control Evaluation Dimension (H_{3b})- Accepted): This dimension exhibits a positive and statistically significant impact ($B = 0.046$, $t = 2.277$, $p = 0.039 < 0.05$). For every one-unit change in collaborative internal control study, accounting information quality increases by 0.046. Although the magnitude is low, the significance confirms that leveraging external audit diagnostics helps internal auditors detect structural control deficiencies earlier, minimizing the risk of financial reporting misstatements.

Due Professional Care Dimension (H_{3c})- Rejected): The analysis shows an insignificant impact ($B = 0.030$, $t = 0.149$, $p = 0.882 > 0.05$). Thus, the null hypothesis is accepted. Exercising due professional care is an intrinsic, personal, and ethical obligation bound by strict internal codes of conduct. Consequently, it cannot be operationally enhanced or altered by external audit outputs.

Report Preparation Dimension (H_{3d})- Rejected): This dimension also reveals a statistically insignificant impact ($B = 0.273$, $t = 1.518$, $p = 0.135 > 0.05$). Thus, the null hypothesis is accepted. Statutorily, internal audit reporting is an independent line of communication directed strictly to internal governance bodies (e.g., the Audit Committee or Board of Directors). These professional boundaries prevent external audit inputs from directly influencing the final drafting or structure of internal reports.

Based on these results, the Multiple Linear Regression Equation is formulated as follows:

$$\{Y = 1.854 + 0.245(X_1) + 0.046(X_2) + 0.030(X_3) + 0.273(X_4)\}$$

The regression equation demonstrates that the overall positive effect of reliance is primarily driven by the early preparatory and diagnostic stages (Planning and Internal Control), whereas the execution and reporting stages (Professional Care and Reporting) remain largely independent from external influence due to professional autonomy and regulatory requirements within Algerian economic institutions. This indicates that a one-unit increase in the internal auditor's reliance on the external auditor's work in the area of planning the internal audit

process leads to an improvement in accounting information quality by 0.245 units. Similarly, a one-unit increase in the internal auditor's utilization of external auditor's work in the area of evaluating and studying the internal control system results in an improvement in accounting information quality by 0.046 units, according to the perceptions of internal auditors in the studied sample. Accordingly, the regression equation is formulated as follows:

Quality of accounting information = 0.245 (Planning the internal audit process) + 0.046 (Evaluation and study of the internal control system).

Discussion of Empirical Findings and the Unprecedented Added Value

The empirical findings of this study provide significant insights into the dynamics of auditing integration within the Algerian corporate sector. The statistical acceptance of the sub-hypotheses (H_{3a} and H_{3b}) confirms that internal auditors' reliance on external audit outcomes significantly improves accounting information quality in the areas of audit planning and internal control evaluation. Conversely, the rejection of (H_{3c} and H_{3d}) indicates the absence of a statistically significant effect during the stages of exercising due professional care and internal audit report preparation.

The Original Added Value and Theoretical Departure: The fundamental contribution of this study lies in its deliberate departure from the dominant perspective in auditing literature. While the majority of previous studies such as (Chadri & Racham, 2022, pp. 185–204)) have primarily focused on the “forward relationship” established under International Standard on Auditing No. 610 (ISA 610), which regulates the external auditor's reliance on the internal audit function, this study introduces a novel “reverse perspective” by examining how internal auditors utilize and benefit from the work, risk assessments, and benchmarks established by external auditors. Consequently, the relationship with previous literature is characterized by a unique methodological inversion supported by empirical consistency.

The Conceptual Inverse yet Functional Alignment with (Gritli & Bouazza, 2021, pp. 632–651): While Gritli (2021) examined the traditional forward integration relationship, where external auditors rely on internal audit activities within established regulatory frameworks, the present study reaches a comparable empirical conclusion from the opposite direction. The findings demonstrate that, regardless of the direction of reliance, professional synergy in Algeria is highly effective during the analytical and diagnostic phases (Planning and Internal Control), while remaining significantly constrained during the formal execution stages (Professional Care and Reporting) due to deeply established statutory boundaries and the legal separation of professional responsibilities.

The Methodological Contrast with (Ben Ldgham, 2018)) and (Chadri & Racham, 2022): Unlike Ben Ldgham, who examined cooperation as a general concept of mutual coordination, and Chadri & Racham, who considered internal auditing primarily as a function assessed by external auditors, the empirical evidence of this study positions the internal auditor as an active and independent beneficiary. The findings demonstrate that when internal auditors systematically utilize external audit assessments and diagnostic outcomes, they are able to enhance the qualitative characteristics of financial reporting.

By establishing this reverse reliance framework, this study provides a new contribution to the local and regional auditing literature, demonstrating that corporate governance effectiveness and accounting information quality are enhanced not only when external auditors rely on internal audit work, but also when internal auditors structurally integrate external audit expertise into their professional practices. Top of Form Bottom of Form.

CONCLUSION AND CONTRIBUTIONS

This study aimed to investigate a relatively underexplored dimension within the auditing literature, namely the impact of internal auditors' reliance on and utilization of external auditors' work in enhancing accounting information quality within the Algerian economic environment. Moving beyond a descriptive presentation of empirical findings, the synthesized results of this research provide significant theoretical and practical contributions that enrich academic knowledge and support professional corporate governance practices.

Theoretical Contributions

From a theoretical perspective, this study contributes to the accounting and auditing literature by addressing a substantial conceptual gap. While traditional research has primarily focused on the “forward relationship” governed by International Standard on Auditing No. 610 (ISA 610), particularly how external auditors rely on internal audit functions, this study introduces a new analytical perspective by examining the “reverse relationship.”

By demonstrating that reverse reliance contributes to enhancing the qualitative characteristics of accounting information (relevance, reliability, comparability, and understandability) from the perspective of Algerian internal auditors, this research confirms that integration between internal and external auditing represents a bidirectional mechanism. Furthermore, it provides a detailed phase-specific understanding of this integration by demonstrating that the positive statistical effect is not consistent across all stages; rather, it is concentrated in the early preparatory and diagnostic stages (audit planning and internal control evaluation), while remaining constrained during the execution and reporting stages due to established statutory boundaries.

Practical and Managerial Implications

From a practical perspective, these findings provide a valuable diagnostic framework for regulatory authorities, professional organizations, and Algerian economic institutions seeking to achieve full compliance with the Financial Accounting System (SCF). First, the empirical evidence supporting the planning dimension ($B = 0.245$) and internal control dimension ($B = 0.046$) demonstrates that internal auditors can effectively reduce audit gaps, avoid procedural duplication, and identify structural control weaknesses at an earlier stage by systematically incorporating external audit assessments and risk evaluations.

Second, the statistical rejection of the impact on exercising due professional care and report preparation provides important guidance for corporate managers. It emphasizes that although operational cooperation generates significant benefits, the professional independence and autonomous reporting responsibilities of internal auditors toward internal governance bodies (such as the audit committee) must remain strictly preserved to ensure institutional integrity. In conclusion, this research demonstrates that the proactive utilization of external audit outputs by internal auditors represents an effective strategic approach for improving financial reporting quality. However, this approach should not be considered an independent solution, but rather a complementary mechanism integrated within a broader and multidimensional corporate governance framework adapted to the characteristics of emerging and developing markets.

Recommendations

Based on the empirical findings of this study, a set of practical recommendations is proposed to further develop the internal auditing profession and strengthen the coordination and integration mechanisms between internal and external audit functions within the Algerian context:

Like any empirical investigation, this study has certain limitations that should be recognized. The main limitation relates to the sample size, which comprised 61 valid responses collected from 38 institutions. Although this sample reflects the practical difficulties associated with obtaining access to internal audit practitioners within the Algerian business environment, its relatively limited size may affect the extent to which the findings can be generalized across different economic sectors or transferred to other developing economies characterized by distinct institutional and regulatory frameworks. To overcome this limitation, future research should seek to increase the sample size by involving a broader range of institutions, conducting comparative cross-country studies, or adopting qualitative research methods, such as semi-structured interviews, to provide deeper insights into the complex dynamics governing the interaction between internal and external auditing functions.

Institutionalizing Mutual Reliance Frameworks: Algerian enterprises should develop formal internal policies, methodological guidelines, and professional procedures that promote the systematic utilization of external audit outputs, including audit reports, diagnostic assessments, and risk evaluations, by internal auditors. Such frameworks would enhance knowledge sharing, reduce audit duplication, and improve the effectiveness of internal audit activities.

Mandating Independent Internal Audit Units: Regulatory authorities and economic institutions should encourage the establishment of independent and adequately structured internal audit units within major organizations and their affiliated branches. Ensuring the organizational independence of these units would strengthen their authority, facilitate direct communication with external oversight bodies, and improve the effectiveness of internal control mechanisms.

Adhering to International Reference Frameworks (IPPF): Greater efforts should be directed toward strengthening the role of the Algerian Internal Auditors Association in promoting the adoption and practical implementation of the Global Internal Audit Standards issued by the Institute of Internal Auditors (IIA). Aligning national auditing practices with internationally recognized frameworks would contribute to improving professional quality, consistency, and credibility.

Establishing Active Audit Committees: Algerian organizations should prioritize the establishment of independent and effective audit committees within their corporate governance structures. These committees can serve as a strategic communication bridge between internal and external auditors, facilitating information exchange, enhancing oversight mechanisms, and supporting the effectiveness of audit coordination.

Integrating Advanced Technologies and Artificial Intelligence: Economic institutions should encourage the modernization of internal audit functions through the adoption of advanced data analytics tools, digital auditing solutions, and Artificial Intelligence (AI) applications. These technologies can enhance automated verification processes, improve risk identification capabilities, support collaboration with external auditors, and contribute to increasing the accuracy and timeliness of accounting information.

Supporting Professional Certifications: Professional bodies and economic institutions should provide greater support for internal auditors seeking internationally recognized certifications, such as the Certified Internal Auditor (CIA) designation accredited by the Institute of Internal Auditors (IIA). Such certifications would enhance auditors' technical competence, professional judgment, ethical awareness, and ability to perform high-quality audit activities.

Fostering University-Industry Collaboration: Stronger cooperation between academic institutions and professional organizations should be encouraged through joint national and international conferences, research projects, and professional forums addressing emerging developments in accounting, digital auditing, taxation, and corporate governance. Such collaboration would facilitate knowledge transfer and ensure that academic research remains aligned with practical professional challenges.

Future Research Directions:

To expand the boundaries of the current literature, this study proposes several contemporary avenues for future empirical research:

AI-Driven Internal Auditing: Exploring the role of Artificial Intelligence (AI) and machine learning algorithms in improving the predictive quality and reliability of financial and accounting information.

Continuous and Digital Auditing: Investigating the impact of continuous auditing techniques and cloud-based accounting systems on the efficiency of internal-external audit integration within the context of digital transformation.

The Reverse Reliance and Financial Integrity: Conducting comparative studies on how the internal auditor's reliance on external audit outcomes mitigates earnings management practices and financial reporting fraud.

Governance and Advanced Auditing Practices: Assessing the joint contribution of internal audit functions and external auditors in implementing anti-corruption algorithms and corporate governance principles via big data analytics.

Audit Committees and Collaborative AI: Examining the role of modern audit committees in managing the ethical and operational risks associated with adopting automated auditing tools, and its impact on narrowing the audit expectation gap.

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