

The Integration between Internal and External Auditing and its Role in Improving the Auditing Process

A Survey Study of a Group of Internal and External Auditors

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Abstract :

The study aimed to measure the extent of an integrative relationship between internal and external auditing and its impact on improving the auditing process, based on a sample comprising a group of internal and external auditors in the state of Setif. The findings indicate several key outcomes, primarily the presence of integration during the planning phase, achieved by ensuring the independence, the adequacy of resources, and the accuracy of the planning process. Integration during the task execution by collaboration in addressing operational challenges, ensuring proper supervision, and evaluating internal control systems and inherent risks. Additionally, integration in the reporting phase is accomplished by verifying that reports include actionable findings and recommendations, are actively engaged with, and are escalated to the highest authority. Integration across these three phases enhances the credibility of financial statements, the reliability of information, and improves internal control systems and risk management, which improves the auditing process.

.Keywords : Internal Audit, External Audit, Internal Auditor, Chartered Accountant, Statutory Auditor

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1. Introduction:

Internal auditing and external auditing constitute two fundamental pillars of an organization's control system, as they both aim to achieve a common goal which is strengthening confidence in the soundness of control systems and the accuracy of financial reports. Despite the differences in the nature of each function, economic developments and the increasing complexity of operations within organizations have created the need to explore effective integration and coordination between them, allowing for mutual benefit from the outcomes of each function, many international and national standards have emphasized this importance by establishing frameworks that regulate the relationship between the two functions and clarify how each can rely on the other within certain limits and conditions. This, in turn, positively reflects on the performance and efficiency of auditing. Thus, the integration between internal and external auditing has become a strategic option imposed by the modern business environment, as it provides additional assurances to both the organization and its stakeholders alike.

Research Problem:

Based on the foregoing, and in order to fully grasp the subject of the study, the research problem will be formulated in the following main question:

Does the integration between internal auditing and external auditing play a role in improving the auditing process in the sample under study?

To address this problem, it is necessary to break it down into the following sub-questions:

- To what extent does integration exist between internal auditing and external auditing in the planning phase of the audit process for the sample under study?
- To what extent is there integration between internal auditing and external auditing in the performance stage of the audit mission for the sample under study?
- To what extent is there integration between internal auditing and external auditing in the audit reporting stage for the sample under study?
- Does the integration between internal auditing and external auditing across the three audit stages enhance the audit process for the sample under study?
- Are there statistically significant differences in the existence of an integrative relationship between internal and external auditing across the three audit stages and the improvement of the auditing process for the sample under study?

Research Hypotheses:

To address the sub-questions, the following hypotheses must be formulated:

- There is integration between internal auditing and external auditing in the planning stage of the audit process for the sample under study.
- There is integration between internal auditing and external auditing in the audit execution stage for the sample under study.
- There is integration between internal auditing and external auditing in the audit reporting stage for the sample under study.

The Integration between Internal and External Auditing and its Role in Improving the Auditing Process -A Survey Study of a Group of Internal and External Auditors-

- The integration between internal and external auditing in the three stages of auditing improves the audit process for the sample under study.
- There are statistically significant differences at the significance level regarding the integrative relationship between internal and external auditing in the three audit stages and the improvement of the audit process for the sample under study.

Research Objective:

The main objective of the study lies in measuring the extent of the integrative relationship between internal and external auditing in the three stages of the audit (planning, performance, and reporting), and its impact on improving the auditing process, as well as examining whether there is a statistically significant effect of this relationship across the three stages on enhancing the auditing process for the sample under study.

The Significance of the Study:

The significance of this study lies in its focus on a contemporary and vital topic in the field of auditing, namely the enhancement of integration between internal and external audit functions with the aim of improving the audit process. With the increasing scale and complexity of operations within organizations, it is no longer feasible to rely on the efforts of each party in isolation. Rather, it has become essential to coordinate activities and exchange information between them in order to achieve the highest levels of credibility and reliability in financial reporting, reduce costs and time, avoid duplication, and strengthen internal control systems and risk management.

2.The Theoretical Framework of the Study:

2.1.Defining the Integration between Internal and External Auditing

The French Institute of Internal Audit and Control (IFACI) defines audit integration as “the use by external auditors of the results of the work performed by internal auditors to deliver their own work effectively, without compromising the independence and competence of the internal auditors’ work” (Boubata & Boudrama, 2023, p. 897).

Integration between internal and external auditing is also defined as “a process of coordination and collaboration aimed at enhancing the efficiency and quality of auditing through information sharing, reducing duplication, and strengthening confidence in internal control systems” (IAASB, 2013, p4).

As indicated by the Institute of Internal Auditors, the integration between internal and external auditing is based on developing an effective relationship between the two functions through collaboration, information sharing, and role clarification, which leads to reducing duplication and achieving added value for governance (IIA, 2013, p6).

Accordingly, integration can be defined as the process of coordination, cooperation, information exchange, and relationship development between internal and external auditing without compromising the independence of both functions, which leads to reducing duplication and enhancing the efficiency and quality of auditing.

2.2.The Role of Audit Standards in Enhancing Integration Between Internal and External Auditing:

2.2.1 Internal Audit Standards:

2.2.1.1.Standard 8.4 External Quality Assessment:

The quality assessment can be conducted through a full external quality assessment or through a self-assessment with independent validation. The required attributes for assessors, according to the same standard, include knowledge of internal audit standards, practical experience in internal auditing and the field of external quality assessments, and a clear understanding of the organization's structure and its sector of activity (IIAS, 2025, p1).

The standard stipulates that the external assessment includes a comprehensive review of the adequacy and effectiveness of the internal audit function, as per (IIA, 2024, p51):

- Commitment to Standards and Ethics: The extent of alignment with international internal auditing standards and compliance with applicable regulations and laws,
- Necessary Professional Care: Through the availability of competencies and a focus on continuous development,
- Resource Sufficiency: Through the efficient use of competencies and resources,
- Effectiveness of Operations and Procedures: Through the quality of risk-based planning, examination of evidence collection and documentation methods, in addition to the quality of audit reports,
- Added Value and Governance: Through the contribution of internal auditing in improving internal oversight, supporting risk management, and its role in enhancing governance,
- Stakeholder Communication: Engaging with the board of directors, senior management, and stakeholders, and being able to meet their expectations,
- Quality Assurance and Improvement Program: Through ongoing internal assessments and a focus on continuous development,
- Recommendations and Future Improvements.

2.2.1.2. Standard 9.5 Coordination and Reliance (IIA, 2024, p62):

The standard stipulates that the Chief Audit Executive must coordinate internal audit activities with internal and external assurance service providers to minimize duplication of efforts and highlight gaps in risk assessment. When the internal audit function relies on the work of other assurance providers, this reliance must be documented, and the internal audit remains responsible for the conclusions drawn.

The Chief Audit Executive can coordinate with other assurance service providers through:

- Taking into consideration the roles of service providers, their responsibilities, independence and objectivity, as well as due professional care.
- Understanding the scope and objectives of the work performed by other assurance service providers and the results of their work.
- Synchronizing the nature, extent, and timing of the planned work.
- Sharing information and providing access to their work programs and reports.
- Using consistent terminology and methodologies whenever possible.
- Establishing clear expectations regarding reliance on the work of other assurance service providers.
- Preparing an assurance map to illustrate coverage, gaps, and overlaps in assurance activities.
- Documenting the nature and extent of reliance on the work of other assurance service providers.

2.2.1.3. Other criteria:

- Standard 2.3 **Disclosure of Impediments to Objectivity** stipulates that if impairments to objectivity cannot be avoided, the internal auditor may rely on external sources to perform and supervise the engagement (IIA, 2024, p22).

The Integration between Internal and External Auditing and its Role in Improving the Auditing Process -A Survey Study of a Group of Internal and External Auditors-

- As for standard 3.1 **Proficiency** states that it is necessary to consider contracting with an independent external service provider when the internal audit function does not possess the required proficiency to deliver the services (IIA, 2024, p. 24).
- Internal Audit Standard 7.1 **Organizational Independence** highlights that when the internal auditor assumes an extended role, this must be documented in the audit charter, such as in the case of contracting with an external assurance service provider, who reports independently to management (IIA, 2024, p. 40).
- Standard 8.2 **Resources** stipulates that resources must be discussed between the board and the auditor at least annually, and that external sources may also be utilized (IIA, 2024, p. 48).
- Internal Auditing Standard 9.1 **Understanding Governance, Risk Management, and Control Processes** indicates that, in order to understand governance processes, the Chief Audit Executive should consider how the organization coordinates activities and communications between the board of directors and internal and external assurance providers (IIA, 2024, p. 54). The same standard further highlights that, when gathering information about risks, recently completed risk assessments by external auditors should be reviewed.
- Internal Auditing Standard 9.2 **Internal Audit Strategy** states that the strategy should be adjusted when changes occur in the results of internal and external assessments (IIA, 2024, p. 57).
- Internal Auditing Standard 9.3 **Approaches** stipulates that the internal audit strategy should be revised when there are changes in the organization's strategic objectives, based on the results of internal and external assessments of the internal audit function (IIA, 2024, p58).
- International Internal Auditing Standard 9.4 **Internal Audit Plan** explicitly indicates that when developing the internal audit plan, the chief audit executive should take into account the capacity of the internal audit function to rely on the work of other assurance providers. Likewise, the internal auditor must consider the external audit schedule when planning internal audit engagements (IIA, 2024, p60)
- Internal Auditing Standard 11.1 **Building Relationships and Communication with Stakeholders** highlights that the internal audit function must be developed to build relationships and communicate with key stakeholders, including external assurance providers (IIA, 2024, p68).
- Internal Audit Standard 13.2 **Significant Risk Assessment** indicates that, in order to gather information, the internal auditor may review recent risk assessments conducted by external service providers (IIA, 2024, p85).

2.2.2.External Audit Standards:

International Auditing Standard (ISA) 610 **using the Work of Internal Auditors** contains a set of provisions that regulate and clarify how the external auditor may use the work of the internal auditor. This includes (International Federation of Accountants, 2020, p684):

- Using the work of the internal audit function to obtain audit evidence;
- The use of internal auditors to provide direct assistance under the direction, supervision, and review of the external auditor.

The standard outlined key conditions for the external auditor to benefit from the work of the internal auditor, the most important of which are:

- Assessment of the possibility of reliance: This includes verifying the objectivity of internal auditors, their competence, and the extent of their adherence to a systematic methodology.
- Use of existing work: The external auditor must coordinate with internal audit, review its reports, and perform additional verification procedures.

- Direct Assistance: Where legally permitted, internal auditors may provide direct assistance; however, this does not extend to high-risk areas or those requiring significant professional judgment.
- Written Approvals: Written approval must be obtained from both management and internal auditors to ensure adherence to instructions and the safeguarding of confidentiality.
- Documentation: The external auditor is required to document his or her evaluations, the nature and scope of the work utilized, and any additional procedures performed.

2.2.3. Local Standards:

Algerian Auditing Standard 610: External Auditor's Reliance on the Work of Internal Auditors (National Accounting Council, 2017):

Issued under Resolution No. 23 of March 15, 2017 by the Ministry of Finance, this standard addresses the conditions and circumstances under which the external auditor may benefit from the work of internal audit, specifically with respect to:

- Determining the possibility and extent of using the work of internal auditors;
- Utilizing specific internal audit work;
- Documentation.

The standard further indicates that the external auditor is required to evaluate certain aspects related to the work of the internal auditor, such as: the internal auditor's technical competence, the objectivity of the internal audit function, the existence of any pressures or restrictions imposed by management, the likelihood of effective communication between the two parties, the extent of management's responsiveness to the internal audit function's recommendations, professional competence, and the adequacy of documentation.

3. Methodology and tools:

3.1. The study population and sample:

The target population of this survey consists of internal auditors, certified public accountants, and accounting experts registered with the National Register of Accounting Experts and the National Chamber of Certified Public Accountants. A total of 80 questionnaires were distributed to a randomly selected sample in the Setif province. Of these, 72 questionnaires were retrieved, with 70 deemed valid for the study, representing a response rate of 87.5%.

3.2. Structuring the Questionnaire:

The questionnaire consisted of 38 questions related to the study variables, which were categorized into four dimensions corresponding to the sub-hypotheses. A five-point Likert scale was employed, and the responses were coded in SPSS according to the degree of agreement, ranging from 5 to 1. To determine the interval length between each degree, the difference between the minimum and maximum values of the scale ($5-1 = 4$) was calculated. Given that the number of categories is five, dividing 4 by 5 yields an interval length of 0.8. This value was then added progressively to the category codes, starting from the lowest category. The adopted coding scheme was as follows:

Table 01: Five-Point Likert Scale

The Integration between Internal and External Auditing and its Role in Improving the Auditing Process -A Survey Study of a Group of Internal and External Auditors-

Categorization	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Coding	5	4	3	2	1
Range	5-4.2	4.2-3.2	3.4-2.6	2.6-1.8	1.8-1

Source: Prepared by the researcher

3.3. Questionnaire Reliability Test:

Cronbach's alpha coefficient was employed to assess the validity and reliability of the questionnaire. Reliability refers to the stability of the questionnaire's results, indicating minimal variation when redistributed to the study sample multiple times across different time periods. The coefficient value reached 81.2%, which is close to 1, signifying a high level of internal consistency and the questionnaire's suitability for study and analysis.

3.4. Demographic Characteristics of the Study Sample:

The following table summarizes the frequencies and percentages corresponding to each characteristic of the study sample's individuals.

Table 02: Demographic Characteristics of the Study Sample Participants

haracteristics	Type	Frequency	Percent-age	Characteristics	Type	Frequ-ency	Percenta-ge
Job Position	Internal Auditor	40	57.1%	Educational Attainment	Bachelor's Degree	44	62.9%
					Master's Degree	22	31.4%
	Accountant	14	20%		Doctorate	2	2.9%
	Accounting Expert	16	22.9%		Other	2	2.9%
Age	Under 30 years	5	7.1%	Years of Experience in Auditing	2 to 6 years	15	21.4%
	30 to 40 years	31	44.3%		6 to 12 years	24	34.3%
	Over 40 years	34	48.6%		Over 12 years	31	44.3%

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

From the table, the following was observed:

Job position: It is observed that 57.1% of the respondents are internal auditors, while the remaining percentage is distributed between accountants, comprising 20%, and accounting experts, comprising 22.9%. Despite the questionnaires being distributed equally, the response rate of internal auditors was higher than that of accountants and accounting experts. With regard to **age** the majority of respondents, 48.6%, are over 40 years old, followed by the age group ranging between 30 and 40 years, representing 44.3%, and then the age group under 30 years, constituting 7.1%. As for **academic attainment**, a diversity in qualifications is observed among the respondents. The majority, accounting for 62.9%, hold a bachelor's degree, as the profession of internal or external auditing typically requires at least a bachelor's degree to practice. This is followed by 31.4% of respondents who possess a master's degree. The remaining respondents, each representing 2.9%, hold either a doctorate or other qualifications. Those with doctoral degrees generally tend to pursue academic careers in university teaching. Concerning **years of experience**, 44.3% of the respondents have over 12 years of experience, which aligns with the observation that the majority are over 40 years old. This is followed by 34.3% with experience ranging from 6 to 12 years, and 21.4% with 2 to 6 years of experience. These findings indicate that the sampled population possesses sufficient expertise to engage in auditing activities.

3.5.Kolmogorov-Smirnov Test for Normality:

The objective of this test is to evaluate one of the following two hypotheses:

- ✓ **Null Hypothesis (H0):** The study data follows a normal distribution.
- ✓ **Alternative Hypothesis (H1):** The study data does not follow a normal distribution.

The null hypothesis (H0) is accepted, and the alternative hypothesis (H1) is rejected when the calculated significance level is greater than the tabular significance level ($\alpha = 0.05$). The following table presents the results of this test:

Table 3: Testing for Normal Distribution Using the Kolmogorov-Smirnov Test

Data	Overall hypothesis
Sample size	70
Mean	152.33
Standard deviation	18.41
Kolmogorov–Smirnov test	0.661
Significance level (Sig)	0.775

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

It is observed from the table that the calculated significance level for the overall hypothesis (0.775) is greater than the significance level of the null hypothesis ($\alpha = 0.05$). Accordingly, the null hypothesis is accepted, and the alternative hypothesis is rejected, indicating that the study data follow a normal distribution according to the Kolmogorov–Smirnov test. Therefore, parametric tests can be applied to analyze the data.

3.6. Hypothesis Testing and Results Analysis:

A one-sample t-test was employed, with the reference mean value set at 3, to determine whether the arithmetic mean reported by the respondents is significantly lower or higher than this value. The significance

The Integration between Internal and External Auditing and its Role in Improving the Auditing Process -A Survey Study of a Group of Internal and External Auditors-

level was established at $\alpha = 0.05$, corresponding to a 95% confidence level. Accordingly, if the significance value (sig) is less than 0.05, the null hypothesis is rejected.

3.6.1. Testing the First Hypothesis:

To test this hypothesis, it is formulated as follows:

- **Null Hypothesis H0:** There is no integration between internal audit and external audit during the planning phase of the audit process for the sample under study.
- **The alternative hypothesis H1:** There is integration between internal auditing and external auditing in the planning stage of the audit process for the study sample.

The following table summarizes the various tests related to the hypothesis

Table 04: Results of Testing the First Hypothesis

Questions	Arithmetic Mean	Standard Deviation	General Trend of Responses	Calculated T-Value	Significance Value (Sig)
The First Question	3.86	0.856	Agree	8.377	0.000
The Second Question	3.81	0.921	Agree	7.394	0.000
The Third Question	3.34	1.075	Agree	2.668	0.010
The Fourth Question	3.54	0.988	Agree	4.596	0.000
The Fifth Question	3.34	1.006	Agree	2.853	0.006
The Sixth Question	3.74	1.003	Agree	6.199	0.000
The Seventh Question	4.16	3.705	Agree	2.613	0.011
The Eighth Question	3.53	0.812	Agree	5.449	0.000
The Ninth Question	2.94	1.238	Neutral	0.386-	0.701
The Tenth Question	3.29	1.131	Agree	2.113	0.038
The First Hypothesis	3.55	1.27	Agree	7.16	0.000

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

The table indicates that the overall arithmetic mean for the items of the first hypothesis is 3.55, which corresponds to the "agree" level on the fourth degree of the Likert scale. This suggests that the study sample agrees that there is integration between internal and external auditing during the audit planning stage. The overall standard deviation is 1.27, indicating a moderate level of dispersion among the responses of the sample, although the general trend leans toward agreement.

As for the items of this hypothesis, the arithmetic means indicate that the respondents agree that the external auditor, prior to commencing the engagement, ensures the independence of the internal auditor and reviews his reports. He also verifies that the internal auditor possesses the necessary academic qualifications before relying on his work, as well as the adequacy of resources in relation to the size of the organization. Moreover,

The Integration between Internal and External Auditing and its Role in Improving the Auditing Process -A Survey Study of a Group of Internal and External Auditors-

the respondents agree that the external auditor reviews the internal auditor's working papers when planning the audit process, designs his program based on the internal auditor's assessment of the internal control system, and discusses the audit plan with him, as for the internal auditor, the study sample members agree that the internal auditor ensures the independence and objectivity of the external auditor when relying on his work, and that the planning of the external audit is carried out properly. However, the opinions of the study sample were neutral regarding item nine, with a significance level estimated at 0.701, which is greater than the tabular significance level of $\alpha = 0.05$. Accordingly, it can be concluded that the internal auditor does not verify the qualifications and experience of the external auditor during the audit planning phase, according to the study sample.

But overall, the first hypothesis is confirmed, with an overall calculated significance level of $\text{sig} = 0.00$, which is smaller than the tabulated significance level of $\alpha = 0.05$ at a confidence level of 0.95%. Furthermore, the overall calculated t-value was estimated at 7.16, which is greater than the tabulated t-value of 1.96. Accordingly, the null hypothesis is rejected, and the alternative hypothesis is accepted, namely that:

There is integration between internal auditing and external auditing in the planning stage of the audit process for the sample under study.

3.6.2. Testing the second hypothesis: In order to test it, it is formulated as follows:

- **Null Hypothesis H0:** There is no integration between internal audit and external audit during the audit execution phase for the sample under study.
- **Alternative Hypothesis H1:** There is integration between internal auditing and external auditing during the execution phase of the audit task for the sample under study.

The table below summarizes all the tests related to the hypothesis

Table 05: Results of Testing the Second Hypothesis

Sayeh Nawel

Questions	Arithmetic Mean	Standard Deviation	General Trend of Responses	Calculated T-Value	Significance Value (Sig)
The First Question	3.79	0.700	Agreed	9.394	0.000
The Second Question	3.63	1.038	Agreed	5.067	0.000
The Third Question	3.51	1.046	Agreed	4.114	0.000
The Fourth Question	3.64	0.817	Agreed	6.582	0.000
The Fifth Question	3.63	0.854	Agreed	6.157	0.000
The Sixth Question	3.66	759 0.	Agreed	7.242	0.000
The Seventh Question	3.47	829 0.	Agreed	4.757	0.000
The Eighth Question	3.50	1.087	Agreed	3.849	0.000
The Ninth Question	3.46	912 0.	Agreed	4.194	0.000
The Tenth Question	3.86	889 0.	Agreed	8.064	0.000
The Eleventh Question	3.51	928 0.	Agreed	4.634	0.000
The Twelfth Question	3.60	0.999	Agreed	5.027	0.000
The Second Hypothesis	3.605	0.904	Agreed	10.40	0.000

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

The Integration between Internal and External Auditing and its Role in Improving the Auditing Process -A Survey Study of a Group of Internal and External Auditors-

The overall arithmetic mean for the items of the second hypothesis is 3.605, which falls within the fourth category of the five-point Likert scale, corresponding to the degree “Agree.” This indicates that the study sample members agree that there is integration between internal and external auditing in the stage of performing the audit task. The overall standard deviation was 0.904, which reflects a low level of dispersion among the respondents’ answers, showing that the general tendency leans toward agreement.

The arithmetic means indicate that the sample members agree that the external auditor ensures that the supervision of internal audit work is carried out properly, that the internal auditor has gathered sufficient persuasive evidence to draw conclusions, and that management provides adequate support for reaching those conclusions. Moreover, the external auditor collaborates with the internal auditor in assessing the internal control system to identify strengths and weaknesses, and makes use of the internal auditor’s results when evaluating the risks of material misstatements.

As for the internal auditor, the study sample members agree that he ensures that the supervision of external audit work is carried out properly, and also verifies the adequacy of external audit evidence. He further assists in collecting the necessary evidence, since his presence complements the work of the external auditor in understanding and improving internal control procedures. Moreover, he makes use of the external auditor’s recommendations to implement continuous improvements and to verify practical results instead of repeating the audit process in cases where risks are detected by the latter.

All the items of this hypothesis are confirmed, since the tabular significance level $\alpha = 0.05$ at a 0.95% confidence level is greater than the overall calculated significance value $\text{sig} = 0.00$. Moreover, the overall calculated t-value was estimated at 10.40, which is greater than the tabular t-value of 1.96. Accordingly, the null hypothesis is rejected and the alternative hypothesis is accepted, meaning that:

There is integration between internal audit and external audit at the stage of performing the audit task for the study sample.

3.6.3. Testing the third hypothesis: In order to test it, it is formulated as follows:

- **Null Hypothesis (H0):** There is no integration between internal auditing and external auditing in the stage of preparing the audit report for the sample under study.
- **Alternative Hypothesis (H1):** There is integration between internal auditing and external auditing in the stage of preparing the audit report for the sample under study.

In the following table is a summary of the main tests related to the hypothesis

Table 06: Results of testing the third hypothesis

Sayeh Nawel

Questions	Arithmetic Mean	Standard Deviation	General Trend of Responses	Calculated T-Value	Significance Value (Sig)
The First Question	3.87	0.700	Agreed	9.394	0.000
The Second Question	3.67	0.717	Agreed	5.067	0.000
The Third Question	3.70	823 0.	Agreed	4.114	0.000
The Fourth Question	3.87	721 0.	Agreed	6.582	0.000
The Fifth Question	3.44	942 0.	Agreed	6.157	0.000
The Sixth Question	3.61	804 0.	Agreed	7.242	0.000
The Seventh Question	4.19	822 0.	Agreed	4.757	0.000
The Eighth Question	3.77	935 0.	Agreed	3.849	0.000
The Ninth Question	3.46	1.003	Agreed	4.194	0.000
The Tenth Question	3.77	887 0.	Agreed	8.064	0.000
The Eleventh Question	3.93	786 0.	Agreed	4.634	0.000
The Third Hypothesis	3.75	0.83	Agreed	10.407	0.000

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

The Integration between Internal and External Auditing and its Role in Improving the Auditing Process -A Survey Study of a Group of Internal and External Auditors-

It is noted from the table that the overall arithmetic mean of the items of the first hypothesis is 3.75, which corresponds to the “Agree” level, falling within the fourth category of the five-point Likert scale. This indicates that the study sample members agree that there is integration between internal and external auditing in the stage of preparing the audit report. As for the overall standard deviation, it reached 0.83, which indicates a convergence among the respondents’ answers and that the general trend tends toward agreement.

As for the items of this hypothesis, the arithmetic means indicate that the study sample agrees that the external auditor reviews the internal auditor’s reports to understand the nature of the audit procedures and the results reached. The external auditor also ensures that management interacts with his recommendations, which these recommendations are appropriate given the circumstances and are feasible to implement, that the internal auditor’s reports are submitted to the highest authority in the institution, and that the external auditor includes in his report the audit procedures related to the internal audit work.

As for the internal auditor, according to the opinions of the study sample, he follows up on the reservations raised in the external auditor’s report and ensures that the irregularities are corrected. He also refers in his report to the various reservations that have not yet been addressed, makes sure to include the external auditor’s findings in his report, and monitors the extent to which management implements the latter’s recommendations and observations.

All the items of this hypothesis are verified at an overall calculated significance level of $\text{sig} = 0.00$, which is smaller than the tabular significance level $\alpha = 0.05$ at a 95% confidence level. In addition, the overall calculated t-value was estimated at 10.407, which is greater than the tabular t-value of 1.96. Accordingly, the null hypothesis is rejected and the alternative hypothesis is accepted, meaning that:

There is integration between internal auditing and external auditing in the stage of preparing the audit report for the study sample.

3.6.4. Testing the fourth hypothesis: In order to test it, it is formulated as follows:

- **Null Hypothesis H0:** There is no statistically significant positive effect of the integration between internal audit and external audit in the three audit stages and the improvement of auditing for the sample under study.
- **Alternative Hypothesis H1:** There is a statistically significant positive effect of the integration between internal audit and external audit in the three audit stages and the improvement of auditing for the sample under study.

The results of the various tests related to the fourth hypothesis are summarized in the following table:

Table 07: Results of Testing the Fourth Hypothesis					
Questions	Arithmetic Mean	Standard Deviation	General Trend of Responses	Calculated T-Value	Significance Value (Sig)
The First Question	4.00	0.868	Agreed	9.638	0.000
The Second Question	4.00	933 0.	Agreed	8.972	0.000
The Third Question	4.00	851 0.	Agreed	9.829	0.000
The Fourth Question	3.93	804 0.	Agreed	9.659	0.000
The Fifth Question	3.93	688 0.	Agreed	11.29	0.000
The Fourth Hypothesis	3.972	8288 0.	Agreed	12.489	0.000

Source: Prepared by the researcher based on SPSS outputs.

It is observed from the table that the overall arithmetic mean of the hypothesis is 3.91, which corresponds to the fourth category on the five-point Likert scale, namely “Agree.” This indicates that the study sample members agree that the integration between internal and external auditing in the three audit stages improves the auditing work of the studied sample. As for the overall standard deviation, it amounted to 0.86, which indicates a low dispersion among the respondents’ answers and that the general trend tends toward agreement.

As for the items of this hypothesis, the arithmetic means indicate that the study sample agrees that the integration between internal and external auditing increases the credibility of the financial statements and enhances the reliability of the information. It also contributes to improving the internal control system, reducing risks, and detecting irregularities.

All the items of this hypothesis are validated with an overall calculated significance level of $\text{sig} = 0.00$, which is much smaller than the tabular significance level $\alpha = 0.05$ at a 95% confidence level. Furthermore, the overall calculated t-value was estimated at 12.38, which is greater than the tabular t-value of 1.96. Accordingly, the null hypothesis is rejected and the alternative hypothesis is accepted, meaning that:

The integration between internal auditing and external auditing in the three audit stages improves the auditing process for the study sample.

3.7. Study of the Impact of Integration in the Planning, Performance, and Reporting Stages on the Improvement of Audit Work

The Integration between Internal and External Auditing and its Role in Improving the Auditing Process -A Survey Study of a Group of Internal and External Auditors-

The validity of the fifth hypothesis will be tested by conducting a simple regression test between each stage of internal auditing, planning, performance, reporting and its relation to audit improvement.

3.7.1. Statistical test of the impact of integration between internal and external auditing in the planning stage of the audit engagement and the improvement of audit work

- **H0:** There is no statistically significant positive effect of the integration between internal auditing and external auditing in the planning stage of the audit engagement and the improvement of audit work from the perspective of the study sample, at a significance level ($\alpha \leq 0.05$).
- **H1:** There is a statistically significant positive effect of the integration between internal auditing and external auditing in the planning stage of the audit engagement and the improvement of audit work from the perspective of the study sample, at a significance level ($\alpha \leq 0.05$).

Table 08: Results of Regression Analysis for the First Hypothesis

Independent Variable	Correlation Coefficient (R)	Coefficient of Determination (R^2)	Fisher's Value (F)	Significance Level (sig)	Regression Coefficient (B)	Constant Value (A)	Student's t-value (T)	Significance Level (sig)
Integration at the stage of audit engagement planning	0.295	0.087	6.48	0.13	0.295	23.32	2.54	0.013

Source: Prepared by the researcher based on SPSS outputs.

The table presents the results of the simple linear regression analysis testing the existence of a statistically significant effect of the integration between internal and external auditing during the audit planning stage on the improvement of audit work for the study sample. The significance of this effect is confirmed by the calculated F-value, which amounted to 6.48 and is statistically significant, with a calculated significance value of 0.00 (sig), which is less than the tabulated significance level ($\alpha = 0.05$). The table also shows that the correlation coefficient (R) between the two variables is 0.295, indicating a positive but weak correlation.

The coefficient of determination equals 0.087, meaning that 0.87% of the variance in the dependent variable (audit improvement) is explained by the variation in the independent variable (integration between internal and external auditing at the planning stage of the audit engagement). The table also shows, through the regression coefficient, that each one-unit increase in the independent variable (integration between internal and external auditing at the planning stage of the audit engagement) leads to an increase of 0.295 units in the dependent variable (audit improvement), with a calculated T-value of 2.54, which is greater than the critical T-value, and a significance level (sig = 0.013) that is below the threshold of 0.05 (α). However, the constant value is 23.32, which is relatively high, indicating that other factors also contribute. Based on the above results, the alternative hypothesis H1 is accepted, which states that **there is a statistically significant positive effect of the integration between internal and external auditing during the audit planning stage on improving auditing practices from the perspective of the study sample**, at a significance level of ($\alpha \leq 0.05$), and the null hypothesis H0 is rejected.

3.7.2. Testing the statistical effect of the integration between internal and external auditing during the audit performance phase on improving auditing operations

- **H0:** There is no statistically significant positive effect of the integration between internal and external auditing during the audit performance phase on audit improvement, from the perspective of the study sample, at a significance level of ($\alpha \leq 0.05$).
- **H1:** There is a statistically significant positive effect of the integration between internal and external auditing during the audit performance phase on audit improvement, from the perspective of the study sample, at a significance level of ($\alpha \leq 0.05$).

Table 09: Regression Analysis Results for the Second Hypothesis

Independent Variable	Correlation Coefficient (R)	Coefficient of Determination (R^2)	Fisher's Value (F)	Significance Level (sig)	Regression Coefficient (B)	Constant Value (A)	Student's t-value (T)	Significance Level (sig)
Integration during the Audit Execution Phase	0.628	0.395	44.23	0.00	0.628	8.32	6.658	0.000

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

The table shows a statistically significant effect of the dimension of integration between internal and external auditing at the stage of performing the audit task on improving audit work. This effect is confirmed by the calculated Fisher's F value of (44.23), with a calculated significance level (sig = 0.00), which is lower than the tabular significance level ($\alpha = 0.05$).

Regarding the correlation coefficient (R), it equals 0.628, indicating a moderate positive correlation between the two variables. Moreover, 3.95% of the variance in the dependent variable (improvement of audit work) is explained by the change in the independent variable (integration between internal and external auditing during the performance of the audit task), as indicated by the coefficient of determination.

From the table, it is also observed that the regression coefficient reached (0.628), which indicates that each one-unit increase in the independent variable (the integration between internal audit and external audit during the audit performance stage) leads to an increase in the value of the dependent variable (improvement of audit work) by 0.628 units. This is supported by the calculated T-value (6.658), which is greater than the tabulated T-value, with a calculated significance level (sig = 0.000). Moreover, the constant value reached 8.32, which is an average value that confirms the presence of other factors contributing to the improvement of audit performance.

Based on the aforementioned results, the alternative hypothesis (H1) is accepted, which states that **"there is a statistically significant positive effect of the integration between internal and external auditing at the audit performance stage, enhancing audit operations from the perspective of the study sample individuals at a statistical significance level ($\alpha \leq 0.05$)."** Consequently, the null hypothesis (H0) is rejected.

3.7.3. Testing the Statistical Impact of the Integration between Internal Audit and External Audit in the Audit Reporting Stage on the Improvement of Audit Practices

The Integration between Internal and External Auditing and its Role in Improving the Auditing Process -A Survey Study of a Group of Internal and External Auditors-

H0: There is no statistically significant positive effect of the integration between internal auditing and external auditing at the stage of preparing the audit report on the improvement of auditing, from the perspective of the study sample, at a significance level of ($\alpha \leq 0.05$).

H1: There is a statistically significant positive effect of the integration between internal auditing and external auditing at the stage of preparing the audit report on the improvement of auditing, from the perspective of the study sample, at a significance level of ($\alpha \leq 0.05$).

Table 10: Regression Analysis Results for the Third Hypothesis

Indepen dent Variable	Correla tion Coeffi cient (R)	Coefficie nt of Determin ation (R^2)	Fishe r's Valu e (F)	Signific ance Level (sig)	Regress ion Coeffi cient (B)	Const ant Value (A)	Stude nt's t- value (T)	significa nce Level (sig)
Integrati on in the audit report preparat ion stage	0.587	0.345	35.75	0.00	0.587	14.25	5.97	0.00

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

The simple regression analysis test indicates a statistically significant effect of the dimension of integration between internal audit and external audit during the preparation of the audit report on the improvement of audit practices, as evidenced by the calculated Fisher value ($F = 35.75$) with a significance level ($\text{sig} = 0.00$), which is lower than the tabulated significance level ($\alpha = 0.05$).

There is also a moderate positive correlation of 0.587 between the two variables, as indicated by the correlation coefficient (R). The coefficient of determination equals 0.345, showing that 34.5% of the variance in the dependent variable (improvement of audit performance) is explained by the change in the independent variable (the integration between internal and external audit when preparing the audit report).

Each unit increase in the independent variable (the integration between internal and external audit at the planning stage of the audit task) leads to an increase of 0.587 units in the dependent variable (improvement of audit performance), as confirmed by the calculated T-value (5.97), which is greater than the tabulated T-value. The significance level was found to be ($\text{sig} = 0.00$), which is less than the tabulated significance level ($\alpha = 0.05$). The constant value was 14.25, which is relatively high, indicating the presence of other factors contributing to the improvement of audit performance.

Based on the foregoing results, the hypothesis H1 is accepted, which states that “**there is a statistically significant positive effect of the integration between internal and external auditing in the preparation of the audit report on the improvement of audit practices, from the perspective of the study sample, at a significance level of ($\alpha \leq 0.05$),**” and the null hypothesis H0 is rejected.

By confirming the three partial hypotheses, the validity of the fifth hypothesis can also be established, namely that:

There are statistically significant differences at the significance level ($\alpha \leq 0.05$) regarding the integrative relationship between internal and external auditing across the three stages of the audit process and the improvement of auditing practices for the study sample.

4. Conclusion :

backbone of any organization. This has underscored the necessity of achieving integration between the two, leveraging each other's work across the various stages of the audit process, from planning to execution and culminating in report preparation. Consequently, various international and national bodies have issued diverse standards to support and guide the importance of this integration, aiming to minimize duplication of efforts and ensure more comprehensive audit coverage, thereby positively impacting the enhancement of audit practices.

Study Results:

- During the planning phase, the external auditor verifies the independence of the internal auditor, their academic qualifications, and the adequacy of allocated resources before relying on their work.
- The external auditor reviews the internal auditor's plans and working papers and examines their reports during the audit planning process, utilizing them as a basis for decision-making.
- The external auditor develops the audit plan based on the internal auditor's evaluation of the internal control system and discusses this plan with the internal auditor.
- The internal auditor ensures the independence and objectivity of the external auditor before relying on his work, and verifies that the audit has been properly planned.
- The external auditor assists the internal auditor in resolving the issues encountered in their work;
- The internal and external auditors evaluate the internal control system to identify strengths and weaknesses and to assess the risks of material misstatements;
- The external auditor ensures that the internal auditor has gathered sufficient and appropriate evidence in order to draw reasonable conclusions;
- The external auditor verifies that management provides adequate support to the internal auditor to carry out their work efficiently, and that such work is properly supervised.
- The internal auditor ensures that the external auditor's work has been properly supervised, that the audit evidence is sufficient and reliable, and may assist in collecting supporting evidence.
- The internal auditor introduces improvements to the internal control system based on the external auditor's previous recommendations.
- When preparing the audit report, the external auditor ensures that management has engaged with the internal auditor's recommendations and that these are communicated to the highest authority within the organization; the report also incorporates audit procedures related to the internal auditor's work.

The Integration between Internal and External Auditing and its Role in Improving the Auditing Process -A Survey Study of a Group of Internal and External Auditors-

- The external auditor verifies that the conclusions and recommendations presented in the internal auditor's report are appropriate under the circumstances and practically applicable.
- The internal auditor follows up on the reservations raised in the external auditor's report, ensures their correction, and highlights any issues that remain unresolved.
- When submitting the internal audit report to the Board of Directors, the internal auditor makes sure to integrate the external auditor's findings and monitors management's response to the latter's recommendations.
- The integration between internal and external auditing enhances the audit process by increasing the credibility of the financial statements and the reliability of information.
- The integration between internal and external auditing enhances the audit process by improving the internal control system, reducing risks, and detecting significant irregularities.

Recommendations:

In light of the results obtained, some recommendations can be proposed to enhance the integrative relationship as follows:

- The necessity of continuous professional development and ensuring that both the internal and external auditors possess sufficient knowledge of the standards governing the integrative relationship between internal and external auditing.
- Increasing coordination and cooperation between internal and external auditors when preparing the audit program, in order to reduce duplication and enhance the accuracy of the results to be achieved after the implementation of the audit program.
- Strengthening cooperation between internal and external auditing by ensuring that both auditors comply with the requirements of the Algerian Auditing Standard (NAA 610).

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