

# The Role of Internal Audit Computerization in Supporting the Task of External Auditing in Jordanian Insurance Companies

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*Abstract:* The study aimed to examine the role of the computerization of internal audits in Jordanian insurance companies in supporting the tasks of the external auditor. The study population consisted of managers and heads of internal audit departments, a number which is estimated at 112 in Jordanian insurance companies, of which there were 25 in the year 2021. Using a questionnaire as a primary source for the study data and relevant statistical methods to analyze the respondents' answers, it is concluded that there is a significant impact for the computerization of internal auditing processes in supporting the tasks of external auditing, and that the computerization of internal auditing processes has a statistical impact on supporting risk assessment, internal control assessment, and the evaluation of audit evidence by the external auditor. The study recommended giving more attention to qualifying both external and internal auditors to work considering the widespread computerized environment, as well as conducting similar studies in different sectors to compare the results from other sectors with those from the Jordanian insurance companies' sector in this study.

*Keywords:* computerization of internal audit processes, external audit, risk assessment task, internal control assessment task, audit evidence evaluation task, Jordanian insurance companies.

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## 1. Introduction

Computerized accounting information systems are one of the most important procedures that the auditor uses to implement the audit process, which helps him to provide appropriate and reliable evidence as quickly as possible and improve the quality of audit evidence. Based on the accounting information of the auditor, practitioners of the profession of auditing and academics in the science of accounting and auditing began using audit computerization to support the quality of the auditor, [15].

The use of information technology in the audit process positively affected the speed and accuracy of the implementation of audits, and reduced the effort and cost associated with them. Training auditors on the use of information technology in auditing leads to an improvement in the quality and effectiveness of auditing, the ability to face various difficulties and risks, and strengthens the internal control system, [18]. Computerized accounting information systems have played an important role in the operation and processing of data, storage, and

transmission, leading to financial results and information in business establishments, [2].

These successive rapid developments in information technology have affected the work of the internal auditor compared to what was the case when using manual operating systems, as well as the operations of the task of the external auditor with an emphasis on international auditing standards, which confirmed that the responsibility of the external auditor to express his technical opinion does not differ. The way the data is operated differs, but it affects the mechanism of carrying out the work of both the external and internal auditor, according to the changes that occur in the way the accounting data is operated, which has been an extensive research area during the past few years.

As the process of electronic data processing has become necessary in large and small-sized organizations, which aim to achieve greater efficiency in their activities, [29], standard No. 401 was introduced into international auditing standards, to set guidelines for the external auditor to follow when the audit process is performed in the environment of computerized information systems.

But how is the work of the internal auditor affected by these changes that occur in the way accounting data is operated, using modern methods for operating and producing data within the facility? A question arises about the extent to which this affects the work of the external auditor, according to International Auditing Standard No. 610. In some parts of its mission, it depends on the work of the internal auditor, and whether the computerization of the internal audit and the use of modern systems have an impact in supporting the task of the external auditor to obtain an impartial opinion on the fairness of the financial statements of insurance companies in Jordan. This is what will be addressed and answered in this study.

### 1.1 Problem Statement

Insurance companies in Jordan are working on automating their administrative and financial systems, and despite the many advantages achieved using computers in accounting, it leads to the creation of some new control problems, and these problems are of particular importance from the point of view of internal audit, some of which relate to the audit path and the disappearance of records and paper documents. Problems include the difficulty of detecting fraud and manipulation operations, [1], some of which are related to computer misuse, the possibility of data theft and systems outputs, and the lack of optimal exploitation of information and communication technology in the audit process, [27], when performing internal audit tests.

The research problem revolves around the following main question:

Is there an impact from computerizing the internal audit in supporting the external audit process in the Jordanian insurance companies?

The following sub-questions are derived from the main question:

1.1: Is there an impact from the computerization of internal auditing in Jordanian insurance companies on supporting the task of the external auditor to assess risks?

1.2: Is there an impact from the computerization of internal auditing in Jordanian insurance companies on supporting the task of the external auditor to assess internal control?

1.3: Is there an impact from the computerization of internal auditing in Jordanian insurance companies on supporting the task of the external auditor to assess audit evidence?

### 1.2 The Importance of the Study

The importance of this study derives from addressing several axes in addition to the axis of business performance computerization. Addressing auditing standards is important and has been highlighted by many studies in Jordan locally and internationally, as well as the internal audit axis, which reflects the most important foundations of institutional governance, as indicated by the author in [6], who emphasized that the internal audit function plays a close role in assisting the management in applying the principles of governance by evaluating both the internal control system and risk management. In light of the current Coronavirus pandemic, there is a greater increase in reliance on digital systems to perform business, and there is also a tendency by enterprises to use cloud and information systems based on the Internet, which increases the importance of studies that highlight the computerized and digital environments.

## 2. Literature Review

When taking into account the response of international auditing standards to changes in the work environment of companies and giving the right to the external auditor to rely on the work of the internal auditors, it must be noted that the international auditing standards have confirmed that this accreditation between the external and internal auditor does not eliminate the role of the external auditor. Rather, the external auditor uses the work of the internal auditor as a kind of support for what has been reached after doing what is necessary for the requirements of international auditing standards. The use of modern systems has an impact in supporting the task of the external auditor to obtain an impartial opinion on the fairness of the financial statements, as their use has become more accurate and effective to ensure the fairness and transparency of financial statements, [24].

The study in [25], pointed out that the analytical procedures are a necessity imposed by

considerations of time and cost, so the auditor has become compelled to rely on computing during the audit process. The external auditor must be informed of the independence and impartiality necessary to audit the accounts of any establishment and to express an impartial technical opinion on the fairness of the financial statements, [7].

The International Auditing Standard No. 610 indicates that this does not mean that the internal auditor or assists the external auditor in carrying out the external audit procedures, but rather that the external auditor performs all the procedures required of him in the external audit process, taking advantage of the work of the internal auditor, through which certainty can be increased to verify what he has reached. This gives the auditor assurance that the financial statements of the economic units under audit are free from cases of manipulation, errors and distortions, [23].

The standard also touches on the differences between the objectives of internal audit and external audit, as it indicates that the role of internal audit is limited to what is determined by management, so the external auditor must ensure the reliability of the data on which he depends on his work, [17].

The authors in [28] explain that because the internal auditor has some duties and tasks like the duties and tasks of the external auditor, it is useful to have effective cooperation between them, but many external auditors, with their conviction of the benefit of cooperation with the internal auditor, avoid this cooperation, due to the low level of objectivity and independence of internal auditors.

The authors in [8] and [32] indicated that cooperation between the external and internal auditors increases the efficiency and effectiveness of the audit process, due to the following:

1. By exchanging an understanding of the work and culture of the company under audit, as they are auditing the same company internally and externally, and through the exchange of experiences, the external auditor can use his experience of several different facilities to provide solutions to the internal auditor to resolve outstanding issues.

2. In the absence of cooperation, there may be duplication of work by the external auditor for the same work that the internal auditor has done. The tasks and responsibilities associated with the external auditor have many aspects and differ in terms of their division into responsibilities related to his person, legal responsibilities, and responsibilities related to the performance of the audit process, and the latter related to this study following international auditing rules and standards are as follows:

- Evaluating the internal control system and reporting its shortcomings, under International Auditing Standard No. 265.
- Identifying and assessing the risks of material error through an understanding of the facility and its environment, under International Auditing Standard No. 315.
- Obtaining and evaluating audit evidence, in accordance with International Auditing Standard No. 500.

If the internal audit standards are followed, we find that there is a great similarity between the requirements, planning, and evaluation of the activities that the external auditor and the internal auditor carry out for the areas that they need to audit. For example, if the requirements of the internal audit standard IIAS 2200 (mission planning) are considered, it can be noted that the standard aims to indicate how they should plan for the tasks they are preparing to perform, so that they develop a plan and document it before performing the task.

The location and strength of the internal audit department in the organizational structure within an organization depends on the conviction of the senior management of the importance of internal audit services, which is one of the most important elements that support the success and improvement of the internal audit function in companies, [33].

About two decades ago, many studies emphasized the duties associated with internal auditing and the role of internal audit standards in enhancing the role of the internal auditor. The author in [16] through his study entitled "Internal Audit Tasks within the American International Auditing Standards," stated that the duty of internal auditors was to provide reasonable assurance about the entire operations of the facility and their compatibility with the

objectives and programs of management. The Author in [20] emphasized through his work “The Auditor’s Responsibility Regarding Internal Control and Assessment Risks When Applying Internal Audit Standards,” that deviations resulting from internal control systems are not the responsibility of the auditor, but he is responsible for discovering and correcting such deviation. The author [22], also reiterated through his study, entitled “The Higher Management’s Perception of the Evolution of Knowledge in the Internal Audit Profession and Its Impact on the Role of the Internal Auditor: An Experimental Analytical Study in Jordanian Business Organizations,” that internal audit is important for achieving the efficiency and effectiveness of the control process within the important and effective role of internal audit in preventing and reducing errors and reducing the waste of resources.

Many authors studied computerized systems, their risks and their impact on internal and external auditing, as indicated by the study of the authors of [4] in which the researchers concluded that there is an impact of the quality of information technology on the efficiency of the internal audit. The author in [3] has concluded that the most important risks are the intentional introduction of wrong data by workers in Jordanian banks, and the author in [31] confirmed this when he explained the role of adopting computerized information technologies in the process of hiring internal auditors. The study recommended that the educational skills of accountants and internal auditors should be improved and developed, as organizations should support the training of employees to work on increasing their skills in information technologies to suit the needs of the transition to computerized information systems. The author [12] aimed to find the degree of impact of the technological environment characteristics of the information system on the monitoring of operational risks in Islamic banks operating in Jordan, and concluded that there is an impact from the characteristics of the technological environment of information systems on monitoring operational risks, and there is also a positive effect when using information technology on the independence and privacy of the internal auditor. The study

showed the risks associated with viruses, and the risks related to disasters, whether natural or unnatural.

The study of the author in [21] concluded that there is an impact when applying the elements of the organization’s resource planning system on the quality of internal audits, and the study of the author in [10] entitled “The Impact of the Accounting Information System on The quality of Internal Auditing - a Field Study on Private Jordanian Hospitals,” found the same. The software and procedures for this software have an impact on the quality of internal auditing in private sector hospitals in Jordan. Therefore the author in [5] explained that the most important risks of computerized accounting information systems are the inputs of these systems, and that one of the priorities of internal control in bank departments is to pay attention to the security of these systems. The study of the author in [26] indicated that there is an important role for the internal auditor in reducing risks related to accounting information systems and the risks of accounting information systems subsystems in each of the general ledger, revenue, expenses, human resources, reports, operations and production. The article of the authors in [14] has found an impact of the entry risks of accounting data systems on the internal control procedures. By reviewing the literature of the study and previous studies, it is possible to develop the main hypothesis as follows:

HO.1: There is no statistically significant effect at the level of significance ( $\alpha \geq 0.05$ ) for the computerization of internal auditing processes in supporting the tasks of external auditing.

Three sub-hypotheses were formulated, as follows:

HO.1.1: There is no statistically significant effect on supporting risk assessment by the external auditor through computerizing the internal audit.

HO.1.2: There is no statistically significant effect on the support of the internal control assessment by the external auditor through computerizing the internal audit.

HO.1.3: There is no statistically significant effect on supporting the evaluation of audit evidence by the external auditor through computerizing the internal audit.

### 3. Research Methods

The study relied on the quantitative approach in its conduct to identify the role of internal audit computerization in supporting the task of external auditing in Jordanian insurance companies.

#### 3.1 Study Population and Sample

The study population consisted of managers and heads of internal audit departments, a number estimated at 112 across the 25 Jordanian insurance companies in the year 2021, where a

comprehensive survey was carried out by distributing 112 questionnaires, in the manner of a Purposive Sample. Of the questionnaires, 91 were retrieved and all of them are valid for the analysis.

#### 3.2 Data Sources

The study relied upon collecting information on secondary data such as books, literature, scientific periodicals, and relevant specialized publications. The study relied on a questionnaire that was prepared on the Five Likert Scale.

Table (1) Cronbach Alpha

Variable Name	Independent	Dependent			General indicator
Variables	Computerized Internal audit	Risk Assessment	Internal control evaluation	Evidence evaluation	
Cronbach Alpha	0.765	0.793	0.813	0.878	0.939
No. of Paragraphs	5	5	5	5	20

### 3.3 Reliability:

The results of Cronbach's Alpha coefficient which used to measure the reliability of the study are shown in Table (1).

All the internal consistency coefficients mentioned in the above table indicate the stability of the study tool and the ability to use for statistical analysis.

### 3.4 Normal Distribution:

The value of the Skewness coefficient indicates that the distribution is normal.

### 3.5 Autocorrelation:

This test indicates the absence of problems related to the autocorrelation, so it may be used in the multiple regression model.

## 4. Results

### 4.1 Statistics to describe the study variables:

Table (4) shows the descriptive analysis of the respondents' answers towards the study variables, and the results were as follows.

### 4.2 The results of testing the hypotheses of the study:

In this part of the study, the main hypotheses and the sub-hypotheses originating from them were exposed to Simple Regression analysis, and the following results were reached:

Table (2) Skewness & Kurtosis

Variables	Internal audit computerization	Risk assessment	Internal control evaluation	Evidence evaluation	Support external audit
Skewness	-0.129	0.218	0.055	0.214	0.257
Kurtosis	-0.106	-0.624	-0.019	0.057	0.026

Table (3): Autocorrelation

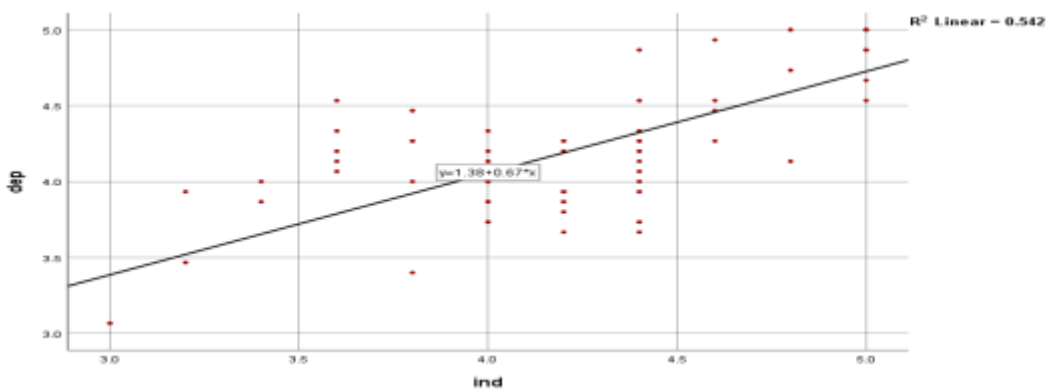
Hypothesis	Ho.	Ho.a	Ho.b	Ho.c	Result
D-W	1.953	1.765	1.974	1.885	No Autocorrelation

Table (4) Descriptive analysis

Variable type	Variables	Mean	Std. Deviation	Percentage%	Application	Ranking
Independent	Computerize internal audit	4.22	0.484	%84.4	High	-
Dependent	Risk assessment	4.22	0.479	%84.4	High	1
	Internal control evaluation	4.17	0.472	%83.4	High	3
	Evidence evaluation	4.21	0.464	%84.2	High	2
	Support external audit tasks	4.20	0.441	%84	High	-

Table (5) Hypotheses Testing

Hypothesis	R	R2	Adj R2	DF	F calculated	F. Sig	Constant	B	Std. Error	T calculated	T Tabulated	T. Sig	Result Ho
Ho	0.736	0.542	0.537	1	105.337	0.00	1.376	0.670	0.065	10.263	1.987	0.00	Reject
Ho.a	0.683	0.466	0.460	1	77.742	0.00	1.371	0.646	0.077	8.817	1.987	0.00	Reject
Ho.b	0.636	0.405	0.398	1	60.581	0.00	1.555	0.620	0.080	7.783	1.987	0.00	Reject
Ho.c	0.746	0.556	0.551	1	111.362	0.00	1.202	0.714	0.068	10.553	1.987	0.00	Reject



The table above shows the results of testing the main hypothesis and the hypotheses that emanate from it. The results were as follows:

The outcome of the main hypothesis test: It was found that there is a statistically significant role for the computerization of internal auditing processes in supporting the tasks of external auditing. The value of the coefficient of determination ( $R^2 = 0.542$ ) specifies that the computerization of internal audits has explained (54.2%) of the difference in support of external audit missions.

#### 4.3.1 The result of the first sub-hypothesis test:

There is a statistically important role for the computerization of internal audits in risk

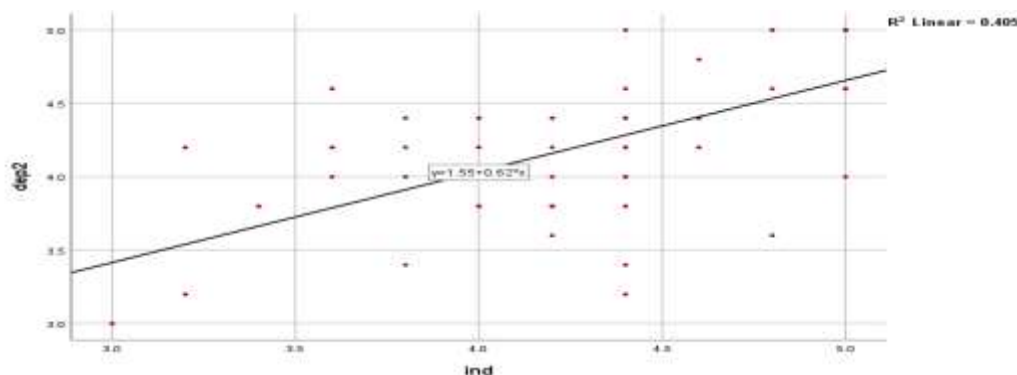
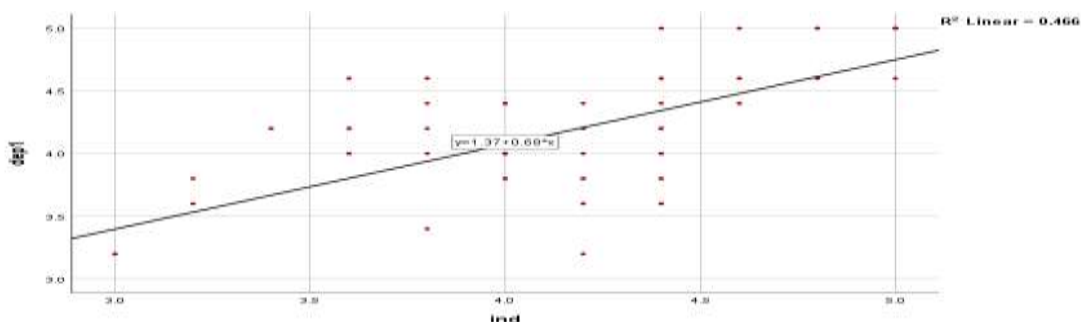
assessment, through the value of T and the value of the correlation coefficient  $R = (68.3\%)$ ,

#### 4.3.2 The result of the second sub-hypothesis test:

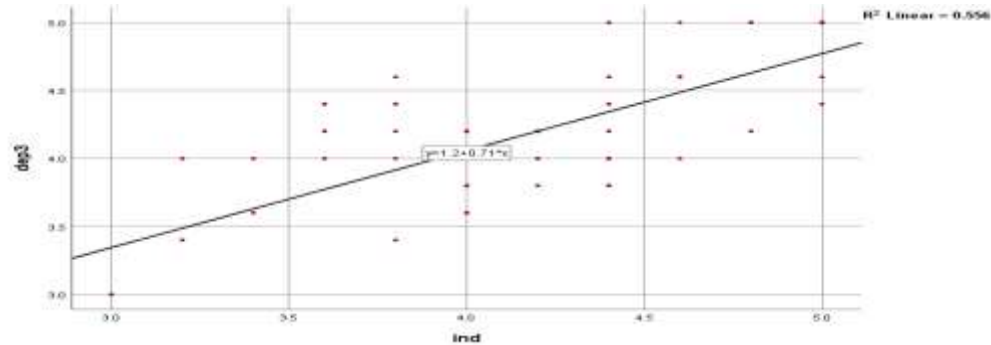
There is a statistically significant role for the computerization of internal audits in evaluating internal control, through the value of T and the value of the correlation coefficient  $R = (63.6\%)$ .

#### 4.3.3 The result of the third sub-hypothesis test:

There is a statistically important role for the computerization of internal audits in evaluating audit evidence, through the value of T, and the value of the correlation coefficient  $R = (74.6\%)$ .







## 5. Conclusions

Through the results of the main and sub-hypotheses, we find that there is an impact from the process of computerizing the internal audit process on supporting the external audit process and tasks in Jordanian insurance companies and on each of the tasks of risk assessment, assessment of internal control, and assessment of audit evidence when the external auditor is performing the audit of Jordanian insurance companies.

Perhaps the most important point indicated by the internal audit standards is that the task of the external auditors is one of the factors that lead to improving the quality of internal auditing. The study of the authors in [9] overlaps may have a reflection on the support of the external audit task.

The higher the quality of the internal audit work, the greater the dependence of the external auditor on the work of the internal auditor, and thus its support for operations in the task of external audit. According to the Jordanian Internal Control System and its amendment No. 3 of 2011, issued by the Ministry of Finance, the development of external audit procedures is one of the factors that contributes to the development of an internal control system, [30]

## 6. Recommendations

The study recommends paying attention to qualifying both external and internal auditors to

deal with the computerized business environment, which is more widespread in the business environment, the author in [19] confirmed this when he pointed out that information technologies and computerized systems have become an integral part of life in the digital century. Therefore, it is necessary to have the appropriate academic qualification in the audit team, whether internal or external, and to take into account the existence of professional certificates related to information systems auditing, including the Certified in Risk and Information Systems Control (CRISC) certificate, issued by the Information Systems Audit and Control Association (ISACA), because of its influential role other than in supporting the task of risk assessment.

The study emphasizes the need to give the Internal Audit Department adequate support from the insurance companies' departments in Jordan, in line with the requirements of corporate governance, which require work to develop performance and that the nature of the relationship between management and internal audit contributes to activating governance and transparency that affects the users of reports. The external auditors, and this confirms the findings of the authors in [13] regarding the importance of the principles of governance in the joint-stock companies in the Jordanian market, of which insurance companies are a part. The study recommends the necessity of diversity in the specializations of the internal audit team and the addition of specialized elements in information technologies and computing for

internal audit operations, and it was also recommended by the authors in [11], that diversity in the internal audit team leads to integration in the performance of all types of team tasks in internal audit units.

The study also suggests a special recommendation for researchers and scholars to conduct similar studies in different sectors to compare the results of studies with this study on the Jordanian insurance sector.

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## **Contribution of individual authors to the creation of a scientific article (ghostwriting policy)**

Ahmad Bawaneh was responsible for the introduction and theoretical aspects of the study, and the discussion and conclusion and recommendations and responsible for extracting and preparing the financial measures of the study and was responsible of Statistics.

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