

# Extent of Compliance with Code of Ethics and its Impact on Internal Audit Effectiveness<sup>1</sup>

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**Abstract** *The study aimed to identify the internal auditors' compliance with code of ethics issued by the Institute of Internal Auditors, it includes (Integrity, Objectivity, Confidentiality, and Competency) and its impact on the effectiveness of internal audit, the study followed the descriptive analytical method, the study population is composed of internal auditors and members of audit committees in the Jordanian shareholding companies. The questionnaire was used in collecting preliminary data, which was distributed to (363) of them who represented the sample of the study. Arithmetic means, repetitions and (Multiple regression), (Stepwise Regression), (Anova) tests were used in data analysis. The study found that there is a compliance from the internal auditors for the code of ethics moderately, the most compliance was in competency dimension, followed by objectivity and then confidentiality and finally the integrity dimension in terms of the level of compliance in descending order and that there is a medium degree of effectiveness of the internal audit function, the integrity dimension was the most impact on the effectiveness of internal audit, the competency dimension was in the second rank, followed by confidentiality, finally the objectivity was the less impact. There were no differences in the opinions of internal auditors and members of audit committees on the impact of internal auditors' compliance on the effectiveness of internal audit. The percentage of CIA certificate (Certified Internal Audit) holders reached (2.7%). The study recommended to aware the internal auditors with the importance to adhere to the code of ethics of the profession through holding seminars and courses and motivate them to raise the level of their commitment through providing them a suitable work environment that encourages commitment and reduce the likelihood of being exposed to situations of conflict of interest and work on revising professional and ethical code of ethics for practitioners of internal audit activity and related instructions, in order to rise into the level that enable to achieve the highest degree of compliance with code of ethics of the profession to raise the effectiveness of internal audit through making internal auditors to acknowledge that their compliance to the code of ethics of the profession has an added value and a real impact on the effectiveness of internal audit and not just a commitment to a moral charter which avoids internal auditors from accountability risks.*

**Key words** Code of ethics, auditing, audit effectiveness

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## 1. Introduction

Ethics are considered the main engine for the humanitarian and professional behavior, so there was an interest in the business environment by providing ethical and behavioral principles and rules that restrict the internal auditors to implement their tasks, in which the professional and ethical compliance supports and complements the technical work routine based on the internal audit standards and instructions for the successful implementation of internal audit activity effectively.

The work of the internal auditors characterized by its critical nature of being focused on the examination, analysis and evaluation the validity and the legitimacy of transactions, particularly with financial impact, and they try detecting the errors and incorrect practices that may exist during the execution of operations within the company, which put the internal auditors on pressures, which can limit their professionalism, especially in conflict situations and conflicts of interest, which calls for resorting to the code of ethics that guide them to carry out their procedures with professionalism under pressures

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and challenges facing them while maintaining their compliance to the moral and the effectiveness of their performance.

### **1.1. Study Problem**

Despite the availability of professional practice of internal audit and the internal auditors' use of sophisticated standards methods for the implementation of internal audit activities and the use of updated technology, in addition to the availability of the code of ethics for the internal audit, but there are issues raised regarding the encroachment in accounting and control practices, which points to the existence of a professional and behavior gap in the internal audit function, so there was a need to explore the extent of internal auditors compliance to the principles of code of ethics which must be guided by to implement the internal audit activity in their work and its impact on the effectiveness of internal audit. The problem of the study can be presented in detail through the following questions:

1. What is the extent of compliance of internal auditors to the principles of code of ethics issued by the Institute of Internal Auditors; that include (integrity, objectivity, confidentiality, and competency)?

2. What is the level of effectiveness of internal audit from the standpoint of internal auditors and members of the audit committee?

3. What is the effect of internal auditors' compliance to the principles of code of ethics issued by the Institute of Internal Auditors on the effectiveness of internal audit? This question is divided into the following sub-questions:

- What is the effect of internal auditors' compliance to the "integrity" element on the effectiveness of internal audit?

- What is the effect of internal auditors' compliance to the "objectivity" element on the effectiveness of internal audit?

- What is the effect of internal auditors' compliance to the "confidentiality" element on the effectiveness of internal audit?

- What is the effect of internal auditors' compliance to the "competency" element on the effectiveness of internal audit?

4. Are there statistically significant differences between the views of the audit committees and internal auditors for the impact of internal auditors' compliance to the principles of code of ethics on the effectiveness of internal audit?

### **1.2. Objectives of the Study**

The study aims to achieve the following goals:

1. Identify the extent of internal auditors' compliance to the principles of code of ethics of internal audit.

2. Identify the impact of the compliance of internal auditors with the principles of code of ethics of the profession on the effectiveness of internal audit.

3. Clarify if there is a difference regarding the impact of the compliance of internal auditors to the principles of code of ethics on the effectiveness of internal audit between the views of the members of the audit committees and internal auditors.

### **1.3. The Significance of the Study**

This study will contribute to improve the perception and knowledge of internal auditors of the principles of code of ethics and correct practices that must be followed to achieve their business professionally under what will face them of conflicts of interest and threats on one hand, and the internal auditors' need and desire to adhere to professional and ethical conduct to achieve the effectiveness of the internal audit function on the other hand, which will lead to a narrowing of the gap between ethical behavior and professionalism, which will contribute in the effectiveness of the Internal audit.

This study will lead to evaluate and review the work method of internal auditors and their actions and direct their professional behavior to fit with professional ethics and achieve the effectiveness of their performance better.

This study will reinforce the perception of the senior management of the level and the importance of professional and moral commitment in their companies, which will encourage to adhere to principles and code of ethics, so it will be part of their daily work routine to become an integral part of the institution's culture and its values, thus improving internal audit practices to suit with the required level of necessary professionalism and ethics to achieve more effectiveness in performing internal audit.

This study is considered as one of the rare studies that conducted on the subject of compliance to the principles of code of ethics for the internal auditors in Jordan; therefore, this study is expected to open the door for more future studies relevant to the subject of this study.

#### **1.4. Hypotheses of the Study**

Based on the questions of the study, the hypotheses of the study can be formulated as follows:

*The First Main Hypothesis:* There is no impact of internal auditors' compliance to the principles of code of ethics on the effectiveness of internal audit.

Two sub-hypotheses are derived from this hypothesis:

*First Sub - Hypothesis:* There is no impact of compliance of internal auditors with integrity on the effectiveness of the internal audit.

*Second Sub - Hypothesis:* There is no impact of compliance of internal auditors with objectivity on the effectiveness of internal audit.

*Third Sub - Hypothesis:* There is no impact of compliance of internal auditors with confidentiality on the effectiveness of internal audit.

*Fourth Sub- Hypothesis:* There is no impact of compliance of internal auditors with competency on the effectiveness of the internal audit.

*The Second Main Hypothesis:* There are no statistically significant differences between the views of the members of audit committees and internal auditors for the impact of internal auditors' compliance to the principles of code of ethics on the effectiveness of internal audit.

## **2. Literature review**

### **2.1. Principles of Code of Ethics**

The Institute of Internal Auditors identifies the principles of code of ethics (which include (4) components: Integrity, Objectivity, Confidentiality and Competency (IIA, 2009):

*Integrity:* The integrity of internal auditors will lead to lay the foundations of trust and this is essential to rely on their judgments, where they must carry out their work carefully, impartially and with a sense of responsibility, with their adherence to laws and to disclose about information in the permitted legal limits, and do not carry out acts or actions that may harm the reputation of their institution or their profession, and not to be intentionally party in any illegal activity and contribute in realizing the legitimate goals of their institution where they work.

*Objectivity:* The internal auditors take into account the highest levels of objectivity in collecting, evaluating and reporting any relevant information with the work they examined, and taking into account a balanced assessment of all the relevant circumstances, and not to be affected while composing their opinions and their judgment with their personal interests or opinions of other impacts. Internal auditors should not participate in any activities that is likely to prejudice their neutral evaluation; this includes non-participation in activities that may conflict with the interests of the organization in which they work and not to accept things that may lead to their professional misjudgment and to disclose material information that, if not disclosed, will distort their reports on the activities that they examined and reviewed.

*Confidentiality:* Internal auditors should respect the value and property of the received information, and not to disclose them without permission or proper authorization, except in cases of a legal bind or professional disclosure, where information should be used as part of the performance of their duties only, and is not used to obtain personal benefits or in a way that harm the legitimacy of the goals and ethics of the organization.

*Competency:* The internal auditors should use needed skills, knowledge and expertise when performing internal audit services, and not to implement only the services that they have knowledge and

experience in and necessary skills, and to follow the international professional standards for internal audit and work to improve and develop their skills and the quality of their services and effectiveness.

## **2.2. The Moral Aspect of Professional International Standards for the Practice of Internal Audit**

We search in the international standards relation with the code of the principles of code of ethics of internal audit, as follows (The Institute of Internal Auditors, 2017):

(1100) standard has indicated that the objective is a non-based mental pattern in which Internal auditors can have access to sound and quality results without subordination of their judgments for the opinions of others, and control the sources that threatening their objectivity, and the independence is to be free of circumstances that threatening their ability to take part of their responsibilities without bias, and standard (1120) has showed that they must be characterized by impartially and not bias, and that they avoid conflict of interests position.

Standard (1210) has pointed out that they should get the skills, knowledge and necessary competencies to do their individual responsibilities, standard (1220) has pointed out that they must exert care and the necessary skill in prudence and professionalism, standard (1300) has pointed out in its interpretation that to assess their compliance with the code of ethics, standard (1320) has pointed out in its interpretation that the internal audit reports should be discussed with the senior management to proof on compatibility with ethics charter and standards, standard (1322) has pointed out that they should disclose about the non-compatibility with the ethics charter and the impact resulting of it, standard (2000) has pointed out in its interpretation that the internal audit management should run effectively when internal auditors adhere to the ethics charter and standards of internal audit and achieve the required goals, as well as standard (2060) has pointed out that internal audit reports should include the extent of adherence of ethics charter and standards to correct any defect at the adherence issues, standard (2110) has indicated that the effectiveness of the programs and the entity's activities related to ethics values should be assessed, standard (2330) has indicated that policies that are harmonious with the directions of the entity and the legislations requirements to control viewing the tasks' documents must be prepared, standard (2410) has pointed out that using the results of the mission reported to parties outside the entity should be restricted, standard (2431) has pointed out that reasons of non-adherence to the behavior rules or standards and the impact of non-adherence on the results and to determine to whom or how the results will be notified and to control and restrictions to use it, and to allow of consulting the legal counsel and the administration should be disclosed, standard (2450) has pointed out that reporting includes determine the scope and the time domain (The Institute of Internal Auditors, 2009).

It is noted from studying the international professional standards for the practice of internal audit that there is a close relationship between them and the principles of the code of ethics and that all of them complete each other in shaping the framework of professional practice of internal audit, there is also a clarification that these standards must be adhered to simultaneously and are compatible with the ethical charters of internal audit, and they stressed on the need to adhere to the principles of code of ethics and provided procedural guidelines for compliance with integrity, objectivity, confidentiality and competency, and explained that to adhere to the ethics charter and standards considered as a constraint with all the mandatory elements of the international professional frame to practice internal audit work.

## **2.3. Personal and Professional Features for the Internal Auditor**

In addition to technical and professional qualifications of the internal auditor, it is necessary to consider the ethical character of the internal auditor himself, ethical virtue requires focus on thoughts of the person and his actions, intentions and behaviors (Armstrong *et al.*, 2003), though the good person is the one who displays a quantity of a certain feature at the appropriate time and place (Crisp, 2010).

As the personal qualities and behaviors are considered important for the success of the work of the internal auditor, namely: (1) Integrity and justice (2) Dedication and devotion to the interests of the institution (3) Reasonable modesty (4) Professional balance (5) To have a principled (6) Consistency (7) Curiosity (8) Good behavior in critical situations (9) Vigilance and caution (10) Perseverance (11) Activity (12) Self - confidence (13) Boldness and courage (14) The ability to make sound and correct provisions

(Moller and Witt, 1999), in addition to modesty and moderation that means to act in self – restrictions, self – denial, self - control and to act in appropriate standards, (White, 2008).

As (Ratliff and Reding, 2002) indicated that the skills that should be available in the internal auditor are as follows: He should be familiar with the following matters: 1. Critical thinking and analysis skills 2. Efficient manner of have adequate understanding of those under audit, whether they were individuals, organizations and systems. 3. New concepts, standards and techniques in control. 4. Awareness and understanding of the risks and opportunities relating to the one who is under audit and the auditors and 5. The rules of professional conduct.

The internal auditor is a valuable asset for the organization's management in achieving the overall goals and objectives, as well as in strengthening the internal controls and corporate governance (Krishna *et al*, 2010). The independence of the internal auditor increases the profits as quality, as investors depend on the quality of financial statements in determining the investment of their decisions (Brown *et. al*, 2010).

The advisory services provided by the internal auditors affect on the scope and the level of reliability and confidence of the external auditors in their work, as the independence of the internal auditors can be diluted when they deliver advisory services (Munro and Stewart, 2010), therefore, external auditors are allowed to use the work of internal auditors if they considered them qualified and objective enough (Engle, 1999).

#### **2.4. The Core Principles for the Professional Practice of Internal Auditing:**

The Institute of Internal Auditors indicated the basic principles that govern the work of internal auditors (Core Principles for the Professional Practice of Internal Auditing), include full integrity and necessary professional competence and care and that the internal auditor should be objective and free from any inappropriate effects (independent) and to be compatible with the institution's strategies, objectives and risks and to be in the right career position and has adequate resources and work on revealing quality and continuous improvement and communicate effectively and provide confirmation based on risks and to have clairvoyance, initiator, and insightful and supports the development and improvement of the institution (IIA).

#### **2.5. Ethical and Professional Conduct of Internal Auditors:**

Ethics are defined as a set of ethical principles, values and behavior rules, ethics are clear when a person take resolution from available several different alternatives related to ethical principles (Hayes, *et al.*, 2005), ethics care about ethical behavior of the people based on clear and specific standards, that are asset of individual values (Bishop, 2013). Professional behavior rules defined as the behavior rules that can directed and controlled by a set of values and beliefs in which they formed by personal, professional and organizational explanations, charters and specific standards (Bik, 2010). Utilitarian philosophy for internal auditors' behavior is considered that they will tend to maximize individual financial return or rewards; this will increases the selflessness as a model in this operation (Fourcade and Healy, 2007). The moral vision are based on that the internal auditors will assess and comparison the impact of their procedures they can take, the final standard is to maximize the value added of the organization, though the moral duty of the internal auditor will make his priorities to adhere with a set of directed rules toward achieving results as retention on growth the organization and reduce the cost (Pojman, 2005). The researcher believes in this case that internal auditors will be ethically committed and give added value to their companies, not the virtual strict adherence with moral philosophy without considering the added value.

The twenty-first century has witnessed many moral failures, which raises the question of the role played by ethics. Experience has shown that ethics work to control reactions to obtain lasting results and indicate the likelihood of an event and comment on it, when an incorrect phenomenon occur, the goal of ethics is not only to correct it, but it should be preventive in future, ethics must not be guide lines only, but they should be preventive and resistant in nature and they should define the right course of action for individuals and organizations (Bishop, 2013). As the emergence of financial scandals make a reason to charge internal auditors and accountants that they have lost their ethic view, professional accounting bodies are criticized by their non-organization of the work of their members to ensure fulfillment of the ethical standards (Neu, 1991; Armstrong *et al.*, 2003; Williams, 2004).

Criticism and doubts about the moral integrity are increasing for the implementers of business (Wyatt, 2004), this raise a question about the extent to which they have ethical features (Swartz and Sharpe, 2006), and are the code of ethics just a faith material? (Neu, 1991; Paracini and Gendron, 2010), internal auditors who have professional goals and trying to professionalize the work of the internal audit are also being inquired for (Jeppeson, 2010), (Rittenberg *et al.*, 2001).

Senior executives in major companies indicated to pay attention to a group of non - ethical activities despite the increase of the measures taken to protect against such faults (Shelagh *et al.*, 2016), but it is known that accounting and auditing is a complex technical process, while ethics on the contrary, are simple to understand, but the hard part in ethics is to know what we and others should properly do correctly, and that honesty, diligence and integrity requirements known to the internal auditors, but they do not know how to achieve and fulfill them, so there is a need to strengthen the audit ethics by attracting the right people to the profession, training them and not subject them to temptations through setting a code of professional behavior that set standards of professional conduct, complaints and disciplinary procedures (Campbell, 2005), especially since the integration of internal auditors within the staff of the organization makes them vulnerable to be affected by the most powerful members of the organization (Gendron and Suddaby, 2004; 'Suddaby *et al.*, 2009), they work within a self-contained domain, unlike external auditors, which implies that they are more susceptible to the threat punishments and they will fall under larger pressure to meet specific demands (Reynolds, 2000), but in the presence of a professional community that contributes in improving audit and internal control (Shelagh *et al.*, 2016), the auditor should be independent when performing the duties of his professional work and to maintain the objectivity of his performance according to the standards (Whittington, Pany, 2011, 70), since the independence and objectivity can become a real achievement through the management effort and the internal auditors awareness for the challenges that threaten their objectivity and independency, while adhering to the internal audit standards and to intensify control over the internal audit function and remove the threats facing the auditors with regard to objectivity and independency (Ntsiful 2011).

In some cases, the performance of internal auditors are exposed to risks that are negatively reflect on the objectivity of internal audit, when internal auditors carried out their work fairly and fairness, but their supervisors are biased and put their clarifications and observations, and thus they will raise the internal audit reports in their biased and unfair form to senior management, and in such cases, we can use parties to assure audit quality, whether they are internal or external to help. Objective threats are managed and adjusted so as to maintain professionalism (Kinsella, 2010), in this context we must expand the scope of internal audit and allow to access openly to the records, assets and employees (Zahran *et al.*, 2010).

## **2.6. Management Role and Audit Committee**

The management is considered responsible for compliance with the ethical and systems standards, including the organizational culture and ethical responds to the effects, the management should consider and be interested in changing the performance reward policies to eliminate the compression process to commit fraud, and upgrade the internal audit method to comply with the conduct of ethics and develop programs to raise ethical awareness, and usually the management wants to provide a sound control environment that include integrity, ethics values, management method, philosophy and workers' competencies at the entity (Coderre, 2009). Management is also concerned in providing code of conduct rules that are necessary and appropriate for the internal audit profession to promote the ethical culture in profession and give confidence to its objectives and describe the behavior and expected habits of the internal auditors, these rules help to explain the principles and applications process aimed to guide the ethical behavior for internal auditors.

It is important for managements to promote the ethical commitment of their institutions within the fact that it is a message to the staff to form the culture of their organization, where leaders of the institutions play a strict role in reporting, communicating and explaining the importance of the ethical obligation for the shareholders owners (MEYER, 2004), but the managers have functional powers to share, access information, findings and recommendations of the internal audit, and that must be allowed to certain limits (Cassandra *et al.*, 2008). As the audit committees are responsible for the supervision of

the efforts of internal audit inside the institution, where they work with the internal audit staff, this is vital to the success of the process of internal audit as a whole, the internal audit departments occupy a privileged position within the company in which they provide valuable services to the audit committee and for the management through an objective guarantees on risk management, governance and control (Swanson, 2010). In a study, it shows that females who head the audit committee and work to reduce the size of the assurances provided by external auditors through improving the effectiveness of the interior control activities or through their assurance of the safety of the preparation of financial reports process in general and thus reduce external audit fees (Ittonen *et al.*, 2010).

### **2.7. Internal Audit**

The activity of internal audit is a proactive approach for the external audit; it has been designed to give added value and improving the organization's operations (Krishna *et al.*, 2010). Internal audit became independent activity which designed to protect the integrity and not only to detect fraud, but to give added value represented in increasing the return on investment through advice and guidance provided by it, where internal auditors interested in all stages of the implementation of the institution works to provide service to senior management, and this exceeds the study of accounting and financial records to reach a full understanding of the processes that are being tested (Cassandra *et al.*, 2008).

Internal audit is important as it works to achieve the required compliance of what it is executed of actions, the internal auditors are part of the institution within a system that determines what is acceptable or unacceptable of business through their actions that would stop any violation, but which regulates the work of the internal audit are the internal auditors, but there are doubts about their success in it, and what was recorded may not accurately reflect what happened (The Houghton *et al.*, 2009).

One of the internal audit functions is the ongoing review of management processes in order to ensure the effectiveness of the activities of the administration (Badara and Saidin, 2014), therefore, the competency and effectiveness of the regulatory process has become part of the goals of the internal audit and thus became the internal audit function is seeking to achieve competency and effectiveness of the institution (Cohen and Sayag, 2010; Mihret *et al.*, 2010). The Institute of Internal Auditors showed that when the internal audit management runs effectively, it becomes an important element in helping the organization to achieve its goals, the organizations that have internal audit activities have the ability to identify the business risks and the deficiency aspects in the system, take corrective actions appropriately and to support the continued optimization process, in order to conserve the credibility of the internal audit and strengthened it, we must control its effectiveness and competency.

### **2.8. The Effectiveness of Internal Audit**

Effectiveness of the internal audit can be defined as: The ability of the internal auditors in achieving the goals set for the internal audit function (Beckmerhagen *et al.*, 2004). It is necessary to find the most appropriate ways to measure and evaluate the effectiveness of the internal audit, so that competency can be improved (Bota and Palfi, 2009), especially that the beneficiaries of the internal audit services are not always appreciate its importance properly (Gay and Simnett, 2007). There is a study that used variables to measure the effectiveness of internal audit related to the internal control system and includes all information, communications, control environment and regulatory activities and risk assessment as variables that are examined to assess the effectiveness of internal control (Theofanis *et al.*, 2011).

In another study to measure the effectiveness of internal audit, it was focused on the relevant factors associated with conviction and satisfaction for the persons that internal audit activities exercised on them, where the relationship of these factors' analysis with the competency of the internal audit, it was found that the entities subject to the internal audit have a significant importance in increasing the competency of the internal audit function (Arena and Azzone, 2009). In another study, the effectiveness of internal audit was evaluated through the relationship and interaction of the audit committee with internal audit function, as it verified the correctness of this relationship (Badara and Saidin, 2013).

In another study, there were a number of variables that have been used to measure the effectiveness of the internal audit function, including the quality of the audit, organizational independence, support for senior management and professionalism of the internal auditors (Cohena and Sayag, 2010).

In a study of (Mihret *et al.*, 2010) the effectiveness of internal audit has been linked to its relation with the organizational and performance feature and its impact on management procedures about the internal audit recommendation, the study concluded that the correctness of this relation should be checked experimentally, that calls to more researches about the competency of the internal audit for accounts.

Feizizadeh (2012) has showed in his study that internal audit function becomes effective in the case of being associated with the property owners and their needs and had a high capabilities of internal auditors and that are continuously measuring the effectiveness of internal auditors and to measure their progress in career development, so it must take into account the need to measure the performance of internal auditors to find out the level of effectiveness of their performance, furthermore, the measurement of the performance of internal auditors is one of the factors that help to achieve the effectiveness of the institution performance. Dittenhofer (2001) indicated that one of the methods of assessing the effectiveness of the internal audit is to determine the main objective of the internal audit and determine the targets that should be accomplished to achieve the main objective and the development of controlled standards and criteria associated with targets that are achieved, and finally the process of assessing the internal audit. Ussahawanitchakit and Intakhan (2011) indicated that any process is considered effective, if its results are compatible with its goals designed in advance, the IIA defined internal audit competency as; the degree of achievement of the prepared objectives of the internal audit (IIA).

### **3. Methodology of research**

The following is a presentation for the method and procedures that have been followed for the purposes of achieving the goals of the study, in which descriptive and analytical approach was used; in addition to community study and data collection tool and its analysis, as it presents a display to test the stability of the study tool.

#### **3.1. Data Collection Methods**

To achieve the objectives of the study, two types of data have been relied on which are: preliminary data; those data collected through a questionnaire and field study which is designed for the purpose of the present study, while secondary data; data was obtained from various office sources as books, scientific studies, periodicals found in court, specialized in accounting, auditing and internal control.

#### **3.2. The Study Tool**

The study questionnaire consists of two sections; the first one included the demographic characteristics of the respondents: Gender, Age, Experience, Academic Qualification, Scientific Specialization and Professional Practice Certificate, the second section has included two main areas, as follows:

*The First Field:* Consists of a set of statements expressed the principles of the code of ethics issued by the IIA and include the dimensions: (Integrity, Objectivity, Confidentiality, Competency) where statements are assigned after each of them.

*The Second Field:* It consists of a set of statements expressing the competency of internal audit.

The researcher adopted Likert Standard Scale to measure the level of approval of the sample on the dimensions of the study and its fields, where he gave to each paragraph of the questionnaire five degrees of approval (5-1) respectively, which number (5) means, I agree very highly, and the number (4) I agree with a high degree, and the number (3) I agree moderately, and the number (2) I agree in a low degree, and the number (1) I agree in a very low degree.

The following criterion had been adopted to judge the arithmetic mean of the answer of the members of the sample on the paragraphs of the questionnaire:

- The arithmetic mean of the answers ranging between 1- 2.33 reflects low approvals.
- The arithmetic mean of the answers ranging between 2.34 - 3.66 reflects the degree of medium approval.
- The arithmetic mean of the answers ranging between 3.67 - 5 reflects a high degree approval.

#### **3.3. The Stability of the Tool**



To check the stability of the study tool, (Cronbach's Alpha) coefficient was extracted for internal consistency of all study measures as shown in Table 1; where the stability coefficient values (Cronbach's alpha) to the field of study, which represents the professional and ethical conduct reached (0.86), while the value of the field, which represents the competency of the internal audit (0.82), which is acceptable values for the purposes of the study.

Table 1. Stability Factor in (Cronbach's Alpha) Manner

The Field	Stability Factor (Cronbach's alpha) Manner
Integrity	0.83
Objectivity	0.81
Confidentiality	0.84
Competency	0.85
Ethical professional conduct as a whole	0.86
The competency of internal audit	0.82

*Virtual Honesty:* To make sure that the suitability of the questionnaire statements commensurate with the objectives of the study and reflect variables honestly, the researcher has distributed the questionnaire to a number of members of the education institution in Jordanian universities to show their observations in terms of language safety and the content and its ability to express the subject of the study variables, where the observations received and checked by the arbitrators, the questionnaire has been modified based on these observations.

*Used Statistical Methods:* For the purpose of answering the questions of the study, and test its hypotheses, several statistical methods have been used represented in repetitions and percentages to describe the sample characteristics, arithmetic means and standard deviations to identify the degree of approval of the individuals subjects of the study variables and its different dimensions. The multiple regression equation and linear regression gradient analysis have been also used to test the validity of the assumptions contained in the study, Cronbach's alpha coefficient was also used to ensure the stability of the measuring instrument.

*The Study Population:* The study population consisted of all dealers with the function of internal audit and they are: (Internal Auditors or Heads of Internal Audit Departments or Assistants to Directors of Internal Audit Departments or Directors of Internal Audit Departments, in addition to members of audit committees) in the Jordanian shareholding companies, the study sample consisted of (363) members, where (400) questionnaires were distributed to identify them randomly, (388) questionnaires were retrieved and after reviewing them, they show that there are (25) questionnaires are not valid for the statistical analysis, and this study sample consisted of (363) individuals; and table no. 2 shows the distribution of members of the sample according to demographic variables.

### 3.4. Demographic Characteristics Description of the Study Sample

Table 2. The distribution of the sample according to the personal variables

Variable	Level	Repetition	Percentage
Gender	Male	301	83.0
	Female	62	17.0
Age	Less than 25 years	13	3.6
	25 years to less than 35 years	93	25.6
	35 to less than 45 years	108	29.7
	45 to less than 55 years	84	23.1
	55 years and over	65	17.9
Specialization	Accounting	274	75.4
	Accounting Information Systems	25	6.9
	Administration	30	8.3

Variable	Level	Repetition	Percentage
	Law	10	2.7
	Finance	24	6.6
Qualification	Bachelor's Degree	332	89.0
	Master's Degree	36	9.9
	Doctorate Degree	5	1.1
Years of Experience	Less than 5 years	23	6.3
	From 5 to less than 10 years	93	25.6
	From 10 to less than 15 years	84	23.1
	From 15 to less than 20 years	69	19.0
	20 years and over	94	25.9
Job Title	Member of the Audit Committee (Board of Directors )	65	17.9
	Director of Internal Audit Department	41	11.3
	Assistant Director of Internal Audit Department	25	6.9
	Head of Internal Audit Department	76	20.9
	Internal Auditor	156	43.0
Professional Practice Certificate in Internal Audit (CIA)		10	2.7

*Gender:* It is noted from table 2 that the majority of the sample was males, where their percentage reached 83.0 % compared to a small percentage of females reached 17.0 %. This is may be attributed to the difficulty and the large responsibilities that the internal audit function needs and the unwillingness of females in our society to face such responsibilities and consequences.

*Age:* Table 2 indicates that the lower age percentage was 3.6 % for the age group less than 25 years, and the largest percentage reached % 29.7 for the age group of 35 to less than 45 years for members of the sample, while those of 45 years and over, almost their total reached 53%, and this indicates that they are adult individuals in dealing with the study questionnaire.

*Specialization:* Table 2 indicates that the largest percentage of individuals with accounting specialization reached 75.4 %, and the percentage of individuals of accounting information systems specialization reached 6.9 %, which means that 82.3% of the study sample were from disciplines that are very relevant and in the heart of the subject of the study and they are familiar with the paragraphs of the questionnaire and they are qualified to answer them, while the rest of the disciplines of the sample were distributed and with low percentages between the disciplines of management, law and finance, and they are practitioners of the activities of internal audit according to their contribution within their specialization, such as studying the legitimacy of the procedures by the internal auditor who has a specialization in law, for example.

*Educational Qualification:* Table 2 shows that 89% of respondents of the sample are those who hold a Bachelor's degree which were vast majority, due to the requirements of their appointing in the beginning as described in the job description which required a bachelor's degree, while the percentage of those with Master's degree was 9.9% and the Doctorate degree was 1.1% which is the lower rate, and that may be due to the lack of material incentives in the event of obtaining post graduate certificates, this will limit the desire of those who hold a bachelor's degree to pursue their post graduate studies, and in general, the academic qualification of individuals enable them to answer the questionnaire.

*Experience:* It is noted that the lowest years of experience reached 6.3% for the category of less than 5 years, while the rest of the individuals' experience was divided between high years of experience categories in a relatively approximate manner, which confirms the knowledge of individuals for the practical and professional practices for the internal audit function and hence the possibility to trust their answers.

*Job Title:* Table 2 shows the lowest rate reached 17.9% for the job title of a member of the audit committee and this is due to the fact that each shareholding company has only one audit committee member from the board of directors, as for the managers of internal audit departments and their assistants, their percentage reached 11.3% and 6.9% respectively. As for the head of the internal audit department, the majority of internal audit units have the job title of head of internal audit department and their percentage was approximately 30%. The majority of respondents of the sample were with the job title

of internal auditors where their percentage reached 43%, which is the largest percentage and that due to the nature of the work of the internal audit unit that needs a large staff of internal auditors, while it needs one manager or one head of department.

*Analyzing and presenting statistical results and discussing them:* This part includes presenting the results of the field study and their analysis in the framework of the objectives and questions that have been previously identified, as follows:

- *Results related to the first question:* What is the extent of compliance of internal auditors to the principles of code of ethics issued by the Institute of Internal Auditors that include (Integrity, Objectivity, confidentiality, Competency)?

To answer this question, the researcher extracted arithmetic means and standard deviations for the answers of the sample about the dimensions of (Integrity, Objectivity, Confidentiality, and Competency), consisting of the principles of code of ethics, individually and as the whole field, the following shows the results:

Table 3. The arithmetic means and standard deviations for the answers of the sample for the dimension "integrity" in descending order

Rank	Number	Statement	Arithmetic Mean	Standard Deviation	Assessment Degree
1	1	A professional code of conduct is available to guide the internal auditors about personal practices and behaviors that should be followed to carry out their work professionally	2.74	1.15	Medium
2	6	The disclosure of information is allowed according to what is permitted only in the professional and legal framework of the company	2.70	1.15	Medium
3	2	Integrity and impartiality values are emphasized on as a basis to justify the procedures carried out by the internal auditors in cases where they can resort to their own personal judgments and estimates	2.63	1.05	Medium
4	4	The director of the internal audit department understands when internal auditors take measures to avoid the degrading of their integrity and impartiality such as not accepting performing a task in the event of a relative's involvement in a financial issue that requires his accountability	2.58	1.12	Medium
5	3	There are measures to encourage compliance with ethical values and professional practices generally accepted in the implementation of internal audit such as rewards and incentives	2.54	1.02	Medium
6	5	There is a system that ensures accountability for non-compatibility cases with the principles and ethics of the profession	2.42	1.09	Medium
7	7	The internal auditors take into account that their behavior is characterized by responsibility and alert, in addition to contribute in achieving legitimate goals which help them to avoid getting involved in what could harm their profession or their company	2.38	1.30	Medium
The dimension of "integrity" as a whole			2.57	0.74	Medium

Table 3 shows that the arithmetic means for the answers of the study sample for the statements of "integrity" dimension ranged between (2.38 -2.74) with a moderate commitment degree to all statements, where the statement number (1) came in the first rank, which states: A professional code of conduct is available to guide the internal auditors about personal practices and behaviors that should be followed to carry out their work professionally, with a mean of (2.74), while the statement Number (7) came in the last

rank, which states: The internal auditors take into account that their behavior is characterized by responsibility and alert, in addition to contribute in achieving legitimate goals which help them to avoid getting involved in what could harm their profession or their company, with an arithmetic mean of (2.38), and the arithmetic mean of the dimension as a whole reached (2.57) with a medium commitment degree.

*Table 4.* The arithmetic means and standard deviations for the answers of the sample for the dimension of "objectivity" in descending order

Rank	Number	Statement	Arithmetic Mean	Standard Deviation	Assessment Degree
1	6	Internal auditors observe relations and activities that they should avoid participating in, because they expect that this will affect their professional judgments in the future	3.50	1.02	Medium
2	7	Internal auditors disclose the material facts about the activities that they audit in their reports, since un-disclosing will lead to a distortion in the results of the reports	3.17	1.23	Medium
3	8	Systems ensure a sufficient degree of organizational independency, that enable the internal auditor to not fear and to exercise his work freely and objectively	3.14	1.18	Medium
4	5	The method of working in the internal audit department avoids the internal auditors from experiencing situations that could lead to conflicts of interest to ensure the maintenance of objectivity	3.08	1.17	Medium
5	3	In case of finding an influence on the overall scale of the internal audit activity, this case shall be discussed with the senior management to find the influence of this on the objectivity of implementing the internal audit works	2.98	1.03	Medium
5	4	Works and results of the audit procedures that are carried out by the internal auditor by another auditor are reviewed to ensure that the internal audit findings were based on adequate and appropriate amount of evidence and documents	2.98	1.15	Medium
7	1	The auditor has a professional freedom in choosing tools and methods to verify objectively and to be able to see the needed documents without restrictions	2.94	1.00	Medium
8	2	The internal auditors work to enhance the results of their auditing work by documentation and sufficient evidence to confirm their impartiality in issuing judgments and promote confidence in their auditing results	2.56	1.26	Medium
The dimension of "objectivity" as a whole			3.05	0.64	Medium

Table 4 shows that the arithmetic means for the answers of the study sample for the statements of "objective" dimension ranged between (2.56 -3.50) with a moderate degree commitment to all terms, where statement number (6) came in the first rank, which states: Internal auditors observe relations and activities that they should avoid participating in, because they expect that this will affect their professional judgments in the future, with a mean of (3.50), while statement number (2) came in the last rank, which states: The internal auditors work to enhance the results of their auditing work by documentation and sufficient evidence to confirm their impartiality in issuing judgments and promote confidence in their auditing results, with an arithmetic mean of (2.56), and the arithmetic mean for the whole dimension was (3.05) with a medium degree commitment.

*Table 5.* The arithmetic means and standard deviations for the answers of the sample for the dimension "confidentiality" in descending order

Rank	Number	Statement	Arithmetic Mean	Standard Deviation	Assessment Degree
1	4	Means and tools are available to enhance the confidentiality of the work of internal auditors (such as password, important files in the safe) specific to each auditor so that no one else can access his settlements and supervisory work	3.16	1.08	Medium
2	6	It should be taken into consideration using information carefully for any possible violation of laws or not to harm the institution	2.84	1.11	Medium
3	3	It is not required from the internal auditors to conduct abuses as addressing certain parties for the results of the initial reports before the official release	2.81	1.30	Medium
4	5	There is an available system that shows permitted or forbidden cases allowed to access documents and control treatments that were conducted on	2.67	1.24	Medium
5	2	The results and reports of internal audit are being disclosed based on a specific procedure that ensures notifying authorities that are allowed only to see the results of the internal audit reports	2.62	1.40	Medium
6	1	Finding a balance between confidentiality and transparency is being clarified by having a professional judgment that ensures the identification of documents with confidential nature	2.38	1.38	Medium
The dimension of "confidentiality" as a whole			2.75	0.89	Medium

Table 5 shows that the arithmetic means for the answers of the study sample for the statements of "confidentiality" dimension ranged between (2.38 -3.16) with a moderate degree commitment to all statements, where statement No. 4 came first, which states: Means and tools are available to enhance the confidentiality of the work of internal auditors (such as password, important files in the safe) specific to each auditor so that no one else can access his settlements and supervisory work, with a mean of (3.16), while statement No. 1 came in the last rank, which states: Finding a balance between confidentiality and transparency is being clarified by having a professional judgment ensures the identification of documents with confidential nature, with a mean of (2.38), and the arithmetic mean for the dimension as a whole was (2.75) with a medium degree commitment.

*Table 6.* The arithmetic means and standard deviations for the answers of the sample for the dimension of "competency" in descending order

Rank	Number	Statement	Arithmetic Mean	Standard Deviation	Assessment Degree
1	4	There is a policy that ensures follow up and keep the internal auditors familiar with the issuance and the studies of international organizations specialized in the field of internal audit so that to benefit from the expertise of those organizations in implementing internal audit activities	3.79	1.17	High
1	5	In some critical cases, experts from outside the company can be benefited from when the internal auditor faces difficulties in implementing internal audit activities	3.79	1.16	High

Rank	Number	Statement	Arithmetic Mean	Standard Deviation	Assessment Degree
3	2	A periodic assessment of the efficiency and knowledge of internal auditors can be conducted in preparation to enroll them into programs and training courses to develop their skills and competencies	3.54	1.07	Medium
4	3	The requirements of appointing internal auditors include providing distinguished levels of knowledge and professional competence that are verified through interviews and tests	3.46	1.24	Medium
5	6	The services and tasks of internal audit are implemented in accordance with international professional standards for practicing internal audit	3.29	1.30	Medium
6	1	The quality of tasks assigned to the internal auditor fit with the nature of his qualifications and scientific specialization, so that the size and quality of work fit with the ability of the auditor and the level of his professionalism and the relative importance of the task	3.12	1.26	Medium
The dimension of "competency" as a whole			3.50	0.82	Medium

Table 6 shows that the arithmetic means for the answers of the study sample for statement of "competency" dimension ranged between (3.12-3.79), where two statements ranked first, No. 4, that states: There is a policy to ensure follow up and keep the internal auditors familiar with the issuance and the studies of international organizations specialized in the field of internal audit so that to benefit from the expertise of those organizations in implementing internal audit activities, and (5), that states: In some critical cases, experts from outside the company can be benefited from when the internal auditor faces difficulties in implementing internal audit activities, with a mean of (3.79) with a high assessment degree, while statement No. 1 ranked last, which states: The quality of tasks assigned to the internal auditor fit with the nature of his qualifications and scientific specialization, so that the size and quality of work fit with the ability of the auditor and the level of his professionalism and the relative importance of the task, with a mean of (3.12) with medium assessment degree, and the arithmetic mean the whole dimension reached (3.50) with a medium degree.

Table 7. Arithmetic means and standard deviations of the sample answers for the field of "The principles of professional and ethical conduct" dimensions as a whole in descending order

Rank	Dimension	Arithmetic Mean	Standard Deviation	Assessment Degree
1	Competency	3.50	0.82	Medium
2	Objectivity	3.05	0.64	Medium
3	Confidentiality	2.75	0.89	Medium
4	Integrity	2.57	0.74	Medium
The principles of professional and ethical conduct		2.96	0.59	Medium

Table 7 shows that arithmetic means for the answers of the study sample for the dimensions of the field of "The principles of professional and ethical conduct" range from (2.57 -3.50) with a medium compliance degree for all the dimensions of the field; the "competency" dimension came in the first rank with a mean of (3.50), and in the second rank the "objectivity" dimension with a mean of (3.05), and in the third rank came the "confidentiality" dimension with a mean of (2.75), and in the fourth and final rank came the "integrity" dimension with a mean of (2.57), and the arithmetic mean for the field as a whole reached (2.96) with a medium degree assessment, which refers that internal auditors comply with the principles of code of ethics issued by the Institute of Internal Auditors in general and in a medium degree.

From the above, we can answer the first question of the study on the compliance of internal auditors to the principles of code of ethics, where statistics show that the degree of internal auditors who comply with the principles of the code of ethics issued by the Institute of Internal Auditors include (integrity, objectivity, confidentiality, competency) came in a medium degree from the point of view of the study sample.

- *Results related to the second question:* To answer the question about the level of the effectiveness of internal audit, the researcher has extracted the arithmetic means and standard deviations of the answers of the study sample for the field statements of "the effectiveness of internal audit", table 8 shows that:

*Table 8. Arithmetic means and standard deviations for the answers of the sample about the field of the effectiveness of internal audit in descending order*

Rank	Number	Statement	Arithmetic Mean	Standard Deviation	Degree Assessment
1	8	The accounting system provides books, records and a group of documents that meet the needs of achieving effective internal control and auditing	3.82	1.17	High
2	13	There are procedures and controls for the process of access to the accounting system and databases so that only the authorized persons can access to the information and to their authorized limits	3.79	1.18	High
3	11	There are professional foundations that are applied effectively and objectively to select and appoint internal auditors	3.66	1.21	Medium
4	7	Tasks and functions are being separated such as the separation between the acquisition of assets, bookkeeping and records and managing accounting settlement reports	3.59	1.22	Medium
5	10	Procedures and controls that are conducted periodically are being evaluated and updated to suit the developments in the work environment	3.58	1.15	Medium
6	9	A work guide for internal audit procedures are available that should be implemented which prevent interference and inconsistency in the work between the auditors of internal audit	3.48	1.20	Medium
7	12	Make sure that employees do their work carefully through verifying that they follow and abide by the instructions	3.42	1.25	Medium
8	1	Controls and internal audit procedures provide the necessary protection of assets and records from damage, loss and embezzlement	3.37	1.19	Medium
9	6	The organizational structure shows the sequence of specializations and clarify the authority and responsibilities tasks of each department so that those responsible for the failures and irregularities that may occur can be identified	3.25	1.24	Medium
10	2	There are work guides include procedures for the implementation of the tasks without committing errors or incorrect accounting settlements	3.10	1.30	Medium
11	3	The procedures of internal audit can be implemented to make sure of fulfilling economic, competency and effectiveness of operational processes	3.08	1.38	Medium
12	5	Measures of operations are available to refer to in order to make comparisons to determine if there are any committed errors	2.97	1.33	Medium

Rank	Number	Statement	Arithmetic Mean	Standard Deviation	Degree Assessment
13	22	The conducted procedures for internal audit ensure verification of commitment to laws and regulations in force when implementing work	2.94	1.15	Medium
14	19	The executive procedures of internal audit are easy to understand and clear so as to ease its application processes	2.93	1.10	Medium
14	20	internal audit procedures ensure the compliance with the implementation of the business systematically and morally	2.93	1.11	Medium
16	21	When establishing the procedures of internal audit, the fulfillment of accountability of responsibility at work must be taken into account	2.90	1.09	Medium
17	4	Tests and procedures must be followed to ensure the accuracy of records, documents, financial and accounting reports	2.87	1.25	Medium
18	17	Accounting and financial data that internally audited are considered reliable	2.69	1.11	Medium
19	14	A sufficient number of qualified control staff of internal auditors are available	2.52	1.12	Medium
20	15	Analysis and comparison of outputs to inputs are conducted during a certain period of time to verify the competency of operations	2.47	1.06	Medium
21	16	The expected risks must be faced through the implementation of controls to ensure its control and maintain its survival within the acceptable minimum limits	2.43	1.01	Medium
22	18	The activities of internal audit characterized by comprehensive and cover all departments and operations	2.20	1.07	Low
The field of "The effectiveness of internal audit" as a whole			3.09	0.40	Medium

Table 8 shows that the arithmetic means for the answers of the study sample from the field of "the effectiveness of internal audit" ranged from (2.20 -3.82), which statement No. 8 was ranked first, that states: "The accounting system provides books, records and a group of documents that meet the needs of achieving effective internal control and auditing", with an arithmetic mean of (3.82) with a high assessment, while in the last rank came statement No. 18, which states: "The activities of internal audit characterized by comprehensive and cover all departments and operations, with an arithmetic mean of (2.20) with a low assessment, and the arithmetic mean for the field as a whole reached (3.09) with a medium assessment, and this shows that the level of the effectiveness of internal audit came medium.

### 3.5. Results related to test the hypotheses of the study

*The first main hypothesis:* There is no impact of compliance of internal auditors with the principles of code of ethics on the effectiveness of internal audit.

Many sub-hypotheses emerged from this main hypothesis as the following:

*First sub-hypothesis:* There is no impact of compliance of internal auditors with integrity on the effectiveness of internal audit.

*Second sub-hypothesis:* There is no impact of compliance of internal auditors with objectivity on the effectiveness of internal audit.

*Third sub-hypothesis:* There is no impact of compliance of internal auditors with confidentiality on the effectiveness of internal audit.

*Fourth sub-hypothesis:* There is no impact of compliance of internal auditors with competency on the effectiveness of internal audit.



To validate this hypothesis, multiple regression equation has been applied to study the impact of the compliance of internal auditors to the principles of code of ethics on the effectiveness of internal audit, and in order to diagnose the problem of internal links of the independent variables, it has been relied on calculating the coefficient factor (Tolerance) for each of the independent variables, as well as using (VIF) test, where VIF should be less than 10 for all independent variables and (Tolerance) values should be greater than (0.05), Table 9 shows that.

*Table 9.* Testing the variation inflation factor and the tolerance variation of the independent variable dimensions

Dimension	Tolerance	Variation Inflation Factor ( VIF )
Integrity	0.27	3.70
Objectivity	0.24	4.13
Confidentiality	0.25	3.92
Competency	0.37	2.73

Table 9 shows that the values of variation inflation factor (VIF) test for all the independent variable dimensions were less than (10), while the value of the allowed variation factor (Tolerance) test for all dimensions are greater than (0.05), which means that there is no high correlation between the independent variable dimensions, and therefore all can be used in regression analysis, and find out which of these dimensions have a statistically significant impact on the dependent variable, as well as to know the percentage of the impact if found, and after it was confirmed that there is no high correlation between the independent variable dimensions, the multiple regression equation will be applied, table 10 shows that.

*Table 10.* The results of applying multiple regression equation to study the impact of the dimensions of the compliance of internal auditors to the principles of code of ethics on the effectiveness of internal audit as a whole

The dimension	$\beta$	T	SIG	R	R <sup>2</sup>	F	SIG
Integrity	0.39	3.32	0.00	0.67	0.45	7.41	0.00
Objectivity	0.31	2.61	0.01				
Confidentiality	0.25	2.05	0.05				
Competency	0.36	2.94	0.01				

Table 10 shows the existence of statistically significant impact at the level of significance ( $\alpha \leq 0.05$ ) of the dimensions of the compliance of internal auditors to the principles of code of ethics on the effectiveness of internal audit as a whole, as the value of the total correlation coefficient (R) (0.67), which is a value that indicates a degree of statistical correlation between the independent variables and the dependent variable, and the value of (R-square) was (0.45), which is a statistically significant value explains the ability of internal auditors to commit to the principles of the ethics of the profession to improve the effectiveness of internal audit as a whole, which means that the dimensions of the compliance of internal auditors to the principles of code of ethics explains the amount value of (45 %) of the change occurred in the effectiveness of the internal audit as a whole, the total value of (F) test reached (7.41) with a significance statistics of (0.00), a statistically significant value indicates a variation in the ability of independent variables to influence the dependent variable, thus rejects the first main null hypothesis to become "There is an impact of the compliance of internal auditors to the principles of code of ethics on the effectiveness of internal audit," As the results of sub hypotheses, the results showed the following:

1. There is an impact of the compliance of internal auditors of integrity on the effectiveness of internal audit, where the values of ( $\beta$ , T) reached (0.39, 3.32), respectively, which are statistically significant values.
2. There is an impact of the compliance of internal auditors of objectivity on the effectiveness of internal audit, where the values of ( $\beta$ , T) reached (0.31, 2.61), respectively, which are statistically significant values.

3. There is an impact of the compliance of internal auditors of confidentiality on the effectiveness of internal audit, where the values of ( $\beta$ ,T) reached (0.25, 2.05), respectively, which are statistically significant values.

4. There is an impact of the compliance of internal auditors of competency on the effectiveness of internal audit, where the values of ( $\beta$ ,T) reached (0.36, 2.94), respectively, which are statistically significant values.

(Stepwise Regression) analysis was also used, table 11 shows the results obtained when testing this hypothesis.

*Table 11.* The results of (Stepwise Regression): The impact of the dimensions of the compliance of internal auditors to the principles of code of ethics on the effectiveness of internal audit as a whole

Step	Independent variable	B	T	SIG	( R )	( <sup>2</sup> R )	F	SIG
The first step	Integrity	0.65	9.42	0.00	0.65	0:42	88.66	0.00
The second step	Integrity	0.23	2.56	0.01	0.75	0:57	80.43	0.00
	Competency	0:57	6.51	0.00				
The third step	Integrity	0.17	2.16	0.03	0.81	0.66	77.15	0.00
	Competency	0.33	3.62	0.00				
	Confidentiality	0.41	5.57	0.00				
The fourth step	Integrity	0.38	3.72	0.00	0.83	0.69	67.44	0.00
	Objectivity	0.06	0.78	0.44				
	Confidentiality	0.17	1.74	0.08				
	Competency	0.32	3.70	0.00				

\* Statistically significant at the level of significance ( $\alpha \leq 0.05$ ).

Table 11 shows that the value of the multiple correlation coefficient (R), which represents the correlation ratio of the dimensions of the independent variable combined with the dependent variable has reached (0.83), which means that there is a strong positive relation between the compliance of internal auditors to the principles of code of ethics and the effectiveness of internal audit, table 10 also shows that the compliance of internal auditors to the principles of code of ethics has a percentage of (69 %) of the variation occurred at the variable of the effectiveness of the internal audit, which is indicated by the value of (R-square), that amounted to (0.69), and because (F) value equals (67.44), and the level of its statistical significance was (0.000), it can be said that there is a statistically significant effect of the compliance of internal auditors to the principles of code of ethics on the effectiveness of internal audit, and therefore the refusal of null hypothesis, and the acceptance of the alternative hypothesis: "There is a statistically significant impact at the level of significance ( $\leq A 0.05$ ) for the compliance of internal auditors to the principles of code of ethics on the effectiveness of internal audit. "The results also showed that the most influence dimensions of the compliance of internal auditors to the principles of code of ethics on the effectiveness of internal audit was the "Integrity" dimension where the ( $\beta$  ,T) values reached (0.38, 3.72) respectively, which are positive and statistically significant values, and came in the second order the "Competency" dimension, where the ( $\beta$ ·T) values reached (0.32, 3.70), respectively, and then the "Confidentiality" dimension where the ( $\beta$ ·T) values reached (0.17,1.74), and finally the "Objectivity" dimension where the ( $\beta$  T) values reached (0.78,0.06) which were also positive and statistically significant values.

*The second main hypothesis:* There are no statistically significant differences at the significance level of ( $A \leq 0.05$ ) between the views of members of audit committees and internal auditors about the impact of the compliance of internal auditors on the principles of code of ethics on the effectiveness of internal audit. To verify the validity of this hypothesis, unilateral analysis of variance (ANOVA) has been applied on the answers of the sample on the areas of (compliance with the principles of code of ethics, the effectiveness of internal audit) depending on the nature of the work, table 12 shows that.

*Table 12.* The arithmetic means for the answers of the sample in the fields of (Compliance to the principles of code of ethics, the effectiveness of internal audit), depending on the nature of the work

Field		Arithmetic Mean	Standard Deviation
Compliance to the principles of code of ethics	Member of the Audit Committee	3.11	0.63
	Director of the Department of Internal Audit	3.23	0.68
	Assistant Director of the Department of Internal Audit	3.11	0.69
	Head of Internal Audit Department	3.13	0.39
	Internal Auditor	3.12	0.68
The effectiveness of internal audit	Member of the Audit Committee (Board of Directors)	3.13	0.81
	Director of the Department of Internal Audit	3.11	0.85
	Assistant Director of the Department of Internal Audit	2.81	0.64
	Head of Internal Audit Department	3.09	0.84
	Internal Auditor	3.08	0.80

Table 12 shows the existence of apparent differences between the arithmetic means for the answers of the sample for the areas of (Compliance to the principles of code of ethics, the effectiveness of internal audit) depending on the nature of work, and to find the statistical significance of these differences. Analysis of Variance (ANOVA) was applied on the answers of sample for the areas of (Compliance to the principles of profession's ethics, the effectiveness of internal audit) depending on the nature of work, as shown in table 13.

*Table 13.* The results of applying the Analysis of Variance (ANOVA) on answers of individuals' in the fields of (Compliance to the principles of code of ethics, the effectiveness of internal audit), depending on the nature of the work

Field		Total squares	Degrees of freedom	Average squares	F	Statistical significance
Compliance to the principles of code of ethics	Between groups	1.07	4	0.54	1.55	0.22
	Within groups	66.56	359	0.35		
	Total	67.64	363			
The effectiveness of internal audit	Between groups	0.10	4	0.05	0.29	0.75
	Within groups	31.45	359	0.16		
	Total	31.55	363			

Table 13 shows that there is no statistically significant differences at the significance level ( $\alpha \leq 0.05$ ) between the views of audit committees' members and internal auditors on the compliance of internal audits to the principles of code of ethics and their impact on the effectiveness of internal audit, where all the (F) values were not statistically significant, thus accepts the second main hypothesis in its negative formula.

#### 4. Results and recommendations

The results that were concluded by the study have been summarized as follows:

1. There is a compliance of the internal auditors to the principles of code of ethics issued by the Institute of Internal Auditors in a medium level, where the compliance level in every dimension was alone from integrity, objectivity, confidentiality and competency in a moderate degree.
2. The results showed that the compliance of internal auditors was more in the competency dimension, followed by objectivity and then confidentiality and finally the integrity dimension in terms of the compliance level in descending order.
3. The study revealed that there is a medium degree of effectiveness of internal audit function in the Jordanian public shareholding companies.

4. The study showed that there are an impact of each dimension that composes the principles of code of ethics issued by the Institute of Internal Auditors on the effectiveness of internal audit, where integrity was the most effective dimension on the effectiveness of internal audit, competency was in the second order in terms of the degree of impact, followed by confidentiality in the third order and finally the objectivity was the least degree in impact.

5. The study showed that there are no differences in the opinions of internal auditors and members of audit committees on the impact of internal auditors' commitment on the effectiveness of internal audit.

6. The study showed that the majority of internal auditors don't have a certificate of professional practice specializing in internal audit, where the percentage of obtaining CIA certificate is only (2.7%).

7. The study showed that females are not participating in the work of internal audit in a large degree, where the majority of the internal audit staff was of males.

### Recommendations

In light of the previous results, the following recommendations can be proposed:

1. Encourage the internal auditors to increase and raise the level of their compliance to the principles of code of ethics issued by the Institute of Internal Auditors, through providing them with suitable work environment that encourages compliance and reduce the possibility of being exposed to situations of conflict of interests.

2. Raise the awareness of internal auditors of the importance of compliance to the principles of the code of ethics by holding seminars and courses related to the professional ethics and correct behaviors of internal auditors and provide them with leaflets of bodies and specialized international organizations to improve their awareness and follow up in this area.

3. Working on revising codes and documents of professional and ethical conduct of practitioners of internal audit activity and the related instructions, to rise to the level that can achieve the highest degree of adherence to the principles of the profession's ethics.

4. To raise the effectiveness of internal audit through make the internal auditors acknowledge that their compliance to the principles of code of ethics issued by the Institute of Internal Auditors have a real added value and impact on the effectiveness of internal audit and not just a compliance to a moral charter that avoids the internal auditors the risk of accountability or making mistakes.

5. Encourage the internal auditors to develop their competence by obtaining a professional practice certificate specialized in internal audit and provide incentive to this end.

6. Working on involving females in the work of internal audit and to clarify the mental image of the internal audit activities and that the responsibility of the female interior auditor is similar to the responsibilities that are carried out in other sections of the companies.

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