

# The Availability of Forensic Accounting Application Factors to Enhance the Auditors Efficiency in Jordan

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## Abstract

This study aims to determine the availability of forensic accounting application factors sought by auditors' representatives of Jordanian Certified Public Accounting and auditors working in the Audit Bureau. The study identifies as well the role of these application factors in enhancing the efficiency of auditors due to the increased responsibility on them in the face of various fraud cases on the one hand, and their appearance in the courts as financial experts supporting the judiciary to adjudicate financial cases on the other hand. To achieve the objectives of the study, the researchers used the descriptive analytical method because of its suitability for the nature of the research. The population of the study consisted of 433 Jordanian certified public accountants and 520 auditors working in the Audit Bureau, from which a sample of 426 was constructed. A questionnaire was developed to collect data and the Statistical Package for Social Sciences was utilized to analyze data and test hypotheses. The study found that there is a statistical difference between the responses of the two samples of the study, and it concluded a set of recommendations, which are hoped to help legislators in strengthening and developing the forensic accounting profession in Jordan.

**Keywords:** Forensic Accounting, Auditors, Forensic Audit, Chartered Accounting, Audit Bureau

**JEL Classification Code:** H83, M41, M42, M48, M49

## 1. Introduction

Forensic accounting is one of the most prominent accounting fields that provide opportunities for future needs. It is also an integrated framework for both law and accounting as it works to determine the skills that are required from the forensic accountant to be an effective expert and advisor in investigative procedures as well as to submit reports supported by sufficient legal evidence to help lawsuits and achieve justice. Consequently, forensic accounting helps addressing cheating and fraud, as well as contributes to resolving financial disputes in the judiciary or settlement before reaching the courts (Ahmed, 2013). Forensic accounting has become an important field of

accounting knowledge since it is interested in examining the judicial problems for which accounting and auditing profession forms its reference frame.

Many countries have paid more attention to forensic accounting reflected in developing the education of forensic accounting as some countries founded special institutions to teach the fundamentals of forensic accounting, while other countries developed educational programs at universities and colleges to award bachelor and higher degrees in forensic accounting. Furthermore, many institutes and organizations have been established that grant various certificates in forensic accounting that enable its holder to practice the profession of forensic accountant or financial expert. Some have decided to integrate the fundamentals and the components of forensic accounting in the work of accountants, auditors and lawyers through dedicated training programs that will raise their efficiency as well as improve their performance. Moreover, many developed countries have acknowledged the profession of forensic accounting within an official framework that regulates their work and the work of the forensic accountant.

In the Arab region in general and Jordan in particular, the features of forensic accounting is still unclear and nobody is responsible for organizing it within an official practicing framework (Al-Kubaisi, 2016). In light of the prevalence

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of cheating and fraud that these environments suffer from and the consequent lawsuits and financial disputes, the audit profession is in a difficult and challenging position as to how to confront different types of fraud and corruption. Consequently, the burden of auditors has increased, whether they work for a government regulatory agency or for legal audit offices. Henceforth, auditors are required to be scientifically and practically qualified with forensic accounting skills and experiences that would raise their efficiency and ability, as well as detect and confront cases of fraud and illegal activities (Qambar, 2015).

Therefore, this study aims to assess the availability of the components of a forensic accounting implementation by auditors in the Jordanian environment in both the public sector, represented by the Audit Bureau, and the private sector, represented by the Jordanian Association of Certified Public Accountants. Because, when cases of embezzlement or any financial irregularities occur in the government sector, auditors from the Audit Bureau are summoned to investigate these cases as the supreme supervisory authority on public funds. Likewise, when so-called dishonesty occurs in private sector companies, a committee of certified public accountants is summoned to support the judiciary, as it is responsible for preparing fundamental accounts organized in accordance with accounting and auditing standards. This requires the auditors in both sectors to be scientifically and practically qualified to with skills in detecting cheating and fraud in order to present opinions that are adopted in legal investigations as well as examining fraud allegations to support litigation and uncover what actually happened.

### 1.1. The Issue

There is a need for forensic accounting and the necessity for the availability of the ingredients related to its application by Jordanian certified public accountants and auditors working in the Audit Bureau to play the role of forensic accountant, because courts resort to entrusting the task of forensic accounting to accounting and auditing experts represented in auditing and consulting firms and offices, as well as the Audit Bureau. Therefore, qualifying auditors with the skills and experiences of combating and preventing fraud, as well as enhancing the ethics and characteristics of the profession, is vital to promote their competence.

### 1.2. The Objectives of the Study

The main objective of the study is to evaluate the available extent of the components of implementing forensic accounting by Jordanian certified public accountants and auditors working in the Audit Bureau, so as to promote their competence. This objective is the following:

First: identify the extent of availability of the implementation components of forensic accounting to Jordanian

certified public accountants and auditors working in Audit Bureau.

This objective consists of the following sub-objectives:

1. Identify the extent of usage of forensic accounting by Jordanian certified public accountants and auditors working in Audit Bureau.
2. Identify the extent of availability of the components related to skills of forensic accounting to Jordanian certified public accountants and auditors working in Audit Bureau.
3. Identify the extent of availability of the components related to experience in forensic accounting to Jordanian certified public accountants and auditors working in Audit Bureau.
4. Identify the extent of availability of the components related to personal characteristics and profession ethics to Jordanian certified public accountants and auditors working in Audit Bureau.

Second: Identify the extent of availability of the components for implementing forensic accounting and promote the competence of Jordanian certified public accountants and auditors working in Audit Bureau.

Third: Identify whether there is any statistical difference between Jordanian certified public accountants and auditors working in Audit Bureau related to the availability of forensic accounting implementation components.

### 1.3. The Hypotheses

Based on the problem of the study and its objectives, the hypotheses were formulated as follows:

**H01:** *The implementation components of forensic accounting are not available to Jordanian Certified Public Accountants and auditors working in Audit Bureau.*

**H01-1:** *Jordanian Certified Public Accountants and auditors working in Audit Bureau do not use forensic accounting.*

**H01-2:** *The components related to skills of forensic accounting are not available to Jordanian Certified Public Accountants and auditors working in Audit Bureau.*

**H01-3:** *The components related to experience in forensic accounting are not available to Jordanian Certified Public Accountants and auditors working in Audit Bureau.*

**H01-4:** *The components related to personal characteristics and professional ethics are not available to Jordanian Certified Public Accountants and auditors working in Audit Bureau.*

**H02:** *The components for implementing forensic accounting do not promote the competence of Jordanian Certified Public Accountants and auditors working in Audit Bureau.*

**H03:** *There is no statistically significant difference between Jordanian Certified Public Accountants and auditors working in Audit Bureau related to the availability of forensic accounting implementation components.*

## 2. Theoretical Framework

Forensic accounting is one of the contribution of accounting science, which emerged because of economic development and the resulting increase and complexity of financial operations. This, in turn, has led to the emergence of many cases of financial corruption, money laundering operations, and the inability to curb these practices. So, there is an essential need for professionals combining financial and legal expertise with investigative and litigation support skills to present evidences to the judicial authorities in order to assist them in making decisions related to the financial issues in dispute (Saudi, 2015).

Forensic accounting is also considered a field of accounting knowledge specialized in clarifying the obligations resulting from actual or anticipated disputes between the conflicting parties for the purposes of the court. The word ‘forensic’ means using accounting in courts, while the word ‘investigative’ means refers to the procedures and

skills that a forensic accountant possesses, derived from his scientific and practical experience that ultimately enables him to testify before the court about the case under investigation (Al-Kubaisi et al., 2016). Singleton and Singleton (2010) stated that the word ‘forensic’ in the accounting profession deals with the relationship between financial facts and legal disputes, so the evidence for forensic accounting is directed to a legal court. The researchers have defined forensic accounting as a growing branch of accounting, while calling by other names such as criminal accounting, investigative accounting, judicial accounting or legal accounting. It is a field that provides information that could be used as evidence for the purposes of resolving financial disputes and supporting criminal cases by applying various investigative skills and acquiring experience and knowledge in the fields of accounting, auditing and law. The researchers define a forensic accountant as the person who searches for evidence, interprets it, and reports results in an objective and sustainable manner from a legal and accounting point of view.

### 2.1. Previous Studies

Title	Main Objectives	Main Findings
The Impact of Forensic Accounting on Minimizing Fraud in Jordan (Al-Hanini & Salameh, 2018)	This study aimed at recognizing the impact of forensic accounting on minimizing the fraud in Jordanian companies.	The study concluded that the forensic accounting has an effective impact on the minimizing the fraud in Jordanian companies, by enhancing the efficiency of adjudication decisions in financial cases in court, identifying the damage and the compensation accurately, avoiding the fraud before happening and its effective impact on detection the fraud in government units.
The necessity of activating forensic accounting and developing it in Iraq (Radhi & Al-Rawaziq, 2018)	This study aims to shed light on the importance of Judicial Accounting and the urgent need to activate its role in Iraq to help in solving many financial and judicial problems. As well as, to identify the required skills of the accountants working in forensic accounting to help them providing quality reports in addition to improve the quality of internal control.	The results clearly indicate the urgent need to activate the role of judicial accounting in Iraq and to benefit from the services of Judicial Accountants and experts in this field because of its significant role in supporting the general economy of the country and promoting the application of justice and law.
Implications of regulatory prescriptions and audit standards on the evolution of forensic accounting in the audit process (DiGabriele, 2010)	This study aimed to determine the level of agreement among accounting academics, auditors, and forensic accountants that the current environmental framework created by regulatory and standard setting bodies appears to require a merger of common ground between forensic accounting and auditing.	The results indicate that forensic accounting has a place in the audit process and that auditors may need to add some of these skills as the market for audits have changed.
Forensic Accounting and Audit Expectation Gap - The Perception of Accounting Academics (Chukwunedu&Okoye, 2011)	To investigate perception of Accounting Academics on the vexed issue of whether the injection of Forensic Accounting techniques, on a cost/benefit basis, in an audit is capable of increasing the ability of the auditor to discover fraud and thus help in bridging the audit expectation gap in Nigeria.	The study revealed, that Forensic Accounting techniques injected in an audit and given cost/benefit considerations is capable of increasing the ability of the Auditor to detect fraud and thus help bridge the audit expectation gap in Nigeria.

Title	Main Objectives	Main Findings
Influence of Forensic Accounting Practices on Fraud Prevention among Listed Companies in Nigeria (Suleiman et al., 2018)	This study examines the effect of forensic accounting knowledge on fraud prevention among listed companies in Nigeria.	Forensic accounting knowledge and complexity are significantly related with fraud prevention.
Evaluation of Auditors' Professional Skills in Local Auditing Firms in Hanoi (Nguyen et al., 2020)	Aims to study improving the quality of auditors to meet workload needs.	The results show that the Professional skills of auditors in auditing firms include 17 attributes. The majority of respondents show appreciation for the professionalism, and professional competence of auditors, while, they think that critical thinking skills and creative thinking skills are still limited and need to be improved. These findings, not only help auditors to improve themselves, but also provide solutions for managers of domestic auditing Firms in Hanoi to enhance quality of audited human resources.

## 2.2. What Distinguishes the Current Study from the Previous Studies?

After presenting the literature on the subject of forensic accounting that were performed in various environments with various objectives, variables and conclusions, one could identify what distinguishes the current study from the previous ones as follows:

1. This study is the first study based on the knowledge of the researchers that specialized in evaluation of the availability of the components for applying forensic accounting to promote the competence of auditors as auditors in Jordan plays the role of forensic accountant. Jordanian certified public accountants and auditors working in Audit Bureau are consulted in investigating cases of embezzlement, corruption, breach of trust or when a financial dispute occurs.
2. The study was performed from the point view of Jordanian certified public accountants and auditors' working in Audit Bureau, so the population of the study is wide ranging.
3. According to the knowledge of the researchers, the studies on the subject did not investigate the methods of forensic accounting as a component of applying forensic accounting. But the researchers have classified the methods of forensic accounting as one of the main application components and they have developed a special part for this axis in the questionnaire.
4. Identification of the availability of the components of applying forensic accounting more accurately and

realistically by using the scale (1–10). This scale depends mainly on evaluative questions that start with number 1 ending with number 10, each number represents the percentage or the degree of availability of the component mentioned in the item. This means that the respondent evaluates the availability of the components of his application of forensic accounting. Moreover, this scale covers a wide range of the responses, so it is possible to get more accurate, free and realistic responses. In addition, this scale is quantifiable because the choices of the responses, numerals and numbers could be interpreted easily since numeral values indicate the variance of the percentage. Henceforth, this study is the first Arab study that utilizes this scale.

5. The competency of the auditor was studied from multiple dimensions, including ensuring the adequacy of disclosure, detecting weaknesses in performance, detecting illegal activities, reducing financial fraud, and narrowing the expectations gap, while other studies dealt with each topic independently and separately.

## 3. Methodology

The current study relied on the descriptive research methodology and the analytical field research method. On the descriptive level, a literature survey was conducted, examining previous theoretical and field studies as well as research related to the subject to identify the most important previous studies, which constitute a vital component bringing together

of knowledge directions. As for the analytical field research, a comprehensive exploratory survey was conducted and the collected data was analyzed by answering questionnaires.

### 3.1. The Sample

The population of the study consisted of Jordanian certified public accountants – 433 – according to the 2020 statistics of the Society of Jordanian Certified Public Accountants, and the auditors working in the Audit Bureau – 520 – according to the statistics of the department of humans' resources in the Bureau. So, the number of individuals in the population of the study totals 953. A random sample of each category was selected, the size of the Jordanian certified public accountants was 205, while the sample size of the auditors working in Audit Bureau was 222. So, the total sample size is 427.

### 3.2. The Tool of the Study

The study tool is the questionnaire that was developed based on previous studies and their theoretical framework, together with consulting the academic experts and specialists. The questionnaire is the most appropriate tool for data collection because this study seeks to measure the availability of the main components of applying forensic accounting, and how it helps to enhance the competence of auditors. This means obtaining reliable and more realistic information, as the questionnaire allows for frank and free answers from the study sample. Also, the questionnaire is considered appropriate for this study because of the geographical distance between the individuals of the study sample, thus they can be accessed through the questionnaire in the fastest and least expensive way.

The responses of the individuals of the sample to the items of the questionnaire were classified according to the following scale:

The previous scale represents an evaluative numeral scale that depends mainly on evaluative questions that starts with number 1 ending with number 10, each number represents the percentage or the degree of availability of the component mentioned in the item. This means that the respondent evaluates the availability of the components of his application of forensic accounting. Moreover, this scale covers a wide range of responses, so it is possible to get more accurate, free and realistic responses. In addition, this scale is quantifiable because the choices of the responses, numerals and each number could be interpreted easily since numeral values indicate the variance of the percentage. This scale is used in surveys that ask respondents to evaluate several topics, such as job satisfaction or political tendencies. It is also used by the World Health Organization to assess issues related to the general health of an individual and has been used to measure customer satisfaction with the quality of services provided to them.

## 4. Results

Table 1 shows the results of the first research question with regard to arithmetic means, standard deviations, percentage and evaluation degree.

The overall mean of the responses of the individuals of the sample of Jordanian certified public accountants and auditors working in Audit Bureau is 7.84 with a percentage of 78.4%. This represents a high evaluation degree as it is greater than the hypothetical mean (Test value = 5.5), meaning that the components for applying forensic accounting are available. The component Availability of Personal Characteristics



Figure 1: Evaluative Numeral Scale

Table 1: The Descriptive Analysis of the Components of Applying Forensic Accounting

No	Component	Mean	S.D.	Percentage	Evaluation degree	Rank
1	Using Forensic Accounting Methods	7.54	0.9220	75.4%	High	4
2	Availability of Forensic Accounting Skills	7.90	0.8030	79.0%	High	2
3	Availability of Forensic Accounting Experiences	7.69	1.063	76.9%	High	3
4	Availability of Personal Characteristics and Profession Ethics	8.23	0.9690	82.3%	Very High	1
	Overall Sum	7.84	0.7060	78.4%	High	



and Profession Ethics occupied the first rank with 8.23 arithmetic mean and a percentage of 82.3%; in the second rank comes Availability of Forensic Accounting Skills with 7.9 arithmetic mean and a percentage of 79%, followed by Availability of Forensic Accounting Experiences with an arithmetic mean of 7.69 and a percentage of 76.9%. In the last rank comes Using Forensic Accounting Methods with an arithmetic mean of 7.54 and a percentage of 75.4%. Table 1 shows that the values of the arithmetic means of the four fields of the study have a high evaluation degree (very high) and above the hypothetical mean (Test Value = 5.5).

#### 4.1. The Results of the First Main Hypothesis

**H01:** *The implementation components of forensic accounting are not available to Jordanian Certified Public Accountants and auditors working in Audit Bureau.*

The result of *t*-test is shown in Table 2. The calculated value of *t* of the variable “Implementation components of forensic accounting” equals 68.447 at  $\alpha$  (0.000) and Dof (426) that is

statistically significant at  $\alpha \leq 0.05$ . The results also indicate that *t*-values for each component were high and statistically significant at  $\alpha \leq 0.05$ . Consequently, the first main null hypothesis is rejected and we accept the alternative one stating “the implementation components of forensic accounting are available to Jordanian certified public accountants and auditors working in Audit Bureau.” Henceforth, this result is an indication of the ability of auditors in the Jordanian environment to practice some fields of forensic accounting due the availability of the main components to implement it. The reason for this is that the judiciary turns to auditors to investigate facts about suspicious financial activities, which enables them to practice certain areas of forensic accounting as experts.

##### 4.1.1. The Results of the First Sub-Hypothesis

**H01-1:** *Jordanian Certified Public Accountants and auditors working in Audit Bureau do not use forensic accounting.*

The result of *t*-test of the first sub-hypothesis is shown in Table 3. The calculated value of *t* of the variable “Using

**Table 2:** Results of Testing the First Hypothesis

No	Components	T	Sig.
1	Using Forensic Accounting Methods	45.674*	0.000
2	Availability of Forensic Accounting Skills	61.854*	0.000
3	Availability of Forensic Accounting Experiences	42.498*	0.000
4	Availability of Personal Characteristics and Profession Ethics	58.189*	0.000
	Implementation Components of Forensic Accounting	68.447*	0.000

\* Statistically significant  $\alpha \leq 0.05$ .

**Table 3:** The Results of Testing the First Sub-Hypothesis

No	Item	t*	Sig.
1	You use interactive auditing; to investigate illegal activities	26.232	0.000
2	You use the legislative auditing method; to examine and evaluate the internal control systems and to ensure the protection of assets	30.535	0.000
3	You are using post-verification method, for examination and evaluation from many different aspects	19.683	0.000
4	You use structured commitment to ensure the extent to which the administrative units adhere to the laws and provisions	30.343	0.000
5	You use the diagnostic tool method; to conduct the examinations for identifying the risks resulting from fraud	18.916	0.000
6	You use the method of continuous monitoring of the company's activities	23.648	0.000
7	You use the method of tracking the movement of money from its sources to the place of its employment	27.002	0.000
8	You use databases; to compile the evidence, be guided by it later	29.489	0.000
9	You use investigative methods. to gather sufficient evidences to support criminal cases	26.289	0.000
	Overall arithmetic average	45.674	0.000

\* Statistically significant  $\alpha \leq 0.05$ .

forensic accounting” equals 45.674 at  $\alpha$  (0.000) and Dof (426), which is statistically significant at  $\alpha \leq 0.05$ . The results also indicate that  $t$ -values for each item were high and statistically significant at  $\alpha \leq 0.05$ .

Consequently, the first null sub-hypothesis is rejected and we accept the alternative one stating “Jordanian Certified Public Accountants and auditors working in Audit Bureau use forensic accounting.”

This confirms the role of forensic accounting methods in assisting auditors to complete the audit process in all its stages, as they are methods and techniques for auditing accounts as indicated (Arokiasamy et al., 2009). The researchers believe that the methods of forensic accounting do not conflict with the auditing process, but rather are considered complementary and a natural extension of it. Thus, forensic accounting is used to uncover more evidence to prove or disprove any financial allegation or breach, and that the practice of forensic accounting methods by auditors in the Jordanian environment came as a natural response to the need for financial experts who are able to assist the judicial authorities to decide on financial allegations that Require special opinions and expertise.

#### 4.1.2. The Results of the Second Sub-Hypothesis

**H01-2:** *The components related to skills of forensic accounting are not available to Jordanian Certified Public Accountants and auditors working in Audit Bureau.*

The result of  $t$ -test of the second sub-hypothesis is shown in Table 4. The calculated value of  $t$  of the variable

“Forensic accounting skills “ equals 61.854 at  $\alpha$  (0.000) and Dof (426), which is statistically significant at  $\alpha \leq 0.05$ . The results also indicate that  $t$ -values for each item were high and statistically significant at  $\alpha \leq 0.05$ .

Consequently, the second null sub-hypothesis is rejected and we accept the alternative one stating “The components related to skills of forensic accounting are available to Jordanian certified public accountants and auditors working in Audit Bureau.”

This result confirms that Jordanian certified accountants and auditors working in the Jordanian Audit Bureau possess the skills of forensic accounting and are able to employ them. This was due to the convergence of the account auditing profession and the forensic accounting profession in some fields, in addition to the employ auditors in the Jordanian environment as financial experts, which gave them these skills.

#### 4.1.3. The Results of Testing the third Sub-Hypothesis

**H01-3:** *The components related to experience in forensic accounting are not available to Jordanian Certified Public Accountants and auditors working in Audit Bureau.*

The result of  $t$ -test of the third sub-hypothesis is shown in Table 5. The calculated value of  $t$  of the variable “Availability of Forensic Accounting Experiences “equals 42.498 at  $\alpha$  (0.000) and Dof (426), which is statistically significant at  $\alpha \leq 0.05$ . The results also indicate that  $t$ -values for each item were high and statistically significant at  $\alpha \leq 0.05$ , except item 8 related to the advanced and specialized professional certificates as calculated  $t$  equals 0.237, which is statistically

**Table 4:** The Results of Testing the Second Sub-hypothesis

No	Item	$t^*$	Sig.
1	You have oral and written communication skills; to conduct interviews and present the results to the concerned authorities	40.475	0.000
2	You have the flexibility and ability to respond quickly to emerging and emergency events	21.943	0.000
3	You have the skills of negotiation, debate and court litigation procedures; to resolve criminal disputes	26.330	0.000
4	You have the skills of financial investigation and structured thinking; to look beyond the numbers	31.922	0.000
5	You have the skills to manage risk and control fraud	32.384	0.000
6	You have the skills to provide legal and judicial financial advice	26.340	0.000
7	You possess the skills to use information technology; to extract electronic evidence	29.006	0.000
8	You have the skills to detect and recognize fraud and misrepresentation in financial records	32.546	0.000
9	You have the skills to link results to causes	33.425	0.000
	Overall Arithmetic Average	61.854	0.000

\* Statistically significant  $\alpha \leq 0.05$ .

insignificant at  $\alpha \leq 0.05$ . This can be explained by the fact that there is a discrepancy in the responses within the sample, which is attributed to the responses of the auditors of the Audit Bureau, as a large percentage of them do not possess advanced and specialized professional certificates, unlike the certified accountants.

Consequently, the third null sub-hypothesis is rejected and we accept the alternative one stating “The components related to experience in forensic accounting are available to Jordanian certified public accountants and auditors working in Audit Bureau.”

This result confirms the availability of experiences related to forensic accounting among Jordanian certified accountants and auditors working in the Audit Bureau. This is a natural result of the judiciary resorting to them in financial disputes and illegal activities, which gave them sufficient experience that enables them to practice certain areas of accountability. The researchers believe that there is a strong integration between experiences and skills, as experience generates skill at work. If the auditor has experience in a field, he will certainly possess the skill associated with this field.

#### 4.1.4. The Results of the Fourth Sub-Hypothesis

**H01-4:** *The components related to personal characteristics and profession ethics are not available to Jordanian Certified Public Accountants and auditors working in Audit Bureau.*

The result of t-test of the fourth sub-hypothesis is shown in Table 6. The calculated value of  $t$  of the variable “Availability

of Personal Characteristics and Profession Ethics” equals 58.189 at  $\alpha$  (0.000) and Dof (426), which is statistically significant at  $\alpha \leq 0.05$ . The results also indicate that  $t$ -values for each item were high and statistically significant at  $\alpha \leq 0$ .

Consequently, the fourth null sub-hypothesis is rejected and we accept the alternative one stating “The components related to personal characteristics and profession ethics are not available to Jordanian Certified Public Accountants and auditors working in Audit Bureau.” This result confirms the ethical commitment of Jordanian certified accountants and auditors working in the Audit Bureau. The researchers believe that adherence to professional ethics by the auditor and his adherence to distinct personal characteristics will contribute greatly to his uniqueness during the performance of his duties and will certainly be one of the most important factors of his success.

#### 4.2. The Results of the Second Main Hypothesis

**H02:** *The components for implementing forensic accounting do not promote the competence of Jordanian Certified Public Accountants and auditors working in Audit Bureau.*

The result of  $t$ -test of the second main hypothesis is shown in Table 7. The calculated value of  $t$  of the variable “Components of implementing forensic accounting promotion of the competence of Jordanian Certified Public Accountants and auditors working in Audit Bureau” equals 92.660 at  $\alpha$  (0.000) and Dof (426), which is statistically

**Table 5:** The Results of Testing the Third Sub-Hypothesis

No	Item	$t^*$	Sig.
1	You have sufficient experience in manipulation and fraud detection	33.389	0.000
2	You have sufficient experience in the work of the administrative unit under audit and its legal entity	31.695	0.000
3	You have experience in the litigation systems and the basics of the legal environment and forensic procedures in force in Jordan	26.351	0.000
4	You have the ability to understand the components of the internal control systems of administrative units	36.932	0.000
5	You have experience in various international accounting standards, auditing standards and field investigation procedures	34.483	0.000
6	You have experience in business and financial reporting	32.909	0.000
7	You have adequate and continuous training in the field of accounting	29.058	0.000
8	You have advanced and specialized professional certificates available.	1.184	0.237
9	You have the opportunity; To submit accounting experience reports to the judicial authorities and testify before the judiciary	25.017	0.000
	Overall Arithmetic Average	42.498	0.000

\* Statistically significant  $\alpha \leq 0.05$ .



**Table 6:** The Results of Testing the Fourth Sub-Hypothesis

No	Item	t*	Sig.
1	You have the perseverance and determination to perform well at work	49.998	0.000
2	You have creativity and innovation when doing your analyzes	46.161	0.000
3	You have a high degree of professional skepticism	31.375	0.000
4	You have the capacity for exploratory, deductive and research thinking	34.153	0.000
5	You have sufficient knowledge of international ethical standards	34.707	0.000
6	You have sufficient knowledge of the concept and mechanism of applying the rules of professional conduct	34.381	0.000
7	You have accuracy, confidentiality and integrity at work	41.311	0.000
8	You have impartiality, objectivity and independence in work	41.813	0.000
9	You have professional competence and due diligence at work	41.635	0.000
	Overall Arithmetic Average	58.189	0.000

\* Statistically significant  $\alpha \leq 0.05$ .

**Table 7:** The Results of Testing the Second Main Hypothesis

No	Item	t*	Sig.
1	Ensuring the adequacy of disclosure and transparency in the financial statements	46.386	0.000
2	Providing fair, accurate and robust judgments	55.208	0.000
3	Detecting areas of fraud and deficiencies in financial performance	33.457	0.000
4	Gathering evidences of financial fraud	33.051	0.000
5	Taking proactive fraud detection measures	33.580	0.000
6	Improving and supporting internal control systems and emphasizing the independence of the auditor	39.958	0.000
7	Conducting necessary investigations into financial crimes, leading to their discovery in a timely manner	32.939	0.000
8	Completing all stages of the audit process efficiently and effectively	40.310	0.000
9	Narrowing the expectations gap between the auditor and the user of the financial statements	49.368	0.000
	Overall Arithmetic Average	66.092	0.000

\* Statistically significant  $\alpha \leq 0.05$ .

significant at  $\alpha \leq 0.05$ . The results also indicate that *t*-values for each item were high and statistically significant at  $\alpha \leq 0$ .

Consequently, the second main null hypothesis is rejected and we accept the alternative one stating “The components of implementing forensic accounting do not promote the competence of Jordanian Certified Public Accountants and auditors working in Audit Bureau.” This result confirms the role of the components of implementing forensic accounting in enhancing the competence of auditors, as the availability of these components will enhance his efficiency. Forensic accounting has a role in providing sufficient evidences to control fraud, narrowing the expectations gap and providing fair judgments. The previous literature (Aryanti & Adhariani, 2020; Nguyen & Nguyen, 2020) indicated that there is a gap in expectations in the responsibility of auditors to detect

all frauds and mistakes protecting the company’s assets by strengthening audit standards, the researchers believe that the best way to do this is to include forensic accounting in the work of the auditor.

#### 4.3. The Results of Testing the Third Main Hypothesis

***H0<sub>3</sub>:*** *There is no statistically significant difference between Jordanian Certified Public Accountants and auditors working in Audit Bureau related to the availability of forensic accounting implementation components.*

Table 8 shows that there are statistically significant differences at  $\alpha \leq 0.05$  in the availability of the components

**Table 8:** The Results of Testing the Third Main Hypothesis

Component	Place	Arithmetic Average	S.D.	<i>t</i> *	DoF	Sig.
Using Forensic Accounting Methods Availability of Forensic Accounting Skills	Certified Public Accountants	7.64	0.5310	2.120	425	0.035
	Auditors working in Audit Bureau	7.45	1.168			
Availability of Forensic Accounting Experiences	Certified Public Accountants	8.09	0.6320	4.660	425	0.000
	Auditors working in Audit Bureau	7.73	0.9020			
Using Forensic Accounting Methods Availability of Forensic Accounting Skills	Certified Public Accountants	8.52	0.5400	23.438	425	0.000
	Auditors working in Audit Bureau	6.92	0.8250			
Availability of Forensic Accounting Experiences	Certified Public Accountants	8.51	0.621	5.951	425	0.000
	Auditors working in Audit Bureau	7.97	1.146			
Components of Applying Forensic Accounting	Certified Public Accountants	8.19	0.3830	11.091	425	0.000
	Auditors working in Audit Bureau	7.52	0.7810			

\* Statistically significant  $\alpha \leq 0.05$ .

of applying forensic accounting between Jordanian certified public accountants and auditors working in Audit Bureau, as the calculated *t* equals 11.091 with sig = 0.000, which is statistically significant at  $\alpha \leq 0.05$ . These differences were in favor of certified public accountants (8.19) versus the auditors working in Audit Bureau (7.52).

Moreover, the results indicate that there are differences in all items in the previous table based on the sig. values appeared in the same table. The differences were in favor of certified public accountants whose arithmetic averages are that of the auditors working in Audit Bureau. This could be attributed to the nature of the environment where each one of these two classes works in. Since, Audit Bureau is a work environment that is characterized by strict governmental control procedures that limit the flexibility of the auditor's response to some issues.

Consequently, we reject the third main null hypothesis and accept the alternative stating "There are statistically significant differences between Jordanian Certified Public Accountants and auditors working in Audit Bureau related to the availability of forensic accounting implementation components."

## 5. Discussion

This study aimed to identify the availability of the main components for implementing forensic accounting and how it will contribute to enhancing the competence of auditors from the perspective of Jordanian certified public accountants and auditors working in Audit Bureau. This part includes a summary of the most important findings of the study:

### 5.1. Results of the First Main Hypothesis Test

It indicates the availability of the components for implementing forensic accounting to the Jordanian certified public accountants and auditors working in Audit Bureau, and it came with a high evaluation degree as shown in Table 1, where its arithmetic average was 7.84 with a percentage of 78.4%. This confirms that Jordanian certified public accountants and auditors at Audit Bureau are able to practice some areas of forensic accounting and can play an important and effective role in supporting the judiciary during the investigation of illegal activities and controlling financial fraud. Since forensic accounting aims to employ accounting information in the field of judiciary and financial advice, the availability of the basic components for its implementation is a good thing to support the judiciary and meet its needs regarding financial irregularities, as well as the needs of investors, shareholders and regulators. It is worth noting that the Ministry of Justice established in 2017 the Directorate of Expertise Affairs as an entity affiliated with the Ministry of Justice. The Directorate annually submits applications for affiliation to the Register of Financial Experts and Experts from all disciplines and determines the conditions that must be met by the expert according to the requirements of Expertise System No. 35 of 2018.

#### 5.1.1. Results of the First Sub-Hypothesis Test

It indicates that Jordanian certified public accountants and auditors at Audit Bureau use forensic accounting methods as shown in Table 1 with an arithmetic average of 7.54 and a percentage of 75.4% in a high evaluation degree.

This confirms the use of forensic accounting methods by auditors in Jordanian environment whether they work at certified public accounting offices or at Audit Bureau. The researchers believe that forensic accounting methods are auditing techniques and are a natural extension of the account auditing process. In addition, auditors can use it to give greater quality to their performance, as the use of forensic accounting methods to audit financial statements will make them a strong basis for financial decision-making.

#### **5.1.2. Results of the Second Sub-Hypothesis Test**

It indicates that Jordanian certified public accountants and auditors at Audit Bureau have the skills of forensic accounting as shown in Table 1 with an arithmetic average of 7.90 and a percentage of 79.0% in a high evaluation degree. This confirms the availability of forensic accounting skills among auditors in Jordanian environment whether they work at certified public accounting offices or at Audit Bureau. The researchers believe that the availability of forensic accounting skills among auditors in the Jordanian environment came as a natural result of the use of auditors by the judiciary to adjudicate financial disputes, to provide expert reports or to testify in courts. Consequently, these skills were generated in them, and this is confirmed by the procedures that the Directorate of Expertise Affairs of the Jordanian Ministry of Justice undertakes to raise the level of experts accredited to the Jordanian courts, whether they are financial experts or experts from other disciplines. This, in turn, pushes all those who wish to register in the Register of Certified Experts to upgrade their skills and requirements that allow them to be an expert.

#### **5.1.3. Results of the Third Sub-Hypothesis Test**

It indicates that Jordanian certified public accountants and auditors at Audit Bureau have the experiences of forensic accounting as shown in table (1) with an arithmetic average of 7.69 and a percentage of 76.9% in a high evaluation degree. This confirms the availability of forensic accounting experiences among auditors in Jordanian environment whether they work at certified public accounting offices or at Audit Bureau. The researchers believe that the availability of forensic accounting experiences among auditors in the Jordanian environment came as a natural result of the use of auditors by the judiciary to adjudicate financial disputes, to provide expert reports or to testify in courts. Consequently, these experiences were generated sufficiently to enable them to practice certain fields of forensic accounting. In addition, the Directorate of Expertise Affairs stipulates within its conditions for the accreditation of financial experts that they have advanced and specialized experience in certain fields, according to the requirements of the current situation.

This is evident in the fact that some workers in the legal accountancy profession in Jordan obtained advanced and specialized certificates in criminal accounting, to be added to their list of experiences that entitle them to practice the role of a financial expert, given that the Association of Certified Public Accountants is an accredited body with the Ministry of Justice to attract financial experts.

#### **5.1.4. Results of the Fourth Sub-Hypothesis Test**

It indicates that Jordanian certified public accountants and auditors at Audit Bureau have the personal characteristics and profession ethics as shown in table (1) with an arithmetic average of 8.23 and a percentage of 82.3% in a high evaluation degree. This confirms the availability of forensic accounting personal characteristics and profession ethics among auditors in Jordanian environment whether they work at certified public accounting offices or at Audit Bureau.

#### **5.2. Results of the Second Main Hypothesis Test**

It indicated that the availability of the components of implementing forensic accounting will promote the competence of Jordanian certified public accountants and auditors at Audit Bureau where the arithmetic average equals 8.38 with a percentage of 83.2% and a high evaluation degree. This confirms that the availability of the components for implementing forensic accounting will promote the competence of the auditors in Jordanian environment whether they work at certified public accounting offices or at Audit Bureau. The researchers believe that the interest in forensic accounting and the introduction of more of its techniques and methods and their integration in the work of the auditor will make him able to give judgments and opinions that go beyond being a reasonable assurance of the fairness of financial statements, that is, the auditor will become more able to detect fraud, manipulation and financial corruption.

The researchers also believe that forensic accounting is an important and essential pillar of the financial fraud control system, as the availability of the basic components for their implementation and their merging with the work of the auditor will support the professional's position and enhance the way he performs his work, thus narrowing the gap of expectations and vanishing the crisis of confidence in his work.

#### **5.3. Results of the Third Main Hypothesis Test**

It indicates that there are differences in the evaluation of the availability of the components of implementing forensic accounting according to the individuals of the sample in favor of certified public accountants for the whole level of the tool as well as for other sub-fields. These differences

could be attributed to the nature of the environment where the auditor works whether at certified public accounting offices or at Audit Bureau, since the last one is associated with strict governmental control procedures. Moreover, This could also be attributed to certified accountants' possession of expertise, skills, capabilities, specialized training courses, and professional certificates specialized in auditing and checking accounts more than auditors of the Audit Bureau, enabling them to use and practice forensic accounting methods in accordance with international standards, that is reflected in their understanding and awareness of the importance of forensic accounting.

## 6. Recommendations

Based on the results, the current study provides the following recommendations:

1. The Jordanian certified public accountants and auditors working in the Audit Bureau should expand the use of forensic accounting methods in a better manner than is currently used, with the aim of strengthening their effective role in assisting the judicial authorities in the issue of arbitration and adjudication of financial disputes.
2. The Jordanian Audit Bureau, being an independent governmental body, works to support and follow up all the components of forensic accounting and provide them to all its cadres to play its role in controlling public funds and combating or reducing financial and administrative corruption, and the same is true for external auditing offices.
3. Promoting and developing forensic accounting expertise among certified public accountants and auditors of the Audit Bureau, providing specialized training courses and facilitating their obtaining specialized professional certificates, especially for newcomers, and activates the role of criminal accounting.
4. The bodies that grant advanced accounting certificates should study the idea of contracting with the bodies that grant forensic accounting certificates abroad to grant such certificates inside Jordan.
5. The bodies regulating the profession of auditing in Jordan should integrate the profession of forensic accountancy into the work of the auditor in a manner that authorizes the auditor to practice the profession of forensic accountancy in a clear, official and recognized manner.
6. Developing mechanisms for continuing professional education for auditors in order to qualify them

scientifically and practically as forensic accountants to practice the profession.

7. Assigning independent courses of accounting and forensic auditing in universities and colleges, with recommendations to faculty members and granting them the authority to discuss practical cases related to financial fraud.
8. Working to consolidate the role of forensic accounting in combating cases of fraud and financial corruption in financial institutions by conducting more studies and researches, and studying real cases of corruption, which forensic accounting had a prominent role in discovering.

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