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The Possibility of using Forensic Accounting Techniques in Detecting Financial Frauds and the Impact on Zakat and Tax Accountants

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ABSTRACT

In the area of accounting jurisprudence, several attempts have been made to develop accounting and accounting information. The most prominent of these were the calls for linking accounting and law, and the judiciary's need for accounting information to cover the demand for forensic accounting services. The outcomes of forensic accounting are reports that guide judges in passing judgment on the conflicting parties on financial issues, Judicial, settlement, and settlement of disputes. Forensic accounting acts as science and applications in the field of accounting, finance taxes with the use of Civil law and criminal law in order for making the right decision by Forensic accountant. This science can be applied through the availability of various techniques which help in detecting fraud and support the juridical cases. One of the main tasks of Forensic accountant is to detect fraud as fraud was a widespread phenomena in large number of companies. This phenomena occurs as a result of depending the certified public accountant on samples when reviewing financial statements without having any responsibilities toward detecting fraud. Here comes the role of Forensic accounting in detecting fraud through using of different techniques such as Benford law, and detection tools such as data mining and analysis

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I. Introduction

The guidebook proves that Forensic accounting is not a new field as the ancient Egyptians were using it to count and revise their gold under the name of "ears and eyes of Egyptians" (Crumbley, 2001, 181).

Detecting fraud is not considered as one responsibility of the accountant. As, fraudsters may be safe from his detection. This forces companies' managers to hire experts, who use group of techniques which show unusual behavior in the harmonization of data to prove or report fraud. There comes the importance of forensic accounting for reporting fraud information to its users such as tax and Zakat advisors in Saudi Arabia. Also, through providing fiscal, financial information regarding financial cases to court, forensic accounting supporting juridical financial cases.

The forensic accountant may be highly involved relations with either tax and Zakat advisors or with a certified public accountant. However, the tax and Zakat advisor may find it difficult to understand financial statement submitted by forensic accountant. This misunderstanding creates a non-ignored gap between what does the forensic accountant finds and what he decides. Another gap can be found between what does the tax and Zakat advisors find and what they decide. So the resulted decisions are less ideal. In other words, the effectiveness of a forensic accountant depends on the other connected parties.

So, it is important to study forensic accounting techniques one of important factors to achieve the accumulation among forensic accountant and other connected parties. This accumulation in turn allows certified public accountant to achieve the reasonable understanding and cooperation level with forensic accountants from one side and

with Zakat and tax accountants from the other side. This in turn allows the certified public accountant to prepare financial statement on the bases which he can defend. This will in turn lead to minimize the gap between Zakat and Tax accountants and certified public accountant and adding more trust. While ignoring these techniques leads to Creating varying degrees of accuracy which in turn increases the possibility of occurring technical errors.

In light of what mentioned above, it is clear that there is a combination of techniques that combine with each other, and can affect the Zakat and tax revenues negatively or positively, and that the importance of these factors lies in affecting the degrees of performance, which reflects negatively or positively on the confidence of the examiner in audit reports, Reducing the time required for the tax examination, linking the various data, extracting relations to benefit the tax examination process, satisfying the relevant parties. And, with the help of these techniques, there is a probability to overcome the problem of tax examination.

Research question

Fraud has become a scourge in the economy of many countries. Therefore, fighting against fraud requires the creation of specialists in the field of fraud investigation and the detection of their perpetrators (wrongdoer) in front of all parties involved - Zakat and tax examinations.

The main concern of research is the impact of the techniques of Forensic accounting for the performance of the legal accountant and the recognition of the Zakat and tax accountants for his duties by applying the practical reality to the Saudi environment

II. Literature Review

A theoretical study to demonstrate the importance and role of forensic accounting techniques in the recognition of the Forensic accountant's duties towards the auditor in the disclosure of fraud and the impact on the Zakat and tax examiners

The Forensic accountant relies on a variety of different techniques that assist him in executing and completing the tasks assigned to him, especially the detection of frauds in addition to the skills and characteristics necessary to complete his duties,

Benford's Law

Benford's law, or law of the first significant digit. If one forgets to follow the rule, then the numbers will fail some statistical tests and are likely to be scrutinized with care. Benford's law claims that if you collect numbers at random and calculate the frequencies of their first significant digits, the numbers with first significant digit 1 should appear around 30% of the time, while the numbers with first significant digit 9 appear only 4.5% of the time. This rule is observed in many other sets of numbers, like powers of 2 or Fibonacci numbers. Benford law's concerns the distribution of the first significant digits of numbers. The first significant digit of a positive number is the leftmost nonzero digit of its decimal expression. For instance, the first significant digit of π is 3, that of 2371.5 is 2, and that of 0.00563 is 5. , but it is now a standard tool to detect frauds. Of course, more and more tax evaders learn of it. (Christiane Rousseau, 2015)

Under Benford's law, low numbers are found to possess a greater probability of appearing in the first two (or three) significant digital positions within a number than high numbers. In the context of our research, this means that if the digital frequency in the bank account data, we employ in our analysis departs from the expectations of Benford's law, we can argue that the data have been manipulated. Or, in other words, that the data have been transformed to conceal the real financial conditions of the banking institutions that comprise our sample (Grammatikos et al, 2016)

Steven Miller revealed in his study in 2008 the discovery of fraud in banks and found that the staff accepts the applicant from their friends to obtain credit cards, then accumulates balances of less than \$ 5000 and then write off their debt because the limit of write-offs are less than \$ 5,000

According to research by Nigrini (1997), the original Benford's Law included 5 tests in the areas of accounting and auditing. The model converts digits into calculations, which is why it is also called the Digits test. The five tests are: First Digit, Second Digit, First Two Digits, First Three Digits, and Last Two Digits. Each test has its own purpose. Both the First and Second Digit tests are high-level tests used to check the general reasonableness of data. They identify only obvious anomalies. To get efficient, effective results, the input data must be massive. Using less data does not enable comparison of patterns.

According to Nigrini et al., (1997) Benford's Law can test the authenticity of lists of numbers by comparing their actual and expected digital frequencies. The non-conformity of the results can indicate FFS in a company.

The Big Four accounting firms use Benford's Law to conform to the fraud-detection recommendations in the Financial Statements of the Statement of Auditing Standards No. 99, which highlights the importance of Benford's Law to assessing the possibility of financial misstatement. (Mehta et al, 2017)

Diekmann and Jann (2010) that draws attention to difficulties in using Benford's law to detect fraud in scientific publications. They point out that in order to establish the validity of the Benford test, it is required to demonstrate that real data are in agreement with the Benford distribution, while manipulated data follow some different distribution.

Steven study indicates that , Not all fraud can be detected by Benford's Law. A math test indicating fraud is not proof of fraud: unlikely events, alternate reasons. (Steven J Miller, 2008)

However, some studies in the literature are cautious about the effectiveness of Benford's Law in detecting fraud. A study conducted by Hayes (2012) found Benford's Law useful as an early indicator of the possibility of FFS and possibly use as a warning sign of bankruptcy. In addition, the study found that Benford's Law alone cannot detect FFS and that deviations from Benford's Law can cause an analyst to question the validity.

Although Benford's Law might not accurately detect fraud, it can still indicate the possibility of fraud. Nonconformities to Benford's Law are red flags indicating possible irregularities, thereby directing an auditor's attention to the financial statements that merit further attention. (Mehta et al. 2017)

The results of Beneish study support using more than one forensic tool to detect FFS, because each model has shortcomings.. The Beneish Model is a probabilistic model, so it will not detect manipulation with 100% accuracy (Beneish et al., 1999).

The study's results suggested that all forensic tools are not useful with regard to financial statements. For example, Benford's Law is useful for detecting digits fraud, so it must be applied to the target company's day-to-day transactions, check collections and cancellations and debt collections, rather than to financial statements. However, all forensic tools used in the study were useful for indicating red flags regarding the scope of the fraud at Toshiba, although none could pinpoint the exact location or area of the fraud. (Mehta et al. 2017)

Computer Assisted Auditing Tools CAATs

The Davis and others study concluded that increasing digital fraud has led many accountants to acquire advanced IT skills and certification for qualification as IT auditors and accountants (Davis et al., 2007).

Professional and regulatory bodies recognize the value of IT to accountants. The American Institute of Certified Public Accountants recognizes the importance of technology to the organization and to accountants. In its 2013 List of Top 10 Technology Initiatives the AICPA listed "Securing the IT Environment", "Ensuring Privacy" and "Preventing and Responding to Computer Fraud" as top priorities (AICPA, 2013)

The most common form of CAATT used in the information technology (IT) audit profession is GAS. This software allows the auditor to examine 100 percent of the data in transactions, not just a sample, and to conduct a number of audit techniques that have devolved over the years and have been proven to be effective in detecting anomalies that could be indicators of fraudulent activity

For example, if a bank has a pre-set limit of \$50,000 for loan officers before the loan goes to the loan committee for approval, the file there would choose those Loans that were just below \$50,000. Prior frauds have been perpetrated by loan officers making bogus loans.

Just below the authorization level to maximize the amount of the theft. Filters can also be used to spot data that is not there, but should be, such as missing data values

Another potential GAS example. Fraudsters sometimes write checks to themselves and then deposit the checks into their own bank accounts.

Thus, it is possible to identify fraudulent checks of the bank's customers if this procedure is feasible.

For example, sorting all transactions by date can help spot dates that are too old or yet in the future. Snorting can also help identify transactions outside the normal range of values Statistics (Kelly, 2004)

Stratifying Data. Stratify is a GAS technique that distributes transactions across equal layers of amounts. By examining these layers, or strata, the auditor can spot certain anomalies. If the distribution is abnormal, it can be seen and the auditor can follow up to see if the abnormal distribution is indicative of one or more anomalies (Kelly, 2004)

The use of these GAS techniques is not a cure-all, nor does it necessarily identify fraud. Rather, it directs the attention of the trained IT or fraud, Bank Fraud and IT Security Report auditor to identify possible anomalies. Anomalies in data are the result of only two types of problems, including a) errors or b) fraud

Using one of these CAATI tools can be very effective in detecting fraud, especially since these tools examine 100 percent of the transaction data. (Kelly, 2004)

Data Mining

Can be defined as the process of extracting information from data to discover patterns and relationships which were previously unknown, as this technique can help detect fraud by detecting patterns of behavior that are indicative of fraudulent activity (Kenneth, 2005, 1)

1.Exploration: It includes the disclosure of knowledge or patterns in data, such as the link, trends or discrepancies without any prior assumption as to what pattern will be identified without prior knowledge of fraud. The correlation is a relationship between variables such as the occurrence of the two variables together or that the existence of one of them leads to the existence of the other.

2. Prediction models: These models use patterns discovered to estimate the outputs to be obtained from new values.

3. Variation analysis: Variation is obtained by specifying the rule or criterion and then identifying items that deviate from the norm or precept ,and which are considered outlier and need to be further investigated

An auditor can never become certain about the legitimacy of and intention behind a fraudulent transaction., the most optimal and cost effective option is to find out enough evidences of fraud from the available data using specialized mathematical and data processing algorithms (Phua,et al , 2005)

Some researchers have tried to apply a combination of many data mining applications (Classification - Clustering - Prediction -Outlier detection –Regression –Visualization) and data mining Techniques (Regression-Neural Networks-Bayesian Belief Network - Naïve Bayes - Nearest Neighbor

Fuzzy logic - Decision Tree - Genetic Algorithm - Expert System) (Sharmaet al,2012)

Some researchers have tried to apply a combination of many data mining

Techniques (Kotsiantiset al, 2006). The main objective is to apply a hybrid decision support system using the stacking variant methodology to detect fraudulent financial statements.

Some of the recent study in the financial fraud detection makes use of two or more data mining applications in a hybrid manner or just attempt to compare their effectiveness (Zhou et al,2011) (Perols et al,2011) (Ravisankar et al,2011)

For example, Decision Trees (DT) is a tree structured decision support tool, where each node represents a test on an attribute and each branch represents possible consequences. In this way, the predictive model attempts to divide observations into mutually exclusive subgroups and , the conjunctions of features by branches. Decision trees are commonly used To identify and predict the impact of fraudulent financial statements (Yang et al,2008)

Another example, Classification-classification or prediction is the process of identifying a set of common features (patterns), and proposing models that describe and distinguish data classes or concepts . Common classification techniques include neural networks, the Naïve Bayes technique, decision trees and classification is one of the most common learning models in the application of data mining in fraud detection (Zhang et al,2004)

Ratio Analysis

A ratio analysis may help the forensic accountant estimated some of the expenses For example, if the cost of a unit sold from a company's good can be estimated at 35% of the sales revenue, then we can use this ratio to determine a reasonable amount of the cost of the goods sold when the company's financial records are lost . (Metha and Mathur, 2007, 1577)

Thus, it is possible to say that the ratio analysis technology works to identify the irregular in the data that are likely to represent a fraudulent activity. Since the fraud includes various activities, this means that each of the above techniques has an important role in detecting certain types of fraudulent activities (Coderre, 2002, 16)

The initial design of the financial fraud detection model comprises of five financial ratios - Return on Assets (ROA), Accounts Receivable (A/R) to sales ratio, Current Ratio, Total Asset Turnover and Inventory Turnover.(Ahokovet al, 2016)

Financial analysis techniques can help investigators discover and examine unexpected relationships in financial information (Davis, et al., 2010). These analytical procedures are based on the premise that relatively stable relationships exist between economic events in the absence of conditions to the contrary. Known contrary conditions which cause unstable relationships to exist might include unusual or nonrecurring transactions or events, and accounting, environmental, or technological changes. Public companies experiencing these events must disclose and explain the facts in their financial statements.. Financial ratios are a great way to analyze a company's strengths and weaknesses. Ratios convert financial information to standardized format that can be used to compare with other companies and industry expectations. Unexpected deviations in relationships most likely indicate errors, but also might indicate illegal acts or fraud (Kovalerchuk et al., 2007).

An understanding of general relationships between certain financial statement balances is necessary to identify relationships that appear unusual. If sales increase, how should the cost of sales respond? If commission expense decreases, what would be expected of sales? Answers to questions such as these are the foundation of financial analysis. The following relationships are general, and traditionally occur between financial accounts; however, unique circumstances may render different results. .(Ahokovet al, 2016)

The following is a worked example

For the current year, ABC Ltd reported the following ratios:

-ROA = 20%

- Asset Turnover (being a Sales/Average Total Assets) = 2.5 times

- Net Profit Margin = 15%

Question: Why would we suspect at least one of these ratios is not correct?

We must be able to identify a relationship between the given ratios:

$ROA = \text{Net Income} / \text{Average Total Assets}$

$\text{Asset turnover} = \text{Sales} / \text{Average Total Assets}$

$\text{Net profit margin} = \text{Net Income} / \text{Sales}$

Now, we can look at the common factors:

ROA and asset turnover both use Average Total Assets

ROA and net profit margin both use Net Income

Asset turnover and net profit margin both use Sales

Now, we can look at the values provided:

$ROA = 0.20$ $\text{Asset turnover} = 2.5$ $NPM = 0.15$

We can then prove these values are not consistent. This can be done either by using algebra, or by simply assuming a Value for one of the common factors. In this case, let's assume average total assets equal \$100

If that is the case; $\text{Net income} / 100 = 0.20$

(so Net Income = 20)

$\text{Sale} / 100 = 2.50$ (so Sales = 250)

Then: $\text{Net Income} / \text{Sales}$ would have to be: $20 / 250 = 0.08$

Conclusion: NPM of 15% is not consistent with the values of $ROA = 20\%$ and $\text{Asset Turnover} = 2.5$ times. (Ahokovet al, 2016)

From reviewing the previous studies, it is clear that the most common techniques used in forensic accounting are the Benford Law, CAATS, data mining and analysis of ratios because of their effect on the auditor and therefore their effect on the Zakat and tax examiners. Thus, the researcher will use these techniques to conduct the study and prove the findings of the theoretical study

III. Study Significance

The importance of the research stems from the widespread fraud that has cost the global economy a lot as a result of financial woes, the high rate of financial crimes and the high incidence of fraud and manipulation.

This has raised doubts among investors, shareholders, lenders and government agencies such as the tax authorities on the veracity of information contained in the financial statements submitted by business organizations periodically, as well as the high rates of litigation and disputes.

This requires specialized experts or professionals from accountants who can benefit from their expertise and skills and depth of their ability to investigate and deter fraud and to discover the veracity of the information contained in the financial statements and to express opinion in judicial proceedings concerning financial irregularities and fraud in the financial statements before the courts.

IV. Study Objective

A field study to show the importance and role of forensic accounting techniques in recognizing the legal accountant of his duties towards the auditor in the detection of fraud and the impact on the Zakat and tax examiners, and determining the relative importance of these techniques to the parties participating in the study

V. Study Hypothesis

Based on the above objectives, the following three hypotheses were developed regarding the tools

H0(1): forensic Accounting techniques (as an independent variable) do not affect the performance of the external auditor (as a dependent variable)

H0(2): The applied of forensic accounting techniques do not affect the provision and delivery of accurate, timely, adequate and appropriate information to the external auditor (independent variable) on the development of the performance of the Zakat and Tax Examiners (as a dependent variable)

Methodology preliminaries

The researcher used primary data collection techniques from the accounting literature on the subject of a set of forensic accounting techniques in the application of a set of independent variables such as Bedford's Law, Computer Assisted Auditing Tools CAATs, Data Mining, Ratio Analysis (the external auditor) as a dependent variable, and then its reflection on the tax examiner, all through a field study. The data are collected from the primary sources, by developing a questionnaire that serves the objectives of the study, It was distributed to the members of the study population.

VI. Analysis

Design and contents of the survey list

The researcher relied on obtaining the data of the field study on the survey list, which was distributed to a selected sample of the establishments operating in the Kingdom of Saudi Arabia from the companies registered in the Saudi Stock Exchange and the audit offices. The General Authority for Zakat and Income distributed some questionnaires to each sample randomly in Riyadh and Jeddah.

First: Society and study sample

The field study was based on the designing and distribution of a survey list of the partners in the audit offices, as well as the managers of the in companies registered in the Saudi Stock Exchange and some employees of the General Authority for Zakat and Income in Jeddah and Riyadh. The total number of questionnaires used and distributed in the statistical analysis was (100), which is considered to be a reasonable number, as most of the respondents have higher qualifications such as university education, and those with skills, knowledge, and experience in the activities and fields in which they work in.

Table 1. The number of questionnaires distributed and received a sample.

Statement	External Auditor	Zakat and Tax Examiner	Corporate Managers
Number of questionnaires distributed	117	130	125
Number of questionnaires received (excluding non-refundable)	111	110	103
Number of questionnaires excluded for being incomplete	(11)	(10)	(3)
Number of valid questionnaires for analysis	100	100	100
Percentage of valid questionnaires for analysis	%85	%76	%80

These experienced respondents are characterized by efficiency, ability, skill and good conduct with any problem they face. This ratio is an appropriate and reasonable proportion of the analysis. Due to the researcher which used to close-style interviews to overcome differences in culture and education.

The study tool

The researcher divided the questionnaire into a set of general inquiries relating to the problem of research, and a set of inquiries relating to the hypothetical test research, and using a Likert Scale to answer the questionnaire paragraphs.

The validity and reliability study tool

The integrity of the instrument was verified after the initial form was developed. To verify the stability of the study tool, the Cronbach Alpha test was used to verify its homogeneity or consistency. Where the value of the coefficient of a Cronbach Alpha for the variables of the study between (.791-.973), and this means a large degree of credibility in the answers, and thus can be generalized to the

results of the study of the student community, and Table (2) shows the most important results of this test.

Multivariate Analysis

To test the hypothesis of the study, The researcher used the SPSS program and the Minitab program, where the linear regression methods were used to test the relationship between the dependent variable and a set of independent variables. As well as the stepwise regression model was used to calculate the coefficient of determination in a percentage, and the complement of 100%. , To illustrate the link between the variables, in addition to the use of the statistical alpha Cronbach test.

Table 2. Stability study tool coefficients according to (cronbach alpha).

Questions	its objective	Paragraphs	External Auditor	Zakat and Tax Examiner	Corporate Managers
1	The aim of the new tax in Saudi Arabia	5	.791	.844	.853
2	Causes of Zakat examiner expectations gap and realize judicial accountant	8	.921	.926	.917
3	The purpose of the application of forensic accounting techniques	6	.898	.894	.896
H0 (1)	The impact of the set of forensic Accounting Techniques (as an independent variable) on the performance of the External Auditor (as a dependent variable)	5	.855	.865	.872
H0 (2)	The impact of the techniques of judicial accounting applied in the performance of the external auditor (independent variable) on the development of the performance of the Zakat and tax examiner (variable dependent)	2	.848	.863	.862
Tool as a whole		26	.972	.972	.973

Table 3. The aim of the new tax in Saudi Arabia.

Statement	External Auditor					Zakat and Tax Examiner					Corporate Managers				
	0	25	50	75	100	0	25	50	75	100	0	25	50	75	100
XA1-General State expenses	6	8	22	52	12	1	4	20	39	36	3	8	13	37	39
XA2- Unduly tax	1	4	20	39	26	0	9	23	49	19	6	8	22	52	12
XA3-most of taxpayers provide sham tax return	0	9	23	49	19	1	13	14	39	43	1	4	20	39	36
XA4- Lack of sound and complete databases for taxpayers	1	3	14	39	43	3	14	27	26	30	0	9	23	49	19
XA5- The low proportion of their body for Zakat and income from tax return	3	14	27	26	30	8	13	37	39	3	1	3	14	39	43

General notes

The answer is done using a Likert scale by selecting the appropriate percentages :

100% - 75% - 50% - 25% - 0%.

() Figures in between brackets below the calculated value of t change equation

-* Indicates morale at 0.05 levels.

-* * Indicates the moral level of 0.01

Y: indicate the dependent variable

- X1 X2 X3 X4 X5 Refers to independent variables.

Second: The field study results and hypothesis testing:**1. General noted related to research**

From the previous table, it is clear to the researcher that the goal we seek to achieve from the issuance of a new tax in Saudi Arabia is to cover the public expenditure of the state. This opinion has been supported by a majority of respondents in the audit offices and corporate managers. While other members of this sample view the Zakat and Income Tax Authorities' as inflexible institutions when examining the application of the tax law where the main purpose of the tax is the collection of taxes without right. This opinion is based

on the ambiguity of some texts in law and the issuance of some instructions that may be contrary to the laws and contradictory with them and conflict with each other. While 75% of the participants in the survey from Zakat and Income Tax Authority sees the primary purpose of this tax is to cover the public expenditure of the state and achieve goals, whether economic, political, or social because of the lack of complete databases, including the data of the financiers.

And the lack of realism of the views of the examiners regarding the scope of the audit. It was supported by 75% of the survey participants, the audit offices, and the Zakat assessor. The strength of the continued threat of auditor independence, the lack of clear identification of the role of the audit office, and the inconsistency of reports Accounting for changes in the community make the form and content of the current audit office report does not reflect the validity and integrity of the information contained in the financial statements, while 75% of respondents in the survey from the managers of companies that the ineffective communication in the audit with the examination officers, leading to taking decisions contrary to their preferences.

Table 4. The Purpose Of The Application Of Forensic Accounting Techniques.

Statement	External Auditor					Zakat and Tax Examiner					Corporate Managers				
	0	25	50	75	100	0	25	50	75	100	0	25	50	75	100
XC1- establishing a minimum level of quality audit service	3	14	25	28	30	2	9	16	54	19	5	5	9	23	58
XC2- The need for preventive controls to prevent fraud	2	9	16	54	19	3	13	27	25	32	3	14	25	28	30
XC3- Provide the External Auditor with information on the expectations of the Zakat and Tax Examiner and his awareness of most of his duties	3	13	27	25	32	2	9	16	53	20	2	9	16	54	19
XC4- Study and evaluation of internal control system	2	9	16	53	20	6	8	22	52	12	3	13	27	25	32
XC5- Obtain sufficient evidence of evidence in terms of quantity and diversity	6	8	22	52	12	4	8	18	38	32	2	9	16	53	20
XC6- Apply and adhere to professional standards	4	8	18	38	32	5	5	9	23	58	6	8	22	52	12
AS8- Lack of effective professional organization	5	14	25	28	30	5	5	9	23	58	2	9	16	54	19

Table 5. The Impact Of The Set Of Forensic Accounting Techniques(As An Independent Variable)On The Performance Of The External Auditor(As A Dependent Variable).

Statement	External Auditor					Zakat and Tax Examiner					Corporate Managers				
	0	25	50	75	100	0	25	50	75	100	0	25	50	75	100
YD - Deliver accurate, temporality and appropriate information to the external auditor.	5	5	9	24	57	5	5	9	26	55	5	5	9	26	55
YE - Increase the credibility of information and mutual trust, thus reducing misunderstandings, effort and cost to the Zakat and tax examiner	5	5	9	26	55	4	9	22	39	26	5	8	9	31	47

Most of the participants from the audit offices consider that the auditors themselves need preventive controls to prevent fraud and to improve the performance of the audit service, which increases the confidence between the auditor and tax examiner

While most of the respondents in Zakat and Tax examiners see the need to obtain sufficient evidence to set a minimum level of quality for this service.

Researcher finds the need to issue the need for preventive controls to prevent fraud and reduce it to the minimum as possible

2. Notes regarding to a hypothetical test group search

From the previous table, it is clear that the views of the external auditors have the greatest importance

First Hypothesis : forensic Accounting techniques (as an independent variable) do not affect the performance of the external auditor (as a dependent variable)

They Provide and deliver accurate, timely, appropriate and adequate information to the external auditor on the risks faced by the business.

Table 6. The impact of the set of Forensic Accounting Techniques(As An Independent Variable)on the performance of the external auditor (As A Dependent Variable).

Statement	External Auditor					Zakat and Tax Examiner					Corporate Managers				
	0	25	50	75	100	0	25	50	75	100	0	25	50	75	100
XD1- Bedford's Law	6	8	21	50	15	4	10	20	53	13	4	7	24	44	21
XD2- Computer Assisted Auditing Tools CAATs	3	14	25	27	31	2	7	21	50	20	5	10	19	47	19
XD3- Data Mining	0	10	21	50	19	3	10	19	48	20	2	9	17	51	21
XD4- Ratio Analysis	2	9	16	54	19	3	14	25	27	31	3	14	27	26	30

First: from the perspective of each of the external auditor , the Zakat and tax examiners and corporate managers, using simple regression analysis, showed the impact of moral XD1 XD2 XD3 XD4 on the dependent variable, namely

Table 7. From the perspective of each of the external auditor, the zakat and tax examine and company managers using simple regression linear and stepwise.

The regression equation	R	R ²	F	Factors affecting the dependent variable
$YD = 6.87 + 0.171 XD4 + 0.208 XD3 + 0.231 XD2 + 0.492 XD1$ (1.84)* (1.97)* (3.03)** (5.41)**	64.3%	62.8%	** (42.77)	All independent variables affecting the dependent variable From the point of view of the External Auditor
$YD2 = 3.53 + 0.424 XD1 + 0.233 XD2 + 0.255 XD3 + 0.229 XD4$ (4.35)** (2.36)* (2.93)** (3.18)**	67.1%	65.7%	** (48.42)	All independent variables affecting the dependent variable From the point of view of The Zakat And Tax Examiner
$YD2 = 6.47 + 0.205 XD1 + 0.556 XD2 + 0.153 XD3 + 0.185 XD4$ (2.43)** (6.97)** (1.98)** (2.86)**	73.5%	72.3%	** (65.73)	All independent variables affecting the dependent variable From the point of view of Company Managers

Equation (1) from the perspective of the external auditor

Where the coefficient rate 62.8%, re the independent variables influence on the dependent variable, while the remaining 37.2% due to other factors, not measured in the moral relationship has proved to function at a level of significance of 0.01%, 0.05%

(Note the estimated value of the function)

Equation (2) from the point of view of Zakat and tax examiners

Where the coefficient rate 65.7%, representing independent variables influences on the dependent variable, while the remaining 34.3% rate due to other factors, not measured in moral relationship has proved to function at a level of significance of 0.01%, 0.05%

(Note the estimated value of the function)

Equation of (3) from the viewpoint of corporate managers

Where the coefficient rate 72.3% rate, representing independent variables influences on the dependent variable while the remaining 27.7% due to other factors, not measured in moral relationship has proved to function at a level of significance of 0.01%, 0.05%

(Note the estimated value of the function)

Secondly: the most influential factor using stepwise

From the perspective of the external auditor

- The most important factor affecting the external auditor is XD1 then XD2 and XD3

- The most influential factor in the dependent variable is XD1 where the degree of influence is 53.20%, then the variable XD1, XD2 and the degree of their influence combined 61.00% ,, Then variable XD1, XD2, XD3 and the degree of their influence combined 63.03%

-From the point of view of Zakat and tax examiners

- The most influential factor is XD1 then XD3 then XD4 then XD2

The most influential factors on the dependent variable is the XD1 where the degree of influence is 52.32%, while the combined influence of the variables XD1 and XD3 is 61.86%. Also the collective influence of variables XD3, XD4, XD1 is 65.16%. Finally, the combined influence of the variables XD1 XD2 XD3 XD4 is 67.09%

- From the point of view of corporate managers

- The most influential factor factor is XD2 then XD4 then XD1

- The most influential factor in the dependent variable is XD2, where the degree of influence is 64.51%,. Further, the combined influence of variables XD2, XD4 is 70.02%. Finally, the combined influence of XD2, XD4, and XD1 variables is 72.36%.

The significance of the relationship at the level of 0.01%, 0.05% (Note from the value of the estimated value of the function) from the point of view of all parties.

It is clear from the above that application of the policies and procedures of the forensic accounting techniques as an independent variable has a main role in improving the performance of the external auditor as a dependent variable

The external auditor is more interested in applying accounting techniques, with full transparency to increase the independence and objectivity in work, reflected the satisfaction of the examiner, Which in turn increases confidence in the neutral technical opinion of the auditor.

A second hypothesis clarify the impact of the application techniques of forensic accounting in the provision, delivery and delivery of transparent information to the external auditor (independent variable) to develop the performance of the Zakat and tax examiner (variable dependent)

Table 8. The impact of the techniques of judicial accounting applied in the Performance of the External Auditor (Independent Variable) on the development of the Performance of the zakat and tax examiner (Variable Dependent).

Statement	External Auditor					Zakat and Tax Examiner					Corporate Managers				
	0	25	50	75	100	0	25	50	75	100	0	25	50	75	100
XE1-- Provide disclosure channels of sufficient and reliable information to the examiner the Zakat and all parties concerned	5	8	21	48	18	6	7	20	40	27	5	7	22	53	13

First: using simple regression analysis showed moral impact of XE1 from the perspective of each of the external auditor, the Zakat and tax examiner and corporate managers on the dependent variable:

-Reducing disputes between the parties involved as a result of increased credibility and Mutual of information, thereby reducing misunderstandings, effort, and cost to all parties.

Table 9. Shows the techniques of forensic accounting applied in the performance of the external auditor (independent variable) on the development of the performance of the zakat and tax assessor(variable dependent)

The regression equation	R	R ²	F	Factors affecting the dependent variable
YE = 26.7 + 0.806 XE1 (10.81)**	54.4%	53.9%	(116.95)**	All independent variables affecting the dependent variable From the point of view of the External Auditor
YE = 18.4 + 0.729 XE2 (11.54)**	57.6%	57.2%	(133.28)**	All independent variables affecting the dependent variable From the point of view of The Zakat And Tax Examiner
YE3 = 16.8 + 0.916 XE3 (11.92)**	59.2%	58.8%	(142.11)**	All independent variables affecting the dependent variable From the point of view of Company Managers

-- A strong and integrated professional performance that meets the needs of different parties.

-- Provide timely information works to bring the views and reduce time, and solve problems in an appropriate way at the appropriate time .

-Reduce the distractions information-

Ensure that the financial statements are free of errors and essential fraud.

-Reduction of unnecessary procedures .

From the above, it is clear that the forensic accounting techniques have a pivotal role in improving the quality of financial statements, thus reducing misunderstandings and the cost to the Zakat and tax examiner

- **Equation No. (1)** from the point of view of the External Auditor

Where the coefficient 53.9% rate representing independent variables influence on the dependent variable, while the remaining 45.1%, the rest is due to other factors, not measured in moral relationship has proved to function at a level of significance 0.01%, 0.05%

(Note the estimated value of the function)

- **Equation No. (2)**, from the point of view of Zakat and tax examiner

Where the coefficient was 57.2% and therefore the effect of the independent variables on the dependent variable was 57.2%. The remaining percentage was due to other factors, not measured by the function. The level of significance of the correlation was found in 0.01%, 0.05%.

- **Equation No. (3)**, from the point of view of the managers of companies

Where the coefficient was 58.8%. Thus, the effect of the independent variables on the dependent variable is 58.8%. The remaining percentage is due to other factors that are not measured by the function. The level of significance of the correlation was found in 0.01%, 0.05%

Second: The most important factors influence using the stepwise

- **From the point of view of the External Auditor**

-That's the most important factors effect on the dependent variable is XE1 With an influence rate of 54.41%.

From the point of view of Zakat and tax examiner

The most important factors effect on the dependent variable is XE2 with the degree of influence 57.63.

From the point of view of the managers of companies

- The most important factor affecting the dependent variable is XE3 where the percentage of influence is 59.19%. , The level of significance of the relationship was found in 0.01%, 0.05% (Note from the value of the estimated value of the function) on all sides

It is clear from the above that the most influential factors on the quality of the external auditor's performance is the delivery of accurate, timely and appropriate information to all parties, that has the greatest impact on the quality of performance of the other parties.

3. Data and Method

First hypothesis

From the point of view of the External Auditor

Nonparametric Correlations

Correlations

		XD1	XD2	XD3	XD4	YD
YD	Correlation Coefficient	.582**	.512**	.541**	.370**	1.000
	Sig. (2-tailed)	.000	.000	.000	.000	.
	N	100	100	100	100	100

** . Correlation is significant at the 0.01 level (2-tailed).

Note The closer the value of R (correlation coefficient) to 1, the stronger the relationship,

The existence of some simple correlation between some of the variables studied is as follows:

-There is a strong and a significant positive correlation between YD and XD1 where we show value. R =.582 where R indicates a strong positive relationship

-There is a strong positive correlation between YD and XD2, which shows the value of R =.5122 where R indicates a strong positive relationship

-There is a strong positive correlation between YD and XD3, which shows a value of R = .541 where R indicates a strong positive relationship

- There is a strong and significant correlation between YD and XD4, where R = 3.70. The linear correlation coefficient R indicates a strong positive relationship.

From the point of view of the Zakat and tax examiner

Nonparametric Correlations

Correlations

		XD1	XD2	XD3	XD4	YD
YD	Correlation Coefficient	.577**	.522**	.480**	.519**	1.000
	Sig. (2-tailed)	.000	.000	.000	.000	.
	N	100	100	100	100	100

** . Correlation is significant at the 0.01 level (2-tailed).

The existence of some correlations between some of the variables studied is as follows:

-There is a strong and a significant positive correlation between YD and XD1 where we show the value of R= .577 indicating a strong positive relationship

-There is a strong and significant positive correlation relationship between YD and XD2 where we show value. R = .222 indicating a strong positive relationship

-There is a strong and statistically significant correlation relationship between YD and XD3 where we show value. R = .80 indicating a strong positive relationship

-There is a strong and statistically significant correlation relationship between YD and XD4 where we show value. R = .19 indicating a strong positive relationship

From the point of view of corporate managers

Nonparametric correlations

Correlations

		XD1	XD2	XD3	XD4	YD
YD	Correlation Coefficient	.588**	.673**	.400**	.529**	1.000
	Sig. (2-tailed)	.000	.000	.000	.000	.
	N	100	100	100	100	100

** . Correlation is significant at the 0.01 level (2-tailed).

The existence of some correlations between some of the variables studied is as follows:

-There is a strong and a significant positive correlation between YD and XD1 where we show value R=.588 ** R indicating a strong positive relationship

-There is a strong and significant positive correlation relationship between YD and XD2 where we show value. R =.673 **indicating a strong positive relationship

-There is a strong and statistically significant correlation relationship between YD and XD3 where we show a value R= .400 ** The value of linear correlation coefficient R indicates a strong positive relationship

-There is a strong and statistically significant correlation relationship between YD and XD4 where we show value .529 ** indicating a strong positive relationship

The second hypothesis

From the point of view of the External Auditor

Nonparametric Correlations

Correlations

		XE	YE
YE	Correlation Coefficient	.593**	1.000
	Sig. (2-tailed)	.000	.
	N	100	100

** . Correlation is significant at the 0.01 level (2-tailed).

The existence of some simple correlation between some of the variables studied is as follows:

- There is a strong and statistically significant correlation relationship between YE and XE where R. = .593** indicating a strong positive relationship

From the point of view of the Zakat and tax examiner**Correlations**

		XE	YE
YE	Correlation Coefficient	.749**	1.000
	Sig. (2-tailed)	.000	.
	N	100	100

** . Correlation is significant at the 0.01 level (2-tailed).

The existence of some simple correlation between some of the variables studied is as follows:

-There is a strong and statistically significant correlation relationship between YE and XE where we show value $R = .749$ ** indicating a strong positive relationship

From the point of view of corporate managers**Correlations**

		XE	YE
YE	Correlation Coefficient	.628**	1.000
	Sig. (2-tailed)	.000	.
	N	100	100

** . Correlation is significant at the 0.01 level (2-tailed).

The existence of some simple correlation between some of the variables studied is as follows:

-There is a strong and statistically significant correlation relationship between YE and XE where we show value $R = .628$ ** indicating a strong positive relationship

From the above, it is clear that from all parties (the external auditor, Zakat, and tax examiners and corporate managers) that:

There is a positive significant relationship between the techniques of forensic accounting combined as an independent variable and the external auditor performs as a dependent variable. Also, these techniques allow all parties (Zakat and tax examiners) to have information channels

4. Results of the study hypotheses

On the basis of scientific proves, the researcher concluded through the field study that the techniques of forensic accounting in Saudi companies affected the quality of accounting information and thus increased the confidence of the relevant parties.

VII. Conclusion and Implications**Results and Recommendation****First: Study Results**

-The application of the techniques of forensic accounting is to confirm and increase the reliability and credibility of the financial statements with such an application, it is possible to achieve of multiple standard quality, which means achieving the comprehensive concept of the quality of accounting information affecting the performance of the external auditor and then the Zakat and tax officers

There is a strong positive relationship between the good interaction of the group of techniques of forensic accounting, the quality of the performance of the external auditor, and the quality of the financial reports and the Zakat and tax examiners

The combined techniques of forensic accounting, in fact, constitute a set of controls to achieve a high quality of the information contained in the financial reports and others, which lead to restoring the confidence for current and prospective investors and different users of the accounting reports and the Zakat and tax payers. This will, in turn, be positively reflected in the quality of the performance of the external auditor

-The profession of forensic accountants is one of the modern and advanced professions Which enjoys growing demand for its services

Fraud involves crooked and diverse ways involving deceit, deceit, and lies that lead to appendage Damage to others through the false presentation of financial statements that hurt current investors who are deceived by those lists. This fraud, in turn, leads to making nonrational decisions

- Many frauds involve collusion between a number of employees and hide from the auditor's eyes. This requires specialized staff such as accountants to investigate.

- The detection of fraud requires the use of various techniques such as Benford, CAATs, data mining and ratio analysis. These techniques draw attention to items which exhibit abnormal or abnormal behavior such as fraud or error that require investigation

VIII. Discussion and Suggestions**Study recommendations and implications**

The researcher recommends some recommendations, the most important of which are the following:

The need to combine the efforts of professional organizations and stakeholders to raise the awareness of shareholders and investors by highlighting the role of forensic accounting techniques in improving the quality of financial reports and lists, increasing the credibility and transparency of the beneficiary group.

Taking into account the interests of different parties and improving communication channels with them

The application of the techniques of forensic accounting in the various economic units of Saudi Arabia, with the attempt to develop a guide to the standards of forensic accounting techniques by the circumstances of the Saudi economic environment and make maximum use of their application Forensic Accountants

The need to develop accounting methodologies in Saudi Arabia to create qualified forensic accountants to serve as experts to support judges with their accounting knowledge, investigative skills, auditing and international accounting standards IFRS. Having obtained the necessary qualifications to assist in conducting appropriate financial investigations.

Disseminate the idea of forensic accounting to Saudi companies, institutions, and law to contribute to the rationalization of their decisions and to provide reasonable assurance about the absence of deviations in the financial statements and issued accounting reports

- The need for legislation to determine the duties of the forensic accountant in both courts and Objection committees in Zakat and Tax departments. This will enable experts to adapt their work according to forensic accounting requirements

- Developing accounting approaches in accounting departments in Arab universities and training centers To create qualified forensic accountants to serve as experts and consultants in the judicial field and the development of the judiciary to make it highly aware of the forensic accounting

- To review the procedures of the commercial courts and to appoint a forensic accountant to examine the lists of financial statements provided by taxpayers, not only to satisfy the legal requirement for submission such statements

- Establishment of a professional association of forensic accountants. And, putting such a condition that only members of these associations are allowed to practice this profession

The need to develop the audit curriculum, as an attempt to develop plans and programs to prevent fraud. This development includes audit techniques such as Benford's technology, CAATs, data mining, and ratio analysis to show any abnormal behavior in the homogeneity of the accounts

References

- AICPA (2013). Retrieved on July 20, 2013 from <http://www.accountingtoday.com/gallery/AICPA2012-Top-10-Technology-Initiatives-62024-1.html>.
- AICPA. (2013). Statement on Audit Standards 99, consideration of fraud in a financial statement Audit. Retrieved January 15, 2014 from <http://www.aicpa.org/Research/Standards/AuditAttest/DownloadableDocuments/AU-00316.pdf>
- Anuj Sharma & Prabin Kumar Panigrahi A Review of Financial Accounting Fraud Detection based on Data Mining Techniques International Journal of Computer Applications (0975 – 8887). Volume 39– No.1, February 2012.
- Anupam Mehta & Ganga Bhavani .Application of Forensic Tools to Detect Fraud: The Case of Toshiba...Journal of Forensic and Investigative Accounting Volume 9: Issue 1, January–June, 2017
- Bai, B., Yen, J. & Yang. X. (2008). False financial statements: characteristics of China's listed companies and CART detecting approach, International Journal of Information Technology & Decision Making 7 (2) 339–359.
- Beneish, Messod (1999). A Note on Wiedman's (1999). Instructional Case: Detecting Earnings Manipulation. Indiana University issues in Accounting Education Vol. 14, No.
- Christiane Rousseau, Benford's law: learning to fraud or to detect frauds?, Klein Project Blog, Posted on May 24, 2015 by Antoine Nectoux, <http://blog.kleinproject.org/?p=1093>
- Coderre, David G.; "Variance & Ratio Analysis", Frequencies, The Journal of Size Law Applications, Volume 1, No. 2, January 2002.
- Crumpley, D.Larry, "Forensic Accounting: Older Than You Think", Journal of Forensic Accounting, Vol. II, pp 181 – 202, 2001.
- Cusack, B., & Ahokov , T. (2016). Improving forensic software tool performance in detecting fraud for financial statements. In Valli, C. (Ed.). (2016).The Proceedings of 14th Australian Digital Forensics Conference, 5-6 December 2016, Edith Cowan University, Perth, Australia. (pp.17-24).
- Davis, C., Schiller, M. & Wheeler, K. (2007). IT Auditing, New York, NY: McGraw-Hill.
- Davis, C., Farrell, R., & Ogilby, S. (2010). Characteristics and skills of the Forensic Accountant. American Institute of Certified Public Accountants.
- Durtschi, Cindy; Hillison, William; Pacini, Carl; "The Effective Use of Benford's Law to Assist in Detecting Fraud in Accounting Data", Journal of Forensic Accounting, USA, Volume V, 2004.
- Dickmann, A. Jann, B., 2010. Benford's Law and fraud detection: Facts and legends. German Economic Review 11, 397-401.
- Grammatikos, Theoharry and Papanikolaou, Nikolaos (2016) Applying Benford's law to detect fraudulent practices in the banking industry. Working Paper. Luxembourg School of Finance, Luxembourg.
- Haynes H Allyn (2012). Detecting Fraud in Bankrupt Municipalities Using Benford's Law. ScrippsSeniorTheses. Paper 42. http://scholarship.claremont.edu/scripps_theses/42
- Kenneth, O'Flaherty; "Fraud Detecting Through Data Mining", The National Underwriter Company, 2005. www.highbeam.com
- Kotsiantis, S., Koumanakos, E., Tzelepis, D. & Tampakas, V. (2006). Forecasting fraudulent financial statements using data mining, International Journal of Computational Intelligence 3 (2) 104–110.
- Kovalerchuk, B., Vityaev, E., & Holtfreter, R. (2007). Correlation of complex evidence in forensic accounting using data mining. Journal of Forensic Accounting, 8(1).
- Mehta, G.S. ; Mathur, Tarun; "Preventing Financial Fraud Through Forensic Accounting"; Journal of the Institute of Chartered Accountants of India; Volume 55, No. 10, April 2007.
- Mehta, G.S. ; Mathur, Tarun; "Preventing Financial Fraud Through Forensic Accounting"; Journal of the Institute of Chartered Accountants of India; Volume 55, No. 10, April 2007
- Nigrini, Mark J.; Mittermaier, Linda J.; "The Use of Benford's Law as an Aid in Analytical Procedures", Auditing: A Journal of Practice & Theory, Volume 16, No. 2, 1997.
- Nigrini, Mark J (1997). The Use of Benford's Law as an Aid in Analytical Procedures' Auditing, Journal of Practice & Theory 16.2 (1997): 52–67.
- Perols, J. (2011). Financial Statement Fraud Detection: An Analysis of Statistical and Machine Learning Algorithms, Auditing: A Journal of Practice and Theory, Vol. 30(2), pp. 19-50.
- Phua, C., Lee, V., Smith, K. & Gayler, R. (2005). A comprehensive survey of data mining-based fraud detection research, Artificial Intelligence Review (2005) 1–14.
- Ravisankar P., Ravi V., Rao G.R. & Bose I. (2011). Detection of financial statement fraud and feature selection using data mining techniques. Decision Support System, 50, 491-500.
- Steven J Miller, Benford's Law and Fraud Detection, or: Why the IRS Should Care About Number Theory! , Bronfman Science, 2008.
- Tommie Singleton, Kelly Todd. Frank Messina., How to Use Computer-Assisted Audit Techniques to Uncover Fraud. Bank Fraud and IT Security Report, December 2004 www.forensicstrategic.com/wp-content/uploads/2012/08/how-to-Use-Computer-Assisted-Audit-Techniques-to-Uncover-Fraud.pdf
- Zhang, D., & Zhou, L. (2004). Discovering golden nuggets: data mining in financial application, IEEE Transactions on Systems, Man and Cybernetics 34 (4) (2004) Nov
- Zhou, W. and Kapoor, G. (2011). Detecting evolutionary financial statement fraud. Decision Support Systems, v. 50, n.3, p.570-575.