The use of accounting information systems in analytical procedures for the audit process, from the point of view of internal and external audit in the public sector (a case study of public universities)

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Abstract
This study sought to measure and assess the use of accounting information systems in analytical procedures for the audit process, from the point of view internal and external audit in the public sector (a case study of public universities) and their role in promoting evidence in the audit results and its availability in Jordanian public universities, as well as to determine the extent of the use of analytical procedures in the audit process, from the point of view of both the internal in observation and auditing services workers at Jordanian universities and external auditors for these universities and how consensus the study sample answers in answering the study questions.

Researchers have developed a study tool (questionnaire) based on the conceptual framework and previous studies, (100) questionnaire were distributed on a sample of the population of the study which is consisted of the internal observation units services workers in Jordanian public universities and external auditors for these universities.

Using appropriate statistical analysis tools for the study data (arithmetic means, standard deviations and One way ANOVA).

It was concluded that there are no significant statically differences between the views of the internal observation services staff in public universities and external auditors for these universities on the importance of using analytical procedures in auditing • There are no significant differences between the views of the two sample study for these universities to the auditors use of analytical procedures in audits, and the study showed that the use of analytical review methods was moderate by internal and external auditors, while the advanced analytical review methods are used less • Because they need the skills of statistical analysis, the study also revealed that there are obstacles limiting the use of analytical procedures in the field of work, and most of these obstacles are the absence of clear criteria for analytical procedures issued by the INTOSAI Organization and the organizers of the audit profession, lack of skills in the field of analytical measure. Although the constraints that limit the application of analytical procedures did not have any statistically significant and material impact on increasing the efficiency of the audit performance.

In the light of the analysis results the researchers presented a set of recommendations that they consider them necessary to improve and strengthen the evidence in the audit results and availability in Jordanian public universities, as well as to determine the extent of the use of analytical procedures in the audit process, and reduce the risk of control to gain an understanding of the business and its environment.

Key Words: Accounting Information Systems, Internal auditing, External auditing.
1.0 Introduction:

Analytical procedures are the most modern methods of checking and examination of financial statements that are submitted by the accounting information systems audit after switching to the testing audition using samples methods, as using testing audition has become more effective and efficient than using the detailed audit to reduce the risk of discovery and confirmation of the fairness and objectivity of the financial statements as the auditor assess the validity and adequacy of financial information obtained from the accounting records of the audit economic unit that is subjected to the auditing through the study and evaluation of internal control system as well as to obtain evidence in the substantial measures and the auditor use of these procedures to help in reaching the required level of confidence in the auditing profession in general.

Due to the increased government expenditure and increasing social burdens placed on governmental units and budget deficit, limited resources and the need to ensure that Government funds had been used for the intended purposes and that it was in accordance with the laws and regulations applicable to governmental units. So Governments have provided protection and attention for the public money and give everything to preserve it, the protecting of the public money isn't limited to save it from theft, and wasting it, uncover the causes of negative deviations between actual planned and processed expenditures, but extends to other areas vary according to the nature of the work of people, systems, and controls systems applied. In light of this increasing interest in various countries about governmental accounting staff accountability due to the increased popular demands and growing public pressure for more information on programs and services, as it is difficult to find an effective and efficient system of Central and local government administration without some kind of accounting accountability from the people for which governmental auditing was made to secure it through measuring and assessing the performance of departments of government units in the acquisition and allocation of resources to its goals. (Hilmee, 2009, pp. 74-79).

Computer programs currently have helped auditors greatly in applying analytical procedures to assess errors including regression analysis prediction in account balances and evaluate changes between predicted balances and actual values. INTOSAI has confirmed in their statements the importance of taking into account the use of entities subjected to auditing and higher observation units analytical procedures in the public sector audits. Hence the study of analytical procedures as an important factor in the audit process.

2.0 Aim of the search

This study aims to achieve the following:

1. Analytical procedures and its objectives.
2. Identify the types and methods of analytical procedures used by public sector auditors internally and externally.
3. Identify the different audit stages where analytical audit procedures are used by auditors.
4. Identifying the obstacles facing the auditors when using analytical procedures in audits.

3.0 Research problem:

The problem of the study is determined in measuring and assessing the use of accounting information systems in analytical procedures in the audit process, from the point of view of internal and external audit in the public sector (public University case study) and its role in promoting evidence on the results of the audit by answering the following questions:

1. Are the auditors in the public sector aware of the importance of using analytical procedures?
2. To what extent do the auditors used analytical procedures in audits?
3. At which stage of the audit do the analytical procedures are used?
4. What are the obstacles faced by auditors in the use of analytical procedures in audits?

4.0 Significance of the research:

Analytical procedures are tools that should be used by the auditor being aided in predicting potential and important problems. And is an important means to gather evidence which draws the attention of the auditor to the extraordinary things for efficiency in the audit process. Here lies the importance of research in the role of analytical procedures in
the audit process in terms of its concept, types, components and how to apply them during the different stages of scrutiny and link it with the international auditing standards (ISPM No. 520) which aims to offer instruction related to applying the analytical procedures while auditing and internal audit standards (SIA No. 6) related to analytical procedures and how to extract ratios, draw conclusions and future prospects and decision-making thereof, use these procedures to optimize procedures in audits, this would play an effective role in enabling Auditors working in accountancy and audit entities to perform a greater role in reducing fraud, manipulation and administrative corruption and improve public economic sector performance and government sector services On the other hand.

Integration between internal and external auditing plays a positive role on the level of auditors who practices the two jobs (internal and external auditor) in helping them to achieve their best and provide the results of high quality audit work; in the interests of many groups in the community to enable them to make appropriate decisions in the appropriate time, there for the proper and the correct way of the workflow activities. INTOSAI defined internal control as an integrated process carried by the management and staff of one unit while seeking to perform their functions and are designed to provide reasonable assurance that the following general objectives are achieved:

1. Implementation of effective and influential operational processes in a systematic, ethical and economic way.
2. Meeting the obligations of responsibility accounting.
3. Avoiding the loss of assets. (INTOSAI, 2007, p. 6)

According to the researcher's knowledge there is no similar study at the level of Arab world to measure and assess the use of analytical procedures in the audit process, from the point of view of internal and external audit in the public sector.

5.0 Research hypotheses:

Researcher used in answering the problem of the search in the following set of hypotheses:

1. Auditors in the public sector (internal and external) are not aware of the importance of using analytical audit procedures.
2. Auditors in the public sector (internal and external) do not use analytical procedures methods in auditing.
3. There are no obstacles facing the auditor when using analytical procedures in auditing that limit the procedures application.

6.0 Theoretical framework and previous studies:

The study of (Mustafa, 2004) measuring the impact of financial and non-financial information on the performance of analytical audit procedures, experimental study on audit offices in Saudi Arabia. This study aimed to examine the impact of financial and non-financial information in determining the scope of the audit when performing analytical procedures and examination of financial and non-financial information, the results of this study revealed that the Auditors were focusing largely on financial information in determining the scope of the audit and giving it a great importance, on the other hand non-financial information were used as a minor evidence in the audit process, It also showed that audit process is expanded when both financial and non-financial information lead to an undesirable direction.

The study of Tahat (2003) and Ghraibh (2003) was conducted in Jordan and came to similar conclusions on the extent of the use of Jordanian Auditors for audit analytical methods procedures, and the extent of reliance on the International Audit Guide and the relationship between reference experience and using those procedures or audit stages and placements, and analytical procedures contribute to discover (21%) To (40%) of the Errors, while the procedural use does not have any role in this regard, while the auditor works in the single review offices, one of the most affecting barriers, and is consistent with the findings of Mustafa study (2004) held in Saudi Arabia.

The Study of (Alkatiri, 2005) analytical review, field study for the practices of Auditors in Qatar, aimed to show the extent of knowledge and interest in the use of analytical audit procedures in the State of Qatar, the results of the study showed that the majority of reviewers rely on analytical audit procedures and the importance of these procedures to install and promote the results of the audit. the used procedures are detailed analysis of financial status and menu items list, then compare financial information for previous years, and study its elements and trends based on auditor experience as studying financial ratios, and comparing actual information with planned ones.
also showed the main factors limiting the use of analytical audit procedures which are the lack of financial and non-financial information, lack of predictive capacity and weak internal control systems.

The Study of (Almkhadmh, Alrasheed, 2007) aims to highlight some selected factors that are expected to affect the performance of the auditing process in the Jordanian audit offices. These factors include: objectives of analytical audit, procedures of analytical audit and constraints which limit the application of analytical audit procedures and these factors have been selected in the light of the literature review for audit on analytical audit procedures; to accomplish this a questionnaire aimed to Auditors working in audit offices in Jordan and members of legal accountants organization and members faculty has been developed.

The study used descriptive statistic and analytical methods to test study hypotheses, the results showed that the audit offices rely primarily on analytical audit procedures in their operations, and stressed the importance of these procedures in promoting the results of the audit. The results also showed a relationship between analytical audit objectives and audit procedures efficiency (the dependent variable), but for constraints variable which limit the application of these procedures, no statistically significant and material impact on increasing the efficiency of the audit process has been found. The study found a set of recommendations and proposals to increase the performance of the analytical auditing procedures.

(Fateh, 2009) The impact of computer use and analytical procedures on auditing of accounts. Where he shows that the overall objectives and scope of audit do not change when the auditing process is performed in automated data processing environment, in General, the application of audit procedures may require the auditor to consider methods that are used in computers as a tool for auditing. Analytical procedures also allow greater scope for obtaining evidence, proofs for early detection of errors, and the computer adds a greater push in using different programs in the area of analysis using analytical procedures.

(Alkadi, 2010) Study aimed at studying how Central inspectors for central observation control in Syria to assess internal control under the great development of the auditing profession in recent years to adopt internal control evaluation Portal under financial reports as an alternative to financial statement which prevailed in the past, to meet the requirements of the financial community to give the auditing profession greater responsibility under the fraud and manipulation in the contemporary world, and this development was not only in the private sector but in the Government controls which have parallel development to enable those bodies to handle the heavy responsibilities placed on it in reducing corruption in the public sector and control over public funds and not exposing it to loss or wastage. The Field studies and statistical analysis results have confirmed through the questionnaires which was distrusted on a random sample form the first auditors and ordinary working in Damascus auditors (city and villages) from the unit dependence of the files ordinary reviews with financial statements and what is related to it form files without connecting it with the internal observation with the used system to reach the opinion in the financial statement and the other review information.the study also shows that the auditors understand the importance of environment and auditors evaluation and the different auditors activities with giving less weight to estimate the danger, information, and deliverance which is used in the modern standards related to the finical statement entry itself , less than the level of internal observation entry in the light of financial statements that was adopted in American professions recently.

(Al Sharairi, 2011) obstacles in using analytical procedures in the public sector audit Jordanian audit institution case, the study aimed to state the obstacles facing auditors in Jordanian audit institution when using analytical auditing and the problems of applying it, the study showed that when using the analytical methods by Auditors of audit institution practical was moderate while it was noted that the use of comparison and advanced analytical review methods was low; the study indicated that the reason was that they need high skills of statistical analysis. There are also many obstacles limiting the use of analytical methods by the Auditors, the most important one was the lack of a working directory and guidelines issued by INTOSAI and the audit institution with regard to analytical review.

(Koskivaara,2007) The study aims to describe procedures of analytical methods used in the continuous control environment in the various stages of the audit and the role of analytical procedures in obtaining analytical evidence to increase the confidence of the auditor to enable them to express their opinion on the final accounts, in addition to using four different types of statistical analytical methods for expected monthly sales, it was shown that the model of
study include using two simple analytical methods such as estimate the average sales value of last year, compared with previous years, as well as using advanced techniques in the analysis through the use of regression analysis and neural networks in the study model to predict monthly sales as good methods of analysis. The study recommended the use of this type of developed methods in an ongoing monitoring environment.

(Linda McDaniel, 2005) discussed the reasons why some audits adopt vulnerable audit analytical procedures and the role of the results and its accuracy. The study sought to review some articles for researchers that illustrate the inadequacy of the audit procedures when using analytical audit procedures, the study indicated that there were a variety of reasons mainly: the auditor not being able to assess the correct strength of the analytical review procedures, as the sensitivity of the audit in relevant to the results and the audit judgment related to evaluation of previous periods, as a foundation to interpret and apply the producers of the same analytical audit, there for not using the capabilities of the analytical review will not lead to produce reliable results. Research shows that the most essential aspects are the urgent need for significant improvements and precision when using the returned trial examination.

(Wendy Green, 2004) entitled “impact of the receiving original clarifications in judging the analytical review procedures”, this study showed how the timing of receiving the original clarifications as well as respond to calls show that the performance of the Auditors in the early stages of applying analytical audit procedures had affected their performance in subsequent stages, some researchers have pointed out that over the last decade financial institutions increased analytical audit procedures used to identify audit aspects that require focus. The study found proven evidence that when you complete all operations on analytical audit procedures, the auditor will be able to overcome all prejudices and weaknesses that result in the preparation of initial assumptions and instructions. They study also found that there must not be a separation on analytical audit procedures and to make each of them individually as this will change the way in which analytical audit runs the analytical auditing.

(Kenny et al., 2000) the study focused on analytical audit procedures, using five elements: client risk, predictability of specific audit account balances, reliability of the used information, the accuracy of analytical review method, reliability of information containing a few data that do not take into account the results of the analytical review. The study found that expectation can be made about potential material decisions errors and the extent of examination that would be done in tune with the analytical audit procedures results, thus determined proofing method. The study also found that the previous five factors have had a substantial impact and importance for both physical and potential errors on audit periods.

6.1 Accounting information systems

Information systems are considered one of the oldest information systems because of the importance of accounting information to the financial and economic reality and the relationship between the company the surrounding environment where accounting information systems play an important role in the maintenance and production of data used in the Organization for the planning, assessment and diagnosis of the dynamics of work and financial circumstances. (Al Sharairi, 2011) And through the prominent role of accounting information systems in management of institutions through the provision of appropriate information to both the management of the organization or to third parties interested on such information. (Alkatiri, 2005) There for it the benefits offered by accounting information systems became clear to achieve the objectives of the administrative processes including audits and financial control, and through these systems institutions provide its financial position, cash and non-cash expenses through financial reports prepared in a suitable and appropriate way for reliable use in corrective decisions. (Amari, 2004) Accounting information systems are part of the management work and a primary source of information that the management depends on in auditing procedures (Yassin, 2006) Accounting information assists in the oversight process by comparing data with actual performance to identify deviations and find correction for it, as information technology development leads to increase storage and processing capacity, which contributes to the accuracy and speed of procedures for auditing and control. (Linda McDaniel, 2005) The availability effective continuing information system is a major factor in the failure or continuity of an organization, this importance lies in the use of provided information by these systems to support administrative processes such as internal and external audit.

Information technology has changed the way the accounting systems works through the acquisition, storage, processing of information and electronic distribute through the accounting information systems, leading to a significant increase in the capacity of accounting, studies indicated that either financial or internal auditors must
possess the required skills to accomplish tasks in a professional manner including comprehension, analysis and observation through the use of accounting information systems and the knowledge of computerized audit programs and this depends on the nature of the complexity of the work tasks. (Borthick et al., 2006)

The accounting system in any facility serves as accounting information system, and this system varies according to its ability to provide the required information appropriately and in a timely manner, which will help in the making of the decisions process, in addition to other objectives.

7.0 Methodology of the study:

To achieve the objectives of the study and its hypotheses, the study adopted descriptive analytical methodology of secondary and field data related to the study variables.

7.1 Sources of data collection

1. Secondary sources: include Office survey of the previous theoretical studies relevant to the study in question.
2. Primary sources: through some interviews with some Auditors, included the design and distribution of a questionnaire to the study sample in order to gather data related to the views of the included category.

7.2 Study tool:

A questionnaire has been designed to fit the theme and objectives of the study after being familiar with the literature, previous studies on the subject, and international standards for government regulation.

7.3 The study community and sample:

The study community consists of regulatory staff working in the internal and external observation who have worked or are still working in units (internal observation) by entities subject to audit as well as workers in the audit institution (external control) in public universities in Jordan represented by the following universities: University of Jordan, Balka applied university, Al-Yarmouk, Alshmeeh and Mutah University. 100 at the time of study, the number of the distributed questionnaires were (100), 50 questionnaires included internal audit staff in public universities as well as some professional faculty members and others who are interested in this aspect, and 50 questionnaires distributed to employees of the audit institution (external control) in public universities in Jordan (directors and Chairmen and Auditors) only (87) questionnaires had been approved for the purposes of research and analysis, (13) questionnaires have been excluded because it was not correctly filled, direct method have been used in the Distribution and recovery of individuals who will shape the sample for this study, table 1 shows that:

The percentages of respondents from the internal and external auditors practitioners within universities

<table>
<thead>
<tr>
<th>Statement</th>
<th>frequency</th>
<th>relative frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal auditor</td>
<td>44</td>
<td>51%</td>
</tr>
<tr>
<td>External auditor</td>
<td>43</td>
<td>49%</td>
</tr>
<tr>
<td>Total</td>
<td>87</td>
<td>100%</td>
</tr>
</tbody>
</table>

7.4 Statistical methods used:

1. Arithmetic mean, standard deviation, to arrange and describe the importance of terms and variables contained in the questionnaires and frequency distributions, percentages, to describe the demographic variables based on the results of the (SPSS program).
2. (One way ANOVA)

7.5 Data analysis and hypothesis testing:

The following analysis of data obtained through the identification of the study:

Training courses:

Table (2) shows the distribution of the study sample members as they receive training courses on the use of analytical audit procedures.
Distribution of respondents having the training courses.

<table>
<thead>
<tr>
<th>Having the training courses</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>42</td>
<td>48%</td>
</tr>
<tr>
<td>No</td>
<td>45</td>
<td>52%</td>
</tr>
<tr>
<td>Total</td>
<td>87</td>
<td>100%</td>
</tr>
</tbody>
</table>

It is clear from the table above that (52%) of the Community members did not receive training in the application of analytical review procedures, while there were only (48%) auditor who got those courses, which means that there are problems and constraints relating to the application of those procedures by members of the study sample.

8.0 Hypotheses testing:

8.1 Hypothesis 1: public sector Auditors (internal and external) are not aware of the importance of using analytical audit procedures.

Table 3 shows the views of both external and internal auditors, also the average degree of both of them and the arithmetic mean of all paragraphs form (1-11).

<table>
<thead>
<tr>
<th>No.</th>
<th>Paragraph</th>
<th>Arithmetic mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Stop the wastes of the public money</td>
<td>4.43</td>
<td>0.62</td>
</tr>
<tr>
<td>2</td>
<td>increase the efficiency and effectiveness of the audit process</td>
<td>4.52</td>
<td>0.53</td>
</tr>
<tr>
<td>3</td>
<td>understanding the environment and the nature of the organization work</td>
<td>4.33</td>
<td>0.74</td>
</tr>
<tr>
<td>4</td>
<td>Select the appropriate sample size.</td>
<td>4.15</td>
<td>0.85</td>
</tr>
<tr>
<td>5</td>
<td>detecting cheating and mistakes</td>
<td>4.34</td>
<td>0.60</td>
</tr>
<tr>
<td>6</td>
<td>Reduction of other testing</td>
<td>3.98</td>
<td>0.84</td>
</tr>
<tr>
<td>7</td>
<td>Reduce the cost of auditing.</td>
<td>3.80</td>
<td>1.08</td>
</tr>
<tr>
<td>8</td>
<td>Understanding the information systems used in the unit.</td>
<td>4.17</td>
<td>0.70</td>
</tr>
<tr>
<td>9</td>
<td>Help reduce audit risks.</td>
<td>4.13</td>
<td>0.72</td>
</tr>
<tr>
<td>10</td>
<td>Reduce the time and effort required for the audit process.</td>
<td>3.76</td>
<td>1.21</td>
</tr>
<tr>
<td>11</td>
<td>Predicting the balances of some accounts to compare it with the actual stocks</td>
<td>3.90</td>
<td>0.90</td>
</tr>
</tbody>
</table>

Table (3) shows the views of both external and internal auditors, also the average degree of both of them and the arithmetic mean of all paragraphs form (1-11).

With regard to the importance of using analytical audit procedures, arithmetic mean for it was in the limits of (4, 52-3, 76) taking into account that the table has arranged analytical audit procedures sequentially according to the importance of each action, where the increase in the efficiency and effectiveness of the audit process came first with (25.4) arithmetic mean and (0.53) standard deviation, came last reducing the time and effort required for the audit process, with (3, 76) arithmetic mean and (1.21) standard deviation.

It is clear from table (3) the absence of statically significant differences in the level of ($\alpha \leq .05$) between the external auditors and the internal auditors’ answers on the paragraphs related to the importance of using analytical procedures in auditing. To test this hypothesis also data were subjected to one way ANOVA test.
The results indicated that there were no statically significant differences between the answers of public sector auditors both external and internal, to the importance of using analytical procedures in auditing, where (F) value = (1.237) not statistically significant level at \( \alpha \leq .05 \). Level of significant for the process is= 0.269 which is greater than 0.05 and here we can accept the theory of nonexistence and admit that there are no differences between auditors in the internal and external public sector related to the importance of using the analytical procedures in auditing.

8.2 Hypothesis 2: Auditors in public sector (internal and external) don't use analytical procedures methods in probing.

Table No. (4) Shows the arithmetic mean and standard deviation of the sample answers

<table>
<thead>
<tr>
<th>No.</th>
<th>Paragraph</th>
<th>arithmetic mean</th>
<th>standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>Using simple non-quantitative methods based in personal judgment and professional experience.</td>
<td>3.92</td>
<td>0.73</td>
</tr>
<tr>
<td>13</td>
<td>Comparing current year balances with the balances of previous years for the same item.</td>
<td>4.15</td>
<td>0.62</td>
</tr>
<tr>
<td>14</td>
<td>Comparing financial ratios of the same unit with the same ratios for a unit with similar activity (industry standards).</td>
<td>4.01</td>
<td>0.67</td>
</tr>
<tr>
<td>15</td>
<td>Comparing planning budgets with actual results.</td>
<td>4.07</td>
<td>0.74</td>
</tr>
<tr>
<td>16</td>
<td>Multiple regression analysis.</td>
<td>3.77</td>
<td>0.69</td>
</tr>
<tr>
<td>17</td>
<td>cash flow model</td>
<td>3.99</td>
<td>0.71</td>
</tr>
<tr>
<td>18</td>
<td>vertical analysis for financial statements</td>
<td>3.95</td>
<td>0.88</td>
</tr>
<tr>
<td>19</td>
<td>horizontal analysis for financial statements</td>
<td>4.02</td>
<td>0.68</td>
</tr>
<tr>
<td>20</td>
<td>Financial planning model</td>
<td>3.83</td>
<td>0.75</td>
</tr>
<tr>
<td>21</td>
<td>Audit choice for analytical procedures and their level of application depends on professional judgment and diligence.</td>
<td>4.19</td>
<td>0.62</td>
</tr>
</tbody>
</table>

Table (3) shows the views of both external and internal auditors, also the average of each one and the standard deviation for all paragraphs (12-21).

With regard to public sector Auditors (internal and external) use for methods of analytical procedures. The arithmetic mean was from(4, 19-3, 77) Noting that the table has arranged sequentially analytical audit procedures according to the importance of each action, came in the first place audit choose for analytical procedures and the level of their professional judgment and diligence, with (4, 19) arithmetic mean and (0.62) standard deviation and came last the use of multiple regression analysis method with (3,77) arithmetic mean and (0.69)standard deviation . Using developed analytical review methods to a less degree, because it needs statistical analysis skills which are unavailable among many Auditors.

also seen in table (4) that there are no statically significant differences at the level of \( \alpha \leq .05 \) between the external auditors and the internal auditors answers on the paragraphs on their use of analytical procedures in probing.

To test this hypothesis data were subjected to (One way ANOVA) analysis.
The results indicated that there were no significant differences between audit answers in the public sector internal and external to the use of analytical procedures in audits, \((F) = 2.289\) and is not statistically significant at \((\alpha \leq 0.05)\) level. And the level of practical significance is = 0.134 which is greater at theoretical the level of significance which is = 0.05 and here we can accept the theory of nonexistence and admit that there are no differences between public sector Auditors both external and internal, related to their use of analytical procedures in probing.

8.3 The third hypothesis:
There are no obstacles facing the auditor when using analytical procedures in probing that limit its application procedures.

Table (5) obstacles facing the auditor using analytical procedures

<table>
<thead>
<tr>
<th>No.</th>
<th>Paragraph</th>
<th>arithmetic mean</th>
<th>standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>Lack of financial and non-financial information required for implementation of analytical procedures.</td>
<td>4.33</td>
<td>0.84</td>
</tr>
<tr>
<td>26</td>
<td>There are few training courses on the use of analytical audit procedures.</td>
<td>4.18</td>
<td>0.90</td>
</tr>
<tr>
<td>27</td>
<td>Consider as an important means to collect evidence.</td>
<td>4.08</td>
<td>0.61</td>
</tr>
<tr>
<td>28</td>
<td>The absence of standards and manuals on analytical procedures</td>
<td>3.86</td>
<td>0.92</td>
</tr>
<tr>
<td>29</td>
<td>The difficulty of applying analytical procedures on non-profit organizations (governmental).</td>
<td>3.89</td>
<td>0.91</td>
</tr>
<tr>
<td>30</td>
<td>Absence of rates or criteria that can be used as a guide in interpreting analytical test results.</td>
<td>3.94</td>
<td>0.88</td>
</tr>
<tr>
<td>31</td>
<td>Data available are inadequate to serve for analytical purposes.</td>
<td>4.08</td>
<td>0.89</td>
</tr>
<tr>
<td>32</td>
<td>Outputs of governmental accounting system do not provide data to assist in the analysis of financial statements.</td>
<td>3.94</td>
<td>1.04</td>
</tr>
<tr>
<td>33</td>
<td>Rely on analytical procedures in the case of institutions with effective internal control system.</td>
<td>4.0</td>
<td>0.82</td>
</tr>
<tr>
<td>34</td>
<td>I have information on the prerequisites for international auditing standard no. (520) related to analytical procedure.</td>
<td>3.71</td>
<td>0.93</td>
</tr>
<tr>
<td>35</td>
<td>I have information on basic requirements for internal audit standard (SIA No. 6) related to analytical procedure.</td>
<td>3.67</td>
<td>0.94</td>
</tr>
</tbody>
</table>

With regard to the impediments facing Auditors to use analytical procedures paragraphs (25-35), the arithmetic mean was around (4, 33-3, 67) Note that the table had been arranged by the importance of each action, where first place
was for the lack of financial and non-financial information required for implementation of analytical procedures with (4, 33) arithmetic mean and (0.84) standard deviation and last was providing information on basic requirements for internal audit standard (SIA No. 6) related to analytical procedure, with (3.67) arithmetic mean and (0.94) standard deviation. From the table we notice that most averages were high, i.e. there are obstacles limiting auditors to apply the procedures.

Table No. (6) stages of using the analytical procedures

<table>
<thead>
<tr>
<th>Paragraph</th>
<th>arithmetic mean</th>
<th>standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>In the planning stage</td>
<td>3.72</td>
<td>0.80</td>
</tr>
<tr>
<td>The implementation phase of the</td>
<td>3.89</td>
<td>0.77</td>
</tr>
<tr>
<td>audit process</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Final auditing stage</td>
<td>3.97</td>
<td>0.69</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It is clear from table 6 above, paragraphs (22-24), that there are close use to the analytical procedures during the different stages of the review though use at all stages, and this is confirmed by Alkatiri 2005, and Sharairi study

9.0 Study results:
Based on the data analysis and the findings mentioned above, the results of this study are as follows:

1. external and internal auditors do not use, significantly, analytical audit procedures in General when auditing the accounts and financial statements, and there is uneven use of these procedures where it was not used equally, despite the use of analytical audit procedures at all stages of the review process, from planning to final review.

2. Despite the varying of external and internal auditors understanding to the importance of analytical audit procedures use but the overall level of that perception was low, perhaps it is mainly due to what is stated in the paragraph (1) that the low level of use of these procedures in general, which in turn led to the total average of arithmetic mean of the extent to which the reviewers understand the importance of using analytical audit procedures, as well as the arithmetic mean of the extent of the actual use of those procedures, have reached together a lower value for each from the used Arithmetic mean in this study.

3. Some external and internal auditors have not received training courses on analytical audit procedures used in the process of auditing of the accounts and financial statements; though some of the external and internal auditors have a large experience in suing use procedures, while some did not receive the required training courses, leading to the discrepancy in General.

4. The obstacles to the use of analytical review by external and internal auditors are, the lack of financial and non-financial information required for implementation of analytical procedures, in both low level training courses on the use of analytical audit procedures.

1.0 Recommendations
Depending on previous conclusions, and to supplement supplies the study, the study recommends that:

1. The need to highlight the importance of analytical procedures for auditor through the process of auditing in various stages.

2. The need for supervisory authorities on internal and external auditor to give greater importance to simple quantity and quantity analytical procedures, through advanced training courses workshops and seminars on the use of analytical audit procedures when performing the process of auditing the financial statements.

3. The need for supported criteria — such as standard financial ratios — for the different sectors to be used by reviewers in the necessary comparisons, which is a key element of the analytical review procedures.
4. Specialized Jordanian universities should be interested in teaching international audit standards for its students and in particular audit criterion no. (520) of the analytical review procedures.

5. Identify areas that are most vulnerable to criticism or errors and thus require focus and increase testing.

6. Encourage the merging between Jordanian public sector Auditors and auditing offices worldwide to share their experience and knowledge for better application of advanced methods in auditing.

7. Internal observation is the cornerstone of the work of the audit institution work and the report on the effectiveness of internal observation by certified audit of internal institution is a step in the right direction, and this needs to develop the knowledge of Auditors of the importance of internal observation and the methods of evaluation, and activate the internal control management activities in institutions and public enterprises and all government units and this provide added value to the work of the public sector auditors, and then to reduce corruption.

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