



The effect of performance audit economy, efficiency and effectiveness criteria on the accountability level of Ardebil province executive agencies' managers referred to in Article (5) of the Civil Service Management

Manochehr Heydari¹, Heydar Mohammadzadeh Salteh^{2}*

¹Department of Accounting, Electronic Branch, Islamic Azad University, Tehran, Iran

²Department of Accounting, Marand Branch, Islamic Azad University, Marand, Iran

ARTICLE INFO

Article history:

Received 24 Jun 2018

Received in revised form 27 Aug 2018

Accepted 14 Sept 2018

Keywords:

Economy,

Efficiency,

Effectiveness,

Accountability levels,

Performance audit criteria.

ABSTRACT

Objective: The present study is an attempt to investigate the effect of performance audit criteria on accountability of managers in executive agencies of Ardabil province referred to in Article 5 of the Civil Service Management. **Methodology:** This study is applied in terms of objectives and descriptive in terms of nature and hypothesis testing. Data collection is carried out through library and field studies. The population of this study consists of 206 executive managers in Ardabil province referred to in Article (5) of the Civil Service Management. Due to specific size of the population, samples of 134 managers were selected through the Cochran formula. The disproportionate stratified random sampling method was used for sampling in this study. **Results:** The data were analyzed by The SPSS software. After making sure about the normal distribution of data, single-sample T-test was used to test and analyze the hypotheses of the study. Finally, the Friedman test was used to rank the variables of the study. **Conclusion:** The results obtained from all the hypotheses showed a significant difference between the average of samples and the average of the population, thus, we can say that the performance audit in the executive agencies, based on economy, efficiency and effectiveness criteria can affect the accountability level of managers.

1. Introduction

Executives of large public sector institutions are held accountable for the use and deployment of financial resources in the aforementioned aspects. Therefore, they are obliged to provide reports in accordance with the type and levels of accountability for entry into the accountability process and submit them to the selected auditors to be addressed, assessed and commented on (Guthrie, 1989). The accountability levels defined by Stewart, known as the accountability ladder, is evaluated, addressed and judged through a comprehensive accounting system, including the subsystems of financial audit, compliance audit and performance audit. Accountability for performance and plans is addressed and evaluated through performance audit system. Therefore, this audit micro-system should be analyzed within the framework of responsibility system in the executive agencies. Because development of accountability level over public resources, from purely financial aspects to both financial and operational aspects, has led to the transformation of audit procedures in developed countries. With the establishment of new public management system that enjoyed important features such as focus on outputs, results and effectiveness of the programs rather than the inputs, Financial and compliance audit were not able to carry out their mission anymore and modern audit methods were required. In such conditions, performance audit together with New public management, financial audit and compliance audit, developed a comprehensive audit system in the public sector known as comprehensive auditing (Reichborn-Kjennerud & Johnsen, 2011).

Stewart believes that two specific elements are considered in the accountability process:

A) Reporting: including the information needed to provide a basis for formulation of judgments, this element is known as the report element.

* Corresponding author: Heydar.Mohammadzadeh@web.net

DOI: <https://doi.org/10.24200/jmas.vol6iss04pp13-18>

B) Addressing: assessment and expression of views that provide a basis for judgment and action. This element is known.

Therefore, for completion of the accountability process, and promotion of its levels, the claims made by the accountors should be evaluated, addressed and audited.

Stewart, assimilate the first and second channels (which focus on reporting and addressing respectively) to a string whose filaments are twisted together and both the accountor and the accountee contact through these two channels. Stewart believes that the relationship between the accountor and the accountee is a power-based relationship. Those who have the right to receive reports, have the power to address, judge and express their opinions about them. He refers to this relationship as the bond of accountability (Daujotaitė & Mačerinskienė, 2008).

Thus, according to the above information, investigation and evaluation are effective in promotion of accountability levels and are integral components of the accountability bond. Thus, a significant relationship can be established between the performance audits and proportion of accountability levels.

The aim of public audit is to ensure transparency and accountability in the use of resources, in all kinds of financial management. The purpose of audit is to address the Accounts and statements of income and expenses to see if these financial statements are formulated honestly and properly. In the 1980s, the public sector in most parts of the world experienced some crucial reforms and improvements. These reforms and improvements are referred to as "new public management" (McCrae & Vada, 1997)

The new public management aims to cut public expenses and improve the efficiency and effectiveness of government programs. "The New Public Management", forces the public sector to improve itself by transferring the private sector management principles to the public sector. Reform, bureaucracy, innovation encouragement, as well as accountability and efficiency improvements, facilitate public services. This means that the performance criteria of organizations are essential for improvement of public sector. the advent of "New Public Management" and good public ideas, have caused a fundamental change in the auditing approach of the public sector, which has led to a focus shift from financial and compliance audit to performance audit (Weiner, 2002). the above information, the studies carried out so far, as well as the lessons learned in the executive agencies of Ardabil province, suggest that the reasons for undesirable accountability of managers and personnel of executive agencies in Ardabil province in the status quo, include weakness of the investigation of assessment systems (the second channel in Stewart's accountability bond) as well as the lack of appropriate standards of performance audit.

Favorable situation in the described investigations related to the second channel in Stewart's analytic framework (investigation and audit are the second channel in Stewart's accountability bond) can be attributed to capable evaluation systems including audit performance that can be referred to as a basic element in the completion of the accountability process. This system is based on economy, efficiency and effectiveness criteria.

Criteria selection is the most important part of the performance audit, which leads to increased quality of audit and improvement of accountability levels accordingly. When the criteria are compared to what actually exists, audit findings are in fact developed, and in the absence of these criteria, there is no basis for comparison and conclusion, therefore, selection of performance audit criteria is one of the fundamental challenges in the performance audit.

The field of accountability defines the domain of accountability. The accountors need to know about what they should be held accountable and report on. On the other hand, the accountees should be aware of the area for which the accountors are held accountable. Failure to determine a specified scope for accountability leads to development of challenges in the accountability process.

The Performance audit criteria define the scope and limits of accountability and affect the accountability levels of managers. Most experts and boards for formulation of accounting standards in the public sector have come to an agreement on the minimum accountability level. GASB states that the minimum accountability of financial reporting includes provision of information that will help to assess whether the government (state and local) acts within the legal restrictions imposed by the citizens of the state, the government structure account for the character and nature of resource provides and environmental characteristics of the need for accountability. Therefore, the performance audit criteria are tools used to determine the scope of accountability and are effective in promotion of accountability levels (English, 2007).

In the public agencies of Ardabil province, the gap between the current and the desired state which can be regarded as the problem in this study, can be attributed to lack of favorable assessment criteria in the performance audit process. In the absence of favorable assessment criteria, the Managers and employees as accountors, wouldn't know what they are held accountable. In such a case, the domain of accountability practices will face many challenges.

The present study is an attempt to investigate the impact of performance audit standards on the accountability levels of managers in the executive agencies in Ardabil province referred to in Article 5 of the Civil Service Management to determine the importance of performance audit standards' impact on the accountability of executive managers in the population. In this study, attempts are also made to help the government officials and managers and other authorities in identification and resolution of problems related to the lack of accountability of managers in the executive agencies. Finally, attempts are made to offer solutions to the problem using the results of the research (Ng, 2002).

1.1 This paper seeks to answer the following questions:

Does performance audit in the executive agencies in Ardabil province, referred to in Article 5 of the Civil Service Management, based on economy, efficiency and effectiveness standards, affect the accountability of managers?

2. Materials and methods

This study is applied in terms of objectives and descriptive in terms of nature and hypothesis testing. In this study attempts are made to investigate the effect of performance audit standards on the accountability level of managers in the executive agencies of Ardebil province, referred to in Article 5 of the Civil Service Management.

2.1 Population

The population of this study consisted of 206 managers of executive agencies in the Ardebil province referred to in Article (5) of the Civil Service Management.

2.2 Sample size

In order to determine the sample size, first, 206 directors of the executive agencies referred to in Article (5) of the Civil Service Management were extracted. After formulation of the population framework and considering the specific size of the population, a sample size of 134 individuals was selected through Cochran formula.

2.3 Sampling

Since the population of this study includes the managers of executive agencies referred to in Article (5) of the Civil Service Management, and since the executive agencies are classified based on Articles (2), (3), (4), (5) of the Public Audit Act approved in 1366, and the managers are also classified based on the selection and appointment criteria approved by the Council of Ministers, the Disproportionate stratified random sampling was used for sampling in this study. And a sample size of 134 subjects were selected based on the above sampling method.

The number of selected participants is disproportionate to the number of the strata members and the researcher believes that the disproportionate ratio of subjects, could properly represent all members of the population.

2.4 The data collection instruments

The Operational concepts related to the variables were raised in a questionnaire consisting of 15 questions per variable in order to measure the variables. Finally, a questionnaire consisting of three aspects of economy, efficiency, and effectiveness was designed. The developed questionnaire was distributed to a sample group of 30 individuals and was approved and finalized after determination of the coefficient of reliability (Cronbach's alpha). This questionnaire was finally given to the respondents as the final questionnaire.

The questionnaire consisted of 15 closed questions for the economy, 15 questions for efficiency, and 15 questions for effectiveness which make up a total of 45 closed questions which measure the impact of the economy, efficiency and effectiveness in five levels of accountability. The Cronbach's alpha coefficient was used to measure the reliability of the questionnaire and the reliability of the questionnaire was 0/70.

3. Discussion and results

3.1 Data analysis procedures

SPSS software was used for data analysis. To analyze the hypotheses of the study, the Kolmogorov-Smirnov test was used to test data distribution, after proving the normal distribution of data, single-sample T-test was used to test and analyze the hypotheses of the study. Finally, the Friedman test was used to rank the variables of the study.

Table 1. Kolmogorov-Smirnov test results used to determine the normal distribution of variables

effectiveness	efficiency	economy	statistic
0.67	0.89	1.04	The z value in Kolmogorov-Smirnov test
0.31	0.19	0.1	The significance level

According to the results presented in Table 1 and given that the significance level of error for the confidence level of 0/95 is greater than 0.05, it can be said that the variables of the study are normally distributed and parametric tests can be used to analyze the variables the hypotheses of the study.

The effect of the performance audit in the executive agencies, based on Economy, on the accountability levels of managers.

Table 2. Single sample T-test results

Comparison criteria =3				Standard deviation	mean
Mean differences	Significance level	Degree of freedom	t		
0.95	0.001	133	17.11	0.64	3.95

According to the above table and given that that the significance level of error for the confidence level of 0.99 is greater than 0.01, we can say that there is a significant differences between the effect of performance auditing in the executive agencies based on economy, on the accountability of managers among the samples of the study (3.95) and the average population (comparison criteria = 3) And the average effect of performance auditing in the executive agencies, based on economy criterion, on accountability levels of managers among the samples of the study is higher than the average population. Therefore, it can be said that performance audit in executive agencies, based on economy criterion, affects the accountability of managers.

The effect of performance audit in executive agencies, based on economy criterion, on the accountability of managers.

Table 3. The single sample T-test results

Comparison criteria = 3				Standard deviation	mean
Mean differences	Significance level	Degree of freedom	t		
0.98	0.001	133	17.62	0.64	3.98

According to the above table and given that that the significance level of error for the confidence level of 0.99 is greater than 0.01, we can say that there is a significant differences between the effect of performance auditing in the executive agencies based on efficiency criterion, on the accountability of managers among the samples of the study (3.98) and the average population (comparison criteria = 3), And that the average effect of performance auditing in the executive agencies, based on the efficiency criterion, on accountability levels of managers among the samples of the study is higher than the average population. Therefore, it can be said that performance audit in executive agencies, based on the efficiency criterion, affects the accountability of managers.

The effect of performance audit in executive agencies, based on the efficiency criterion, on the accountability of managers.

Table 4. The single sample T-test results

Comparison criteria = 3				Standard deviation	mean
Mean differences	Significance level	Degree of freedom	t		
0.94	0.001	133	17.60	0.62	3.94

According to the above table and given that that the significance level of error for the confidence level of 0.99 is greater than 0.01, we can say that there is a significant differences between the effect of performance auditing in the executive agencies based on effectiveness criterion, on the accountability of managers among the samples of the study (3.98) and the average population (comparison criteria = 3), And that the average effect of performance auditing in the executive agencies, based on the effectiveness criterion, on accountability levels of managers among the samples of the study is higher than the average population. Therefore, It can be said that performance audit in executive agencies, based on the effectiveness criterion, affects the accountability of managers.

Table 5. Friedman's test results for ranking the performance auditing effect in executive agencies, based on economy criterion, on different accountability levels

rank	Rank mean	Accountability level
5	1.95	Level 1
2	2.91	Level 2
3	2.88	Level 3
4	2.87	Level 4
1	3.40	Level 5
Significance level	Degree of freedom	coefficient
0.008	4	13.83

According to the results of table (5) and given that that the significance level of Friedman test is lower than 0/05, we can say that there is a significant difference between the effect of performance auditing in the executive agencies based on economy, on different levels of accountability. The results show that the highest and lowest effects are attributed to level five and level 1 of accountability respectively.

Table 6: Friedman test results for ranking the impact of performance audit in executive agencies, based on the efficiency criterion, on different levels of accountability

rank	Rank mean	Accountability level
3	3.03	Level 1
2	3.1	Level 2
5	2.81	Level 3
1	3.11	Level 4
4	2.95	Level 5
Significance level	Degree of freedom	coefficient
0.39	4	4.09

According to the results of table (6) and given that that the significance level of Friedman test is higher than 0/05, we can say that there is no significant differences between the effect of performance auditing in the executive agencies, based on effectiveness criterion, on different levels of accountability. However, the ranking results show that the highest and lowest effects are attributed to level four and level three respectively.

Table 7: Friedman test results for ranking the impact of performance audit in executive agencies, based on the effectiveness criterion, on different levels of accountability

rank	Rank mean	Accountability level
2	3.12	Level 1
4	2.94	Level 2
1	3.13	Level 3
3	3.03	Level 4
5	2.76	Level 5
Significance level	Degree of freedom	of coefficient
0.17	4	33.6

According to the results of table (7) and given that that the significance level of Friedman test is higher than 0/05, we can say that there is no significant differences between the effect of performance auditing in the executive agencies, based on effectiveness criterion, on different levels of accountability. However, the ranking results show that the highest and lowest effects are attributed to level three and level five respectively.

4. Conclusion

According to the results, performance audit in the executive agencies, based on economy criterion, affects the accountability levels of managers. As interpretation of these findings, it can be said that performance audit in the executive agencies based on the economy criterion, can determine the accountability limits of managers and this audit is an instrument for determining the field of accountors accountability. In addition, this type of audit, lets the accountors know that the decisions and activities should be cost-effective and that they must be accountable for the economy of decisions and actions. It also shows that; economy is one of the conditions of appropriate decision-making. Therefore, use of economy criterion in conducting performance audit, is an instrument to determine the field of accountability and affects the accountability levels of managers. And leads to promotion of managers' accountability levels accordingly. The results of this study are consistent with the results of (Dittenhofer, 2001; Heinrich, 2002; Getie Mihret & Wondim Yismaw, 2007). The results show that the performance audit in the executive agencies, based on efficiency, affects the accountability levels of managers. As interpretation of these findings, it can be said that performance audit in the executive agencies based on the efficiency criterion, can determine the accountability limits of managers and is an instrument for determining the field of accountors accountability. In addition, this type of audit, lets the accountors know that the decisions and activities should be effective and that they must be accountable for the efficiency of decisions and actions. It also shows that; efficiency is one of the conditions of appropriate decision-making. Therefore, the use of efficiency criterion in conducting performance audit, is an instrument to determine the field of accountability and affects the accountability levels of managers. And leads to promotion of managers' accountability levels accordingly.

The results of this study are consistent with the results of (Dittenhofer, 2001; Heinrich, 2002; Getie Mihret & Wondim Yismaw, 2007; Alexander, 2000). Finally, the results show that the performance audit in executive agencies, based on the effectiveness criterion, affects the accountability of managers. As interpretation of these findings, it can be said that performance audit in the executive agencies based on the effectiveness criterion, can determine the accountability limits of managers and is an instrument for determining the field of accountors accountability. In addition, this type of audit, lets the accountors know that the decisions and activities should be effective and that they must be accountable for the effectiveness of decisions and actions. It also shows that; effectiveness is one of the conditions of appropriate decision-making. Therefore, the use of effectiveness criterion in conducting performance audit, is an instrument to determine the field of accountability and affects the accountability levels of managers. And leads to promotion of managers' accountability levels accordingly.

The results of this study are consistent with the results of (Dittenhofer, 2001; Heinrich, 2002; Getie Mihret & Wondim Yismaw, 2007; Alexander, 2000; Henri & Journeault, 2010). The effect of economy, efficiency and effectiveness criteria on the accountability levels of managers and their contribution to promotion of managers' accountability levels, can be attributed to the fact that these criteria specify the limits and scope of the accountors accountability. When these criteria are compared to the reality, the performance audit findings are achieved and a basis for comparison, judgment, and conclusions would be provided. The above criteria, let the accountors know about they should be accountable and prepare reports about. On the other hand, the accountees should also be aware of the fields in which the accountors should be held accountable. This mutual relationship causes economy, efficiency and effectiveness criteria to affect the accountability levels of managers and to promote their accountability levels.

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How to Cite this Article:

Heydari M., Mohammadzadeh Salteh H., The effect of performance audit economy, efficiency and effectiveness criteria on the accountability level of Ardebil province executive agencies' managers referred to in Article (5) of the Civil Service Management, *Uct Journal of Management and Accounting Studies* 6(4) (2018) 13–18.