THE IMPORTANCE AND EFFECTIVENESS OF AUDITING IN THE PUBLIC SECTOR IN THE REPUBLIC OF NORTH MACEDONIA

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Abstract

Public sector auditing constitutes a fundamental mechanism for promoting transparency, strengthening accountability and ensuring the effective management of public resources. In this context, particular emphasis is placed on its institutional impact and the challenges affecting its implementation.
The research employs a quantitative approach, using a structured questionnaire to collect data from public administration officials. The aim is to assess how auditing contributes to transparency and accountability and to identify key areas from improvement.
The analysis highlights a clear correlation between positions held in the public administration and the level of education, as well as between positions and years of experience.
The findings indicate higher levels of education and board experience are associated with a more positive assessment of auditing practices. However, challenges such as resource constraints, lack of training and resistance from other institutions persist affecting the overall effectiveness of auditing.
The study contributes to the literature by highlighting critical areas that require attention to improve auditing practices, including the need for enhanced training, stronger managerial support and improvements in transparency and reporting. Recommendation include investing in specialized training, increasing managerial backing and adopting advanced technologies to enhance auditing processes. These insights aim provide actionable strategies for policymakers and administration to strengthen the effectiveness of auditing in the public sector.
The public sector represents a key component in the social and economic structure of any state, providing essential services.

Keywords: Auditing Practices; Public Sector; North Macedonia; Public Financial Management.

1. Introduction

Public sector auditing has evolved from traditional compliance checks toward a broader focus on performance and value for money. This new approach is particularly associated with the philosophy of New Public Management, which emphasizes efficiency and outcomes rather than merely adhering to procedures (Lapsley, 2008).
Public sector auditing is a critical and essential process for ensuring transparency, accountability and efficiency in public expenditure. This section examines the fundamental concepts of auditing in the context of the public administration of North Macedonia, including its purpose objectives, the role of auditing in improving performance and the specific challenges that may arise in the implementation of auditing practices.
Performance auditing assesses whether public resources are being used optimally to achieve established objectives. According to Pollitt and Bouckaert (2017) regular audits help identify unnecessary processes, reduce costs and improve resource allocation (Pollit & Bouckaert, 2014).
Auditing in the public sector of North Macedonia is an essential process for ensuring accountability, transparency and efficiency in the use of public resources. This section examines the application and impact of auditing within the public administration of North Macedonia by analyzing current practices, challenges and benefits in the context of the country.
According to the Institute of Internal Auditors (2022), public sector auditing plays an important role in ensuring accountability and transparency in governance. For North Macedonia, a country in the process of developing its public administration, auditing is a critical tool for improving the performance of government institutions and protecting the public interest. By

monitoring and evaluating the efficiency of public fund utilization, auditing contributes to reducing waste and ensuring the financial sustainability of public entities.
Auditing provides an ogoing assessment of internal controls and risk management processes, helping to prevent violations and ineffective practices (Mihajlovska, 2020).
Although public sector auditing in North Macedonia offers numerous benefits, it also faces significant challenges in terms of effective implementation. Some of the main challenges include:

1. Lack of Capacity and Expertise – Public institutions often face a shortage of qualified personnel and limited budgets for conducting regular and comprehensive audits. This limits their ability to carry out high-quality audits and cover all necessary areas (KSA, 2021).
2. Complexity of Laws and Regulations – Complex and frequently changing laws and regulations may limit and ability of government institutions to implement high standards of accountability and transparency in public financial management.
3. Resistance to Change – In some cases, there is resistance to implementing audit recommendations and introducing the necessary improvements in public financial management practices.

Historically, auditing practices in North Macedonia began to develop during the period following the country's independence, when a legal framework for public sector financial control and accountability was established. In the early 1990s, during the transition from a centrally planned economy to ensuring transparency and efficiency in the use of public funds (Teodorovska, 2005).
Although positive results have been achieved, public sector auditing continues to face challenges, including a lack of resources, resistence to implementing recommendations and the complexity of regulations. Nevertheless, auditing practices continue to improve, contributing to increased transparency, accountability and the performance of public institutions (Mihajlovska, 2020).

2. Methodology

This study is based on an empirical approach aimed at analyzing the importance and effectiveness of public sector auditing in the Republic of North Macedonia. To conduct the research, quantitative methods of data collection and alaysis were employed to assess respondents perceptions of auditing practices, the implementation of audit recommendations the effectiveness of internal controls and communication between auditors and management.

2.1 Data Collection

The research population includes public administration officials, auditors, managers and other specialists who are directly or indirectly involved in auditing processes. A purposive sampling method was uses to select participants, with the aim of including individuals with relevant knowledge and experience related to the research topic. A total of 120 respondents participated in the study and their responses constitute the empirical basis for the analysis and interpretation of the findings.
Primary data were collected through a structured questionnaire consisting of 15 questions of 10 of which formulated using a Likert rating scale, while the remaining 5 were closed-ended questions with predefined response options. The research instrument was designed to provide standardized and comparable data, enabling the analysis of key dimensions of auditing effectiveness in the public sector.

Data processing and analysis were conducted using SPSS (Statistical Package for the Social Sciences). The analysis includes descriptive statistics, which are used to present the main characteristics of respondents answer, as well as further statistical analyses to examine relationships between the research variables. In particular, Pearson's correlation analysis is used to assess the direction and strength of relationships between variables, while regression analysis is employed to examine the explanatory relationships between selected factors and auditing effectiveness in accordance with the research hypotheses.

2.2 Econometric Model Specification

The study focuses on four main dimensions: the impact of audit recommendations on institutional effectiveness; the relationship between audit frequency and audit quality; the role of internal controls in implementing audit recommendations; and the importance of communication between auditors and management in facilitating their implementation. These dimensions provide the basis for the empirical testing of the hypotheses and the assessment of factors that may influence the effectiveness of public sector auditing.
Finally, the results of the statistical analysis are interpreted in relation to the research objectives and hypotheses, with the aim of drawing conclusions supported by empirical data and proposing recommendations that contribute to improving auditing practices.
Econometric model:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \cdots + \beta_n X_n + \mu \quad (1)$$

Where:
$Y = depended\ variable$
$\beta_1, \beta_2, \ldots, \beta_n - independed\ variable$
$\beta_0 - constant$
$\mu - error\ term$
The model is used to examine the relationship between public sector auditing practices and their effectiveness, particularly regarding the implementation of audit recommendations, audit frequency, internal control structures and the quality of communication between auditors and management.

3. Results and Data Analysis

This section presents the empirical findings of the study based on data collected from 120 respondents through a structured questonnaire. The collected data were analyzed using the Statistical Package for the Social Sciences (SPSS). The analysis is divided into three main parts: descriptive statistical analysis, correlation analysis and regression analysis. These methods were used to examine respondents perceptions of public sector auditing and to assess the relationships between the main research variables in accordance with the research hypotheses.

3.1 Descriptive Statistical Analysis

Descriptive statistics are used to describe the characteristics of the sample in the methodology section of a report and to check variables for potential violations of the assumptions underlying statistical techniques. These descriptive statistics include the mean, standard deviation, range of values, skewness and kurtosis (Pallant, 2011).

Table 1: Descriptive Statistics of Respondents Demographic Characteristics

Variable	Category	Frequency (N)	Percentage (%)
Gender	Male	60	50 %
	Female	60	50 %
Age	35 – 44 years	45	37 %
Education	University degree	70	59 %
Work Experience	2 – 5 years	40	33 %

Source: The author

Based on the data presented in Table 1, it can be observed that the sample consists of 60 participants, representing both genders with an equal gender distribution, the largest age group 37% falls between 35 and 44 years old, the majority 59% hold a university degree and 33% of the participants have between 2 and 5 years of work experience.

Table 2: Descriptive Analysis for Likert-Scale Questions

Variable	Mean	Standard Deviation
2. Importance of auditing practices for transparency	4.2	0.87
3. Current effectiveness of public sector auditing	3.25	0.99
5. Frequency of audit inspections	3.4	1.07
6. Senior management support for auditing	3.5	1.12
7. Transparency of audit reporting	3.2	1.03
8. Contribution of auditing to administrative performance	4.3	0.84
9. Satisfaction with audit report quality	3.35	1.11
10. Frequency of changes in auditing practices	3.05	1.02
12. Auditors preparedness for public sector challenges	3.58	0.90
13. Impact of auditing on public financial management	3.73	0.93
Overall mean	**3.56**	**0.99**

Source: The author

Based on the data in Table 2, it can be observed that, overall the respondents view auditing as important and effective within the public sector of North Macedonia. Considering the overall mean and standard deviation for the set of Likert-scale questions a mean of 3.56 and a standard deviation of 0.99, the results indicate a positive perception and a moderate dispersion of responses. Questions concerning the improvement of transparency and performance in the public sector yielded higher mean scores, while those regarding changes to practices reflected comparatively lower scores overall, these data point to a generally positive trend.

Table 3: Descriptive analysis Closed-Ended Questions

Variable	Most Commonly Selected Response	Frequency (N)	Percentage (%)
1.Position in public administration	Manager	36	30 %
4. Main challenges affecting audit effectiviness	Lack of transparency in reporting	36	30 %
11. Most effective auditing methods	Financial auditing	38	32 %
14. Main benefits of auditing for public institutions	Process optimization	38	32 %
15. Recommendations for improving auditing practices	More training and professional development	52	43 %

Source: The author

Based on the data in Table 3, 30% of the participants hold managerial positions. An equal percentage 30% indicated that a lack of transparency in reporting hinders the effectiveness of auditing in the public sector. Furthermore, 32 % of respondents identified financial auditing as the most effective method, while another 32 % highlighted the process optimization as the primary benefit that public institutions derive from auditing. Finally, 43 % of the respondents emphasized that improving auditing practices in the public sector requires increased training opportunities and professional development.

3.2 Correlation Analysis

Correlation analysis is a fundamental method in economic research; it enables the identification of statistical relationships between the key variables that structure the phenomena under study. This analysis is used to assess the strength and direction of the linear relationship between the selected variables, facilitating a robust and thorough analysis.
For this purpose, we will employ the Pearson correlation coefficient, which is the standard method for numerical variables and distributions that approximate a normal distribution. The Pearson coefficient provides a more robust and accurate measure compared to other coefficients.

Table 4: Comparative Summary of Correlation Analysis Results for Hypotheses H1-H4

Hypotheses	Independent Variable	Dependent Variable	Pearson Correlacion Coefficient (r)	p-value
H_1	Implementation of recommendations	Public sector effectiveness	0.62	0.001
H_2	Audit frequency	Audit quality	0.57	0.002
H_3	Internal control structures	Efficiency of implemenatation of recommendations	0.59	0.001

H4	Communication quality	Degree of implementation of recommendations	0.54	0.001

Source: The author

The Perason correlation analysis conducted across all the research hypotheses (H1-H4) indicates that all theoretically predicted relationships are positive and statistically significant (p=0.001 for three hypotheses and p=0.002 for one hypothesis), providing strong statistical support for the conceptual farmework of the study.

3.3 Regression Analysis

Regression analysis is a statistical method used to examine the values of a dependent variable by using one or more independent variables. This method is important for understanding the impact of various factors on a phenomenon and for predicting future values based on existing data (Hameli, 2017).

Table 5: Comparative Summary of Regression Analysis Results for Hypotheses H1-H4

Hypotheses	**Independent Variables**	**Beta**	**R^2**	**p-value**	**Status**
H1	Implementation of Audit Recommendations	0.350	0.420	<0.001	Confirmed
H2	Audit Frequency	0.370	0.375	<0.001	Confirmed
H3	Internal Control Structures	0.360	0.407	<0.001	Confirmed
H4	Communication quality	0.380	0.429	<0.001	Confirmed

Source: The author

As shown in Table 5, all hypotheses (H1-H4) are supported, as the Beta coefficients for the main variables are all positive and significant ($p<0.001$). The R^2 values for all hypothesis fall within the 0.37-0.43 range considered moderate indicating that the models explain a significant portion of the variance in the dependent variables. Hypothesis H4 (communication quality) has the highest R^2 value (0.429), suggesting that this factor explains a greater proportion of the variance in the effectiveness of recommendation implementation compared to the others.

Conclusions

This study confirms the importance of auditing as a strategic mechanism for strengthening transparency, accountability and efficiency in the public sector of the Republic of North Macedonia. The empirical findings indicate that audit quality is positively associated with the implementation of audit recommendations, audit frequency, the effectiveness of internal control systems and communication between auditors and management. The correlation and regression analyses provide statistical support for all four research hypotheses (H1–H4), demonstrating the importance of these factors in improving public sector auditing practices.
The findings highlight the need for public institutions to consider auditing not merely as a control instrument, but also as an opportunity for continuous institutional improvement. In this

regard, strengthening internal control structures, ensuring the more effective implementation of audit recommendations, enhancing reporting transparency and investing in professional training and development are essential. Furthermore, the adoption of modern technologies and alignment with international standards can contribute to the advancement of the auditing system.

In conclusion, the effectiveness of auditing is measured not only by its ability to identify weaknesses, but primarily by the capacity of institutions to transform recommendations into concrete actions and sustainable results. Therefore, strengthening auditing represents an important step towards building more transparent, efficient and accountable public institutions that serve the interests of citizens.

Nomenclature

RMV – Republic of North Macedonia
MV – North Macedonia
SPSS – Statistical Package for the Social Sciences
ISA – International Standards on Auditim
IAP – Institute of General Auditing
AAPK – Agency for Public Audit and Control
INTOSAI – International Organization of Supreme Audit Institutions
SNA – International Auditing Standards

References

[1]. Al-Akra, M. (2013). *The impact of the new publik management on public sector accounting: A review of the evidence*. Managerial Auditing Journal, 28

[2].Civil Service of North Macedonia. (2021). *Raporti vjetor mbi sfidat dhe mundësitë në auditimin e sektorit publik të Maqedonisë së Veriut* [Annual report on challenges and opportunities in public sector auditing in North Macedonia].

[3].Consortium of Auditors of North Macedonia. (2020). *New strategy for the development of auditing in North Macedonia: Raising standards and promoting transparency*.

[4].Freedman, D. A. (2005). Statistical models: Theory and practice. Cambridge University Press.

[5].Gujarati, D. N., & Porter, D. C. (2009). Basic econometrics (5th ed.). McGraw-Hill.

[6].Hameli, K. (2017). *Statistics for Economists* (2nd ed.). Pegi.

[7].Hyseni, M., & Selmani, E. (2019). *Auditimi i performancës në sektorin publik – rëndësia dhe sfidat në kontekstin e Maqedonisë së Veriut* [Performance auditing in the public sector – Importance and challenges in the context of North Macedonia]. *Revista Ekonomike, 6*.

[8].Institute of Internal Auditors. (2022). *Annual performance report: Improving efficiency in the public sector of the Republic of North Macedonia*. Office of the Auditor General of the Republic of North Macedonia.

[9].Lapsley, I. (2008). The NPM agenda: Back to the future. Financial Accontability & Management.

[10].Lapsley, I. (2019). The performance puzzle: Understanding the performance of public organizations. Journals of Public Budgeting, Accounting & Financial Management, 31(4),478-495.

[11].Lewis-Beck, M.S. (1995). Data analysis: An introduccion. Sage Publications.

[12].Mihajlovska, I. (2020). Challenges and improvements in public sector auditing: A case study. Journal of public administration and governance, 10.

[13].Office of the Prime Minister. (2023). *Ligji mbi auditimin dhe llogaridhënien në sektorin publik të Maqedonisë së Veriut* [Law on Auditing and Accountability in the Public Sector of the Republic of North Macedonia].

[14].Oxford University Press. (2023). Oxford Reference Online. Retrieved from https://www.oxfordreference.com/

[15].Pallant, J. (2011). SPSS Survival Manual (6th ed.) Routledge.

[16].Pilsudski, J. (1931). The memoirs of Jozef Pilsudski. New York: Polish Book Imorting Co.

[17].Pollit t, C., & Summa, H. (1997). Reflexive watchdogs? How supreme audit institutions account for performance and audit. Public Administration.
[18].Pollitt, C., & Bouckaert, G. (2017). Public management reform: A comparative analysis – Into the age of austerity (4th ed.). Oxford University Press.
[19].Pollozhani, N. (2016). *Kontabiliteti publik* [Public accounting].
[20].Pollozhani, N. (2017). *Raportimi financiar* [Financial reporting].
[21].Power, M. (1999). The audit society: Rituals of verification. Oxford University Press.
[22].Snyder, T. (2010). Bloodlands: Europe between Hitler and Stalin. New York: Basic Books.
[23].State Audit Commission. (2021). *Annual report on audits conducted in the public sector in 2021*.
[24].Teodorovska, M. (2005). Auditing and Financial Transparency in the Public Sector of the Republic of North Macedonia. Skopje, North Macedonia: Skopje University Press.
[25].Trajkovic, G. (2008). Descriptive Statistics. In encyclopedia of Public Health. Springer.
[26].Wooldridge, J. M. (2013). Introductry econometrics: A modern approach (5th ed.). South-Western Cengage Learning.