ANALYSIS OF THE INFLUENCING FACTORS REGARDING THE IMPROVEMENT OF THE INTERNAL MANAGERIAL CONTROL AND OF THE INTERNAL AUDIT AT THE ENTITIES OF PUBLIC INTEREST

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Abstract: Implementation and development of the relationship internal managerial control - internal audit is not only a legislative issue, but rather a problem of changing the mentality that aims over time and change the organizational culture. For these reasons, the implementation and development of the internal managerial control system in correlation with the internal audit has produced and will produce a series of fundamental changes in the organization and functioning of public interest entities, which contribute to: increasing managerial responsibilities; understanding the philosophy of risk management; inherent risk management and awareness of the introduction of specific internal management control techniques and tools.

Keywords: Internal managerial control, internal audit, public interest entity, risk management.
JEL Classification: M42.

1.   Introduction

The internal audit function is especially useful for the management of the entity, offering it assistance and counselling for decision making, based on the experience and knowledge gained during the verifications and evaluation of the activities subject to audit. At the same time, through the opinions, conclusions and recommendations given to the management, the internal audit contributes to the adoption and improvement of their decisions. We also believe that better communication between management and internal audit can lead to an increase in the efficiency of the decisions taken.

Public internal audit should not be confused with the internal control function of which it is a part, it is not a more "sophisticated" form of strengthening control as it is often misunderstood, but a managerial counselling function.

In our opinion, the concept of audit- counselling should be used as often as possible to eliminate confusion with the notion of audit-control, even if the two notions are not incompatible. The audit, by examining the efficiency and effectiveness of the entity's actions, adds value to the control and a rigorous control facilitates the auditor's work. This added value brought in the decision-making processes that take place in public entities, managers substantiate their decisions, based on the information they have and after consulting with internal and external specialists who master the field of activity specific to the entity. Specialists must include internal auditors who have in-depth knowledge of all activities within the entity, as by the nature of their function, using specific techniques and methods, they examine and evaluate both the adequacy and effectiveness of the internal control system and the quality of the activities carried out in the entity, thus enriching its knowledge and experience in the field. At the same time, auditors assess (Macarie, 2008) the degree of risk that may affect the achievement of objectives if certain decisions are made and determine the level of risk that the entity is prepared to accept.

2.   Literature review

Until the consolidation and regulation of audit and internal control functions, respectively, in most European countries, the main research in the field focused on: Strain M.M. (1946) - audit questions from professional examinations, comments on selected cases and topics; Field W.H. & Cashin J.A. (1947) - Internal control standards and audit

procedures; Cashin J.A. & Owens G.C. & Byrnes W.T. (1963) - Audit, Brasseaux J.H. & Miles F.L. (1972) – Auditor's Report: Cases and Illustrations; Marwick P. & Mitchell & CO (1976) - Research Opportunities in Auditing. Also noteworthy are the research of specialists Arens A., Loebbecke K. (2003) or Littleton A. (1961) who develop an integrated approach to auditing.

Staciokas R. & Rupsys R. (2005) conducts a dynamic analysis of the evolution of internal audit responsibilities and states that, "internal auditors provide counselling and recommendations for general management, take part in risk management processes and provide recommendations for improving these processes".

From a management perspective, Saam J. (2007), considers that internal audit "supports the management of the entity in fulfilling its obligations and strengthens the trust of the entity's owners in the integrity of management", and J. Renard (2006) considers that internal audit is all that should be to make a person in charge to make sure that he has a good control over the business if he had time or if he knew how to proceed".

Following the signing of the European Accession Agreements in 1993 and the submission of the application for accession to the European Union in 1995, Romania received recommendations regarding the organization of the audit and internal control activity.

Regarding the **public internal audit**, at the recommendations of the European Commission was introduced, in the control and audit system in Romania, the internal control and implicitly the internal audit, through O.U.G. no. 119/1999 on internal public audit and preventive financial control.

Currently**,** the internal public audit is regulated by Law no. 672/2002 regarding the internal public audit, explained by its application norms issued in 2003, which regulates the activity within the public institutions, with extension to the other organizations whose owner is the state. It should be noted that the introduction of public audit activity in our country is not an imperative imposed by the acquis communautaire, a takeover or an adaptation, thus leaving a fertile ground for finding solutions adapted to the specifics and particularities of the national economy. To the regulations mentioned above is added the adoption of the Internal Control Code by O.M.F.P. no. 946/2005, including the standards of management and internal control at public institutions and for the development of managerial control systems, elaborated according to the model of the Integrated Code of Risk Management (COSO-ERM model) from 2004.

3. Research methodology

This research is a process of choosing from a population a group whose opinions we wanted to know. Thus, each part of the study has an equal probability of being selected. In this study, the population consists of internal and external auditors from some public entities analysed in Bucharest.

The questionnaire was sent to 82 internal and external auditors, only 50 questionnaires were returned with complete data, obtaining a response rate of 60.97%.

The questionnaire was conducted for a study, including 2 types of questions relevant to the empirical case, respectively:

a) General questions, with the role of providing a clear picture of the personal profile of the respondents in the sample;

b) Questions regarding the opinion and perception regarding the opinion and perception of the respondents regarding the way of improving the internal managerial control and the internal audit).

The data collected from the 50 participants in the questionnaire were included in a database created within the SPSS program variant 22.

In order to highlight the processed information, the functionalities of statistical data analysis were used, by approaching several types of analyses, as follows:

➢ Univariate analyses: frequencies, distributions;
➢ Bivariate analyses: Pearson Correlation, ANOVA;
➢ Significance tests: T test for independent samples.

The instrument reliability of this study was tested using Cronbach's Alpha. According to the authors (Kaiser, 1974, pp.31-32), the instrument is considered acceptable when the value is over 60%.

Table no. 1 shows the level of reliability coefficients of the items processed in the questionnaire that are higher than 70%, which is considered extremely reliable.

Table no. 1 Reliability coefficients for measuring variables

Number of items	Variables	Cronbach's Alpha
1.	*Profession of auditor and the connection with education*	0.872
2.	*Internal managerial control system (IMCS) organization*	0.864
3.	*Approaching and applying a IMCS standard*	0.823
4.	*IMCS evaluation*	0.759
5.	*IMCS implementation*	0.831
6.	*IMCS development and improvement*	0.797

The results of the socio-demographic information are presented in (table no. 2) and, respectively in the graph from (Figure no. 1) as follows:

Table no. 2 Socio-demographic information

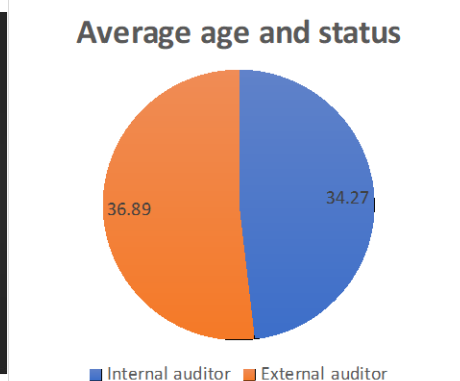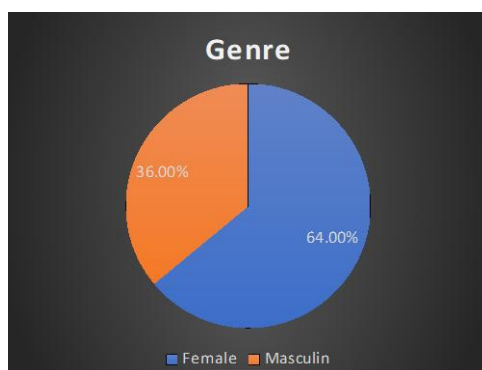| Variables	Answer	Frequency	Percent
Genre	Female	32	64%
	Male	18	36%
		N	**Average**
Average age and status	Internal auditor	28	34.27
	External auditor	22	26.8

Figure no. 1 Results of socio-demographic information
Source: Own projection

4. Perceptions on the means of improving the internal managerial control system (IMCS)

The study used a dependent variable, which is represented by the improvement of the internal managerial control system and 4 independent variables reflected in the prism of the topics of perception debated, the country approached being Romania.

The integral regression model for the empirical investigations in estimating the factors that could explain the means of improvement of the managerial internal control system through the prism of the auditor profession, is presented as follows:

$$IMCSi = \square 0 + \square 1Fi + \square 2Ri + \square 3PRi + \square 4DIFi$$

The regression model highlights the relationship between a dependent variable (Improving the internal managerial control system - IMCSi) and four independent variables, respectively:

1. Fulfilment of functions and duties in an economical and efficient way - Fi;
2. Compliance with legal regulations and management provisions- Ri;
3. Protection of resources against abuse, loss or fraud - PRi;
4. Development, maintenance and provision of accurate and complete financial information DIFi.

The standard deviations of three of the topics addressed were less than 3, namely: the perception of the fulfilment of functions and duties in an economical and efficient way, the perception of Compliance with legal regulations and management provisions and the perception of the Development, maintenance and provision of accurate and complete financial information.

The results in (table no.3) show that the perceptions regarding the Improvement of the internal managerial control system are not, on average, similar.

The calculation of the indicators of the central tendencies, the average and the standard deviation of the variables involved in the model is presented in the same table, where the general statistics of the regression equation are highlighted.

Table no. 3. General statistics of the regression equation

	N	Average	Standard deviation
Perceptions of performing functions and duties in an economical, efficient and effective way	50	1.5500	0.7491
Perceptions of compliance with legal regulations and management provisions	50	2.3650	0.9787
Perceptions of protecting resources against abuse, loss or fraud	50	3.9000	1.4813
Perceptions of developing, maintaining and providing accurate and complete financial information	50	3.2300	0.8082

Table no. 4 presents the results of the Pearson correlation analysis regarding the variables, by testing the hypotheses and interpreting the Pearson correlation results.

Table no. 4. Results of Pearson correlation analysis

		IMCS	F	R	PR	DIF
IMCS	Correlation Statistical significance (second extremity) N	1 50				
F	Correlation Statistical significance (second extremity) N	1.130 0.079 50	1 50			
R	Correlation Statistical significance (second extremity) N	-0.017 0.000 50	0.043 0.001 50	1 50		
PR	Correlation Statistical significance (second extremity) N	0.147 0.000 50	0.169 0.001 50	0.106 0.001 50	1 50	
DIF	Correlation Statistical significance (second extremity) N	0.297 0.000 50	0.359 0.001 50	0.217 0.001 50	0.056 0.000 50	1 50

It is observed that out of the total of 4 explanatory variables tested in this study, there is a significant correlation between 3 independent variables Fulfilment of functions and duties in an economical and efficient way (F), Protection of resources against abuse, loss or fraud (PR) and Development, maintenance and provision of accurate and complete financial information (DIF) and the dependent variable, for example, Improvement of the internal management control system. The correlation between Compliance with legal regulations and management provisions and Improvement of the internal management control system (IMCS) has a very weak value. Based on the results in the table, there is a positive relationship between the dependent variable (IMCS) and most independent variables.

In the analysis of the factors that could influence the improvement of the internal managerial control system, a regression analysis was used to test the effect of the 4 independent (explanatory) variables on the dependent variable (explained).

Table no. 5. Regression analysis

Model	Sum squared	Df	Average deviation	F	Sig.
Regression	4.582	4	0.936	0.499	0.801[a]
Residual statistics	51.506	43	1.867	-	-
Total	57.100	47	-	-	-

a) Elements: (Constant variable), F, R, PR, DIF

Table no. 6 contains information on the dependent variable explained by the existing model used in this study and the residual one that indicates the oscillation of the dependent variable that is not included in the model.

In order to ensure the statistical adequacy of the model, the conformity can be measured by the sum of the correlation coefficients called R^2.

Table no. 6. Conformity based on correlation coefficients

Model	R	R^2	adjusted R^2	Estimated errors
1	0.285[a]	0.082	-0.082	1.361

➢ Elements: (Constant variable), F, R, PR, DIF

As presented in Table no. 6, both R^2 and adjusted R^2, measure the conformity of the model, for example, the proportion of the oscillation of the dependent variable explained by this model.

Since the adjusted R^2 represents the modification of the limitation of R^2, the value of the adjusted R^2 is meant to measure the conformity of the model. Thus, according to the table, the value of adjusted R is 0.082, indicating that the independent variables in the model explain an 82% oscillation of the dependent variables. In this case, it can be deduced that the study model provides good data compliance. This result practically indicates that the independent variables in this research are the major factors in improving the internal managerial control system.

Table no. 7. Correlation between the explanatory variables and the IMCS dependent one

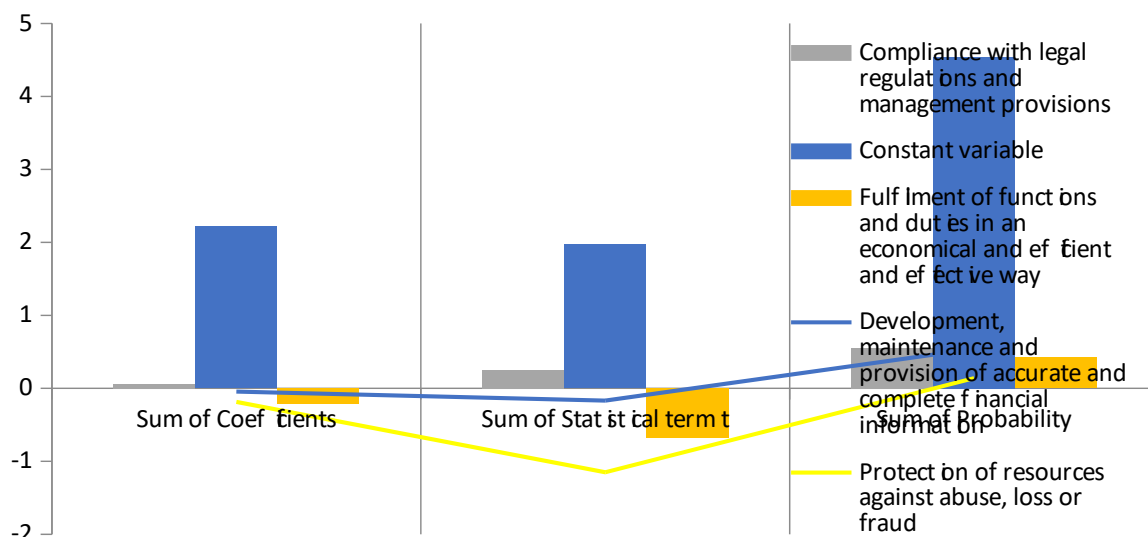| Variables	Coefficients	Statistical term t	Probability
Constant variable	2.216	1.968	4.542
Fulfilment of functions and duties in an economical and efficient and effective way	-0.217	-0.672	0.425
Compliance with legal regulations and management provisions	0.058	0.248	0.555
Protection of resources against abuse, loss or fraud	-0.186	-1.151	0.139
Development, maintenance and provision of accurate and complete financial information	-0.045	-0.169	0.539

Figure no. 2

Source: Own projection

As underlined in the table and figure above, the results of the 4 explanatory variables tested in this study confirm that there is an insignificant relationship between them and the analysed dependent variable (IMCS).

Taking into account the highlighted values, the multiple regression line is represented by the following regression equation:

$$IMCS = 2.216 – 0.217*F + 0.058*R - 0.186*PR - 0.045*DIF$$

5. Analysis of the reliability coefficients of the measured variables analysed

Factor analysis is a technique that is used to reduce variables to factors with a small number. Before using the factor analysis, the hypotheses of normality, homoscedasticity and linearity were verified.

In this regard, the Kaiser Meyer Olkin (KMO) model was used to measure the adequacy of the sampling, also the Bartlett globosity test was used to test the inter-correlation between the factors.

Table no. 7 illustrates the KMO guide for interpreting factor analysis values.

Table no. 7. KMO Guide

KMO	Opportunity for factor analysis
0.90 - 1.00	Wonderful
0.80 - 0.89	Satisfactory
0.70 to 0.79	Medium
0.60 to 0.69	Mediocre
0.50 to 0.59	Ungrateful
Less than 0.50	Needs to be excluded

The reliability was tested again after factor analysis to ensure the reliability of the instrument.

Cronbach's Alpha is considered an appropriate test of the reliability of the survey instrument.

Table no. 8 shows that Cronbach's Alpha ranges from 70.6 to 86.1%, which exceeds the minimum value of 70% to be acceptable. This means that the instruments used to measure the variable were acceptable and the data were subsequently used for further analysis.

Table no. 8. Reliability of the survey instrument

Number of items	Variables	Cronbach's Alpha
1.	*Profession of auditor and the connection with education*	0.790
2.	*IMCS organization*	0.861
3.	*Approaching and applying a IMCS standard*	0.848
4.	*IMCS evaluation*	0.851
5.	*IMCS implementation*	0.706
6.	*IMCS development and improvement*	0.790

The present study relies on tolerance (TOL) and variance inflation factor (VAR) to test collinearity. TOL values should be above 10% and VAR should be less than 10%. (Table no. 9) indicates that there is no multi-collinearity between the variables, because the values of the inflation factor of the VAR variance were between 1,428 and 1,975, and the TOL tolerance values were between 50.1% to 69.7% percent.

Table no. 9 Tolerance and variance values

Variables	TOL	VAR
Profession of auditor and the connection with education	0.643	1.541
IMCS organization	0.501	1.975
Approaching and applying a IMCS standard	0.697	1.428
IMCS evaluation	0.595	1.673
IMCS implementation	0.529	1.880
IMCS development and improvement	0.536	1.789

For the analysis of linearity, normality and homoscedasticity, the Skewness and Kurtosis tests were performed before testing the hypotheses.

Table no. 10. Skewness and Kurtosis Tests

Variables	Skewness		Kurtosis	
	Statistic	*Std. Error*	*Statistic*	*Std. Error*
Profession of auditor and the connection with education	-.541	.203	-.215	.302
IMCS organization	-.436	. 203	.453	.302
Approaching and applying a IMCS standard	-.697	. 203	.402	.302
IMCS evaluation	-.782	. 203	.226	.302
IMCS implementation	-.326	. 203	-.198	.302
IMCS development and improvement	.526	203	-.205	.302

The results show that the Skewness and Kurtosis ratios are between ± 1.94 and 2.56, respectively, indicating that the data are normally distributed.

Table no. 11 shows that, in general, auditors have a moderate and favourable perception of the improvement of the internal managerial control system.

Table no. 11 Auditors' perception of IMCS improvement

Variables	Number of items	Average	Standard deviation
Profession of auditor and the connection with education	4	3.453	.64543
IMCS organization	7	3.953	.62171
Approaching and applying a IMCS standard	7	3.653	.60151
IMCS evaluation	8	3.899	.62123
IMCS implementation	10	3.903	.67532
IMCS development and improvement	10	3.925	.69061

This section presents the conclusions of the relationship between the dependent variable (Improving the internal management control system) and the independent variables *(Profession of auditor and the connection with education, IMCS organization, Approach and application of IMCS standard, IMCS evaluation, IMCS implementation, IMCS development and improvement).* In this regard, the study used multiple regression.

The regression result shows that the value of R^2 is 49.7% and the value of F is 12,534. (Table no. 12) presents these results.

Table no. 12. Multiple regression results

Variables	Non-standardized coefficients		Standardized		
		Std. Error	*B*	*t-value*	*Sig.*
Constant	2.123	.036		4.261	.002
Profession of auditor and the connection with education	.617	.096	.479	2.223	000
IMCS organization	.613	.103	.391	2.679	.006
Approaching and applying a IMCS standard	.437	.112	.302	3.162	.000
IMCS evaluation	.395	.101	.199	4.415	.003
IMCS implementation	.326	.015	.496	5.302	.000
IMCS development and improvement	.529	.010	.463	5.313	.000

*F= 12.534 R^2 = .497 Sig. = 0.05

The study shows the relationship between internal and external audit, as well as the improvement of the internal management control system using a questionnaire survey among auditors.

Interestingly, the extracted results showed that the participants perceived favourably the link between internal control and internal audit in relation to external audit in order to increase the quality of the managerial internal control system.

7. Conclusions

Currently, implementing rules are established for all CIM standards and specific activities are being carried out to maintain and develop these standards, but, as in any field, there is the possibility of improvement. At the level of public interest entities, it is important to maintain and develop a coherent system of internal managerial control, taking into account the minimum requirements of internal managerial control standards.

Particular importance must be given to *Standard no. 8 - Risk management*, which is a key element of the internal management control system. Risk management involves a series of complex activities, because the risks are found in various fields and categories: security, war scenarios, financial, environment, IT, reputation, occupational health, etc.

The main aspects to be taken into account in the future by public interest entities, in terms of internal managerial control, according to the legislation, would be: creating an organizational framework conducive to the implementation and development of the internal managerial control system, establishing a clear flow of information and coherently, a good risk management, useful procedures, updated and adequate to the structures and activities of the entity.

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