CONTRIBUTIONS IN THE ANALYSIS OF USING CAAT’S IN AUDIT OF EUROPEAN FINANCED PROJECTS FROM ROMANIA

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**Keywords:** audit, funds, risks, HOMALS, European audit policy, CAAT’s, e-cohesion, Cloud technology
Abstract of PhD Thesis

The basis of decisions on the level of EU cohesion policy is the budget of the supra-state structure and the political and economic destiny of each member state. This colossal decision pressure can also be managed through post-decision actions for projects that are in the various stages of their implementation, actions initiated through the continuous communication and cooperation of national actors at different levels of national and European governance, vertical and horizontal. According to Inforegio Regional Policy, The European Commission approves the Structural Funds using the partnership principle, the principle of additionality of European Union expenditure to those of recipient states, the principle of concentrating expenditures, efforts and resources and the principle of programming on objectives and priorities through multiannual programs. (European Commission, 2014)

The main objective of this paper is to fit the analysis of the determinants form the process of absorption of European funds from Romania in the context and the theories that cooperate in the environment outlined above, in conjunction with the role of using audit software. The body of the work is created on the two strands that distinguish between the political programs that govern the funded projects and the technologies that can be used to achieve programmatic goals.

The purpose of the paper is to map the intellectual structure of the research field in which was carried out the analysis of the specialized literature and of the procedural framework valid at the level of the European funded projects in Romania. This approach was continued by analyzing the various determinants in the absorption process of the funds, according to the literature, in order to obtain a predictability on respondents' perception of the determining factors in the absorption process of the previous period (2007-2013). An analysis was conducted on the role and possibilities of using the IT tools in the audit missions of the European funded projects, following the investigation of the factors that influence the use of CAAT's in Romania.

The results of the research carried out during 2013-2017 were disseminated through BDI or ISI indexed articles and through national or international conferences.

The paper is structured in five balanced chapters, the information transmitted harmoniously combining concepts of a theoretical nature with practical ones.
In the first chapter of the doctoral thesis “Theoretical dimensions on the audit of European funded projects” investigations of the SSCI-JCR databases were conducted for the period 2000-2017 following the main concepts needed in the research: audit, funds and risks and creating 27 descriptors related to them. Using the HOMALS method (Homogeneity Analysis by Alternating Least Squares) and IBM SPSS Statistics 19 & QDA Miner applications we mapped two-dimensionally the intellectual structures in the field of research, we followed the dynamics of this field and described the identified and unexplored research areas. The study highlighted the applied standards, types of missions and theories used in this field. One of the descriptors that were created, called information technologies, recorded an increase in interest over the period 2011-2017, with a percentage change in the frequency over the 2000-2010 period of about 398%, proving the importance of our study in the field of research described. The chapter ends with a brief presentation of the conceptual framework valid for European funds in Romania, pointing out the different methods of impact analysis for the use of funds and the strategies proposed for application in Romania during the next period of absorption. This analysis was complemented by the comparative study of the budgets allocated to cohesion policy for the two programming periods.

Chapter two, entitled “Determinants in the process of absorption of European funds” adds value to the structure, at its level presenting the results of the absorption rate analysis for Romania compared to the other EU member states, both in 2013 and in the end of 2016, the speed of requesting funds and percentages of possible errors in calculating payment requests to the European Commission during the first programming period. This information is particularly important in the context of the year 2019 when The Commission will analyze the intermediate targets taking into account performance indicators based on output and financial indicators achieved and may suspend payments or make financial corrections for operational programs.

Using a qualitative methodology combined with quantitative methods we have analyzed the determining factors in the absorption process that referred to the absorption rate (which measures the efficiency of allocation) and added value at macroeconomic level (which measures the effectiveness of projects) registered for the period 2007-2013. The results of the survey pointed the obtained predictabilities, on the one hand the perception of the influence of political, financial and human resources factors and of the main actors in the absorption process on the rate of absorption of European funds, and on the other hand the perception of the impact of the process of absorption of European funds on major economic indicators. The surprising
factor in the results described was the importance attributed to the human resource in the implementation of the project. Respondents consider human factors decisive in the absorption process but it is impossible for them to define exactly the importance of the independent financial auditor in funds absorption, including at the level of those 34% of respondents who answered they had management positions during the 2007-2013 period. The results of the study highlight the role of the auditor in the process of preventing irregularities. These results highlight the need to review the possibility of carrying out continuous audit missions, so that the beneficiaries will feel the auditors’ full participation in the absorption process.

At the end of this chapter we have highlighted dependencies within the cohesion policy created by the European Code of Conduct through the principle of partnership and institutionalized mechanisms of multi-level governance. The principle can positively affect through the partnership agreement, the cash-flow of projects but also to avoid mediation between the parties to the Partnership Agreement, especially for substantial sums such as in strategic projects.

Another objective of the paper was CAAT's (computer assisted auditing techniques) analysis to assess the possible benefits that they could bring in the financial audits of European funded projects. Thus, in chapter three of the paper, “Use of IT tools in financial audit missions in Romania”, we intended to answer the question whether the use of IT tools can increase the performance of the audit engagement and indirectly of the project itself.

The use of CAAT's has been encouraged by recent international audit standards but also by studies that have proven it can provide increase of the efficiency and effectiveness of audit engagements. These standards do not also provide the necessary methodologies for CAAT's involvement in audit engagements which offers research opportunities for professionals in the field confronted with concrete situations. Understanding the mechanisms that prevent the increase in the number of users of audit software may lead to various initiatives to facilitate their use. One of the prerequisites considered important following the research is the existence of computerized accounting systems but also performing audit missions to customers with a high volume of activity and complex systems. The study takes into account the possibility to use continuous audit missions for auditing European funded projects. It started from the hypothesis that such missions could solve the need to achieve quick, fair and viable results for the beneficiaries but also for Management Authorities. Another hypothesis of the research referred to the fact that any user will try these tools to achieve simpler goals in order to later increase the degree of difficulty.
In the analysis carried out in this chapter we investigated the degree of audit software usage in the various phases of the audit engagement, if the same IT tool is used in the different phases of the mission and the reasons for choosing these CAAT’s. The qualitative study investigated whether financial auditors carried out audit missions of projects financed by European funds and which would be the need for audit software on the market of financial audit services in Romania, including for continuous audits. Our research has highlighted that the majority of IT users in audit missions appreciates the ease in using the data, low cost of the application, easy access to information within it, multiple data management capabilities and application reliability.

The most important result of our research was the need of auditors to have IT solutions tailored to audit methods and techniques, and to the legislation applicable to financial audit missions in Romania.

The results of these researches have determined that in the next chapter we compare the characteristics of two applications – CAR and gA – in order to evaluate in detail the benefits and limitations that they can present and the possibilities to use them for the purpose of increasing the efficiency of financial audit missions of European funded projects in Romania.

In chapter four of the paper, called “The role and possibilities of using the IT tools in the audit missions of European funded projects in Romania” continued at first instance with the analysis of IT tools which Romanian auditors have declared to use based on the results of the study in the previous chapter.

The analysis continued by investigating how two computer tools work and the ways in which they can be used in the audit missions of European funded projects. Following this study, we presented the comparative situation of the inputs and outputs specific to the two instruments and of the tools available to financial auditors in the tested versions.

A subchapter provided information on the possibility of using Cloud technology in the electronic management of the documentation of a European funded project and for which the inputs and outputs that can be used in Owncloud 8.0.16 technology have been identified. Using the prototype proposed for management using this technology, the benefits and boundaries of the technology were described.

The measures adopted within the procedural framework of the European Union and their applicability at the level of the projects implemented in Romania were highlighted in order to determine the possibilities of reducing administrative expenses at project level using e-cohesion policy. The outcome obtained from this analysis resulted in the presentation of cause-
effect dependencies applicable to the actors involved in e-Cohesion for the 2007-2013 period in Romania. There were presented the main developments in the applications used by the Romanian state for the observance of the e-cohesion policy, for which the possibilities of their use have been mentioned to limit the risks of overloading audit missions and the monitoring and control system.

Another objective of this chapter was to investigate the international auditing standards used in the audit missions of European funded projects in Romania for the period 2007-2013 and phases have been described to indicate migration to CAAT's use in project auditing.

The threats and challenges of the traditional audit services market are already presented by the specialty literature and the possibility to provide new ways of analyzing the activity of entities in a timely manner is facilitated by the existence of new technologies. It has been concluded that there are no solutions in the market dedicated to audit missions of European funds and that there are conditions for carrying out such missions, such as the use of IT tools in accounting and management of activities, in both the general and specific sense of the European funded projects. The goal was: to study the literature on the limits of the adoption of continuous assurance (continuous monitoring and audit) and barriers to their adoption, how to use support technology in such missions but also the main decision makers in the context of these assurances. An experiment was made based on a semi-structured interview with financial auditors, members of the Chamber of Financial Auditors in Romania, consisting of 10 questions, to obtain their opinion on the possibility of implementing continuous audits of European funded projects, the impact of the use of IT tools on commitments but also the motivation to use them in audit engagements. The logical diagram illustrating the accounting and auditing processes under the continuous audit procedures was tested, on the example of a request for interim reimbursement for a project with European funding from Romania during the absorption period 2007-2013. Major barriers that the study noticed in adopting continuous audit missions were, on the one hand, the limited availability of these tools but also the lack of people accustomed to them.

It has been concluded that this scheme can be successfully used in reality and information was obtained on the actions that should characterize a prototype of an IT tool dedicated to audit missions of European funds. Another result of this chapter was the description of the stages of the audit mission of European funded projects and of the financial flow of certification, approval, settlement and transfer of European funds proposed for the 2014-2020 programming period.
The final conclusions, own contributions and prospects for further research in the thesis are presented separately in the last chapter titled “Final conclusions”.

The results of this research are of particular importance in the selection and use of CAAT's in the audit missions of European funded projects and in actions of absorption with efficiency and effectiveness of European funds, they may be considered the starting point for carrying out in-depth studies to be performed in the coming period, in particular amid the start of the absorption process for 2014-2020 but also the regulations applicable to auditors during this period.