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Review of the following PhD thesis:

**Evolution of economic-financial auditing system at defense sector,
future trends in its evolution.**

**Comparison of economic-financial auditing with monitoring system,
possibilities of their development.**

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I. Identifying a scientific approach and its actuality

At present the economic and financial auditing systems, which are important segments of military economy, developing and changing alongside the operation of state budget, are regularly exposed to everyday challenges, therefore, they require continuous changes and modifications.

These modifications related to systematic evaluation, risk analysis, controlling-monitoring and the development of organization management by these methods co-habit closely with the establishment, development, transformation and termination of a system.

Why audit is necessary?

As the state employs finances of tax-payers, strict guarantees are necessary in order to efficiently manage these automatically received funds, and to ensure that only the most crucial and obligate amounts are subtracted from citizens. In line with development of market economy, competition and maximization of capital efficiency appear to be up front in economy. However, state administration is obliged to manage with other conditions, competition is minor, its most important goal is to carry out its main tasks – determined by law – at high standards by using the least resources only.

The different goals and protection of tax-payers' money, and the different legislation of entrepreneurs require a strict, controllable system which concentrates all important financial decision-making tools in parliamentary institutions.

As characteristic of democratic societies, we also have to create and establish the guarantees of state's efficient management of public funds. A transparent state budget corresponds with these guarantees, which fulfils all public requirements, operated and controlled by democratically elected MPs' decisions.

Necessity of ensuring efficient and controllable management of public funds requires complex auditing of operation of state budget.

This auditing system has to facilitate the compliance of legislative acts, the collection of due incomes, the efficient, economic usage of public funds, the stability and establishment of budget and of appropriation accounts, the management of public debt, the efficiency of trust management, the compliance of accounting and accountancy vouching systems.

The real challenge itself is whether this auditing system will be realized while regulating the processes within the legislative frames of state budget, and, if yes, whether it will be suitable to manage the resources and assets of national economy and to execute expectable level of monitoring. Secondary, but another challenge of remarkable sources is that, besides unified standards, each sector performs their auditing in different structural environment – even though they may use the same assets and resources –, therefore, diversity of answers can be expected in a very same situation; although, structural and organizational characteristics might include effective solutions for the execution of auditing.

In favor of efficient operation of state budget each actual government regulates the auditing system within legally defined and ensured environment. In relation to this, actuality of this project comes from the fact that while establishing the efficient auditing system of public finance – within transforming operations which highly influence subsystems and sub-organizations – we have to concentrate on operation of certain auditing systems and on revealing and using of incidental resources.

Within those strategic and tactical aims of present and future, which refer to convergence expectations and state balance, within the frames of defense management, it is highly important to reveal the goals of audit efficiency and the expansion of the extant ones, which are characteristics of and can be found in the sector, in order to facilitate the increased protection of assets and resources of state budget.

II. Orientation of research, aims, hypothesis, and methods.

- 1.) **To examine** those internal and external indicators which have influenced and determined the organization, tasks, roles and execution of controlling processes and institutions in the past.
- 2.) **To analyze** general requirements and their realization toward controlling.
- 3.) **To examine** the audit system and its tasks founded for controlling of EU subsidies, and the operations of related institutions.
- 4.) **To reveal** imperfections of economic-financial system, to make proposals for changes, to suggest solutions.
- 5.) **To examine** thoroughly those methods and opportunities, this could be taken over from monitoring systems and could be implemented into economic-financial auditing.

Aims of research:

- 1.) **To interpret and define** the content and concept of audit system of defense sector, which accurately corresponds with present challenges of economic environment.
- 2.) **To determine** those special and different points in controlling system which are characteristics of defense sector and which are to be improved.
- 3.) **To verify** that maintaining and improving the economic-financial audit system of defense sector and designating its future directions have measurable results.
- 4.) **To prove** that development both of modern, facilitative operations of public finances and those of different systems of defense sector, operated at minimum but not satisfactory level, is not only necessary but possible, as well.
- 5.) **To reveal** that implementing an audit system used in state administration into defense sector shows further opportunities and expansion by taking into consideration several experience of monitoring systems.

During my research I have set up the following hypothesis:

- 1.) There are internal organizational and methodological human resource reserves within the economic-financial audit of defense sector and by exploiting these reserves the efficiency of audit is likely to improve.
- 2.) I suppose that the introduction and implementation of those processes that enhance efficiency shall not cause any disturbance of interests and it shall not require extra costs.
- 3.) In case of economic effectiveness, besides quantitative figures there are special indicators, characteristics of only defense sector, which express - implying both the efficiency indicators of military categories and indicators of economic expenditures - the expediency arisen from auditing.

Methods of research:

In order to reach the appointed aims I have used both general and specific methods of research such as library archives, observation, and some mathematical methods e.g. adaptation and analysis.

- I have studied domestic and international magazines and results of other researches.
- In a historic comparative analysis I have studied the different phases of evolution of audit and the related processes.
- By analyzing and combining several data based on experimental observation I have studied the specific aspects of operating an audit system at the military services in line with practical problems of public sphere.
- By using the method of supervision I have studied the fields of tasks at the Ministry of Defense and at other subordinated institutions.
- By a historic comparative method I have elaborated the process of evolution of audit system, its effects on operation of state administration.

III. Introducing the structure of thesis.

In the first chapter I review the aims and orientation of my research. **I introduce** hypothesis and methods of research.

In the second chapter I introduce the evolution of audit system, the aspects taken into consideration at time of its establishment. **I intend to also introduce** its development and changes.

In the third chapter I define the notions related to audit, and the related interpretation problems. **I'm up to introduce** their characteristics, types, and requirements toward them. I will explain the subject of audit and its regulations.

In the fourth chapter I' going to review the role and position of audit in management; **I introduce** the control system of MoD.

In the fifth chapter I present in details the economic-financial audit system and its peculiarities at defense sector. **I analyze** its possibilities of development.

In the sixth chapter I present the monitoring system. I will explain its characteristics, features, and its necessity. **I analyze** some experience in its previous operation. **I review** function of monitoring system at defense sector.

In the seventh chapter I'm going to summarize the completed task, I will draw conclusions, and I will make proposals, suggestions. **I introduce** scientific achievements which I consider new.

IV. Summary of completed scientific activity. New achievements, proposals, practical availability.

Conclusions having been drawn during my research are recorded at different chapters; their essential elements are the following:

1.) Audit, as a management tool, has changed its aim, content and form in line with sociological, economical and political relations; it has become a vital part of state administration and government.

It can be stated, the **defense sector** of present days could offer a special environment which **provides alternatives** to other sectors in operation of some audit systems, and in the conditions of operation.

Defense services, as it is well-known, are the 'cleanest' among public funds, which are controlled and regulated on several levels. Civilian control, assurance of transparency, internal and external auditing systems all guarantee the continuous observation of usage of human resources at every structural level for and by the request of state (supporter).

2.) Auditing examines the efficiency and regularity of (considered to be) past activities. In order that we could joint present and future activities with it – this feature is included in monitoring at present – **its principles needed to be expanded**.

One of the principles '**Efficiency**' needs to be expanded, its notion and content to be completed, which could cover even the measurement, calculation and specification of damages caused by variances (**V**).

Therefore, possibility of introducing a new principle has risen: measuring the results of auditing, principle of '**Measurement**', which gives a detailed explanation of how to measure the relation between variances (**V**) and requirements (**R**) in money.

In the sphere of efficiency $F = \frac{R}{V}$ e.g. in pointing out facts, requirements and variances

we must not stop. We have to achieve that it should become nominal indicators in order that processes of management, preparation and decision-making are supported by this materialization.

Measured data of auditing and its efficiency is the detection of variances itself; this is the measuring possibility which can be materialized during analysis, in figures. It is only one step to recognize and measure the self-supporting ability of audit system, to compare its costs and achieved profit.

3.) On the basis of examinations carried out it can be assessed that neither state regulation system, nor regulation of defense sector, nor financial institutions' internal specialist **auditing does not include any allocations to measure and to increase efficiency.**

Execution of departmental regulation and internal financial audit reach the achievements of well-organized, strict, thorough and complete entities, however, this disciplined environment does not fundamentally demand the requirements of nominal figures, let alone its possibilities.

It can also be appointed that the present range of well-formed, regulated evaluations, records, and auditing documentations should be extended, moreover, it might become an obligatory element to carry out those economic calculations which can present not only the measurable results in an economical entity but they are able to show their own efficiency as well. Consequently, **measurement of efficiency** (indicator of effectiveness) **must be ensured during auditing**, methodology and requirements must be taken into consideration.

Auditing apparatus sets up strict and correct time calculations of working hours of auditing tasks. It is only one step to detect some cost necessity of auditing.

Possibilities of improving efficiency revealed during audit cannot replace those of the whole system.

4.) Monitoring does not equal to auditing, since auditing examines regularity and efficiency of past activities, while monitoring connects present and past in order to prevent anomalies. Monitoring is a process being present during the whole period of a project.

In defense sector, in compliance with fulfilling allies' requirements, skill development notions could be ideal subjects of monitoring activity, since it is not a fully covered area of internal auditing, and, besides the final results even the analysis of the approach can facilitate efficiency. Data collection must be continuous in order that management

(military leadership) shall receive information about the progress of project (task) and could influence its course, if necessary, within the boundaries of acceptable realization. One synthesis of the above mentioned and concluded notions is that **monitoring appears to be more suitable** to influence the process both in structure and in time by producing nominal results.

Audit systems are supported by the fact that not only one project but a complex economical process is being controlled, although, the dimension of time (subsequences) only allocates the 'occurrence', it still provides us with some future relevancies.

Time dimension of monitoring is more convenient but its extension is narrower, therefore, it is necessary to program and to project its management by **extending it with prevailing positive effects** (synergies).

Another development opportunity of auditing and monitoring systems can also be proposed, besides the above mentioned methods, in order that continuous monitoring shall be achieved by modifying (expanding) the present structure and roles of executive controlling authorities. The proposal of necessity concerns some issues of defensive planning, e.g. structure of planning, but as modification of a methodology it does not require either further resources or major structural changes.

5.) Without drawing into extra resources and reserves, defense sector possess the ability that is needed to execute continuous and effective monitoring activity. This conclusion equals to the statement that proposed extension of tasks within the opportunities of system development (auditing-monitoring) does not require direct need of resources; furthermore, it does not call for structural changes in the given auditing apparatus. It is an important circumstance since it will probably neither hurt interests nor will require withdrawal of resources while being executed.

The following results are considered scientifically new:

- 1.) While examining the evolution of auditing systems I have revealed that defense sector, unlike others, possess a special internal structural determination which can only be expressed here and can positively affect the execution of internal auditing.

- 2.) I have proved that economic-financial auditing system of defense sector does not include any criteria in relation to items of nominal measurable efficiency, consequently, the extension of this area is needed, and introduction of mathematical methods and such analysis are of actual need.
- 3.) I have proved that, although, the internal audit system of economy-finance corresponds with expectations of state regulations, it has a highly traditional system of execution which must be carefully reconsidered, in relation to applied methods, informational content, executive structures, and application of time dimensions it calls for development.
- 4.) I have revealed and proved that several experience in financial support of Hungarian Defense Forces and their specific practice in monitoring can establish the reconsideration of internal audit in defense sector, and its introduction to not fully covered areas, in order to exploit the positive synergies of these notions.

Proposals, practical usage:

- 1.) To extend the requirements toward internal audits applied in defense sector with the notion of efficiency, and to introduce a new and independent principle 'Measurement'.
- 2.) To operate a monitoring system after having slightly changed the defense planning - due to the effects of positive process of time management - along with the existing and already operating audit systems at different managerial levels.
- 3.) To analyze nominal efficiency indicators of completed audits carried out by present auditing authorities, and to provide management with these data during the decision-making process.
- 4.) To influence future trends by applying monitoring methods and by post-examination of different economic activities carried out during the operation of an audit system.
- 5.) To internally monitor the use of project-based resources in defense sector.

V. Publications in the subject of the thesis

Nr	Publication	Journal
1.	NATO audit system	Spring wind Third International Committee of Young Hungarian Scientific Researchers and.... 1999. 05.14-15 (Zrínyi Miklós Defense University) Budapest brochure p. 19
2.	Thoughts about observations of logistics at HDF	Military Logistic Material and Technical Assurance, issue: 2000/1. MoD Logistic General Directorate Budapest, p. 89-96 ISSN 1588-4228
3.	Requirements towards auditors (based on a study)	Budgeting, Finance, Accounting, issue: 2000/1. MoD Central Finance and Accountancy Directorate, Budapest, p. 72-75. ISSN 1789-3062
4.	Financial audit at NATO I.	Budgeting, Finance, Accounting issue: 2000/1. MoD Central Finance and Accountancy Directorate, Budapest, p. 63-68. ISSN 1789-3062
5.	Financial audit at NATO II.	Budgeting, Finance, Accounting issue: 2003/2. MoD Central Finance and Accountancy Directorate, Budapest, p. 74-83 ISSN: 1789-3062
6.	Wonder substance or forced solution?	Auditing Monitor, issue: 2006/3. Government Audit Office Budapest, p. 26-35 ISSN 1218-7631
7.	Defense sector and auditing I.	Military Logistics, issue: 2007/3. MoD Development and Logistic Agency Budapest, p. 129-139 ISSN 1588-4228
8.	Defense sector and auditing II.	Military Logistics, issue: 2007/ 4. MoD Development and Logistic Agency Budapest, p. 79-94 ISSN 1588-4228
9.	Defense sector and auditing (historic review)	Budgeting, Finance, Accounting issue: 2007/1. MoD Economic and Finance Agency Budapest, p. 61-67 ISSN 1789-3062

10.	Auditing and its mathematically possible approach	Budgeting, Finance, Accounting issue: 2008/1. MoD Economic and Finance Agency Budapest, p. 19-25. ISSN 1789-3062
11.	Defense sector and auditing II. (historic review)	Budgeting, Finance, Accounting issue: 2008/1. MoD Economic and Finance Agency Budapest, p. 43-52. ISSN 1789-3062
12.	Monitoring observation in defense sector	Military Logistics, issue: 2008/1. MoD Development and Logistic Agency Budapest, (under publication) ISSN 1588-4228
13.	Retrospection on setting up and establishment of monitoring in defense sector	Academic and Applied Research in Military Science (AARMS) 2008 (Zrínyi Miklós National Defense University) Budapest, (under publication) ISSN 1788-0017
14.	Areas of development of budget-control system in defense sector	Budgeting, Finance, Accounting issue MoD Economic and Finance Agency Budapest, (under publication) ISSN 1789-3062
15.	Financial audit and monitoring system in defense sector	Budgeting, Finance, Accounting issue MoD Economic and Finance Agency Budapest, (under publication) ISSN 1789-3062
16.	Possible areas of development of control systems in defense sector. Informational yield of these systems.	Bulletin of Intelligence Military Intelligence Office Budapest, (under publication) ISSN 1588-242X

VI. Professional Resume

I was born in Szentes on 18th November 1963. I finished primary school in Szentes. In secondary education I studied at II. Rákóczi Ferenc Military School and at Vasvári Pál Grammar School in Nyíregyháza.

After this military service became a professional commitment for me.

I graduated in 1986 from Zalka Máté Military Technical College, Department of Logistics and Finance. After having finished my studies I started working as a financial controller officer at the Finance Department of then HRDF Homeland Defense Directorate.

While working I applied to Budapest University of Economics, from where I graduated in 1994, specialized in management and in accountancy. My thesis covered a highly current topic at the time: 'Privatization and privatization techniques in Hungary 1987-1993'.

In 1990 I was transferred to the predecessor of my present service point, to the HDF Economic and Finance Directorate; in 1996 I was promoted to Head of Financial Audit Department of MoD Central Finance and Accountancy Directorate, where I was working until 2005 being responsible for countersign fields as well. Due to the complex modifications of financial services during these years, a complete new system of financial audit had to be created along with its structural organization, methodology, requirements and work-flow. In this period our country was obliged by European Union to establish a controlling system to check the usage of EU subsidies, this became the new monitoring system. Within this project, like in other ministries, a Monitoring Committee was established in Ministry of Defense, which I was member of until its termination. Since 2007 I have been working as a General Deputy of CEO of MoD Economic and Finance Agency.

Due to my positions I participated in implementation of new tax system at the army in 1987-88, in establishing the new accounting system in 1992, in re-structuring the financial-accounting departments in 1996, in developing the regional financial-accounting systems, in establishing and developing MoD CFAD and MoD CEIR.

Beyond these, I educated financial controlling at Bolyai János Military Technical College, and I acted as examiner in the committee of final examinations.

While working, I also have applied to ZMDU PhD School of Military Sciences. I was inspired - by working both in the field of financial audit and at Development Monitoring Committee of MoD - to deeply examine these topics and to carry out scientific researches in these fields.

In the last year I have written 10 specialist articles, before I had been author of 6 other (reviews, tabloids). While working, I also passed English and German intermediate language exams of 'C' type, specialized with military vocabulary and STANAG 3.3.3.3. english language exam.

I have always done my job and scientific researches with undiminished ambition, inquisitive mentality and with taking on lot of workload.