

REVIEW

*by Assoc. Prof. Dr. Valentina Grigorova-Gencheva,
Department of "Finance and Insurance",
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*of a dissertation for awarding the educational and scientific degree "doctor"
in Higher Education Area 3. Social, economic and legal sciences
Professional direction 3.8. Economy
doctoral program "Finance, Insurance and Assurance"*

Author: Ardit Hajiya

*Topic: "The role and significance of finance, accounting and financial mathematics in companies"
Academic supervisor: Prof. Dr. Stanislav Dimitrov, Higher School of Insurance and Finance*

1. General description of the presented materials

By order No. 161 dated 08.05.2024 of the Rector of the Higher School of Insurance and Finance Prof. Doctor of Law Boris Velchev, I have been appointed as a member of the scientific jury to ensure a procedure for the defense of a dissertation on the topic "The role and significance of finance, accounting and financial mathematics in companies" (The role and significance of finance, accounting and financial mathematics in companies) for the acquisition of the educational and scientific degree "doctor" in the Higher Education Department 3. Social, economic and legal sciences, Professional direction 3.8. Economics, doctoral program "Finance, insurance and provision". The author of the dissertation work is Ardit Hadzhia - a doctoral student of self-study at the Department of Finance and Insurance with scientific supervisor Prof. Dr. Stanislav Dimitrov from 19.12.2022.

The materials submitted by Ardit Hajiya include documents according to the presented inventory: dissertation work in electronic version and on paper, abstract of the dissertation work in electronic version and on paper in English and in Bulgarian, declaration of originality and credibility, certificate of the fulfillment of the minimum national requirements for obtaining the ONS "Doctor", a list of publications on the topic of the dissertation, copies of the publications on the topic of the dissertation, summaries of the publications on the topic of the dissertation in Bulgarian and in English, and a resume.

The PhD student has attached 3 (three) publications.

2. Brief biographical data for the doctoral student

Ardit Hajiya has over 10 years of experience teaching mathematics at various educational

levels, from secondary school to university. The main objective in its activity is to promote a deep understanding of mathematics and to stimulate pupils and students to develop their full potential. During his time at the American University for the Middle East, A. Hajiya was selected as "Instructor of the Year", a distinction that testifies both to his dedication to the profession and to the success of his students. Alongside the preparation of his PhD thesis, the candidate currently teaches IGCSE, AS and A-level Mathematics at a respected international school (King's College Tirana) where he continues to inspire and guide students to academic excellence.

3. Actuality of the topic and appropriateness of the set goals and tasks

The topic of Ardit Hajiya's dissertation is particularly relevant at a time when mathematical methods and the possibilities of artificial intelligence (AI) are increasingly being applied in all areas of life. They are particularly useful and widely applicable in the field of finance and accounting.

The subject of research in the dissertation is to prove that a company needs financing to be able to operate successfully and achieve its goals. The purpose of the research is to establish what are the main characteristics of finance, accounting and financial mathematics, which are necessary for companies to function successfully and make a profit. The author defines as a special subject of research in his development, the confirmation of the hypothesis that finance is the life force of a company, accounting is the main system for providing financial data, and financial mathematics is a way of modeling and projecting and forecasting the future financial flows of the company. In this regard, the main tasks of the study are formulated quite logically and expediently: to prove that finance is of particular importance for the development and functioning of companies, accounting - for preparing appropriate reports and reporting to management, and financial mathematics - for current forecasting and forecasting the future operations of firms.

The author very accurately and correctly defines that "The main objectives of finance in companies are to ensure maximum return on investment and market value per share, maximization of profits, maximization of profitability, maximization of liquidity. The purposes of accounting in any business are to systematically record transactions, sort and analyze them, prepare financial statements, evaluate the financial position and support decision making with financial data and business information. One of the key goals of financial mathematics is also to understand how to construct the best investment strategies that minimize real-world risks."

The main hypothesis of the author is to confirm that business finance involves effective management of monetary resources within an organization to achieve specific financial goals. Hajiya wants to prove that business finance involves the strategic planning and allocation of funds to support various activities and functions of the business and that it is a means of optimizing the use of financial resources to increase the overall value and profitability of the company.

4. Knowing the problem

The PhD student is very familiar with the problem of dissertation research. The object of his research interest is the essence, the interrelationships between finance, accounting and financial mathematics and their importance for the successful development of a company. A. Hajiya's dissertation is one of the few scientific works in which, in addition to having one main and three additional research hypotheses, the so-called developed research hypotheses: "In principle, finance, accounting and financial mathematics are interconnected and allow companies to make real business decisions on the basis of which they will achieve the desired development."

5. Research methodology

Conducting research on the topic of the doctoral dissertation chosen by the candidate requires a multidimensional approach and the application of a number of research methods such as:

- historical method - through it the financial situation of companies is perceived in historical terms;
- content analysis - through its application, the legal aspects and other elements of the companies' financing systems are analyzed;
- comparative method - with its application, a comparative perception of experience, methodology and differences in the functioning of financing systems in companies is carried out;
- statistical method - it is used in order to more precisely understand the general rules, the regularity and legality of the current and possible forms of financing of companies;
- synthesis - with the help of this method, the data obtained with the help of the previous methods are combined;
- induction and deduction - used in research procedures to define conclusions from the theoretical views and opinions of other authors, as well as to experimentally collect data from the practice of other subjects.

The chosen research methodology allows achieving the set goal and obtaining an adequate answer to the tasks solved in the dissertation work.

6. Characterization and evaluation of the dissertation work

The dissertation has a volume of 161 pages. The work is structured in three chapters, introduction, conclusion and appendices, and in a separate part the review of the methodological approach to the scientific research is separated. The bibliography of the dissertation includes a total of 119 titles, all on online sources of information. The development contains 14 tables and 61 figures. A. Hajiya's research covers the period from 2000 to the present day.

The first chapter is entitled "Role and Importance of Finance Companies". In it, the candidate defines the nature and role of finance in a company, examines the main types of investments and budgets, as well as the budgeting process in general. Special attention in this chapter is given to dividends, return on capital and debt financing. At the end of this chapter, the author discusses the importance of corporate finance, strategic planning and budgeting, and risk management.

The second chapter entitled "The role and importance of accounting in companies" defines accounting as a process, examines the types of accounting in a company and its importance in evaluating business performance. A. Haxhija pays special attention to the preparation of financial statements and ensuring compliance with laws in the relevant field.

Chapter Three - "The Role and Importance of Financial Mathematics in Companies" - defines the concept of "financial mathematics" and its application in various areas of economics such as risk management, stock trading, data mining, econometrics, forecasting, marketing, creating investment strategies and others. At the end of this part of his study, Hajiya examines various aspects of the relationship between financial mathematics and accounting.

In conclusion, I can summarize that the doctoral student was able to realize the goals and objectives set in the dissertation work.

7. Contributions and significance of the development for science and practice

The contributions of the development can be summarized as follows:

- A pioneering moment in the development, against the background of the development of scientific thought in Albania in the field of economics and finance, is the emphasis placed on the close connection between mathematics and finance. The author emphasizes its importance for the understanding and application of scientific disciplines in the development of financial operations of companies.

- The author successfully demonstrates that the application of mathematical models in finance makes it possible to use thinking skills alongside scientific disciplines such as statistics and computer science. This thesis of his has specific scientific and applied significance in the field of planning and budgeting of a company's activities.

- An indisputable contribution of this dissertation, although without an element of innovation, is the proven importance of financial knowledge and the crucial role of its application in business and accounting. The use of scientific mathematics and finance provides the necessary knowledge and capabilities to effectively control business finances, as well as great opportunities

to create greater economic progress for companies.

- The scientific approach in understanding financial activities has a key role in the real life of business in making the right investment decisions to generate maximum rapid growth and development of companies. Undoubtedly, this statement of the PhD student is innovative in terms of more active and efficient management of modern business processes in Albania.

A. Hajiya's dissertation asserts that in order to properly apply the principles of mathematics in finance, the complexity of financial transactions in a company must first be understood and analyzed.

The scientific-applied contributions of the dissertation can be used in several different companies for a certain period of time, after which their growth rates can be measured according to specific parameters that are the same for all companies. The author could conduct a comparative analysis between the business results of companies that use mathematical methods in their planning and financing, as well as to limit risk, and others that do not.

8. Evaluation of publications on the dissertation work

The doctoral student has submitted 3 scientific publications written in English on the topic of the dissertation. Each of them represents an independent scientific study in the form of an article published in the VUZF magazine - "VUZF Review".

9. Assessment of compliance with minimum national requirements

According to the report attached by Ardit Hajiya, the minimum national requirements for acquiring the scientific degree "Doctor of Sciences" in the professional direction 3.8. Economy are fulfilled.

10. Personal participation of the doctoral student

In my opinion, the dissertation is the work of the PhD student himself. The sources used are correctly cited and there is no evidence of plagiarism.

11. Abstract

The abstract in English, attached to the dissertation, has a volume of 37 pages. It contains a description of the main characteristics of the presented scientific development: structure and content of the dissertation, a summary of the main problems and research methods, as well as publications on the topic of the dissertation.

The abstract of the dissertation work was prepared in accordance with the criteria adopted for similar scientific works. However, it does not contain theoretical conclusions and author's solutions to significant scientific or applied scientific problems that represent a significant and original contribution to the science of finance and accounting.

In the abstract, some scientific and applied achievements of Ardit Hajiya are systematized, which include proposals for specific activities related to increasing the role of finance, accounting and mathematics in companies. Guidelines and measures have been developed to improve the functioning and coordination between individual structures (departments, directorates) working in the field of finance, accounting and mathematics in companies.

In a statement to the abstract, the author clearly declares that the submitted dissertation is his original work and contains results obtained from his own research, with the support and assistance of his supervisor. A. Hajiya declares that the dissertation has not been defended in other universities, institutes or other higher education institutions for the acquisition of an educational and scientific degree.

12. Critical remarks and recommendations

Ardit Hajiya's dissertation has a number of merits, I have no specific remarks. There is a certain imbalance between the content of the first and the remaining chapters of the development (80:30:30 pages), but this fact can be partially explained by the importance of the problems treated in the respective chapters and does not represent a significant shortcoming from a scientific point of view. I would like to formulate a question for the candidate:

1. Will the role of financial mathematics increase, incl. AI, in the choice of investment strategies and the formation of the budget of companies in the future?

13. Personal impressions

My personal impressions of the doctoral student Ardit Hajiya were formed during the preliminary defense of his dissertation, held online on April 24, 2024. The candidate clearly and comprehensively presented the structure and main conclusions of his dissertation work, confidently, competently and convincingly answered the questions posed by members of the Department of Finance and Insurance. In this first meeting for me, A. Hajiya showed excellent presentation skills as well as a high level of professional English.

14. Recommendations for future use of dissertation contributions and results

The scientific-applied contributions of the dissertation could be used to compile a guide for modern management of companies in Albania, which would include the specific measures and activities developed by A. Hadjia for successful strategic planning and budgeting. This edition would be useful for improving the functioning and coordination between individual company structures working in the field of finance, accounting and mathematics, as well as for the application of modern mathematical methods, incl. AI, in the management of companies.

It is appropriate that such a publication be distributed by financial institutions that finance the business development of small or small and medium-sized companies, in order to achieve more effective management of their growth and reduce risk.

Conclusion

The dissertation contains scientific, scientific-applied and applied results, which represent an original contribution to science and meet all the requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria (ZRASRB) and the Regulations for the Implementation of ZRASRB. The presented materials and dissertation results fully comply with the specific requirements of the Regulations for admission and training of doctoral students in the Higher School of Insurance and Finance.

The dissertation shows that the doctoral student Ardit Hajiya possesses in-depth theoretical knowledge and professional skills in Professional direction 3. 8. Economics, demonstrating qualities and skills for independent conduct of scientific research.

Due to the above, I confidently give my positive assessment of the conducted research, presented by the above-reviewed dissertation work, abstract, achieved results and contributions, and I propose to the honorable scientific jury to award the educational and scientific degree "doctor" to Ardit Hajiya in the Department of Higher education 3. Social, economic and legal sciences; Professional direction 3. 8. Economics; PhD program "Finance, Insurance and Assurance".

24/05/2024

Reviewer:

Assoc. Prof. Dr. Valentina Grigorova-Gencheva