



OPINION

on dissertation work for awarding the educational and scientific degree „**Doctor**“ in scope of higher education 3. *Social, economic and law sciences* professional field 3.7. *Administration and management*, scientific specialty *Application of computer technology in economics*

Author of the thesis: *Neda Venelinova Chehlarova*

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Dissertation topic: *Research of the e-business system in the context of increasing the digital and professional competencies of consumers*

Member of the Scientific Jury: prof. Nikolay Sterev University UNWE-Sofia, scope of higher education 3. *Social, economic and law sciences*, professional field 3.8. *Economics and management* the scientific specialty 05.02.18 *Economics and management, 3.8 Organization and management of production*

Appointed as a member of the Scientific Jury with Order of the Rector of University of Forestry No 311C-530/ from 14.10.2022 г.

1. Compliance with the procedure.

According to the presented materials on the public defense of the dissertation work, as well as according to the First meeting of the Scientific Jury, I consider that the procedure for acquiring the ESD "Doctor" has been complied with. In addition, as of the date of preparation of the opinion, no signal has been received and no conditions have been established for infringement of the copyrights of other authors.

2. Brief biographical data about postdoctoral student.

Neda Venelinova Chehlarova graduated as a bachelor (2017) and master (2018) at the University of Forestry. From 2019 is a full-time doctoral student at the Department of **MATHEMATICS, PHYSICS AND INFORMATICS** of the University of Forestry. During her doctoral studies, she participated in 2 research projects and participated in the author collectives of 7 publications. During the period 2015-2020, while studying at UF, she worked.

3. The actuality of the problem.

- *Structure, volume*

The dissertation work on the topic "*Research of the e-business system in the context of increasing the digital and professional competencies of consumers*", presented by doctoral student *Neda Venelinova Chehlarova*, is 171 pages long and is structured in: introduction, exposition in three chapters, conclusion, contributions and references. 1 application is presented: questionnaires: "Digital competences of users", "Working with QR code" and "Working with electronic signature". In terms of structure, the thesis presented for review can be positively evaluated: basic theoretical propositions related to e-business, applicable models of e-business, definition of the user in electronic /incl. and cloud/ environment in the First chapter of labor; a comparative analysis of basic digital skills was

carried out, as well as a comparative analysis of the curricula and disciplines through which they are acquired in different educational institutions in the Second Chapter, and an analysis of a study of the digital competence of users was presented /by using 3 questionnaires cards/ and on this basis, recommendations to businesses are made to support the development of the digital competences of users in the Third Chapter.

• *Brief assessment of: topicality of the topic; degree of knowledge of scientific literature and the studied issues.*

The main elements representing the conceptual framework of the dissertation work are presented in the introductory part.

The relevance of the presented research problem is indisputable: in the expansion of digital technologies, which are the basis of Industry 4.0, as well as the growing need to use digital technologies for education, work and free time for various other reasons, incl. and pandemic conditions. This relevance is marked in the introductory part, but is defended to a satisfactory extent in the first and second chapters of the dissertation.

The bibliographic reference contains 205 sources, of which 117 are in Bulgarian, 86 in a foreign language and 2 electronic sources. The literature review shows that the doctoral student knows both the theoretical foundation of the defined research problem and modern methodological and applied research related to the subject and object of the dissertation research.

4. Relevance of the topic of the dissertation and expediency of the set goals and tasks.

The derived concept of the dissertation research through: main objective, objectives and research thesis can be highly rated.

The goals and objectives are short and precise, and are logically linked to the main research thesis. The conceptual framework of the dissertation research is adequately presented in the introduction of the dissertation

The object and subject are correctly defined. In view of the diversity in definitions of the object and the subject of research, especially and due to the continued evolution of the understanding of e-business, e-government and e-consumer, discussed in detail in the first chapter of the work, the dissertation work would definitely gain even more if in defining object and object constraints were inferred on the object

5. General presentation of the dissertation, knowledge and mastery of the issue.

The **introductory** part correctly defines the structure of the dissertation work and gives an adequate idea of the logical framework of the dissertation research.

The **first chapter** of the dissertation presents an author's study of the theoretical foundations of e-business systems. The positive evaluation of the content of this chapter is based on the fact that the theoretical review examines all the /currently/ concepts that express the concept of e-business: e-commerce, e-marketing, e-logistics, e-finance, e-engineering, -management and e-learning. Within this chapter, the doctoral student has presented the development of the theoretical foundations for e-business models. As a result of the theoretical analysis carried out in paragraph 8 of the chapter, a classification of the software products used in electronic business was derived, which was subsequently used in the applied research carried out in the Third Chapter.

In the **second chapter**, the doctoral student has conducted a comparative institutional analysis of digital skills, with an emphasis on school and higher education. Both the analysis of basic elements of professional digital competences, embedded in the curricula and programs of various higher

schools in Bulgaria, as well as the systematization of the basic digital skills inherent in the state administration in comparison with the digital skills of students, professionals in the field deserve a positive assessment. of digital technologies.

The **third chapter** of the dissertation contains the results of the author's research on the problems of digital competence of users in Bulgaria. The research was conducted on the basis of secondary research among major state agencies such as: NSI, CPC and others. The conducted analysis of interviews regarding the use of digital business tools deserve a positive evaluation, as on this basis the more important generalizations regarding the need for short trainings to develop the digital competences of users in Bulgaria are derived.

In **summary**, adequate approaches and methods of scientific research were used in the presented dissertation work. The performed theoretical summaries, synthesis of the methodological toolkit and practical-applied analyzes show that the doctoral student possesses and demonstrates the key skills acquired by him to summarize theoretical propositions; to carry out a synthesis of theoretical concepts and methodological tools; to conduct theoretical and applied critical analysis using a variety of literary source and applied information gathered through various methods.

6. Research methodology.

The presented methodology of the scientific research is correctly described and the achieved results of its use allow to realize the applied contributions indicated in the next paragraph.

7. Evaluation of dissertation results

Undoubtedly, the dissertation submitted for review has a number of contributions. In general, I accept the 4 points of contribution defined by the doctoral student in the Abstract and in the Statement of Contributions, which can be refined to the following:

- On the basis of a theoretical analysis, a study of the scope and content of the e-business system in modern organizations and business entities was carried out in the context of its use by the user and the digital competences he must possess in order to work successfully and effectively with it.

- Based on a comparative analysis, scientific and applied requirements related to the digital and professional competencies necessary for working in an electronic environment are systematized;

- An applied study analyzed the current trends in the development of the digital competencies of professional groups related to the use of e-business.

- A toolkit for short trainings was developed and tested to support the building of digital and professional competences of users in the context of the dynamics of development of the e-business system of state institutions and business entities

8. Critical notes and questions.

Although there are individual theses that can serve as a basis for critical remarks, they do not change my overall positive opinion and high assessment of the achievements of the dissertation work.

The following question can be addressed to the doctoral student:

- Who should have the "responsibility" for the establishment of appropriate digital and professional competences necessary for the use of the various e-business models: the user himself; educational institutions (from pre-school, school or higher education); the state through its institutions, incl. CPC; or the bringer of e-business?

9. Conclusion.

The proposed dissertation work by *Neda Venelinova Chehlarova* on the topic "*Research of*

the e-business system in the context of increasing the digital and professional competencies of consumers" fully meets the requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria (ZRASRB), the Implementing Regulations of ZRASRB and the Rules for the terms and conditions for the acquisition of scientific degrees of the University of Forestry for the acquisition of the educational and scientific degree "doctor".

Considering the above-mentioned characteristics of the dissertation, the qualities of the author and the scientific and applied contributions in the dissertation, I consider it to be a completed original author's research. This gives me the reason to express my **POSITIVE** opinion that *Neda Venelinova Chehlarova* should be awarded the educational and scientific degree "**doctor**" in the field of higher education: 3. Social, economic and law sciences, professional direction 3.7. Administration and management, scientific specialty "*Application of computer technology in economics*".

Prepared opinion:

/prof. Dr. Nikolay Strev/

The review was submit: (Date) 16. December 2022