

**OPINION**

**by Assoc Prof. Ivanka Todorova Bankova, phd  
professional direction 3.7 "Administration and management"**

**on**

**dissertation on:**

**"Increasing the competitiveness of the supply chain of Bulgarian enterprises by using  
blockchain technology"**

**author: Rusen Zhelev Gigov**

**Research supervisor: Prof. Ivan Tenev Dimitrov, phd**

**for awarding the educational and scientific degree "doctor"  
in professional direction 3.7 "Administration and management",  
doctoral program:**

**"Organization and management of production /industry/"**

This Opinion was prepared based on the decision of a scientific jury, determined by Order of the Rector of the University "Prof. Dr. Asen Zlatarov" - city of Burgas No. UD-165/ 06.07.2023 for the defense of a dissertation for awarding the educational and scientific degree "doctor" to Rusen Zhelev Gigov. The doctoral student has submitted all the required documents from the ZRASRB, PPZRASRB and the Regulations for the terms and conditions for acquiring scientific degrees and occupying academic positions at the University "Prof. Dr. Asen Zlatarov" - Burgas. The candidate has submitted a dissertation, an abstract, a reference to contributions and publications on the research topic. The doctoral student has proven that he possesses the requirements under Art. 36 (3) of ZRASRB in-depth theoretical knowledge of the scientific specialty and abilities to conduct independent scientific research.

**1. Evaluation of the content of the dissertation:**

Submitted for review dissertation work is dedicated to an undeniably dissertable topic, the relevance of which is determined by the fact that with the entry of high technologies, blockchain and artificial intelligence in regular business processes and in particular in supply chains, they provoke discussion research and analysis of the advantages and the features of the blockchain technology for increasing the competitiveness and optimization of the value chains of the enterprises in Bulgaria. As a result of the study, the potential of using the technology was brought out, especially to increase the recognition of digitally adaptable companies as potential partners, as well as to consider possible risks and threats. A working framework of the idea of application of blockchain software applications is proposed, the role of which is to be a starting point for future introductions of high technologies, with a view to achieving high added value in enterprise supply chains.

The dissertation has a volume of 231 pages (212 pages of the main text), is characterized by a clear and logically sustained classical structure, consisting of an introduction, an exposition in three chapters, a conclusion, a list of sources used, a reference to scientific contributions, a declaration of originality. The content of each chapter is divided into multiple paragraphs. The author's theses are illustrated by 44 tables and 16 figures. 203 information sources in Bulgarian and English, including books, magazine articles and 58 Internet resources, correctly cited in the text have been thoroughly processed and analytically systematized.

#### Dissertation Research Strengths

In the introduction of the dissertation, the topicality and significance of the topic are convincingly presented, the conceptual framework and the practical-applied focus of the work are clearly outlined, the correctly defined subject, object and the research problem, which is implicitly presented in the topicality of the research, deserve positive evaluation. The structure of the dissertation research is subordinated to the basic parameters formulated in the introduction, which provide an opportunity to prove the author's thesis and, through the fulfillment of the set research tasks, achieve the goal of the dissertation work, namely - to establish opportunities for increasing the competitiveness of the chain of supplies to Bulgarian enterprises by using blockchain technology. The methodology and information base on which the study is based is presented.

The author demonstrates in-depth knowledge of the researched issues. In the literature review, the necessary attention is paid to clarifying the conceptual apparatus and the perceptions of various authors about the competitiveness of supply chains and the essential features of blockchain technology. The author's position stands out in the justification of scientific theses and the application of a specific approach in the search for solutions to the outlined problems. The doctoral student's ability to freely handle the conceptual apparatus, to derive, interpret and systematize theoretical and practical problems, as well as to offer opportunities for solving them, deserves a high rating. As a result of the in-depth analysis of the investigated problems, the main factors increasing the competitiveness of the supply chains have been taken into account; the advantages inherent in BCHT are highlighted; good practices in the use of BCH in supply chains were analyzed; the factors stimulating the introduction of BCHT in the supply chains have been identified; the reasons limiting the perception of BCH as a suitable tool increasing the competitiveness of supply chains are summarized. The advantages of introducing the technology are argued, and the possibilities for positioning Bulgarian enterprises in the global supply chain are presented. (First chapter)

The scientific-applied basis of the study is the qualitative and quantitative analyzes of the presented motivating and limiting factors influencing the introduction of blockchain technology.

The convincingly presented conclusions as a result of the research represent the identification of the main characteristics of the representative sample and the determination of the target groups of respondents, as well as the specification of a confidence interval. The construction of the Questionnaire for the conduct of the research, where questions related to the demographic structure of the respondents, the importance of the motivating factors, and the influence of the limiting factors, found a suitable place deserves a high rating. (Chapter Two)

Results with the highest research weight and high practical-applied potential are achieved in the Third Chapter. The conducted empirical study and the derived results of the analysis deserve a positive evaluation, such as: "the negative influence of cryptocurrencies" and "the lack of organizational policies for the adoption of BCHT", which appear to be significant limiting factors, having an impact on the overall adoption of blockchain technology. A holistic approach is appropriately applied through a step-by-step analysis to identify the leading motivators and opportunities for using smart contracts. The statement is defended with conviction that "by adopting blockchain technology in the field of supply chains, Bulgarian enterprises increase their competitiveness and will be recognizable as innovative and reliable partners among counterparties in transnational supply chains." (Chapter Three)

## **2. Scientific and scientific-applied contributions of the dissertation work.**

Formulated contributions can be accepted and defended, I consider them to be a personal achievement of the doctoral student. The achieved scientific results refer to the enrichment of existing scientific and scientific-applied positions and existing knowledge about the possibilities of increasing the competitiveness of the supply chain of Bulgarian enterprises by using blockchain technology, and are aimed at deriving a methodology and toolkit for researching the development and search for opportunities for the introduction of blockchain technology in Bulgaria.

## **3. Evaluation of dissertation publications**

The author's thesis is supported by 2 independent and 7 co-authored publications in scientific publications, corresponding to the scientometric requirements for ONS "doctor", and 3 of the publications are in publications indexed in Scopus. The presented publications reflect an important part of the dissertation work and verify the achieved results of the scientific research, which ensures its publicity.

## **4. Evaluation of the autoref**

The presented abstract allows to outline the achieved results and reflects relevantly the structure and content of the dissertation work. It has been prepared in accordance with good academic practices and meets the requirements of the ŽRASRB and the Regulations for its application.

## 5. Opinion on the presence of plagiarism

Within my available sources and my competences, no plagiarism and incorrect borrowings have been found. During the procedure, no non-anonymous and motivated written reports of plagiarism were received. I have no conflict of interest with the candidate.

## 6. Criticisms, recommendations and questions

I have no significant comments on the content of the dissertation. The following recommendations can be made for future research:

- in order to focus the research interest on the possibilities of introducing the blockchain technology and in order to obtain specific applicable results, it would be appropriate to introduce limitations of the research;

- the conclusion could be more result-oriented, drawing specific conclusions related to the set research tasks

- the development would benefit if the contributions are differentiated into scientific and scientific-applied ones.

## 7. Conclusion

The submitted dissertation on the topic "Increasing the competitiveness of the supply chain of Bulgarian enterprises through the use of blockchain technology" is in full compliance with the requirements for acquiring the educational and scientific degree "doctor" of ZRASRB, the Regulations for its application and the Regulations for the conditions and the procedure for acquiring scientific degrees and occupying academic positions at the University "Prof. Dr. Asen Zlatarov" - Burgas. The dissertation research is a well-formed and in-depth scientific work, it contains current, significant and original for theory and practice scientific-applied and applied results and contributions on an important topic for our national space. This is a reason to declare my positive assessment of the work.

**With conviction, I propose to the respected members of the Scientific Jury to award the educational and scientific degree "doctor" to Rusen Zhelev Gigov in the scientific specialty "Organization and management of production/industry/", in professional direction 3.7. "Administration and Management".**

8 August 2023 г.

Prepared the opinion,

Assoc. Prof. Ivanka Bankova, phd

Подпис заличен  
Чл.2 от ЗЗЛД