

OPINION

competition for awarding educational and scientific degree "PhD" at the NBU

By Assoc. Prof. Konstantin Hristov Poudin, PhD, professional field 3.8 Economics, scientific specialty "Economics and Management (Defence and Security Management, Foundations of Security Policy)", Department "National and Regional Security", UNWE, about PhD thesis „Blockchain security and State Governance“ for awarding educational and scientific degree "PhD", professional field 9.1. National Security, scientific specialty "Strategies and Security Policies", candidate Teodora Kirilova Licheva.

1. Scientific and scientific-applied significance of the research problem

The significance of the research problem of the PhD thesis, namely the information security in organizations in the sphere of state administration to be guaranteed through the application of blockchain technologies, is indisputable from scientific and scientific-applied point of view. Every day, thousands of attacks and attempts to illegal access to data, which is created, processed and stored in administrative structures, are registered. Bulgaria is no exception for this tendency.

The financial losses are not the only negative consequences of that. It is also a matter of moral damage, leading, in general, to a decrease in the trust of citizens in organizations in the sphere of state administration. These circumstances also have a strong negative image effect on foreign partners. All this determines the priority of the studies dedicated to information security and the ways for its improvement.

Statistics information, presented by the author in the dissertation, is another evidence of the topicality of the topic. Fig. 54, p. 165, shows that the number of academic publications worldwide related to blockchain technologies in the period 2010-2019 (I assume that this trend continues after that) increased. In 2012, they were zero, in 2013 they number was 3, and in 2019 their number was already 2793 publications. All this shows the growing importance and relevance of the subject.

2. Characteristics of the research objectives and research tasks of the PhD thesis

The objective and the task of the research in the dissertation become clear in the context of the Introduction. The correctly defined object and subject of the research, as well as the research thesis, which are presented in the abstract, contribute to their clarification.

3. Relevance of the chosen methodology in terms of the set objective and tasks of the PhD thesis.

The system approach is the main approach, chosen by the candidate. The comparative-analytical method and its variant - identification and analysis of good practices are the basic

methods applied in the dissertation. I believe that the candidate has chosen and applied appropriate methods, having in mind the overall design of the research, through which she accomplished the research tasks and achieved the main objective. I think it was possible the essence of these methods to be clarified in a little more detail in a separate part of the PhD thesis.

4. Scientific and scientific-applied contributions of the PhD thesis (description and evaluation)

The PhD thesis has several contributions. It was possible these contributions to be declared much more clearly. The dissertation would gain even more from this. These contributions could be defined as follows:

- The essence and application of blockchain technologies are clarified, their strengths and weaknesses ("pros and cons") are identified, and this was done by applying the selected research methods;
- Good practices have been identified in the application of blockchain technologies in the administrative structures of a certain countries from Europe, North America and Asia;
- Recommendation to end-users, especially state government bodies, for the implementation of blockchain technologies have been made etc.

5. Evaluation of the publications on the PhD thesis: number, issues in which they were published.

On pp. 40-41 of the abstract, candidate Teodora Licheva listed an impressive 11 own publications (She listed 9 publications at the beginning of the abstract), including 2 monographs in Bulgarian and 9 own articles, incl. 1 article in English on the topic of the dissertation. All of them present different aspects of the author's research work on the topic of blockchain security during the period of her PhD training at the National and International Security Department of the NBU.

6. Citation by other authors, reviews in the scientific press, etc.

In the materials provided to me for the preparing of current opinion, it is not indicated whether there are citations of Teodora Licheva's publications by other authors. There is also no information about reviews in the scientific press.

7. Opinions, recommendations and notes.

Considering the PhD thesis and the abstract, which correctly presents it in a systematized and abbreviated version, I have the opportunity to create a positive attitude to the candidate's work. The candidate demonstrates excellent knowledge of the subject matter,

the thoroughness with regard to the research of the problem, the ease of handling the researched sources of information, which total number is 86 sources, incl. in Bulgarian, Russian, English and Chinese. The clear writing style, which facilitates the perception of the presented ideas, should also be highlighted.

I believe that in her future research work, the candidate could also use other research methods. For example, a survey or an interview with experts, which would add additional scientific weight.

On pp. 78-79 it is stated: "Actually, the implementation of blockchain in the institutions in Bulgaria can be considered as the last stage of digitalization, as cooperation between the administration and citizens, a trust-enhancing mechanism for security both at the informational, civil and national level." Regarding this statement in the dissertation, I would like to ask the following questions: What are your observations regarding the degree of implementation of blockchain technologies in the state administration in Bulgaria? How is this process going? What are the main challenges facing it?

8. Conclusion with a clearly formulated positive or negative assessment of the dissertation work.

There is no doubt that the dissertation presents a conscientiously conducted, original and comprehensive study of an extremely topical and important problem of the information security and in particular information security in the state administration. The dissertation has the scientific and applied contributions. It meets the requirements for awarding the ESD "PhD", given by the Academic Staff Development Law in the Republic of Bulgaria and the rules for its implementation, as well as the regulations of the NBU. I highly appreciate the achieved results in the PhD thesis, which allow me to give my positive assessment for the awarding of the ESD "PhD" to Teodora Kirilova Licheva in professional field 9.1 National Security, scientific specialty "Strategies and Security Policies".

25.03.2024

Sofia

Signature:

Assoc. Prof. Konstantin Hristov Poudin, PhD