REVIEW

by prof. Virginia Ivanova Zhelyazkova, DSc, Ph.D., VUZF University

of a dissertation for awarding the educational and scientific degree
"Philosophiae Doctor (Ph.D.)"
in Higher Education Area 3. Social, Economic, and Legal Sciences
Professional Field 3.8. Economy
Doctoral Program "Finance, Insurance and Social Insurance"
Author: Dobromir Valentinov Donchev
Topic: "Creating a Governance Model of Digital Transformation of Business Entities in the Digital Economy through Process Mining Methodologies"

Research supervisor: assoc. prof. Radostin Grigoriev Vazov, Ph.D.

1. General description of the presented materials

By Order No. 135 of 22.03.2024 of the Rector of VUZF University Prof. Boris Velchev, DSc, Ph.D., I have been appointed as a member of the scientific jury to ensure a procedure for the defense of a dissertation on the topic "Creating a Governance Model of Digital Transformation of Business Entities in the Digital Economy through Process Mining Methodologies" for the acquisition of the educational and scientific degree "doctor" in higher education area 3. Social, economic, and legal sciences, professional field 3.8. Economics, doctoral program "Finance, insurance, and social insurance".
 The author of the dissertation is Dobromir Valentinov Donchev - a doctoral student in an independent form of study at the Department of Finance and Insurance with scientific supervisor assoc. prof. Radostin Vazov, Ph.D.

The materials submitted by Dobromir Donchev include the following documents:
• Autobiography;
• Copy of the diploma for master's degree;
• Dissertation for awarding Ph.D. degree;
• Abstract of the dissertation;
• Reference on the implementation of the national minimum requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria (LDASRB) and the Regulations for its implementation;
• A reference to the applicant's citations;
• List of the candidate's scientific publications on the subject of the dissertation;
• Summaries of the candidate's scientific publications;
• Texts of the candidate's scientific publications.

The doctoral student has submitted a total of 5 scientific publications - 4 articles and 1 conference report, all published in non-refereed, peer-reviewed journals or edited collective volumes. The four articles were independently developed in Bulgarian language, the report was co-authored and published in the English language.
The documents are well presented, which makes the reviewer's tasks easy.

2. Brief biographical data for the doctoral student

The candidate Dobromir Donchev holds a bachelor's degree in the field of engineering sciences from Technical University - Sofia and two master's degrees - from UNSIT and VUZF University in Sofia. Over the years of his development as a specialist in the private sector, he has gained considerable experience in various business organizations, holding roles mainly related to data management and business processes from the field of information technology.

It is this experience, combined with previous education, that allows the candidate to deepen his research within the framework of a dissertation for the award of a Ph.D. at VUZF University.

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

The topic of the dissertation is undeniably relevant. Digital transformation is among the imperatives of the modern functioning of all economic entities, of course to a different degree and scale depending on the type of these entities. The big question for any organization faced with the need to transform its model in the context of the digital economy is how to do it. The so-called "process mining" methodologies, or methodologies for analyzing the functioning of business processes, help to answer this basic question.

The work submitted for review examines precisely their role in the realization of digital transformation, which makes it of scientific importance and of obvious practical significance.

4. Knowledge of the research topic

From the presented dissertation, it is evident that the doctoral student knows very well the matter he is researching from both a theoretical and a practical point of view. The text is enriched with numerous figures and tables that present the author's ideas.

It shows the author's position everywhere in the text, which speaks of his competence in the field of the problem under consideration. The list of the literature used could be richer, but I take into account the peculiarity that many Internet pages are cited, in which there is rich content. The use of many internet sources is understandable considering the researched topic.

5. Research methodology

The methodology used is primarily from the field of qualitative analysis, supplemented with the results of empirical research in the form of a survey. I believe that the chosen approach is appropriate for the study.

6. Characterization and evaluation of the dissertation

The dissertation has a volume of 191 pages. The work is structured in an introduction, three chapters, a conclusion, a list of references, and appendices.

The introduction smoothly invites the research topic and has all the requisites of an introduction to a dissertation - thesis, object, subject, purpose, tasks, methodology, and research limitations.

The first chapter has an introductory, theoretical character. In it, the doctoral student presents the main types of approaches to digital transformation in business by applying process mining methodologies. In this part of the work, several practices, approaches, and methodologies have been examined historically and analytically, and this has been done consistently and with a high degree of systematicity.

In the second chapter of the work, the author first presents the flexible project management methodologies for digital initiatives, and then lays down and analyzes two of

them: Scrum and Extreme Programming XP. He further analyzes some quality assurance and process control systems, comparing Agile and CMMI. Finally, he presents his view on process mining and its role as a link between BA and Data Science.

The subject of the third chapter is the author's proposed applied framework model for managing digital initiatives through the integration of process mining. Here, the doctoral student gives his interpretation of the contribution of process mining to the development of some processes in the economic environment - the emergence of the service economy (incorrectly translated as "servitization" in the dissertation) and digitalization. However, it is not clear how exactly he connects the description of the essence of these indisputable processes with his topic. It would be well to do this before the subsequent publication of the work, with the author introducing the reader to his idea in more detail at the beginning of the third chapter. The service economy and digitization are developing for many other deep geopolitical, technological, and economic reasons, and process mining is just one management tool for organizations to better navigate the rapidly changing business environment.

In the conclusion, the main inferences of the research are correctly presented.

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

The main contributions of the dissertation are of an applied nature. The leading approaches for implementing initiatives and projects in the field of digital transformation are very well presented, and a practical model for implementing digital initiatives is proposed, which has an indisputable value for practice.

8. Personal participation of the doctoral student

No information would give grounds to doubt the authorship of the submitted dissertation. The text shows the commitment of doctoral student Donchev to the subject, as well as his very good knowledge of it.

9. Evaluation of publications on the dissertation

All five scientific publications presented for review in connection with the present procedure are from the field of the subject of the dissertation. They supplement the scientific results in it and support their popularization. They are fully sufficient to fulfill the national minimum requirements of the LDASRB and the Regulations for its implementation for awarding the Ph.D. to the candidate.

10. Assessment of compliance with minimum national requirements
The presented scientific publications fulfill and exceed the requirements of the LDASRB and the Regulations for its implementation for awarding the Ph.D. degree under professional field 3.8 Economics.

11. Criticisms, questions and recommendations

I have no serious critical notes or recommendations. I would only want to note that the contributions of the dissertation presented in the abstract could be better outlined to reflect the actual achievements of the candidate.

I have the following questions for Ph.D. student Donchev:

• Isn't there a danger that we forget to apply the simple principles of management, relying on digital solutions?

• According to numerous observations in practice, as a result of the application of various "data mining" solutions, what often happens is that there is a generation of excessively many and complex reports, which, instead of helping management to make decisions, lead to confusion. What is your opinion and solution for this problem?

12. Personal impressions

I have positive personal impressions of Ph.D. student Donchev as a diligent and ambitious young scientist with a marked interest in the latest and challenging topics in the field of the application of information technologies for the management of economic processes in companies.

13. Recommendations for future use of dissertation contributions and results

I recommend that Ph.D. student Donchev publish his work in the form of a book based on a dissertation, preferably in English to achieve wider recognition.

CONCLUSION

The dissertation contains scientific, scientific-applied, and applied results, which represent an original contribution to science and meet the requirements of the LDASRB and the Regulations for its implementation. The presented materials and dissertation results fully comply with the specific requirements of the Regulations for admission and training of doctoral students at VUZF University.

The dissertation shows that the doctoral student Dobromir Donchev has in-depth theoretical knowledge and professional skills in professional field 3. 8. Economics, demonstrating qualities and capabilities 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, abstract achieved results, and contributions, and I propose to the honorable scientific jury to award the educational and scientific degree "Ph.D." to Dobromir Donchev in the higher education area 3. Social, economic, and legal sciences; professional field 3. 8. Economics; doctoral program "Finance, Insurance and Social Insurance" at VUZF University.

April 19, 2024   Reviewer: ....
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(prof. V. Zhelyazkova, DSc, Ph.D.)