

## OPINION

for obtaining the educational and scientific degree “Doctor”

in **Dimitar A. Tsenov Academy of Economics**

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Author of dissertation: **Martin Olegov Aleksandrov**

Dissertation topic: **BUSINESS MODEL FOR COMPETITIVE OPEN SCIENCE**

Scientific supervisor: **Prof. Krasimir Todorov Shishmanov, PhD**

### **I. General Description of the Dissertation**

This opinion has been prepared based on Order No. 636/28.06.2024 for the approval of the composition of the scientific jury for the open procedure for the public defence of the dissertation titled “Business Model for Competitive Open Science”, developed by Martin Olegov Aleksandrov, for the attainment of the educational and scientific degree “Doctor” in the field of study 3.8. Economics, in the doctoral programme “Application of Computing in Economics”.

The opinion complies with the requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria (ZRASRB), the Regulations for the Implementation of ZRASRB, and the Regulations for the Development of the Academic Staff at the D. A. Tsenov Academy of Economics, Svishtov.

The dissertation submitted for review, titled “Business Model for Competitive Open Science”, is dedicated to the concept of open science and proposes a new model for democratizing research outcomes among various stakeholders (scientific organizations, higher education institutions, regulatory bodies, academic journal publishers, technology companies, citizens, and software developers) within an open digital scientific ecosystem.

In this context, **the objective** of the study has been formulated: to develop a strategy for adapting the business model of a scientific publication (scientific journal) to the principles and requirements of the “Open Science” concept, and, based on an integrated approach, to propose a new business model for electronic publishing in scientific journals, as well as a methodology for implementing an electronic scientific periodical using Open Journal Systems (OJS).

The selected **object of research** is the process of integrating Bulgarian scientific publications into the global scientific and informational space. The subject of the study is the adaptation of a scientific journal to OJS (exemplified by the journal “Business Management”).

To achieve the set goal, five research tasks were formulated and accomplished during the course of the dissertation work.

The dissertation totals 231 pages, of which 163 pages are the main text. The structure is well-balanced and includes an introduction, an exposition consisting of three chapters, a conclusion, references, and eight appendices. To illustrate the author’s reasoning, eight tables and 24 figures are embedded. The references are appropriately used and correctly cited.

## **II. Evaluation of the form and content of the dissertation**

The research topic is relevant because open science makes data and publications accessible, which improves transparency and reproducibility of research and promotes collaboration and innovation. Open science democratizes knowledge, facilitates informed decision-making, enhances research efficiency, and increases public trust in research. Moreover, it helps researchers comply with funding requirements by ensuring broader dissemination and validation of scientific discoveries. It is a fact that research in the field of open science is still insufficient. This lack highlights the need for studies on the implementation, challenges, and impacts of open science to facilitate the widespread adoption of open scientific practices by the scientific community.

In the dissertation, the doctoral candidate follows this framework: 1) studying and analyzing specialized literature related to the research topic in a transforming economy; 2) developing a business model for a competitive scientific journal; and 3) testing the proposed business model using the example of the „Business Management“ scientific journal at the D. A. Tsenov Academy of Business.

The first chapter of the dissertation is dedicated to the state and prospects of the scientific community in a transforming economy. The author analyzes the essence and characteristics of the “Open Science” initiative for sharing scientific resources and the challenges of open-access publishing, particularly the protection of intellectual property. The doctoral candidate examines the capabilities of online repositories and archives for storing, accessing, and reusing datasets and research results as a tool to accelerate knowledge transfer.

The second chapter presents the theoretical and methodological aspects of introducing an innovative business model for a scientific journal. The main characteristics of the business model for publishing a peer-reviewed scientific journal, the methodology for building the business model, and the procedure for introducing a scientific journal into an online system for servicing, maintaining, and managing electronic publications are thoroughly discussed.

The third chapter clarifies the practical aspects of implementing the proposed innovative business model for accessible science using the example of the “Business Management” journal. The main stages and features of the process of implementing the new business model in an academic publishing house, the effects of collaborative work among stakeholders on the modernization of scientific research and the acceleration of scientific progress, the benefits and contributions of the study, as well as future research directions in this area, are discussed.

The methodology proposed by doctoral candidate Martin Aleksandrov is appropriate and allows the tasks to be addressed and the set goals to be achieved.

The presented abstract is prepared in accordance with legal requirements and relevant regulations, outlining the main results and contributions achieved.

The provided list of publications shows that the doctoral candidate has published two co-authored articles, one sole-authored article, and one sole-authored report. With this, he meets the minimum national requirements for the educational and scientific degree of “Doctor”. Participation in scientific forums indicates that the doctoral candidate's ideas have been presented to a wide audience.

### **III. Scientific and Applied Contributions of the Dissertation**

The main contributions of the doctoral candidate are scientific, scientifically applied, and applied. The scientific contributions of the dissertation research are as follows: 1) An analysis of a problematic business area has been conducted, and the issues that can be addressed through software technologies have been identified. 2) Modern software platforms have been studied, and an optimal solution for successful implementation has been proposed. The scientifically applied contributions of the dissertation research are: 1) Functional models of a web application processing real-time data have been proposed, which can serve as a basis for the development of software applications meeting the needs of scientific publishing or journals, significantly resolving their technological issues. 2) A method for using electronic open-access journals has been developed and described. The applied contribution of the dissertation research is: A software prototype has been developed based on one of the proposed functional models to establish its reliability and applicability.

The obtained results confirm the hypothesis of the dissertation. They are significant and represent a contribution to the development of publishing platforms based on the principles of open science using open-source software.

### **IV. Questions Regarding the Dissertation**

I have two questions for the doctoral candidate:

1. How can open-source platforms ensure the quality and cybersecurity of published research results?

2. What are the potential challenges and barriers to transitioning to open access for scientific publications using open-source online platforms?

#### **V. Summary Evaluation of the Dissertation and Conclusion**

From the above, it is evident that Martin Olegov Aleksandrov is a highly qualified expert in the field of business informatics, with extensive competencies and proven achievements in this area. He possesses the knowledge and skills necessary for conducting independent scientific research. This gives me reason to conclude that, in addition to meeting the minimum national requirements, the dissertation, abstract, and presented scientific work satisfy the requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria (ZRASRB), the Regulations for its implementation, as well as the Regulations of D. A. Tsenov Academy of Economics for the development of the academic staff, which are required for candidates seeking the educational and scientific degree “Doctor”.

Therefore, I give my positive assessment of the research conducted, as presented in the above-reviewed dissertation, abstract, achieved results, and contributions, and I recommend that the esteemed academic jury award the educational and scientific degree “Doctor” to Martin Olegov Aleksandrov in the area of study 3. Social, economic sciences and law, field of study 3.8. Economics, doctoral programme “Application of Computing in Economics”.

20.08.2024

Opinion prepared by: .

(Prof. Galina Ilieva)