

OPINION

by Assoc. Prof. Katia Rasheva-Yordanova, PhD

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Regarding the dissertation of Naiden Kirilov Naidenov

on the topic:

**“RESEARCH AND MODELING OF BUSINESS PROCESSES
SUPPORTING DECISION-MAKING RELATED TO DIGITAL
TRANSFORMATION”**

This opinion has been prepared in according to Order No. 61 of 28.03.2025 of the Director of IICT-BAS, issued based on a decision of the Supervisory Board of IICT (Protocol No. 3 of 26.03.2025), by which I was appointed as a member of the academic jury for the procedure concerning the defense of the dissertation titled “RESEARCH AND MODELING OF BUSINESS PROCESSES SUPPORTING DECISION-MAKING RELATED TO DIGITAL TRANSFORMATION” for the award of the educational and scientific degree "Doctor" in the doctoral program "Informatics", professional field 4.6. "Informatics and Computer Science" by Nayden Kirilov Naydenov, under the scientific supervision of Prof. Daniela Borissova, DSc.

I. General description of the submitted materials

As a member of the academic jury, I received access to:

- The dissertation for the award of the PhD degree;
- Abstract of the dissertation in Bulgarian and English;

- Copies of the articles included in the dissertation;
- Other accompanying procedural documents.

The dissertation is 126 pages long. Its structure includes: Introduction, three chapters, conclusion, summary of obtained results, contributions, list of publications based on the dissertation, list of cited publications, declaration of originality of results, and bibliography. The dissertation contains 22 figures, 6 tables, and 187 literature references.

The list of publications includes 4 titles, one of which is in press. All are co-authored. The abstracts, comprising 43 pages in Bulgarian and 42 in English, reflect the essence and content of the dissertation.

II. Relevance and significance

The dissertation by Nayden Kirilov Naydenov is a current study in the field of digital transformation, offering innovative models to support managerial decision-making. In a dynamic digital environment, organizations must adapt their strategies and technologies to remain competitive.

The developed mathematical models provide practical tools for objective assessment and optimization of digital transformation by integrating objective and subjective indicators. They support key managerial decisions related to critical factors, strategic choices, and progress assessment.

The study has both scientific and practical value—it enriches the theoretical foundations of digital transformation and proposes models with real business applications that support effective resource management and informed decision-making.

III. Analysis of the candidate's scientific achievements

The evaluation of the dissertation is based on the requirements of the Academic Staff Development Act (ASDA) and its regulations. According to Art. 6 (3) of ASDA, the dissertation must contain scientific or applied scientific results that represent an original contribution to science.

The doctoral candidate has three published articles in peer-reviewed journals indexed in international databases, and one accepted for publication. The SJR rankings of these journals range from Q4 to Q2, demonstrating the quality of the publications. Additionally, the doctoral candidate has seven identified citations in scientific journals and conferences indexed in Scopus and IEEE, which attests to the scientific relevance and impact of the research. Independent citations in documents indexed in global scientometric databases confirm the necessary publicity of the achieved results.

The defined contributions can be considered applied scientific and meet the stated research objectives. The doctoral candidate presents a total of four contributions, which comply with ASDA requirements, as they contribute both to expanding the theoretical framework in the field of digital transformation and to the practical application of the developed models in real business processes. The proposed approaches offer new opportunities for strategic planning, management, and optimization of digital initiatives in organizations, while also providing a methodological foundation for future research and applications.

IV. Critical remarks

The dissertation is well structured and presents an in-depth analysis of the studied issues. The proposed models are primarily

developed in the context of business organizations, but future research could explore their adaptation and application in other areas such as the public sector, education, or healthcare, where digital transformation is also of significant importance.

It is advisable that the doctoral candidate strengthen his independent research and publications in order to more clearly articulate his personal contribution to the scientific work.

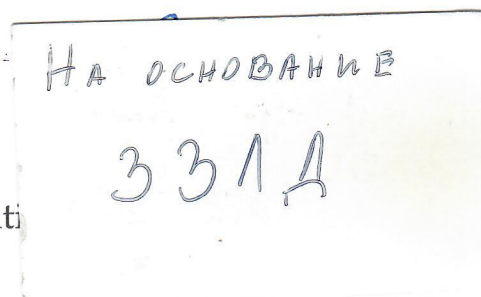
These recommendations in no way diminish the scientific and practical value of the research, nor do they underestimate the achievements of the doctoral candidate. Rather, they provide directions for future development and enhancement of the work, contributing to broader application of the proposed models and methods.

V. Conclusion

I consider that the requirements of the ASDA, the regulations for its implementation, and the internal rules for acquiring academic degrees and holding academic positions at IICT-BAS are met. After reviewing the dissertation and its accompanying publications, analyzing their significance and contributions, I confidently give my positive evaluation and recommend that the esteemed academic jury award the educational and scientific degree "Doctor" to Nayden Kirilov Naydenov in professional field 4.6. "Informatics and Computer Science", doctoral program "Informatics".

Sofia
15.05.2025

/Assoc. Prof. Kati



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