

To Department of
"Finance and Insurance"
VUZF, Sofia

REVIEW

From the reviewer (name, academic position and scientific degree):

Prof. Dr. Andrey Zahariev from "D. A. Tsenov" Academy of Economics, Svishtov
Scientific specialty of the reviewer: "Finance, monetary circulation, credit and insurance" (Finance)

Registration of the reviewer in NACID according to the procedure of ZRASRB and PPZRASRB (Register of academic staff and protected dissertation works in NACID):
from 01.12.2018.

Position of the reviewer: Member of the Scientific Jury, acc. Order No. 135/22.03.2024 of Prof. Dr. Boris Velchev, Rector of VUZF, Sofia for the composition of a scientific jury on the dissertation of doctoral student Dobromir Valentinov Donchev on the topic "**Creation of a model for managing digital transformation of business entities in the conditions of digital economics through process research methodologies**".

The scientific supervisor of the doctoral student is Assoc. Prof. Dr. Radostin Vazov, Department of Finance and Insurance, VUZF, Sofia.

Dear Scientific Jury,

The dissertation work developed by doctoral student Dobromir Valentinov Donchev is on the topic "Creation of a model for managing digital transformation of business entities in the conditions of a digital economy through process research methodologies". This review has been developed in accordance 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 - PPZRASRB and the Regulations for the Admission and Training of Doctoral Students at the Higher School of Insurance and Finance.

1. Information about the doctoral student

Doctoral student Dobromir Donchev obtained bachelor's and master's degrees from universities in the country. In 2003, he successfully graduated from the "Bachelor's College" in the specialty "Mechanical Engineering - Precision Technology" at TU - Sofia. In 2012 - OKS "Master" in "Electronic Business and Electronic Management", UNIBIT, Sofia, and in 2013 - MBA, direction Leadership, management and finance (in partnership with Ambient) at VUZF, Sofia.

The training as a doctoral student is carried out independently in a doctoral program with the leading Department of Finance and Insurance, VUZF, Sofia. Academic supervisor from enrollment is Assoc. Prof. Dr. Radostin Vazov.

2. General presentation of the dissertation work

The dissertation focuses on the management of the digital transformation of business entities in the conditions of a digital economy through process research methodologies. The volume of the study is 184 pages, supported by 67 figures and 4 tables. The study was conducted on innovative business projects in the digital industry. The study covers the entire life cycle from the emergence of a business case through the validation, implementation, implementation and optimization with a main focus on the management model and the protection of the investment, including strategic development. All the properties of the studied objects, united in a system of interconnected elements, were considered.

The aim of the dissertation is to analyze the impact of organizational factors on the business digitalization process and to show the possibilities for optimization of processes at the "company" level by means of the integration of Process Research

methodologies. Through a comparative analysis, the main business areas will be examined and an innovative synergistic model for managing risk investments in the digital economy will be presented. The end result will be a developed and adapted model (process innovation) for digital transformation management. Its main focus is achieving business efficiency and effectiveness through constant process optimization and high levels of customer and staff satisfaction.

The tasks that are solved to achieve the goal set in the dissertation are the following:

First. Based on the results of the theoretical study on the topic, to build the conceptual vision for a general innovative management model. To present a conceptual innovation framework covering the lifecycle of a digital initiative (BA/Agile/CMMI/Process mining) and an example of integration with existing automation systems.

Second. To study and analyze the degree of readiness for the implementation of a common working model between business requirements management and Agile Management methodologies.

Third. To develop in detail a comparative analysis of the various flexible models for the development of digital products (Agile).

Fourth. To study and analyze the degree of readiness for the implementation of a common work model based on the system for ensuring the quality of manufactured products (CMMI) and a selected flexible methodology for the production of digital products.

Fifth. To explore and analyze the status of relatively new systems approaches and process optimization models based on real data Six. Process research. To explore the possibility of integrating the described concept as a general approach to an innovative model for the automated processing of large amounts of information/knowledge that covers all major business domains.

Seventh. To analyze the results of the research, making summaries and conclusions with guidelines for the implementation, use and subsequent development

of the process innovation.

The subject of the research is the analysis and tracking of the design of corporate social systems and their accompanying technologies related to the entire cycle for the production of innovative products.

The main areas for analysis are the following: Development and management of business requirements (digital economy); Flexible methodologies for digital project management; Quality management systems and models in the field of digital products; Process research as the missing link between Data Science and Process Management. Transforming real data into values and actions for organizations;

The study verifies the hypothesis that the available models and methodologies for managing digital products are not universal and their application should be the result of a consistent, targeted and systematic study of the technological and social environment of a given company. The correct and gradual integration of the given components into a common innovation model will lead to an improvement in the competitiveness of business entities in the process of their transformation to a digital economy based on knowledge.

The working hypothesis is related to the fact that the process of integration between the following organizational components (domains) should be stimulated: business analysis; flexible methodologies for the production of digital products; quality assessment and description system; process optimization systems based on real data.

In the first chapter, an overview of the scientifically applied paradigms that determine the choice of methodological approaches with a detailed focus in the field of business analysis and requirements management is made.

The second chapter clarifies the technical aspects of the management of digital initiatives, the models for management and development of processes and some fundamentals related to phenomena from the new concepts related to data sciences, namely the process research paradigm.

The third chapter offers a detailed analysis, presenting a section of the new

paradigms supporting the management of digital innovations and the implementation of the Process Research methodology as an innovative model for processing management and solving the main tasks related to the management of large data sets, resources and required rapid adaptation to the developing digital economy.

3. Evaluation of the obtained scientific and scientific-applied results

I assess the tasks set in the dissertation as achieved and solved. The formulated and scientifically derived results in the dissertation confirm the correct application of methodology for analysis and research.

The dissertation contains scientific-applied and applied results, which represent an original contribution to science and meet all the requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria (ZRASRB) and the Regulations for the Implementation of ZRASRB. The presented materials and scientific results fully comply with the requirements of the Regulations for admission and training of doctoral students at VUZF. The tasks set in the dissertation are evaluated as correctly completed. The generalizations and conclusions drawn can be defined as logical and scientifically argued. They confirm the presence of a motivated doctoral student, guided by his scientific supervisor, who applies a sustained and authentic methodology with a high degree of analyticity, leading to scientific conclusions and contributions.

4. Evaluation of the formulated contributions and achieved theoretical, theoretical-applied and empirical results

The following contributions are made in the development:

1. Detailed analysis of BA, CMMI and Agile methodologies.
2. Determining synergy between the considered models and Process mining practices.
3. Analysis of the main problems and their causes in the life cycle of digitalization of companies.

4. Identification of interdependencies between organizational factors and the quality of produced digital products/services and systematization of approaches to their solution.

5. Proposal for a new applied model for the interpretation of the main methodologies.

6. Development of a model serving as a basis for future development of process innovation based on integration between data sciences and a complex management approach in a digital environment with real-time data.

I believe that they correspond to the achievements in the dissertation work.

5. Evaluation of dissertation publications

Five publications are presented on the dissertation, four of which are independent. The publications are at the required scientific and research level, ensure publicity and compliance with the minimum national standards under the PPZRAS.

6. Evaluation of the Abstract

The abstract is 49 pages long. The synthetic merits of the dissertation work are presented in it. The graphic materials used are duly cited.

7. Criticisms, recommendations and questions

Question: Name three advantages and three disadvantages of implementing artificial intelligence in business process management?

8. Conclusion

There is a successful doctoral program leading to dissertation research with high econometric complexity, publications and scientific appearances. The support from the scientific supervisor is visible and positive in all sections and directions.

On the basis of all the above, I express a positive conclusion - "FOR" the awarding of the ONS "doctor" in economics to Dr. Dobromir Valentinov Donchev

from the "Finance and Insurance" department of VUZF.

19.4.2024

Svishtov

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/Prof. Dr. Andrey Zahariev/