ACADEMIC OPINION

On the dissertation for obtaining the academic degree **DOCTOR OF SCIENCES**

in the professional academic area

3.7 Administration and management (Business management)

by

Prof. Desislava Ivanova YORDANOVA, PhD

Opinion of Prof. Vesselin Blagoev, PhD

Higher School of Management, Varna

This academic opinion is written and submitted according to Order № РД-38-462/26.07.2022 г. of the Rector of Sofia University "St. Kliment Ohridski" for nominating an Academic Jury for awarding the academic degree of Doctor of Sciences based on the presentation and defense of the dissertation paper of prof. Desislava YORDANOVA, PhD in the academic/professional field of Administration and management.

The set of documents submitted by the candidate prof. Desislava Yordanova includes all required by the Law for development of the academic staff and by the Internal Regulations of Sofia University for applying the Law for development of the academic staff.

1. Short presentation of the candidate for obtaining the academic degree

DOCTOR OF SCIENCES

Prof. Yordanova presented all the necessary materials for the procedure, including the dissertation "Technological entrepreneurship among Bulgarian STEM students - the role of the university" in volume 342 pages incl. appendices, in Bulgarian and English, abstract, as well as a list of publications.

As can be seen from the presented CV, Prof. Yordanova has extensive academic experience in the field in which the doctoral dissertation is presented, including:

- Teaching activities: Entrepreneurship in English; Creation of a new enterprise; Family business management and succession; Management and development of new and small businesses; Family business; Entrepreneurship and innovation.
- Participation in research projects
- Participation in scientific conferences
- Development of educational and methodological materials

Similar and also concentrated in the entrepreneurial field is her activity as an associate professor and before that an assistant. Within this framework, she has been developing issues related to technological entrepreneurship. As can be seen from the presented list of publications, they are all centered around technological entrepreneurship and/or training STEM students to develop in this field.

As a whole, the presented materials prove the indisputable academic authority and results of Prof. Yordanova and fulfill the formal requirements of the procedure for the scientific degree Doctor of Sciences in the chosen direction "Technological entrepreneurship among Bulgarian STEM students - the role of the university".

2. Evaluation of the qualities of the dissertation work

Without any hesitation, I define the dissertation presented by Desislava Yordanova as first-class science in the relevant field. My reasons for this are as follows:

> The research topic is extremely relevant. Technological entrepreneurship, in particular related to the education of STEM students, is one of the two leading directions in the development

of university education at a higher level, and any qualitative research in this area is extremely valuable - both theoretically and practically.

- D. Yordanova presents various theoretical models of the entrepreneurial university, and key elements of the entrepreneurial university are brought out. Problems and barriers to the entrepreneurial transformation of Bulgarian universities are analyzed. This PhD work certainly adds to the valuable developments in the field.
- Four conceptual research models are proposed that represent the university-related factors affecting the following stages of the technology entrepreneurship process (Figures 18 - 21)
- The methodology of this study, which fully meets the requirements of Scopus journals, deserves special attention. This fact in itself speaks for the quality of the research.
- The research itself is large-scale, conducted in 2015-2016 with the participation of 1061 STEM students studying in 15 Bulgarian universities.
- As Prof. Yordanova points out, "Various barriers to entrepreneurial activity are described and various entrepreneurial activities performed by the studied STEM students who participate in emerging technological entrepreneurship/emerging domestic technological entrepreneurship are identified."
- University-related factors that influence the likelihood of emerging (domestic) technology entrepreneurship are identified
- A conceptual framework of the role of the university for technological entrepreneurship among STEM students is presented (Fig.22).
- > The working hypotheses are commented very well.

3. Publications

In my view, for this procedure it is not the most important element in the assessment. A total of 14 titles are listed, including collective publications, including 3 in Scopus & Web of Science indexed journals. All publications are in English. The publications are related to the research and conclusions in the dissertation work. All publications are related to the subject of the dissertation and reflect different elements of the research.

4. Scientific contributions

I agree with the views presented by D. Yordanova about her contributions, including:

1/ Scientific contributions:

- Definitions, theoretical approaches and models in the field of entrepreneurship are systematized.
- Four conceptual models are developed of university-related factors influencing attitudes, intentions, and behaviors to develop technology entrepreneurship among STEM students.
- The proposed conceptual models contribute to a better understanding of the process of technological entrepreneurship development, because they emphasize the role of intentions to implement technological entrepreneurship as an important stage of transition from target intentions to develop technological entrepreneurship to emergent (internal) technological entrepreneurship.
- A toolkit has been developed to investigate the attitudes, intentions and behavior for the development of technological entrepreneurship among STEM students.

2/ Contributions related to application:

- New knowledge was obtained about technological entrepreneurship among Bulgarian STEM students and the role of the university for the attitudes, intentions and behavior for the development of technological entrepreneurship among Bulgarian STEM students.
- The obtained results have applied significance for the creation and introduction of policies and support measures in order to stimulate technological entrepreneurship among Bulgarian STEM students.
- The obtained results are significant in terms of application for improving the content and didactic methods in entrepreneurship education of STEM students in Bulgarian universities.

7. Critical notes and recommendations

Altogether this is significant research with high value for teaching STEM entrepreneurship students. In the spirit of positive scientific criticism, I would point out the following:

Prof. Yordanova should take the responsibility for more publications in Bulgarian language that are accessible to users in Bulgaria who do not speak English. Such an academic exchange of research/publications would contribute to popularizing the achievements of this research among the Bulgarian audience. The topic is of great interest, and the quality of the research in its two parts – methodology and implementation – meet the highest academic standards.

CONCLUSIONS

On the basis of everything said above, I evaluate the presented dissertation work of Prof. Dr. Desislava YORDANOVA as very valuable and worthy of awarding its author the scientific degree DOCTOR OF SCIENCES in Administration and Management (Economic Management) at SU. I am

convinced that the work meets the accepted recommended scientific and scientometric formal requirements. Publications contain research results representing scientific and scientific-applied contributions, adding knowledge to advance technology entrepreneurship as theory and practice.

I am not related to the candidate, nor have I co-published with her. I appreciate her as a well-known and highly valued and respected person in the academic community.

Based on the analysis of the provided scientific work, its indisputable importance, the scientific and applied contributions contained in it, I find sufficient grounds to propose Prof. Desislava Ivanova YORDANOVA to be awarded the scientific degree DOCTOR OF SCIENCES in professional direction 3.7 Administration and management. I am convinced that such a decision of the Scientific Jury is deserved and I wish her new successes in scientific research as well as as a teacher.

I propose to the esteemed Academic Jury to award Prof. Desislava YORDANOVA, PhD the scientific degree DOCTOR OF SCIENCES.

6.09. 2022 г.

Member of the Academic Jury:

(Prof. Vesselin Blagoev, PhD)