



SUMMIT

SOFIA UNIVERSITY
MARKING MOMENTUM
FOR INNOVATION AND
TECHNOLOGICAL TRANSFER



Funded by
the European Union
NextGenerationEU

National Recovery and Resilience Plan



OF THE REPUBLIC OF BULGARIA



Funded by
the European Union
NextGenerationEU



National Recovery and Resilience Plan



OF THE REPUBLIC OF BULGARIA

Sofia University - Marking Momentum for Innovation and Technological Transfer

ANNUAL REPORT

March 2023 – March 2024

Research group 3.1.17. Digitalization of SMEs

Prof. D.Sc. Desislava Yordanova, leading researcher



Content

1. Main activities
2. Results
3. Planned activities
4. Main problems and risks
5. Publications

Administrative activities

- Two competitions for two vacant positions for established researchers R3 were announced.
- As a result, two established researchers R3 were hired and joined the research group.
- Three public procurement procedures were conducted. The following companies were contracted:
 - The company “Alpha Research” OOD was contracted to conduct analyses of survey data.
 - The company “NOEMA” OOD was contracted to provide services for data analysis.
 - The company "AUTEGRI" EOOD was contracted to provide extraction and analysis of unstructured data related to SMEs digitalization from Internet.
- In January 2024 the software SMART PLS with graphical user interface for variance-based structural equation modeling using the partial least squares path modeling method was bought.

Research activities

- Literature review in the field of digitalization and digital transformation of SMEs.
- 17 interviews with experts in the field of digitalization and digital transformation.
- Development of a preliminary model of the determinants and effects of digital maturity in SMEs.
- Development of a preliminary model of factors influencing the process of digital transformation in SMEs.
- Development of a two-stage analytical framework aimed at quantifying the effect of organizational drivers behind the digitalization of SMEs.

Research activities

- Development of an ML-based AI conceptual framework for assessing SMEs digitalization.
- Manuscript titled “Organizational capabilities for SME digital transformation – evidence from Bulgaria” is submitted to the journal Organizations and Markets in Emerging Economies, indexed in WoS.
- Editorial titled “Digital Technologies and the Internationalization of Small and Medium-Sized Enterprises” was published in Sustainability (IF = 3.9), indexed in WoS.
- The members of the research group participated in six national and international scientific conferences.

Research results

- Drawing upon previous theoretical and empirical research, we present a conceptual model of environmental factors, organizational characteristics and organizational drivers of the process of digital transformation of SMEs. Then, we develop a two-stage analytical framework aimed at quantifying the effect of organizational drivers behind the digitalization of SMEs.
- We developed the architecture of an ML-based AI conceptual framework for assessing SMEs digitalization.
- The editorial titled “Digital Technologies and the Internationalization of Small and Medium-Sized Enterprises” published in Sustainability (IF=3.9) outlines various ways in which digital technologies affect the internationalization of SMEs.



SOFIA UNIVERSITY -
MARKING MOMENTUM
FOR INNOVATION AND TECHNOLOGICAL TRANSFER

National Recovery and Resilience Plan



OF THE REPUBLIC OF BULGARIA

Planned activities

- Until the end of the year, two competitions for two vacant positions for doctoral students R1 will be announced.
- The research results will be communicated during several international conferences in 2024.
- The research team is working on several articles which will be submitted to scientific journals indexed in Web of Science.

Main problems and risks

- The following main problems are identified:
 - Long time to publish a paper in most management journals, especially those in Q1 and Q2 in Web of Science;
 - Long time for published journal articles and conference proceedings to be indexed and appear in Web of Science.
- These problems are associated with the risk of not reaching the envisaged quantitative indicators.
- In order to address this risk, the research group performed 2 national representative surveys about digitalization of Bulgarian SMEs and about digital transformation of Bulgarian SMEs.

Publications

- Yordanova D, Dana L-P, Manolova TS, Pergelova A. Digital Technologies and the Internationalization of Small and Medium-Sized Enterprises. *Sustainability*. 2024; 16(7):2660. <https://doi.org/10.3390/su16072660>;
Link: <https://www.mdpi.com/2071-1050/16/7/2660>
- Pelova B, Hristova G. “ML-based AI conceptual framework for assessing SMEs digitalization through the lens of sentiment analysis” (submitted for review in DMI’2024, [Home page - DMI2024 \(dmiconf.org\)](https://dmiconf.org))
- Yordanova D, Bogdanova B, Pergelova A, Hristova G. “Modelling the process of digital transformation in SMEs via a two-stage analytical framework” (accepted for publication in AIP Conference Proceedings)



SOFIA UNIVERSITY -
MARKING MOMENTUM
FOR INNOVATION AND TECHNOLOGICAL TRANSFER

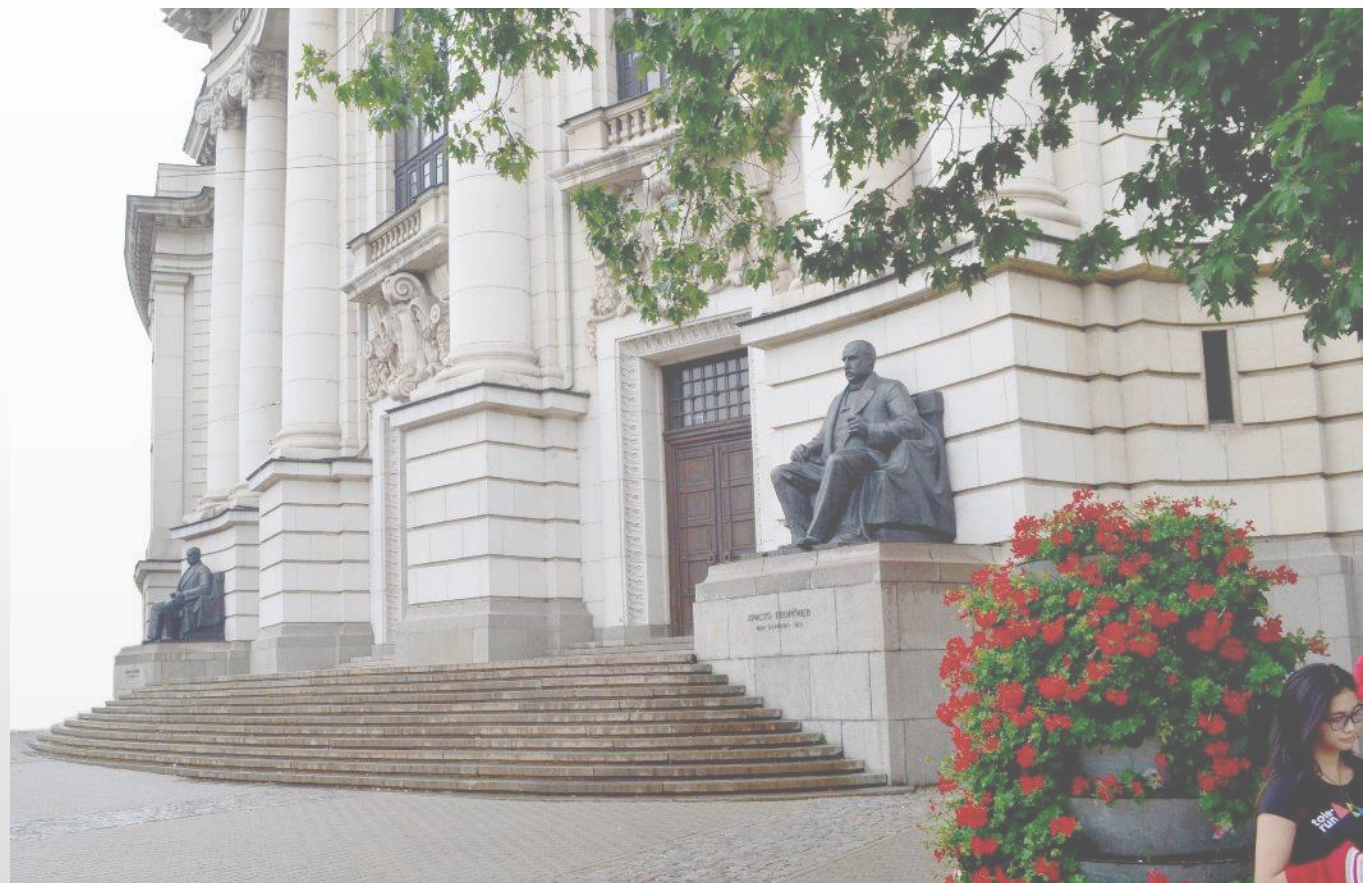
National Recovery and Resilience Plan



OF THE REPUBLIC OF BULGARIA

Thank you for your attention!

Contact: d_yordanova@feb.uni-sofia.bg





SOFIA UNIVERSITY
MARKING MOMENTUM
FOR INNOVATION AND
TECHNOLOGICAL TRANSFER



Funded by
the European Union
NextGenerationEU

National Recovery and Resilience Plan



OF THE REPUBLIC OF BULGARIA

