

**BUCHAREST UNIVERSITY OF ECONOMIC STUDIES**

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## **PHD THESIS SUMMARY**

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PhD thesis title:

**RESEARCH ON ORGANIZATIONAL LEADERSHIP IN THE  
CONTEXT OF RISKS AND OPPORTUNITIES GENERATED BY  
BUSINESS DIGITALIZATION**

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**Key words:** digital transformation, organizational leadership, organizational innovation, artificial intelligence, digital leader, sustainable business.

## THESIS SUMMARY

Digital transformation involves a complex evolution for organizations in recent years, meaning more than just technology adoption. In addition to technological integration, such as the adoption of artificial intelligence that helps to optimize digital transformation through process automation, advanced data analytics, increased productivity, improved information security, better understanding of consumer behavior, etc., digital transformation also implies a cultural change, a business model innovation that can be achieved with the help of organizational leaders equipped with the competencies and skills specific to such a transformational process.

It is organizational leaders who facilitate innovation. They are responsible for fostering a strong organizational culture that stimulates performance and adaptation to the rapidly changing business environment. They must also possess technical skills, strategic thinking and promote a digital culture. They must be adaptable, encourage continuous learning and balance technology integration with people-centered approaches.

The process of digital transformation has also been marked by the integration of agile approaches into digital initiatives, helping organizations to adapt quickly to market changes, innovate constantly and hold a sustainable competitive advantage in today's business environment.

Therefore, digital transformation, agile approaches, organizational innovation and digital leadership are interconnected elements that shape the success of organizations in the digital age. The effective integration of these elements, together with the intelligent use of advanced technologies, can lead to significant improvements in organizational performance and innovativeness.

Through the development of the scientific research paper with the theme *Organizational leadership in the context of risks and opportunities generated by business digitization*, the following aspects are presented:

In chapter 1, the analysis of *current approaches to digitization of business*, identified current characteristics and trends in business, digital business transformation and agile digital transformation and organizational innovation.

To highlight the current characteristics and trends in business, the characteristics of agile business and business 4.0 requirements were analyzed. In order to define the digital transformation of businesses, the defining elements of digital transformation and the factors influencing business

digitization were identified. Regarding agile digital transformation and organizational innovation, the benefits of the agile approach, the risks and opportunities generated by business digitization, the role of artificial intelligence in digital transformation were analyzed and the importance of using artificial intelligence models, in the context of business digitization, was determined.

In chapter 2, the *trends on organizational leadership in relation to the digital and innovation competence requirements of organizations* were analyzed, firstly identifying the defining elements of organizational leadership and the importance of organizational leadership in the context of digital business transformation.

In order to highlight the defining elements of organizational leadership, the approaches in the literature on organizational leadership were analyzed and the importance of organizational leadership in the context of Business 4.0 and effective leadership and organizational performance were determined. With regard to organizational leadership in the context of digital business transformation, the new demands on leadership in the context of digital transformation, the characteristics of digital leadership and the effects of digital leadership on organizational performance were analyzed.

Chapter 3 presents the *results* of doctoral research on *current trends in business development in the context of digital transformation and artificial intelligence*. In this regard, the research was concerned with conducting studies on the success factors and risks generated by business digitization; the relationship between sustainable business, digital transformation and artificial intelligence in the context of sustainable development; and strategies for professional development of employees in the context of business digitization.

To determine the success factors and risks generated by business digitization, an analysis of papers published in the web of science database on the topic of business digitization was conducted.

Through literature reviews, case studies of organizations implementing digital transformation and artificial intelligence solutions, and comparative analysis of different approaches to integrating digital transformation and sustainability initiatives in different industries, the research identified opportunities for artificial intelligence and digital transformation in relation to sustainability goals. Thus, research results indicate that the integration of digital technologies and artificial intelligence offers significant opportunities for improving resource efficiency, optimizing processes, monitoring and reporting environmental impacts, and developing innovative solutions in sectors such as energy, transport and manufacturing.

The results of the research on employee professional development strategies in the context of business digitization showed what are the future structural transformations of the labour market

and what are the professional development strategies of organizations in the context of digital transformation.

In terms of professional development strategies of organizations in the context of digital transformation, the results of the study showed the importance of adapting to the rapid changes in the labor market by adopting training programs and internships.

Chapter 4 presents *research findings on digital transformation and organizational innovation*, with a focus on agile digital transformation in relation to organizational innovation and the integration of innovation management system with risk management system in the context of organizational change driven by business digitalization.

The research findings on agile digital transformation in relation to organizational innovation highlighted the importance of adopting an agile approach to drive innovation and respond quickly to changes in the business environment. However, the study also highlights the challenges associated with implementing the agile approach, such as potential budget overruns and difficulties in meeting deadlines. To manage these risks, the research recommends a clear definition of project scope, careful resource planning and constant monitoring of progress.

The results of the research on the integration of innovation management system with risk management system in the context of organizational change generated by business digitalization identified and analyzed a methodology based on the "action research" model that proposes an eight-step process combining change management, innovation and risk management. The main advantage of this methodology is its ability to facilitate the controlled implementation of innovations, minimizing potential risks and maximizing the chances of success.

The research presented in chapter 5, regarding the *analysis of organizational leadership in the context of business digitalization*, determined, with the help of a questionnaire-based study, which are the skills of digital leaders in the process of digital transformation, on the example of IT organizations in Romania. Also, the literature review facilitated the identification of factors that help organizational leadership in the context of digital transformation.

The results of the questionnaire-based research on the skills of digital leaders in the process of digital transformation, determined the profile of the digital leader, namely the competencies, skills, leadership style and specific priorities that he/she should have.

In terms of factors that help organizational leadership in the context of digital transformation, the research proposed the use of the "Status, Certainty, Autonomy, Relatedness, Relatedness, and Fairness (SCARF) model from neuroscience, which can help the leader of an organization to better manage the digital transformation process. This model, based on the five key elements, provides digital leaders with an effective framework for anticipating, regulating, and explaining employees' emotional responses. Using this model, digital leaders can improve

communication, reduce conflict, and facilitate the adoption of new technologies and processes, turning the challenges of digital transformation into positive team experiences.

Chapter 6 presents the *talent management system in relation to organizational leadership in the context of business digitalization*, developed in the doctoral research. In this regard, a database was developed to support the development of the talent management system, the use of artificial intelligence models was proposed to develop the system, and subsequently the performance of the talent management system was improved based on artificial intelligence models using human assessments in relation to organizational leadership in the context of business digitalization.

The database that supports the development of the talent management system was accomplished in three stages. The first stage involved collecting data from sources such as LinkedIn, extracting 17 job descriptions from Finance, Sales, Customer Service, Human Resources and IT domains, and 66 CVs of potential candidates for these job descriptions. The second stage consisted of data annotation by 8 expert annotators, using a customized graphical interface that facilitated a detailed annotation of the candidates' CVs against the job descriptions. The third stage, the assessment extraction stage, involved the collection and processing of annotators' explanations, resulting in more than 550 human assessments. This database building process helped to develop an effective talent management system, combining human expertise with the advanced capabilities of Large Language Models (LLMs).

The proposed system was based on LLM models, without requiring prior codification of rules, thus providing increased flexibility and adaptability for its integration within any organization. The use of real data and human assessments ensured the validity and relevance of the results.

The enhancement of the proposed talent management system based on artificial intelligence models using human assessments demonstrated the effectiveness of integrating human assessments into the artificial intelligence-based assessment process. The enhanced system, which incorporated human assessments, showed superior performance over the reference system, thus indicating a closer approximation to human judgment. These results validated the hypothesis that the integration of human knowledge and insights can substantially improve the performance of AI (artificial intelligence) systems in talent management for organizational leadership in the context of business digitalization.

Therefore, the results of the doctoral research have highlighted the significant benefits that a talent management system based on large-scale language models can bring to organizational leadership but also signaled the potential risks that may arise.



In conclusion, digital transformation has become an imperative for organizations that want to thrive, remain competitive and innovate in the business environment. For digital transformation to be successful, organizations need to pay close attention to factors that can determine the course of this transformation, such as organizational leadership, the integration of agile approaches into digital initiatives, and the use of appropriate technologies for process development and improvement, such as artificial intelligence. The effective integration of these elements, and others stemming from them, can lead to significant improvements in organizational performance and innovation capacity and help organizations to maintain their competitive edge in the labour market.