

# Digitalization of the Macedonian Economy in the Post-COVID-19 Pandemic <sup>†</sup>

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**Abstract:** Paper aims to elaborate the digitalization process in Macedonian Economy in the period after COVID-19 crisis, particularly aligned with the digitally skilled population and highly skilled digital professions, as well as the digital transformation of businesses. The methodological approach is quantitative and qualitative resulting from the very nature of the research question. The results demonstrated low level of digitalization both with businesses and population in the Macedonian economy after the outbreak of the pandemic.

**Keywords:** digitalization; digital economy; digital skills; digital transformation of businesses

## 1. Objectives

Future processes emphasize the shift toward digitization in many areas of living and actions [1,2]. The importance of this process has been intensified even more with the emergence of the COVID-19 pandemic, changing the habits, needs, and processes of both individuals and business entities [3]. Every single economy, including the Macedonian economy, should upsurge digitalization in order to follow the trends in the global economy. Hence, this paper aims to evaluate whether the COVID-19 pandemic has improved the digital economy in the country, especially in terms of a digitally skilled population and highly skilled digital professions and digital transformation of businesses.

## 2. Methodology

The research was conducted through quantitative and qualitative analysis of two types of secondary data. The first type is quantitative data from relevant sources, realistically showing the degree of digital economy development, such as the OECD Digital Society Index, the WITSA Network Readiness Index, the Balkan Business Barometer, the Global Competitiveness Index, and detailed assessment with the Digital Economy and Society Index (DESI) of the European Commission [4–7]. The second type is qualitative data, derived from the legal framework, strategic programs, and policies of North Macedonia that cover the topic of digitization [8–11].

## 3. Results

The research identified an unnoticeable improvement in the digitalization of the Macedonian economy after the outbreak of the pandemic. Business entities are still very slightly digitized, and digitization is insufficiently supported. There is a low level of the population's digital literacy, which is a serious obstacle for the more significant use of digital tools and services, including electronic shopping, affecting the electronic sale of goods and services by companies. Additional efforts are required to accelerate digitization, target sectors, and stakeholders, where it is most urgently needed and will generate the greatest added value.



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#### 4. Implications

This paper implies an enrichment of scientific knowledge about the digital economy, identifying the changes in the digital population skills and the digital transformation of businesses in the post-COVID-19 period, in the country, and beyond. The research refers to the changing role and perception of digitization in economies and societies and to the growing recognition of digitization and the development of the digital economy as a need. It points to the necessity of reforms and investments in digital technologies, infrastructure, and processes. Subsequently, every economy, including the Macedonian economy, will be more competitive on a global level, resilient, innovative, and less dependent.

#### 5. Originality Value

The approach of evaluating the digital economy in the country through a mix of numerous indicators and parameters that are part of already existing bases marks the originality of the paper. Many of them are placed and compared in one place, giving a more comprehensive overview of the state, and the results can be more firmly confirmed and concluded.

#### 6. Contribution

Considering the relatively new operating conditions as a result of the pandemic, this research contributes to the evaluation of the new states and circumstances in the digital economy in the country and indicates the shortcomings, challenges, and opportunities in the direction of its improvement. At the same time, the contribution of this paper is to indicate the connection of the digitization process with a series of policies to support and create an environment for the introduction, development, and application of digital technologies and tools in the economy, which must be adapted to ensure its successful implementation.

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