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## ENTREPRENEURIAL MINDSET FOR SUSTAINABLE BUSINESS DEVELOPMENT THROUGH DIGITALIZATION

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**Abstract.** *Research background:* One of the main problems of modern society is the excessive, inefficient and insufficient use of resources, a significant part of which are non-renewable and/or slowly recovering, which leads to the disturbance and pollution of the ecological environment. The use of the linear consumption model still predominates, where products that have used certain resources to be produced instead of being recycled after use are thrown away. This requires a transition to a new model that optimizes the process of using resources and leads to a sustainable state of nature and society, which is the basis of the circular economy. The understanding of the problem by the entrepreneurs and the implementation of specific measures to solve it is particularly important. A significant factor for the adoption of the new model may be the digitization of entrepreneurial activity using digital tools and solutions to accelerate and scale the circular economy. This Digitalization Process, as a prerequisite for sustainable development and the realization of the principles of the circular economy, can be considered in this case from two sides - from the point of view of business, and from the point of view of the culture and behaviour of society and specifically of consumers. *Purpose:* This publication aims to examine the entrepreneurial's mindset towards adopting the principles of the circular economy and sustainable development through the digitization of business and the opportunities that digitization provides for solving this problem. *Methods:* In order to investigate the degree of entrepreneurial attitude regarding business digitization and the possibilities for sustainable development through digitization, a quantitative research approach has been applied. The sources that were used include a questionnaire survey and the analysis and evaluation are based on statistical methods. *Findings and novelty.* The findings presented in this paper include entrepreneurs' understanding of the benefits of the circular economy and business sustainability when using digital technologies

*Keywords:* digitization; entrepreneurial activity; circular economy; sustainability

JEL: L26, Q55, Q56

### Introduction

The circular economy represents a new paradigm aimed at prolonging the lifespan of products through practices such as sharing, borrowing, reusing, repairing, and recycling (European Parliament, 2023). In contrast, the linear economy, the previous model, relied on resource extraction and production, resulting in products that eventually became waste. Landfill reclamation has been a common method of

disposal, but it does not provide significant benefits to the environment. The linear economy is no longer viable due to limited resources, energy-intensive production processes, and waste generation, leading to pollution and resource depletion.

According to Eurostat (2019), the extractive industry and production accounted for 37.2% of waste in the EU in 2018. 39.2 % of waste were recycled and 32.2 % was landfilled in the EU in 2020. The United Nations Environment Program (UNEP 2021) reported that the resource extraction sector is responsible for 50% of global carbon emissions and 80% of biodiversity loss. Everyday material production contributes to approximately 45% of emissions in the EU, with over 2.5 billion tons of waste disposed of annually in the Union (Eurostat 2022).

Transitioning to a circular economy presents innovation, competitiveness, and economic growth opportunities. According to EU data, this transition has the potential to add 0.5% to the EU's gross domestic product and create 700,000 jobs by 2030. Additionally, consumers can benefit from access to more sustainable and cost-effective products. With approximately 40% of the total cost of goods in the EU attributed to resources and rough materials, adopting closed-loop models can enhance company profitability and protect against price fluctuations.

The importance of circular production and economy is not only vital for business survival but also for the planet's well-being. Companies that integrate innovative solutions today can prepare for future challenges, develop sustainable strategies, and optimize operations with an environmentally friendly approach.

### **Business digitization and sustainable entrepreneurial mindset**

Digitalization presents unprecedented opportunities for businesses to embrace the principles of the circular economy and achieve long-term sustainability. By leveraging digital technologies, companies can optimize resource utilization, reduce waste, and adopt innovative business models that create value while minimizing environmental impact.

The European Commission monitors the digital progress of member states and publishes annual reports on the Digital Economy and Society Index (DESI). While digitalization progress varies across the European Union (EU), there are signs of convergence. Countries that were initially at a lower level of digitization are progressing at a faster pace, indicating overall digital convergence in the EU (DESI 2022).

However, Bulgaria ranks 26th out of 27 EU member states in the 2022 Digital Economy and Society Index (DESI). Although the country's DESI score has grown by an average of 9% annually over the past five years, it is still insufficient to catch up with other member states.

Whereas, the entrepreneurial mindset encompasses a set of attitudes, behaviors, and skills that enable individuals and organizations to identify and seize opportunities, innovate, and create value (Soltanifar and Smailhodžić 2021). By fostering an entrepreneurial mindset, businesses can drive sustainable practices and capitalize on digitalization to address environmental and social challenges.

Digitalization has become increasingly pervasive, disrupting traditional business models and offering new avenues for sustainable development. Digitalization offers a plethora of tools and technologies that can enhance sustainable

practices. From data analytics and artificial intelligence to Internet of Things (IoT) and blockchain, digital technologies can optimize resource utilization, enable transparency, and promote sustainable supply chains.

Digital entrepreneurial thinking plays a crucial role in achieving sustainable business development. According to Soltanifar and Smailhodžić (2021), companies that embrace digital entrepreneurship benefit from improved financial outcomes. Digital entrepreneurship expands its scope due to advantages like lower costs, enabling entry into new markets and activities. Digital technologies are integrated into various aspects of business activities, such as production processes, logistics, marketing, and communication. Well-known digital startups like Google, Facebook, Amazon, Alibaba, Dropbox, Uber, and AirBNB have paved the way for digital entrepreneurship. It highlights the benefits of the business models, such as increased customer engagement, enhanced brand reputation, and improved resource efficiency.

Understanding the relationship between digital transformation and globalization is essential in digital entrepreneurship. According to Kraus et al. (Kraus, Palmer, Kailer, Kallinger, Spitzer 2019), this relationship fosters the sharing economy, which offers a new business model for entrepreneurial activities. Network connectivity drives digital operations, connecting companies and consumers on national, regional, and global scales (Kooskora 2021). As a result, the digital economy and digital entrepreneurship experience rapid growth.

For successful digital entrepreneurship, the adoption of new technologies and the expansion of digital means are crucial (Soltanifar, Smailhodžić 2021; Zaheer, Breyer, Dumay 2019; Boyko, Evnevich, Kolyshkin 2017; Dudin, Omarova 2019; Kraus, Palmer, Kailer, Kallinger, Spitzer 2019). This includes infrastructure development, the use of artificial intelligence, and the application of digital technologies across various sectors. Cloud services play an increasing role in storing vast amounts of information, contributing to technological advancements in entrepreneurial activities. Bocken and Short (2019) highlight the potential of digital platforms, data analytics, and IoT in promoting circularity through research on business models for the circular economy and the role of digitalization in enabling circular practices.

According to Sachs et al. (2019), the role of digital technologies in driving the circular economy is significant and the importance of government policies and investment in shaping a sustainable and inclusive digital transformation has to be emphasized. In this regard, most funds and EU programs, such as Horizon 2020, aim to support the acquisition and implementation of software products that facilitate the sustainable development of circular economy concepts.

### **The digital change in business models and entrepreneurial thinking**

According to Schwab (2016), within the Fourth Industrial Revolution, the digital connectivity made possible by software technologies is fundamentally changing society. The scale of the impact and the speed of the changes taking place make the change far different from any other industrial revolution in human history. Borisova and Nikolova (2020) emphasize that digital communication accelerates the process of interaction with the user. In this regard, the integration of digital technologies in business operations leads to significant changes in communication

methods, both internally within the company and externally with other companies, customers, and various institutions (Soltanifar, Smailhodžić 2021; Richter, Kraus, Brem, Durst, Giselbrecht 2017; Samara, Terzian 2021). Communication becomes more flexible and independent of time and space. In addition to one-way information transmission, digitalization enables multilateral network connectivity, surpassing the limitations of traditional methods. Company websites and the internet alone are no longer sufficient for information dissemination. New digital technologies introduce advanced communication tools, particularly social networks, which enhance connectivity and offer opportunities for advertising, market research, and gauging consumer sentiment and behavior.

Researchers emphasize that a crucial aspect of digital entrepreneurship is the shift of business models and operations into a digital realm (Soltanifar, Smailhodžić 2021; Ghosh, Hughes, Hughes, Hodgkinson 2021; Song, Wu 2021; Zaheer, Breyer, Dumay 2019; Göcke, Weninger 2021; Kooskora 2021; Boyko, Evnevich, Kolyshkin 2017; Ustinova 2019; Dudin, Omarova 2019; Kraus, Palmer, Kailer, Kallinger, Spitzer 2019). The advent of new business models like dropshipping, freemium, on-demand services, crowdsourcing, crowdfunding, and fintech, alongside the traditional e-commerce model, has redefined the landscape of sustainable entrepreneurship.

The digital transformation of business activities necessitates the evolution of products, services, and marketing approaches to better cater to customer needs (Ghosh, Hughes, Hughes, Hodgkinson 2021; Samara, Terzian 2021; Zaheer, Breyer, Dumay 2019; Ustinova 2019; Kooskora 2021; Soltanifar, Smailhodžić 2021). Digitization is seen as a prerequisite for innovation in product development, the provision of value-added products and services, and innovative marketing concepts.

Digitization also shapes consumer behavior, with an increasing preference for online purchases due to convenience and time savings. Customers, in turn, shape the market through their own demands and expectations (Ustinova 2019). Small businesses face heightened risks in the face of evolving competition and changing consumer requirements, often lacking the resources of larger corporations (Samara Terzian, 2021).

Digital entrepreneurship fosters creative business management, strategic planning, and the need for digitalization strategies (Soltanifar, Smailhodžić 2021). The digital transformation of businesses requires creative thinking to explore new opportunities. When combined with a well-executed digital strategy, creativity becomes a significant factor for business growth (Soltanifar, Smailhodžić 2021).

The literature review on the topic proves the significant contribution to clarifying the relationship between entrepreneurship, digitalization, and the circular economy in the context of sustainable business development. The scientific work of the above-mentioned researchers provides valuable insights into the integration of entrepreneurial mindset, digital technologies, and circular economy principles for driving sustainable business practices.

## **The entrepreneurial mindset in Bulgaria for sustainable business development through digitalization**

The information obtained from the survey of 83 enterprises in Bulgaria contributes to acquiring insights into the attitudes of entrepreneurs regarding digitalization and their sustainable development in the circular economy. The majority of these enterprises are micro-enterprises, accounting for approximately 64% of the total. Together with small businesses, they constitute about two-thirds of the respondents. It should be noted that only around 6% of the surveyed companies do not implement digitalization, while the introduction of digital infrastructure in others varies based on their needs and customer attitudes. The prevalence of digital products in their daily work is largely determined by the diverse economic sectors in which these enterprises operate, although the service sector remains predominant.

More than 80% of all surveyed companies are located in the capital of Bulgaria, which can be seen as a contributing factor to the increased opportunities and desire to utilize digital tools in order to promote their activities or reach their target user groups. Over 55% of micro and small enterprises utilize social media for advertising, a figure that closely aligns with the overall percentage of companies among the respondents who use social media for promoting their activities. Additionally, a higher percentage of surveyed companies use social networks for selling their products.

Based on the analysis of the collected information, several conclusions and recommendations have been drawn regarding entrepreneurial attitudes towards sustainable business development through digitalization.

### **Conclusions and recommendations**

The circular economy aims to decouple economic growth from resource consumption by promoting the reduction, reuse, and recycling of materials. By adopting circular business models, companies can minimize waste, promote resource efficiency, and create value from products throughout their lifecycles. By adopting an entrepreneurial mindset and leveraging digitalization, businesses can embrace the principles of the circular economy and contribute to a sustainable future. This article emphasizes the importance of fostering entrepreneurship, harnessing digital technologies, and adopting circular business models to drive sustainable business development and create a positive impact on society and the environment.

#### **Conclusions:**

a. The survey provides valuable insights into the attitudes of entrepreneurs in Bulgaria towards digitalization and sustainable development in the circular economy.

b. Micro enterprises represent the largest proportion of surveyed businesses, highlighting their significance in the entrepreneurial landscape.

c. A small percentage of companies surveyed do not implement digitalization, emphasizing the need for increased awareness and support for digital transformation.

d. The adoption of digital infrastructure among businesses varies based on individual needs and customer preferences, indicating a tailored approach to digital implementation.

e. The prevalence of digital products is influenced by the diverse economic sectors, with a notable emphasis on the service sector.

### **Recommendations:**

- a. Foster awareness and provide resources to support micro and small enterprises in their digitalization efforts.
- b. Encourage collaboration between businesses and technology providers to develop tailored digital solutions that address specific needs and enhance customer experiences.
- c. Promote the benefits of digitalization across various economic sectors, particularly those less inclined to adopt digital practices.
- d. Offer training and capacity-building programs to enhance digital skills and literacy among entrepreneurs and their workforce.
- e. Establish policies and incentives that facilitate the adoption of digital tools and technologies, particularly in regions outside the capital, to foster a more inclusive digital ecosystem.
- f. Support and encourage the use of social media for advertising and selling products, as it proves to be an effective strategy for micro and small enterprises.

By implementing these recommendations, entrepreneurs in Bulgaria can further leverage digitalization for sustainable business development and contribute to the growth of the circular economy.

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