

Capitolul 5. IMPACTUL DIGITALIZĂRII ASUPRA CREȘTERII COMPETITIVITĂȚII IMM-URILOR DIN MOLDOVA

Chapter 5. THE IMPACT OF DIGITALIZATION ON INCREASING THE COMPETITIVENESS OF SMEs IN MOLDOVA

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Abstract

The relationship between digitalization and increasing the competitiveness of Small and Medium Enterprises (SMEs) in Moldova is the subject of this study. The core of the analysis focuses on the practical effectiveness of using innovative digital solutions. The author's research provides valuable insights into how Customer Relationship Management (CRM) systems can increase customer loyalty, as well as how Enterprise Resource Planning (ERP) systems optimize internal processes and resource management. Through a synthesis of theoretical frameworks and practical case evidence, the paper argues that a strategic and well-managed integration of these digital tools is a key determinant of enhanced productivity, innovation, and overall competitiveness. The findings offer valuable guidance for policymakers and entrepreneurs seeking to establish a more robust and digitally empowered business sector.

Keywords: digitalization, competitiveness, digital transformation, e-commerce, barriers to digitalization.

JEL: L25, M15, O22.

Introduction

The economic foundation of the Republic of Moldova is small and medium-sized enterprises (SMEs), playing an indispensable role in job creation and the dynamics of the private sector. Official data from the National Bureau of Statistics (NBS) confirm this predominance: in 2024, SMEs constituted 99.2% of the total number of active enterprises, a share that has remained constant in recent years. Moreover, they employed 356 thousand people, representing 65.5% of the total number of employees in the economy (ACETI, 2024). This significant contribution to employment underlines the vital importance of the resilience of the SME sector for the social and economic stability of the country. However, a deeper analysis of the data reveals a structural paradox with significant implications. Despite small and medium-sized enterprises (SMEs) accounting for a large number of employees, they generate significantly less added value. According to the National Bureau of Statistics (NBS), in 2024, SMEs accounted for around two-thirds of total employment and around 46% of sales revenue (BNS, 2025). However, these enterprises are concentrated in sectors with low added value and have a productivity level below the EU average. The COVID-19 pandemic has exposed the vulnerabilities of these companies – over 70% of SMEs reported falling demand and disruptions to their supply chains (OECD, 2023). At the same time, the described patterns prove that only digitalization could improve this situation.

Digitalization is not limited to information technology; it involves transforming the business model by integrating digital solutions into all processes. Customer Relationship Management (CRM) systems allow for the collection and analysis of customer data and the management of sales relationships, while Enterprise Resource Planning (ERP) systems optimize internal resource flows. International studies show that digitalization increases productivity, innovation capacity and access to new markets. In the context of an increasingly interconnected global economy through digital technologies, digitalization has ceased to be an option and has become a strategic imperative for competitiveness and survival. The central issue addressed in this paper is the lack of a quantitative understanding, based on rigorous microeconomic data, of how the adoption of digital

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technologies influences the performance of firms in the Republic of Moldova. Although the benefits of digitalization are widely recognized at a theoretical level, their specific impact and its magnitude in the context of a transition economy, with its institutional and structural particularities, remain insufficiently explored. For Moldovan SMEs, which already face structural challenges such as low productivity, an unstable business environment, governance constraints and the impact of recent crises, the adoption of digital technologies can be a key catalyst for growth. However, the reality on the ground indicates a significant digital divide. International reports highlight that most Moldovan companies in non-IT sectors are still at the beginning of the digitalization process.

Research method and literature review

The study is based on a quantitative analysis, combining data from the official releases of the National Bureau of Statistics for 2021–2024, the OECD report on digital skills in Moldova, and the study of the Association for the Development of Electronic Communications and Innovative Technologies (ACETI) on the digitalization needs of SMEs. To assess the investment structure, information on the digital transformation program of the Entrepreneurship Development Organization (EDO), published in a study developed by ACETI, was used. Based on these sources, synthetic datasets were built to describe the economic evolution of SMEs, the distribution of investments, and the level of digitalization by sectors and regions. In his study, Octavian Cozniuc emphasizes the essential role of information and communication technologies (ICT) as a driver of socio-economic development and a key factor in making modern management more efficient. The author argues that digitalization, through tools such as artificial intelligence, cloud computing and data analysis, offers businesses multiple competitive advantages, from optimizing operations and reducing costs, to improving communication and customer experience.

Analyzing the situation in the Republic of Moldova in the period 2017–2021, Octavian Cozniuc, in his study, reveals an increase in the number of SMEs, but also a slow implementation of digital technologies, especially in the “Financial Activities and Insurance” sector. Although the pandemic acted as a catalyst for digitalization, Cozniuc concludes that it is necessary to intensify support programs offered by the state and strategic partners, as well as the creation of a “HUB for the Digital Transformation of SMEs” to accelerate this process and increase the competitiveness of enterprises on the local and global market (Cozniuc, 2023). In their study on the evolution of electronic communications, Crina Condru and Alexandra Frunceac (2023) highlight the significant development of this sector in the Republic of Moldova, considering it a major factor in increasing the competitiveness of the national economy. The authors emphasize that modern infrastructure allows for better connectivity between companies, facilitates the exchange of data in real time, and creates new business opportunities, allowing local entities to compete internationally.

The article demonstrates a continuously increasing penetration rate for digital services; for example, in the third quarter of 2022, the rate for mobile telephony reached 161.9%. Moreover, Moldova ranks among the regional leaders in terms of internet speed and affordability, ranking 6th in the world by the price level for fixed internet. These advances in the national digital infrastructure, also reflected in the increase in revenues from fixed internet services to 1.44 billion lei in 2021, constitute a fundamental premise for the digitalization of businesses and, implicitly, for increasing the competitiveness of SMEs (Condru and Frunceac, 2023).

In their research, Schafer et al. argue that digital transformation is a critical factor for increasing the competitiveness of Small and Medium Enterprises (SMEs) in emerging economies. The authors argue that the integration of digital tools improves operational efficiency, expands market access and optimizes customer interaction, thus contributing to overall economic growth. The study highlights concrete benefits, such as increasing productivity by 20% and revenues by

up to 30% for SMEs that adopt digital technologies. However, the digitalization process faces significant barriers, including financial constraints, lack of digital skills among employees, resistance to change within organizations and inadequate infrastructure. Schafer et al. (2023) believe that to overcome these obstacles, government support for SMEs is essential. The state should pay particular attention to creating a favorable environment for innovation.

Small and medium-sized enterprises, share and structure

The synthesis of the findings reveals a complex reality: although digitalization through CRM and ERP systems offers immense potential for increasing the competitiveness of Moldovan SMEs, the realization of this potential is hampered by a set of deeply interconnected structural barriers. The low adoption rate is not an accidental phenomenon, but a symptom of systemic problems that require a strategic approach, not just one-off interventions.

A regional comparative perspective can provide valuable lessons for the Republic of Moldova. Romania, although facing a level of SME digitalization below the EU average, benefits from a significant boost through the National Recovery and Resilience Plan (NRRP), which allocates substantial funds (grants of up to EUR 100,000 per company) specifically for digitalization. Good practices in Romania include the development of a network of Digital Innovation Hubs (DIH), which offer SMEs “try before you invest” services, consultancy and skills training programs, creating an integrated support ecosystem. Table 1 illustrates the fundamental role that small and medium-sized enterprises (SMEs) have played in the economy over the past four years. The data show that SMEs represent an overwhelming majority of the total number of enterprises, with their share remaining constant at over 99%. Furthermore, SMEs are a major employer at the national level, providing jobs for approximately two-thirds (between 64.2% and 65.6%) of all employees. There is an upward trend in both the absolute number of SMEs, from 59.8 thousand units in 2021 to 68.2 thousand units in 2024, and in the number of employees in this sector, which increased from 342.1 thousand persons to 356.0 thousand persons over the same period, thus underlining the vital importance and stable contribution of SMEs to the economic structure and employment.

Table 1: Share of SMEs in the national economy (2021-2023)

	2021	2022	2023	2024
Total number of enterprises, thousand units	60.3	62.6	63.8	68.7
Number of SMEs, thousand units	59.8	62.1	63.3	68.2
Share of SMEs in the total number of enterprises, %	99.1	99.2	99.2	99.2
Total annual average number of employees, thousand persons	532.5	529.3	539.0	543.1
Annual average number of employees in SMEs, thousand persons	342.1	347.3	352.1	356.0
Share of employees in SMEs in the total enterprise workforce, %	64.2	65.6	65.3	65.5

Source: Prepared by the author based on data from the NBS (BNS 2024)

Figure 1 illustrates the percentage distribution of investments in various technology and service categories. A significant concentration of resources can be observed in three main areas. The largest share (31.0%) is made up of software applications, including ERP/CRM. ICT hardware (28.8%) and technological solutions for e-commerce (27.1%) are in second and third place among investment priorities.

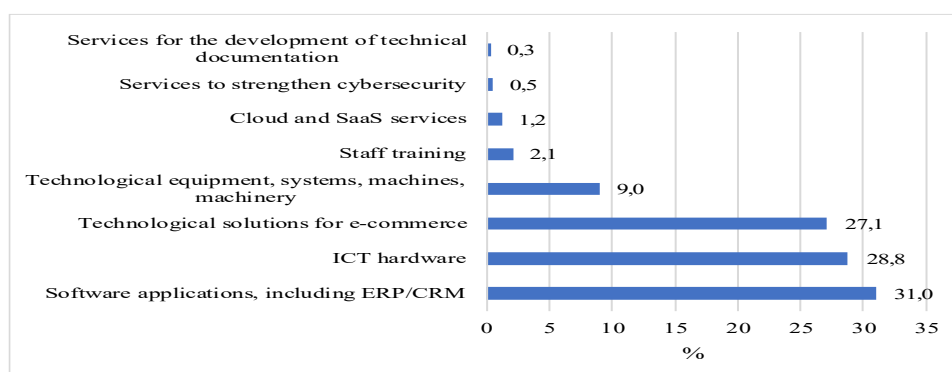


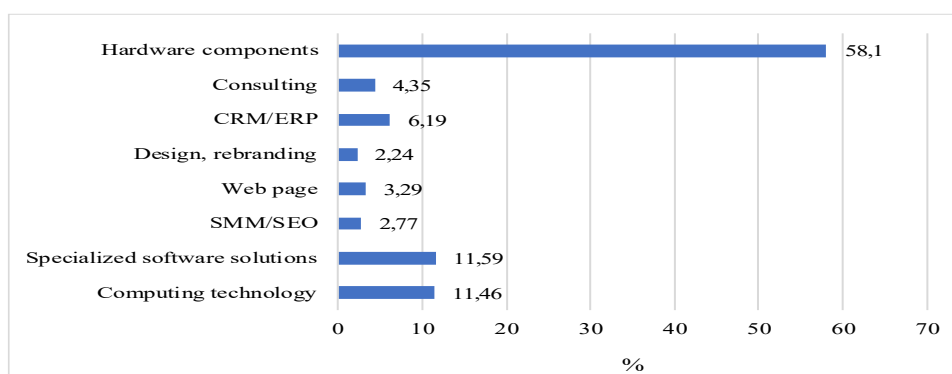
Figure 1. Companies' investment priorities (2024)

Source: Developed based on data from ACETI (ACETI 2024)

Investments in technological equipment and machinery follow at a considerable distance, with 9.0%. At the opposite end, areas such as staff training (2.1%), Cloud and SaaS services (1.2%), cybersecurity strengthening (0.5%) and technical documentation services (0.3%) receive a significantly lower allocation of funds, almost negligible compared to the first three categories. Thus, the allocation of funds for the development of employees' digital skills constituted only 2.1% of the total number of requests for offers made. The share of other investments made record values below 2%. It is worth noting that small and medium-sized enterprises are less likely to invest in cybersecurity services that protect IT systems against cyber attacks and reduce the risks of incidents in the company network.

Figure 2 shows the percentage distribution of grant spending by category in 2024. There is a concentration of funds, with the largest share of investments going to equipment – 58.1%. Specialized software solutions (11.59%) and computing technology (11.46%) are at a significant distance. All other categories received considerably less funding, below 7%, including CRM/ERP systems (6.19%), consulting (4.35%), and services related to online presence, such as website creation (3.29%), SMM/SEO (2.77%), and design/rebranding (2.24%). Therefore, the graph highlights an investment strategy predominantly focused on physical technical infrastructure.

Figure 2. Distribution of grant articles by category in % (2024)



Source: Developed based on data from ACETI (ACETI 2024)

ERP (Enterprise Resource Planning) and CRM (Customer Relationship Management) systems are dedicated to organization, management, monitoring, and navigation solutions. In terms of ICT hardware purchases, the following categories had priority: servers, storage and back-up solutions, network equipment, workstations, monitors, printers, and other types of peripherals. In the case of technological solutions for e-commerce, entrepreneurs are willing to invest in creating

a new website or updating the existing one, and developing visibility materials. At the same time, companies prefer to invest less in staff training. A CRM system goes beyond the functionality of a simple contact database. It centralizes all customer data and interactions – from the first contact, to the sales process, to after-sales services and marketing campaigns – in a single and accessible platform. This 360-degree view of the customer allows for advanced communication personalization, precise market segmentation, and ultimately, building stronger and more profitable relationships (Martinho et al., 2025).

The impact of adopting a CRM system is demonstrable and quantifiable. Aggregated studies from the specialized literature indicate tangible and significant benefits for SMEs. Implementing a CRM can lead to an increase in sales by 15-30% and an improvement in customer retention rates by 25-40%. Sales team productivity can also increase by up to 29% by automating administrative tasks and providing real-time information about customers and opportunities (Mangal et al., 2025).

These benefits are particularly relevant to the economic context of the Republic of Moldova. In a small domestic market, where competition is intense and reputation is built through interpersonal relationships, the ability of a CRM to manage, deepen, and scale these relationships becomes a major competitive advantage. The local CRM solutions market is developing, with platforms such as Bitrix24 and amoCRM being popular, and local companies offering implementation and customization services. A relevant example, although from the region, is that of Mikro Kapital, a microfinance institution with a presence in Moldova, which implemented a CRM system to digitize its sales processes, increase the efficiency of loan officers, and provide superior customer interaction, eliminating the management of information in disparate files.

Conclusions

Digitalization is a vector for increasing the competitiveness of SMEs in the Republic of Moldova. Data show an increase in productivity in recent years, but the adoption of digital tools remains modest. Support programs from the state and development partners have started to reduce the gap, but additional measures are needed to expand digitalization across all regions and sectors. To fully capitalize on the digital potential, Moldovan SMEs need to invest in skills, adopt innovative solutions and collaborate with authorities to access financial resources and consulting. Digitalization is not an option, but an essential condition for long-term survival and competitiveness.

For SMEs in Moldova, digitalization has gone beyond the stage of option, becoming an essential strategic imperative for survival and growth, especially in the context of approaching the European single market. Strategic adoption of digital tools such as CRM and ERP systems can unlock significant potential, generating efficiency gains, stimulating innovation and strengthening customer focus. However, the analysis revealed a severe digital divide, caused by deep structural barriers – financial, human capital and organisational – that prevent the realisation of this potential. Bridging this gap requires coordinated and strategic interventions, both at the enterprise and public policy levels.

Acknowledgments

Studies have been conducted under the framework of Subprogram 030101, “Strengthening the resilience, competitiveness, and sustainability of the economy of the Republic of Moldova in the context of the accession process to the European Union.”

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