# ENTREPRENEURSHIP, TRADE AND EXCHANGE ACTIVITIES

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## MAIN DIRECTIONS OF DIGITALIZATION DEVELOPMENT IN UKRAINE

In the modern era, digitalization has become a determining factor in the transformation of the economy, industry, and labor market worldwide. The rapid development of digital technologies has not only revolutionized traditional business models but also influenced management strategies and employment dynamics. Ukraine, as a new digital hub, is actively implementing digital transformation, contributing to the development of various sectors. Digitalization in Ukraine has significantly affected business operations, from government initiatives to the achievements of the private sector.

This work aims to explore the impact of digitalization on business processes and in various sectors of the economy and society in Ukraine.

Digitalization is the process of integrating digital technologies into various aspects of business, society, and everyday life to improve efficiency, productivity, and decision-making. It involves the use of digital tools, such as cloud computing, artificial intelligence, automation, and data analytics, to transform traditional processes into more streamlined and technologically advanced operations.

In the context of business and the workplace, digitalization involves the implementation of digital management systems, remote collaboration tools, and automated workflows to improve communication, decision-making, and overall productivity. Unlike digitization, which is simply the

conversion of analogy data into digital format, digitalization represents a broader shift toward how organizations operate in a different environment.

The COVID-19 pandemic, as businesses faced unprecedented challenges, has accelerated the adoption of digital technologies across the economy, manufacturing, and social interactions. According to a McKinsey report, companies accelerated their digital adoption by three to four years in the first months of the pandemic. Many companies have switched to cloud-based collaboration tools to facilitate remote work. Platforms such as Zoom, Microsoft Teams, Slack, and Google Meet have become very popular as organizations have sought effective ways to communicate and collaborate online. Daily usage of Google Meet has increased 25-fold in just a few months of 2020 [1]. This adaptation of business processes has allowed businesses to remain operational, increase productivity, and adapt to the challenges of lockdowns and social distancing measures.

The pandemic has also had a significant impact on the use of cashless payments. In particular, the total value of paperless or digital credit transfers has increased significantly in both developed and developing countries. These payments include transfers initiated through online banking, a mobile app, or automated transfers. Contactless payments have increased by 40% [2], and, as a result, the growth in the total use of credit transfers has been so significant that the share of cashless payments in total GDP has increased dramatically worldwide. This indicates a significant shift away from cash payments.

Our country has made significant progress in digitalization, positioning itself as a leader in digital public services and technological innovation. As of January 2025, the country had 31.5 million registered internet users, representing 82.4% of the population, up 2.2% from the previous year. Forecasts indicate that by the end of 2025, internet penetration will reach 98%, underscoring the country's commitment to expanding digital access [3]. Ukraine's progress in digitalization is also reflected in its global ranking. The country ranked 5th in the world for digital public services, a significant jump from 102nd place in 2018. This progress underscores the effectiveness of policies aimed at integrating digital solutions into public administration.

In Ukraine, digitalization is being implemented in various directions, including through government initiatives such as the «Diia» platform, which has simplified administrative procedures. Through a portal and mobile application, Diia offers over 70 government services, including 15 digital documents, the world's first official digital passport. As of the

end of 2024, the platform had over 21.8 million users, indicating widespread adoption among Ukrainians [4].

Another direction is the active introduction of digital technologies into the education system to improve its accessibility and quality. An important initiative is the National Online Platform for the Development of Digital Literacy, which offers online courses, podcasts, and educational videos focusing on digital skills. These resources cover topics such as blockchain, media literacy, and an introduction to programming and aim to provide students with the competencies necessary for today's digital landscape.

To further promote digital literacy, over 3,000 libraries across Ukraine have been transformed into Digital Education Centers. They have become important community digital education hubs, providing resources and guidance to people seeking to navigate the digital world effectively. This initiative, a joint effort of the Ministry of Digital Transformation and the Ukrainian Library Association, supported by UNDP and funded by Sweden, has trained librarians to help citizens acquire digital skills.

The private sector, particularly the IT industry, is also helping to accelerate the adoption of digital technologies. The number of software engineering specialists in Ukraine has grown rapidly, especially with the popularization of IT outsourcing, which has become possible thanks to remote work and the introduction of digital technologies. In 2021, there were over 200,000 specialists. It was expected that in 2024 this figure would reach 250,000. In Kyiv alone, over 76,000 IT specialists are involved in outsourcing. Other IT centers are Lviv and Kharkiv, which employ 15% and 14% of highly qualified engineers in Ukraine. The IT outsourcing sector in Ukraine employs over 67,000 front-end developers and over 200,000 IT professionals overall, putting Ukraine on a par with European countries such as Poland, Sweden, and Italy [5].

Ukraine's rapid digitalization has led to significant progress, but it also creates a number of challenges and negative consequences. One of the main problems is increased vulnerability to cyberattacks. For example, in March 2025, the state-owned railway company Ukrzaliznytsia suffered a significant cyberattack that disrupted passenger and freight transportation, forcing a temporary return to paper-based document management. This incident highlights the urgent need for robust cybersecurity measures as the country becomes increasingly dependent on digital infrastructure. Another factor worth paying attention to is the issue of digital identification and the use of electronic documents, which require a clear definition of legal force in an international context to avoid legal conflicts when using documents abroad. Personal data protection is also an important issue in the context of

digitalization, as an increasing number of digital platforms and services process citizens' personal data. Currently, the legislation in this area does not meet modern requirements, in particular EU standards such as the GDPR. The lack of clear and updated rules on the processing of personal data can lead to abuse and violations of citizens' rights, which is a serious challenge for the development of the digital economy.

Thus, thanks to initiatives such as "Diya", widespread Internet penetration, and digital education programs, Ukraine has increased accessibility, efficiency, and transparency in various sectors. However, these achievements are accompanied by significant challenges, including cybersecurity risks, a digital divide, regulatory gaps, and economic security issues. To fully benefit from the benefits of digital transformation, Ukraine must continue to strengthen its cybersecurity infrastructure, ensure equal access to digital tools, and develop comprehensive policies that promote economic development at a modern level.

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