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DIGITAL TECHNOLOGIES AND SOCIAL CHANGES: OPPORTUNITIES, RISKS, AND ECONOMIC IMPACTS

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Abstract: *This article analyzes the impact of digital technologies on modern economic systems, labor markets, education, healthcare, and social life. While rapid digital transformation improves the quality of human life, it also gives rise to new social issues such as digital divides, security risks, ethical challenges, and psychological problems. The article highlights the advantages and risks of the digital economy and offers recommendations for mitigating them based on data from international and local organizations.*

Keywords: *digital economy, digital divide, artificial intelligence, labor market, digital transformation, global development, Uzbekistan, Digital Uzbekistan 2030.*

Introduction

It is no coincidence that the 21st century is called the "digital century." No technological revolution in human history has progressed as rapidly as digital transformation. Between 2020 and 2025, global digitization processes accelerated fiftyfold (World Bank, 2024). Digital technologies are deeply penetrating all areas of life—economy, education, healthcare, social governance, and even everyday communication and cultural interactions have taken on a digital form.

At the same time, this process is not only a technical upgrade but also a complex social phenomenon that changes human thinking, business practices, and life philosophy. Today, digital transformation has become an integral criterion for the development of every country.

1. Digital Economy and Global Growth Factors

Over the last decade, the digital economy has become a primary driving force of the global economic system. According to the World Bank (2024), 15.5% of global GDP now comes from the digital economy, nearly doubling compared to the 2010s. The OECD (2024) emphasizes that the growth rate of

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the ICT (Information and Communication Technology) sector is three times faster than the overall economy.

Artificial intelligence (AI), automation, and cloud technologies are revolutionizing production processes. According to McKinsey (2023), automation has increased production efficiency by an average of 40%, while cloud technologies have reduced company costs by 30–40%. UNCTAD (2023) reports that in 2023, global e-commerce reached $5.7 trillion, growing at an average annual rate of 8–9%.

However, this growth is not uniform across all countries. Due to differences in digital infrastructure, human capital, and technological readiness, developed countries are fully utilizing the opportunities of the digital economy, while developing countries are still in the exploratory phase.

2. Digital Divide and Social Inequality

While digital development opens new opportunities, it simultaneously creates new social disparities. According to the ITU (2023), internet usage in developed countries is 89%, while in developing countries it is only 47%. This indicates a significant gap in access to information.

Access to digital infrastructure largely depends on geographic location: 85% of urban residents use high-speed internet, compared to around 39% in rural areas. As a result, rural youth lag behind in educational and employment opportunities. UNICEF (2023) reports that only 5% of students in low-income countries have internet access at home, exacerbating inequalities in digital education.

A gender gap also exists: in 2024, 70% of men used the internet compared to 65% of women (DevelopingTelecoms, 2024). Thus, digital technologies have made economic and social equality a pressing issue.

3. Labor Market and New Professional Skills

Technological advancement is fundamentally reshaping the labor market. Automation, AI, and robotics are rendering many traditional professions obsolete, while new fields are emerging. McKinsey (2023) predicts that by 2030, over 400 million jobs will be automated, yet approximately 250 million new tech-based jobs will be created.

According to the World Economic Forum (2023), by 2025, 44% of existing skills will change. High-demand areas include AI, data analysis, cybersecurity, and digital marketing, with a sharp increase in demand for professionals in these fields.

The expansion of remote work has also created new opportunities in the global labor market. Between 2020 and 2023, the number of remote workers increased by 35%. While this facilitates labor market entry, some groups risk falling behind due to insufficient digital infrastructure and skills.

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4. Digital Transformation of Education and Human Capital

Digital technologies have revolutionized the education system. Learning has moved beyond traditional classrooms to global online platforms. Coursera (2023) reports 107 million users completing over 5,000 online courses. UNESCO (2023) notes a 35% increase in interest in STEM (Science, Technology, Engineering, Mathematics) fields between 2020 and 2024.

AI-based adaptive learning systems have accelerated student learning processes by up to 40% (WEF, 2023), highlighting the crucial role of digital tools in shaping a new generation of human capital.

In Uzbekistan, the "Digital Uzbekistan 2030" strategy promotes online education and STEM courses, expanding educational opportunities and preparing youth for modern professions.

5. Digital Approaches in Healthcare

Healthcare has also undergone a digital revolution in recent years. Telemedicine services increased fifteenfold between 2020 and 2023 (Journal of Medical Internet Research, 2023). In the U.S., over 350 million online medical consultations were conducted in 2023. AI-based diagnostic systems improve disease detection accuracy by 30%.

In Uzbekistan, the Ministry of Health reports 1.2 million online medical consultations in 2023. Smart devices and wearable technologies are increasingly used for health monitoring.

6. Cybersecurity and Psychological Implications

Digital life brings convenience but also risks. Cybersecurity Ventures (2023) estimates global cybercrime losses at $8.4 trillion annually. IBM (2023) reports that an average data breach costs a company $4.45 million.

Excessive digital engagement also affects mental health. Pew Research Center (2023) finds that average screen time is 6 hours 58 minutes per day, reaching 7 hours 22 minutes among adolescents. Social media addiction, loneliness, and reduced face-to-face communication are emerging psychological challenges.

Uzbekistan is developing cybersecurity legislation and national standards to ensure safe digital economy growth.

Conclusion

4Digital technologies offer immense opportunities for human development. They accelerate economic growth, improve healthcare, democratize education, and simplify social services. However, they also present new challenges—digital divides, cybersecurity risks, skill shortages, and psychological pressures.

Therefore, the following measures are essential:

1. **Enhance digital literacy** — develop technological skills for all citizens and expand digital infrastructure (ITU, 2024).
2. **Improve workforce qualifications** — establish education

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systems and retraining programs for modern professions (WEF, 2023).

3. **Ensure social equality** — reduce digital divides, particularly gender and regional disparities (UNICEF, 2023).

4. **Strengthen cybersecurity** — develop global standards through public-private cooperation (IBM, 2023).

5. **Promote digital wellbeing** — expand programs supporting psychological health and human connections (Pew Research Center, 2023).

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