



**THE IMPACT OF FUTURE TECHNOLOGIES AND ARTIFICIAL
INTELLIGENCE ON THE GLOBAL ECONOMY**

Norqulova Sevinch Asliddin qizi

Tashkent State University of Economics Faculty of Economics

sevinchnorqulova29@gmail.com

Abstract

The accelerated development of future technologies and artificial intelligence (AI) profoundly impacts the global economic system, revolutionizing the functioning of corporations, governmental agencies, as well as private citizens' life and work. Technologies like machine learning, robotics, blockchain, cloud computing, biotechnology, quantum computing, and the Internet of Things (IoT) have become indispensable aspects of economic growth in both developed and underdeveloped countries. Technological innovations allow for raising productivity levels, promoting innovations, decreasing expenses and helping businesses to better compete in the international business environment. Artificial intelligence is an integral part of the contemporary technological landscape. The capabilities of intelligent machines and software systems include the analysis of vast amounts of data, identification of patterns, prediction of outcomes and performance of actions which usually can only be performed by human intelligence. Corporations widely employ AI to automate production processes, provide clients with adequate services, streamline logistics and make strategic decisions. Governmental agencies also utilize smart technologies in the spheres of health care, education, transportation and public management.

Key words

Artificial Intelligence, Future Technologies, Digital Economy, Innovation, Automation, Machine Learning, Robotics, Economic Growth, Industry 4.0, Globalization, Smart Technologies, Employment.



“KELAJAK TEKNOLOGIYALARI VA SUN’IY INTELLEKT”
nomli respublika ilmiy-amaliy masofaviy konferensiyasi
VOLUME-1, ISSUE-2, 2026

Indeed, technology is one of the leading forces that drive the economy and social development. Over time, humankind has gone through a number of technological revolutions that have significantly affected the transformation of production, transportation, communications, and trade. The first revolution was associated with mechanized manufacturing in the course of the industrial revolution. The second one brought computers and the Internet during the information revolution. Currently, the world faces yet another phase of technological development that has come to be known as the Fourth Industrial Revolution, which involves the development of artificial intelligence, automation, robotics, and digital technology.

The concept of artificial intelligence involves the capacity of computing machines to simulate human intelligence and implement such functions as reasoning, learning, problem-solving, and decision-making. Different from traditional computer programming, AI technologies allow for gradual improvement based on experience and data analysis. One of the areas within the field of artificial intelligence is machine learning that enables computers to recognize patterns and predict outcomes without specific programming.

Undoubtedly, future technologies are having a profound impact on every sphere of the global economy. Within the medical industry, artificial intelligence technologies help physicians diagnose patients faster and more effectively. The economic importance of artificial intelligence is increasing every year. Major technology companies and governments invest billions of dollars in AI research and infrastructure. Countries that successfully develop and implement AI technologies are expected to gain competitive advantages in global trade and innovation. As a result, technological leadership has become an important element of international economic power.

The purpose of this thesis is to analyze the relationship between future technologies, artificial intelligence, and the global economy. The study explores the



“KELAJAK TEXNOLOGIYALARI VA SUN’IY INTELLEKT”
nomli respublika ilmiy-amaliy masofaviy konferensiyasi
VOLUME-1, ISSUE-2, 2026

economic benefits of technological innovation, its influence on employment and business, and the risks associated with digital transformation. Additionally, the thesis discusses possible future developments and strategies for creating a balanced and sustainable digital economy.

Future technologies refer to advanced scientific and technological innovations that are expected to play a major role in shaping society and the economy in the coming decades. These technologies are transforming industries, improving communication, and increasing efficiency across different sectors.

Some of the most important future technologies include:

- Artificial Intelligence (AI)
- Machine Learning
- Robotics
- Blockchain Technology
- Quantum Computing
- Internet of Things (IoT)
- 5G Networks
- Cloud Computing
- Biotechnology
- Nanotechnology

These technologies are interconnected and often work together to create intelligent systems. For example, IoT devices collect large amounts of data, cloud computing stores and processes this information, and AI systems analyze it to make decisions.

One of the most influential technologies is artificial intelligence. AI systems can perform tasks that normally require human intelligence, such as image recognition, language translation, and strategic planning. Machine learning enables systems to improve their performance through data analysis and experience. Deep learning, a more



“KELAJAK TEKNOLOGIYALARI VA SUN’IY INTELLEKT”
nomli respublika ilmiy-amaliy masofaviy konferensiyasi
VOLUME-1, ISSUE-2, 2026

advanced branch of machine learning, uses neural networks inspired by the human brain to solve complex problems.

Robotics is another rapidly growing field. Modern robots are capable of performing industrial, medical, and household tasks with high precision. In manufacturing, robots increase productivity and reduce human error. In medicine, robotic surgery improves the accuracy of operations and reduces recovery time for patients.

Blockchain technology has revolutionized digital transactions and financial systems. Blockchain creates decentralized and secure digital records that cannot easily be modified. Cryptocurrencies such as Bitcoin are based on blockchain technology, but blockchain also has applications in supply chain management, healthcare, and digital identity verification.

Quantum computing represents one of the most advanced technological developments. Unlike traditional computers that use binary systems, quantum computers use quantum bits or qubits, enabling them to solve extremely complex calculations much faster than conventional systems. Although quantum computing is still developing, it may revolutionize scientific research, medicine, and cybersecurity in the future.

In the current economy, artificial intelligence is seen as one of the leading factors driving economic growth. AI solutions increase the pace and efficiency of operations, help optimize the usage of resources, and provide new opportunities for innovation and entrepreneurial activities.

Economic growth refers to an increase in the production of goods and services. Artificial intelligence is used to automate repetitive tasks, improve efficiency, and minimize operational costs, which, in turn, makes it possible for businesses to increase their output significantly.

In manufacturing industries, for instance, robots are programmed to carry out assembly operations continuously without getting tired or taking breaks. Besides, the smart factory



“KELAJAK TEKNOLOGIYALARI VA SUN’IY INTELLEKT”
nomli respublika ilmiy-amaliy masofaviy konferensiyasi
VOLUME-1, ISSUE-2, 2026

uses sensors and other intelligent solutions to monitor the performance of machinery and optimize production.

Another aspect where AI improves business is decision-making. Modern enterprises collect information about customers and market trends. Then, using algorithms and analytics software, companies predict consumer demands and behavior and offer personalized solutions that maximize sales.

Artificial intelligence will continue to transform industries such as healthcare, education, agriculture, and manufacturing. Personalized medicine, online learning platforms, and smart farming systems will improve quality of life and resource management.

The future economy will likely depend heavily on innovation, creativity, and technological knowledge. Countries that invest in education, research, and digital infrastructure will gain competitive advantages in global markets.

International competition for technological leadership is intensifying. The United States, China, Japan, South Korea, and European countries invest heavily in AI research and semiconductor production. Technological leadership increasingly influences geopolitical power and economic stability.

However, international cooperation continues to play an important role. Challenges such as climate change, pandemics, and cyber security issues need technological cooperation on a global scale.

According to specialists, in the future, the cooperation between people and advanced intelligent systems will continue instead of replacing humans by robots. The collaboration will help people solve problems, become more productive, and generate new ideas.

Also, the digital economy provides new possibilities for less-developed countries. These nations can get access to remote learning, digital banking, and trading via e-commerce



“KELAJAK TEKNOLOGIYALARI VA SUN’IY INTELLEKT”
nomli respublika ilmiy-amaliy masofaviy konferensiyasi
VOLUME-1, ISSUE-2, 2026

platforms. Yet, investment in infrastructure and education is required to minimize the digital gap between developed and less developed nations.

In conclusion, the future of the global economy depends on finding the right balance between innovation and social responsibility. The rapid development of artificial intelligence systems has significantly changed the structure of the world economy. In addition, AI technologies increase productivity, stimulate innovation and boost effectiveness in such sectors as medicine, financial services, education, transport, and production. The implementation of intelligent systems allows organizations and governments to optimize their activities, minimize expenses, and enhance their decision-making processes.

The economic advantages of using intelligent technologies are considerable. Automation increases the efficiency and accuracy of production,

References

1. Brynjolfsson, E., & McAfee, A. *The Second Machine Age*. W.W. Norton & Company, 2014.
2. Russell, S., & Norvig, P. *Artificial Intelligence: A Modern Approach*. Pearson Education, 2021.
3. Schwab, K. *The Fourth Industrial Revolution*. World Economic Forum, 2016.
4. Ford, M. *Rise of the Robots: Technology and the Threat of a Jobless Future*. Basic Books, 2015.
5. OECD. *Artificial Intelligence in Society*. OECD Publishing, 2019.
6. World Economic Forum. *The Future of Jobs Report*. 2023.
7. Kaplan, J. *Artificial Intelligence: What Everyone Needs to Know*. Oxford University Press, 2016.
8. Bessen, J. *AI and Jobs: The Role of Demand*. NBER Working Paper, 2019.



“KELAJAK TEKNOLOGIYALARI VA SUN’IY INTELLEKT”
nomli respublika ilmiy-amaliy masofaviy konferensiyasi
VOLUME-1, ISSUE-2, 2026

9. United Nations Conference on Trade and Development (UNCTAD). *Digital Economy Report*. 2021.
10. McKinsey Global Institute. *The Age of AI: Artificial Intelligence and the Future of Work*. 2022.
11. Harari, Y. N. *Homo Deus: A Brief History of Tomorrow*. Harper, 2017.
12. Tegmark, M. *Life 3.0: Being Human in the Age of Artificial Intelligence*. Knopf, 2017.
13. European Commission. *Artificial Intelligence for Europe*. Brussels, 2020.
14. IBM Research. *The Future of Artificial Intelligence and Business*. 2021.
15. PwC Global. *Sizing the Prize: What’s the Real Value of AI for Your Business and How Can You Capitalize?* 2022.