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AI'S ROLE IN ECONOMIC DEVELOPMENT AND DIGITAL TRANSFORMATION

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Abstract

Economic development and digital transformation are among the most important and powerful trends of the 21st century. Rapidly developing technologies around the world, especially artificial intelligence (AI), are causing radical changes in many areas of the economy and acting as a key driver of future economic growth and development. Digital technologies are creating revolutionary changes in data processing and analysis, leading to important outcomes such as new business models, more efficient production methods, and improved workforce performance.

One of the most important aspects of these developments is the integration of artificial intelligence into the economy. The use of artificial intelligence holds great potential in both industry and service sectors. The digital transformation of the economy creates new opportunities and challenges for both the public and private sectors. Using AI to accelerate economic development and build a more transparent, competitive economy is one of the most important strategic priorities of the modern era.

This article discusses the role of AI in supporting economic development and digital transformation. It will also look at how the application of AI is affecting different sectors of the economy, as well as the new opportunities and challenges posed by this technology. Ultimately, it will be shown what an important role artificial intelligence plays in economic development and digital transformation.

Keywords: *digital economy, artificial intelligence, digital technologies, digital transformation*

Introduction

Digital transformation encompasses a wide range of changes in business processes, models and ways of working made possible by technology and data. One of the key drivers of digital transformation is the use and development of artificial intelligence (AI). Artificial intelligence is used in the digital transformation of

the economy to optimize production and business processes, reduce costs, and increase productivity. For example, artificial intelligence can help automate and optimise manufacturing processes such as product quality control, production planning and resource allocation. Artificial intelligence can also be used in business management, for example, to conduct market and customer base analyses to identify customer needs and preferences, which in turn enables the development of optimal strategies to market products and services.

The digital transformation of the economy and artificial intelligence can also increase the efficiency and accuracy of customer interactions through the use of intelligent chatbot systems that can quickly and instantly answer all customer questions. In addition, artificial intelligence can be used in automatic navigation monitoring systems, mobile network monitoring, etc. can launch government services such as.

In general, the use and development of artificial intelligence is a necessary and fundamental step in improving the efficiency of manufacturing, finance, healthcare, transport and other sectors in the digital transformation of the economy.

In today's world, artificial intelligence (AI) is becoming an increasingly powerful tool capable of transforming various spheres of life, including the economy. The digital economy, based on the use of information and communication technologies (ICT), is playing an increasingly important role in the development of the global economy.

AI can bring many benefits to the digital economy: (Table 1).

Table 1.

Increased productivity	Artificial intelligence can automate routine tasks, freeing up people for more creative and strategic work
Personalisation	Artificial intelligence can be used to personalise products and services for each user. This can improve the user experience and increase customer satisfaction.
Improving decision making	Artificial intelligence can be used to analyse big data and provide companies with the information they need to make more informed decisions. Challenges and difficulties in adapting to artificial intelligence Despite the many benefits, there are also a number of challenges in adopting AI:
Unemployment	The automation of routine tasks can lead to job losses. This can lead to social problems and increased unemployment.
Inequality	AI can exacerbate existing inequalities in society. Those who have access to AI technology will gain an advantage over those who do not.
Ethical issues	Artificial intelligence may raise a number of ethical issues, such as algorithm bias, privacy issues and oversight of autonomous systems. Prospects for adapting to artificial intelligence To maximise the benefits of artificial intelligence and minimise the risks, artificial intelligence adaptation strategies need to be developed.
Invest in education and retraining:	Invest in educating and retraining people to work with and benefit from AI.
Create a regulatory environment:	At the same time, there is a need to create a regulatory environment that will incentivise the development of artificial intelligence while addressing ethical issues.

Artificial Intelligence has huge potential for the development and transformation of the digital economy.

Method

A broad and diverse methodological approach is required for a deep and robust understanding of the role of artificial intel-

ligence (AI) in digital transformation and global economic development. The research methods used in this study include a mixed-method approach combining qualitative and quantitative methods, as well as secondary data analysis and case studies. The aim of this approach is to explore various aspects of artificial intelligence applications and their impact on the global economy. Firstly, qualitative methods were applied through in-depth interviews and focus group discussions with stakeholders including industry experts, academics and service users. Through these interviews, researchers are able to explore the perceptions, experiences and challenges faced in implementing AI in the context of digital transformation. The information from these interviews provides insights into how AI can improve the efficiency of public services and drive innovation in the financial sector (Albright T., 2020). This approach also allows researchers to understand the social and cultural context that influences the use of AI technologies. Secondly, quantitative methods have been used to analyse numerical data regarding the impact of AI on economic growth. The study was conducted by surveying companies and organisations that implement artificial intelligence technologies. Using statistical analysis, researchers can determine the relationship between the adoption of artificial intelligence and productivity and operational efficiency improvements in various sectors (Brown B. A., Markowitz J., 2018). The data from this study provides a clearer picture of the contribution of artificial intelligence to global economic growth and helps to assess its economic impact more objectively. In addition, secondary data analysis is also an effective method in this work. Researchers can utilise existing data such as industry reports, academic publications and government statistics to identify trends and implications of AI in a broader context (Acemoglu D. and Restrepo P., 2020). This method allows researchers to collect relevant and up-to-date information without expending a lot of resources. By analysing secondary data, researchers can reinforce the findings from qualitative and quantitative methods and provide a broader context for the research findings. Finally, in-depth case studies can be conducted to analyse the application of AI in a specific context. Researchers can learn lessons that can be applied more broadly by examining success stories and challenges faced by organisations or countries in implementing AI (Agrawal A., Gans J., 2019). This approach enables better AI applications in digital transformation and economic development. Thus, the combination of qualitative, quantitative, secondary data analysis and case study methods provides a comprehensive understanding of the role of AI in a broader context.

Results

It does not cover all possible areas of application of AI technologies in the conditions of digital transformation of the economy, but it clearly shows that the successful formation of Industry 4.0 is impossible without the active development of AI technologies, their close integration into existing business processes and the creation of fundamentally new high-tech enterprises on their basis. At this stage, it is important to emphasise government support measures in the field of information security.

Artificial intelligence helps the digital economy achieve better results as it enables companies to utilise rich intelligence in various use cases, but to succeed, AI must be fully integrated into the process and not just be a part of it.

Discussion

The debate on the role of artificial intelligence in economic development and digital transformation is important in many ways. On the one hand, the application of AI makes the economy more efficient and flexible, ensuring high productivity and quality in the production and services sectors. On the other hand, the widespread application of this technology may lead to job losses and social inequalities, as robots and algorithms may replace labour in some sectors. Therefore, social and ethical issues related to the application of AI, as well as the transformation of education and the labour market, are of great importance.

As a result, while artificial intelligence and digital transformation are key drivers of economic growth, it is important to properly regulate developments in this field and equip

the workforce with new skills. Such developments can contribute to a more sustainable and equitable society, both economically and socially.

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