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The importance of artificial intelligence and socio-economic justice standards

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ABSTRACT

This article analyzes the role, opportunities and existing risks of artificial intelligence (AI) technologies in ensuring socio-economic justice. In particular, special attention is paid to the issues of compliance with the principles of equality, transparency and accountability in decision-making processes based on AI. International experience and legal and institutional aspects of the use of AI in developing countries, including Uzbekistan, are also considered. The advantages and problems of implementing AI systems in the conditions of the Uzbek economy are analyzed. The results of the study show that management approaches based on artificial intelligence are an important factor in increasing sustainable economic growth and efficiency.

Keywords:

artificial intelligence, social justice, economic equality, digital technologies, algorithmic justice, digital economy, sustainable economic growth, management system, automation, efficiency, innovative technologies, competitiveness.

Introduction. In recent years, the rapid development of artificial intelligence (AI) technologies has penetrated all spheres of social life, including economic management, the labor market, education, healthcare, and social protection systems. In the context of digital transformation, artificial intelligence makes it possible to accelerate decision-making processes, use resources more efficiently, and reduce human errors. However, the extent to which this technological progress serves the norms of socio-economic justice requires a thorough scientific analysis.

2. Literature review. It explores the potential of digital technologies to improve public services and enhance citizen engagement. It also discusses the importance of organizational and cultural change in facilitating digital transformation in the public sector¹¹⁸.

In the broader information systems literature on digital ecosystems, notably the special issue of Diga & May (2016), there are some studies that have examined the ICT ecosystem as a tool for social development and addressing inequalities. However, in the context of digital tax services, most of the research in this area has examined the adoption of technology by various stakeholders in the tax sector, such as tax officials, taxpayers or tax advisors. Where necessary, these models have examined phenomena that encompass only a small part of the broader digital tax administration infrastructure.

Apart from the single paper by Canares (2016), a digital ecosystem approach to the study of tax administration in the Philippines, the current research lacks a clear understanding and understanding of the approach to the tax¹¹⁹ literature. Adopting such an approach

would clarify previous studies on digital taxation in terms of criteria for evaluating digital taxa (Canares, 2016).

According to Heeks (2005), "We have systematically reviewed the various narratives that exist on the adoption, use, and effectiveness of various digital tax services studied in different disciplines and to integrate them into a comprehensive conceptual framework for the study of taxation." This need stems from concerns about the high inefficiencies of e-government services and, therefore, the need to understand the critical factors for designing effective digital tax services.

Vasconcellos and Rua (2005) Tax administrations are the lifeblood of any economy and are crucial to the success of the government's digital agenda. In line with the broader digital transformation of government, the core role of tax administration has evolved with it. Tax authorities see themselves not only as tax collectors but also as providers of a range of tax services, from information provision, taxpayer assistance and tax education.

Yeconomides and Terzis (2008) argue that the success of e-taxation is essential for any digitally friendly government, as it ensures a broad range of interactions between the government and its citizens, regardless of their demographics and the inevitability of taxes. They argue that with the proliferation of e-commerce and mobile applications in everyday use, taxpayers have high expectations of the services they expect from their governments.

Robbins, Mulligan, & Keenan (2015) argue that, while much of the literature has argued for the benefits of digitalization, such as greater control and supervision of fiscal spending, reduced corruption, better governance and lower income inequality, these benefits cannot be assumed or accepted. Indeed, others in the literature have criticized the high inefficiency of e-government projects, of which digital taxation is no exception.

According to Aladvani (2016), the issues of system implementation and organizational change are not all problems of the technology itself, but rather the gap between the actual technology and the very complex social context in which the technology operates, such as

people, political environment, and cultural differences, which is largely wider.

Jo'rayev, A. (2022). Legal foundations of digitalization in the judicial system. – The issues of the legal framework for the introduction of digital technologies in the national judicial system are studied.

Kadyrov, M. (2023). Advantages and problems of artificial intelligence in the judicial system. – The priorities and limitations of the use of AI technologies in Uzbekistan are highlighted.

3. Research methodology.

This article used comparative analysis and induction and deduction assessment methods. First, using scientific abstraction and induction-deduction methods, the theoretical foundations of the concepts of artificial intelligence, social justice and economic equality were formed. Through this, the object and subject of the study were determined, and the main scientific hypotheses were put forward.

The study used analysis and synthesis methods, and the social and economic consequences of the use of artificial intelligence were studied separately into separate elements, and their interrelationships were systematically summarized. Through the method of comparative analysis, the experience of various countries and international organizations in implementing artificial intelligence and their approaches to justice standards were compared and analyzed.

4. Analysis and discussion of results.

In the process of reforms in Uzbekistan, digital technologies, in particular artificial intelligence (AI), are considered one of the important factors in ensuring sustainable socio-economic development. The use of artificial intelligence in the fields of public administration, education, healthcare, the labor market and social services, along with increasing efficiency, creates new opportunities for strengthening the standards of social justice.

Socio-economic justice is one of the priority areas of state policy in Uzbekistan aimed at increasing the well-being of the population, supporting the disadvantaged and reducing socio-economic disparities between

regions. Analytical tools based on artificial intelligence allow identifying the social needs of the population, targeted allocation of resources and increasing the effectiveness of social programs. This is of great importance in ensuring the principles of social justice in practice. At the same time, artificial intelligence, by automating decision-making processes, serves to reduce subjectivity and bureaucratic obstacles associated with the human factor. This creates the basis for ensuring equality and transparency in the use of public services, creating equal opportunities for all segments of the population. Especially for the population living in remote areas, the possibilities of ensuring social justice through digital services are expanding. However, in the conditions of Uzbekistan, the process of introducing artificial intelligence requires a careful approach from the point of view of socio-economic justice. If decisions made based on algorithms are not transparent or are based on inaccurate information, they may negatively affect the interests of certain social groups. Therefore, it is necessary to strictly adhere to the principles of justice, impartiality and protection of human rights when using artificial intelligence.

In Uzbekistan, it is important to improve the legal and regulatory framework, institutional mechanisms and ethical standards to strengthen the relationship between artificial intelligence and socio-economic justice. In this process, the formation of an approach that is appropriate to national characteristics, taking into account international experience, will serve to maximize the positive impact of artificial intelligence.

In general, artificial intelligence is emerging as a modern tool for ensuring socio-economic justice in Uzbekistan, and its correct and responsible use will serve to increase the standard of living of the population, strengthen social equality and ensure sustainable development. In the economy of the 21st century, artificial intelligence (AI) technologies are becoming an integral part of the world's social and economic systems. As our President

noted, "Today, humanity is boldly stepping into a new stage of civilization - the era of artificial intelligence. Such technologies are deeply penetrating from the economy to education, medicine, agriculture and management systems."¹

Today, AI technologies have penetrated almost all sectors of the economy. At the same time, their introduction directly affects the labor market, resource allocation, data security, and equality of opportunities for citizens. Therefore, it is of urgent importance to assess the issue of using AI not only from the point of view of technology or innovation, but also within the framework of the paradigm of socio-economic justice. Maintaining the principles of socio-economic justice in the process of using AI has become not only a moral, but also an institutional necessity.

Since decisions made through AI affect human life, the idea of "fair algorithms" is taking shape as a new normative direction in world scientific circles.

Artificial intelligence is creating new production relations by automating human activity on a large scale. In this process, along with the increase in economic efficiency, there are sharp changes in the labor market - the disappearance of some professions, the emergence of new digital professions, and the widening of the income gap between highly skilled and low-skilled workers. Therefore, the new task of economic policy is to encourage innovation, as well as to manage its social consequences fairly.

The principles of "equal opportunities" and "minimization of social differences" set out in John Rawls's "theory of justice"² also serves as an important guideline in the field of artificial intelligence. That is, the use of AI systems should not lead to new digital inequalities between members of society or discrimination against certain groups. In particular, the introduction of the principle of "fair algorithms" in decision-making systems based on databases and algorithms is a priority area of artificial intelligence ethics and economic policy.

¹ https://uza.uz/uz/posts/insoniyat-yangi-civilizaciya-bosqichiga-suniy-intellekt-davriga-dadil-qadam-qoymoqda_773763

² Роулз Ж. Теория справедливости. – М.: Издательство ЛКИ, 2007.

The norms of socio-economic justice in the use of artificial intelligence should be reflected in the following main areas:

1) The principle of equal opportunities - all citizens should equally benefit from the economic achievements created by AI, that is, AI technologies should create equal opportunities for all citizens in access to work, education, healthcare and services.

2) Algorithmic transparency and accountability - the logic of AI decisions should be understandable and assessable to humans, that is, the process of making AI decisions should be open, under human control and re-evaluated.

3) Non-discrimination - data analysis processes should not be unfair on the basis of race, gender, age or social affiliation, that is, social or gender, nationality, age distributions in the database should be neutralized fairly.

4) Economic inclusion - the value created through AI should serve the interests of broad social strata, and AI should ensure that economic achievements are delivered to broad social strata, not just to certain groups.

5) Protection of human dignity - automation should not degrade human labor and creativity, but rather support it, that is, the value of human labor should not decrease as a result of the use of AI, but should serve the development of its creative and intellectual potential.

The introduction of AI into economic sectors increases efficiency, but at the same time increases the risk of unemployment and income inequality through the automation of labor. Therefore, it is necessary to implement the principle of "fair digital transformation" in economic policy. The principle of "fair digital transformation" implies the introduction of retraining and digital skills development programs, the redistribution of revenues generated by AI (for example, through a "robot tax" or inclusive innovation funds), and the formation of a "fair digital policy" with the

participation of the state, the private sector and civil society.

In world practice, significant steps are being taken to legally strengthen the principles of justice in the field of AI, that is, important documents aimed at legally regulating these issues at the global level have been adopted. For example, the European Union's "AI Ethics Guidelines" document defines the concept of "human-centric AI" as a system that serves human interests, guarantees equal opportunities and transparency, and the "Trustworthy AI" concept sets out the principles for creating human-centered, transparent and accountable algorithms.³ UNESCO's "Recommendation on the Ethics of Artificial Intelligence" defines justice, freedom, and the protection of human dignity as the main conditions for the development of AI.⁴ The "AI Principles" documents and recommendations of the Organization for Economic Cooperation and Development (OECD) emphasize "inclusive growth" - that is, the economic value created through AI should serve the interests of broad social strata.⁵

From a national perspective, Uzbekistan, while introducing AI technologies in the process of transition to a digital economy, needs to focus on the fair management of its social consequences. This requires, first of all, the development of digital skills, the formation of a culture of using information, and the creation of conditions for the equal participation of citizens in the digital economy. It is also important to ensure the principle of "fair digital transformation" in the distribution of economic benefits and incomes resulting from the use of artificial intelligence.

In his speech at the 80th session of the UN General Assembly, President of the Republic of Uzbekistan Sh. Mirziyoyev touched upon the issue of digital inequality and ensuring fair opportunities between countries in the use of artificial intelligence, saying: "It is very important to prevent inequality in digital development and the use of artificial

³ European Commission (2019). *Ethics Guidelines for Trustworthy AI*. Brussels.

⁴ UNESCO (2021). *Recommendation on the Ethics of Artificial Intelligence*. Paris.

⁵ OECD (2020). *Principles on Artificial Intelligence*. Paris.

intelligence between countries. We propose to create an international cooperation mechanism aimed at the free exchange of practical solutions and models of artificial intelligence in the fields of health, education and culture."⁶ they suggested.

Scientific and practical conclusion. Artificial intelligence technologies, while being the driver of the modern economy, are setting new boundaries for socio-economic justice. In other words, while accelerating socio-economic processes, artificial intelligence technologies are demanding a new category of justice - "algorithmic justice". Since algorithmic decisions affect human life and economic distribution, ensuring the standards of fairness, transparency and inclusion in them becomes an urgent task. Therefore, in developing digital economy policies, setting a "human-centered development model" as a priority, reducing the digital inequality arising through AI and bringing economic benefits to broad segments of society are the main conditions for implementing socio-economic justice.

In the transition to a fair digital economy, AI should be seen not only as a means of innovation, but also as a key element of a human-centered development model.

In public policy, it is important to ensure "fair digital inclusion" - reducing digital inequality, ensuring openness and responsibility in the use of data.

From a scientific point of view, the problem of AI and socio-economic justice will form new research areas in the coming years, such as "digital ethics", "algorithmic economics" and "human-machine relations".

Because the penetration of AI into decision-making processes is forming new mechanisms that directly affect human life in the allocation of resources, the labor market, social protection, tax and budget policy, lending and education systems. Therefore, the development of ethical standards in the management and use of AI is of strategic

importance for ensuring "justice in the digital era".

Artificial intelligence ethics is a set of standards that guarantee human dignity, equality, justice, transparency and security in the processes of creating, implementing and using digital technologies. Its theoretical foundations are based on pioneering philosophical ideas, the concept of human rights, and modern digital regulatory models. In particular, equal opportunity and the "difference principle" in John Rawls's "theory of justice" are considered important ideas for ensuring algorithmic equality in AI ethics.

Internationally, norms developed by organizations such as UNESCO, the World Bank, the Organization for Economic Cooperation and Development (OECD), and the European Union (AI Act, 2024) are widely recognized as universal standards for AI ethics.⁷ They define principles such as neutrality, transparency, comprehensibility, privacy, security, accountability, and human-centeredness in AI situations. Another aspect of the relationship between AI and socio-economic justice is the risk of algorithmic bias and social inequality. One of the biggest problems with AI systems is algorithmic bias. This usually arises from the transfer of historical inequalities in the collected data to AI models. For example, in areas such as credit ratings, employment, medical diagnostics, educational admissions, and tax audits, social justice can be seriously violated if AI makes decisions based on incorrect data or biased datasets. Research shows that the misconfiguration of AI has often had a negative impact on low-income populations. Therefore, algorithms, fairness audits, data diversification, and technologies for reducing bias are the main prerequisites for SI justice.

Today, in many countries, the practice of assessing poverty levels, distributing social benefits, and identifying needy families based on SI is expanding. However, the errors of automated systems give rise to new conflicts related to social justice. For example, this can be

⁶ https://uza.uz/uz/posts/ozbekiston-respublikasi-prezidenti-shavkat-mirziyoevning-birlashgan-millatlar-tashkiloti-bosh-assambleyasining-80-sessiyasidagi-nutqi_763617

⁷ Жаҳон банки. Сунъий интеллект ва ривожланиш: Рақамли даврда инклюзивлик ва тенгликни таъминлаш. — Вашингтон: Жаҳон банки, 2022. — 140 бет.

caused by the fact that eligible citizens are deprived of benefits as a result of incorrect decisions, incorrect data collection, non-transparency of processes, and the loss of the human criterion. It is for this reason that UNESCO and the Organization for Economic Cooperation and Development (OECD) have established “human-in-the-loop” as a mandatory requirement for SI-based social protection systems.⁸

AI and automation are creating new challenges in the labor market. OECD reports emphasize that the high spread of automation will reduce many low-skilled jobs, which can lead to increased social inequality. Therefore, the concept of a “just transition” is important in AI policy, which involves retraining groups at risk in the labor market, developing new digital skills, and strengthening social protection mechanisms.

Digital ethics, digital equality, and digital inclusion also play an important role in ensuring socio-economic justice in this direction. Because the lack of equal access to digital technologies can exacerbate existing socio-economic disparities between people. In places where infrastructure, Internet access, and digital literacy are low, it is difficult to make fair decisions through AI.

UNESCO’s “Digital Inclusion Framework” identifies digital equality as a key condition for achieving AI justice.⁹

Also, due to the fact that AI systems work with big data, citizens' privacy, data security and the conditions of their use raise special ethical issues. Laws such as GDPR (Europe), CCPA (California) set strict requirements for the protection of personal data when using AI. At the national level, such norms are an integral part of ensuring human rights and digital justice.

⁸ OECD. OECD Principles on Artificial Intelligence. — Paris: OECD Publishing, 2019. — 20 p.

⁹ UNESCO. Recommendation on the Ethics of Artificial Intelligence. — Paris: UNESCO, 2021. — 44 p.

¹⁰ UNESCO. Recommendation on the Ethics of Artificial Intelligence. — Paris: UNESCO, 2021. — 44 p.

International standards on the ethics of artificial intelligence and their importance are covered in the UNESCO document “Recommendation on the Ethics of Artificial Intelligence”.¹⁰ This document is accepted as a global standard for the development of SI in a direction that ensures human rights and social well-being. Its main principles are:

- Justice and equality;
- Inclusivity;
- Human dignity;
- Data protection;
- Environmental sustainability;
- Accountability.

The OECD emphasizes the need to apply SI in a way that combines economic efficiency and social justice. Its main principles are human-centeredness, transparency, accountability, and security.¹¹

The EU AI Act is the world's first comprehensive AI law, which regulates AI according to the level of risk. It introduces strict fairness and security requirements for “high-risk” AI systems (credit scoring, social scoring, biometric identification, medical diagnostics).¹²

IEEE Ethically Aligned Design is a set of ethical standards for engineers, developers, and SI designers that prioritizes respect for human rights and social well-being.¹³

The following tasks are also of urgent importance at the national level in ensuring the justice of AI:

1. Ensuring the transparency and audit of algorithms, that is, introducing mandatory fairness audits for AI systems used in state decisions.
2. Maintaining human oversight, that is, AI should not make independent decisions in areas such as social security, taxation, medicine, and judicial affairs.
3. Strengthening personal data protection legislation.

¹¹ OECD. OECD Principles on Artificial Intelligence. — Paris: OECD Publishing, 2019. — 20 p.

¹² European Union. EU Artificial Intelligence Act. — Brussels: EU Council, 2024. — 112 p.

¹³ IEEE. Ethically Aligned Design. — IEEE SA, 2019. — 266 p.

4. Developing fair scenarios for digital transformation in the labor market.

5. Forming ethics councils and AI governance institutions.

6. Increasing the culture of digital literacy and digital ethics.

Conclusion. The rapid penetration of artificial intelligence and digital technologies into society is raising the problems of socio-economic justice to a new level. Despite the wide possibilities of AI, in conditions of misconfiguration and lack of control, it can exacerbate existing inequalities and lead to unfair decisions in the distribution of resources. Therefore, international standards, national policies and scientific approaches to AI ethics play a decisive role in shaping AI technologies as a force for social justice. In this direction, a systematic approach based on the principles of justice, impartiality, security, human-centeredness, personal data protection and accountability is the only effective way to ensure the sustainable and humane development of AI.

Proposals.

In order to ensure the standards of socio-economic justice in the process of introducing AI technologies in Uzbekistan, the following proposals are put forward:

Introducing national ethical principles based on justice, transparency and human rights in the use of AI. Establish accountability mechanisms that ensure the impartiality and explanation of algorithmic decisions. Ensure social equality through inclusive and impartial data generation for artificial intelligence systems. Develop institutional mechanisms to oversee the use of artificial intelligence in public administration. Strengthen digital equality by increasing the digital and artificial intelligence literacy of the population.

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