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ARTIFICIAL INTELLIGENCE GOVERNANCE IN UZBEKISTAN: STRATEGIC FOUNDATIONS, EMERGING LEGISLATIVE MEASURES, AND COMPARATIVE ANALYSIS WITH GLOBAL ETHICAL STANDARDS

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Abstract

This article is dedicated to exploring the strategic foundations of Artificial Intelligence (AI) governance in Uzbekistan, its emerging national legislative measures, and their comparative analysis with global ethical standards, particularly the Recommendations of the Organisation for Economic Co-operation and Development (OECD) and UNESCO.

The study identifies a disparity between Uzbekistan's goals for AI implementation within the framework of the "Digital Uzbekistan – 2030" strategy and international norms (such as accountability, transparency, security, and non-discrimination). The core problem is highlighted as the gap between the desire to adopt high ethical standards and the necessary technical capacity (low digital literacy, underdeveloped infrastructure) required for their practical implementation.

The article analyzes how Uzbekistan's AI readiness level (70th globally, 1st in Central Asia according to the 2024 index) practically restricts the enforcement of global ethical principles , and how this situation creates the risk that high ethical requirements will remain as merely formal accountability in official documents.

In the discussion section, it is shown that Uzbekistan's pursuit of AI sovereignty introduces conflicting points with the OECD's principles of openness and international cooperation. The conclusion emphasizes that the biggest challenge for Uzbekistan is the lack of technical and institutional capacity to enforce ethical requirements and the necessity of finding a balance between national control and international cooperation. Due to low literacy rates, the establishment of an Internal Ethical Governance system is proposed as a temporary measure.

Keywords: Artificial Intelligence, Uzbekistan, OECD, UNESCO, AI governance, ethics, legislation, AI Sovereignty, digital literacy.

INTRODUCTION

Artificial Intelligence (AI) technologies are fundamentally transforming economic, social, and political life globally. The Republic of Uzbekistan is also embracing this trend, having set the goal of widely implementing AI in public administration and various sectors of the economy within the framework of the "Digital Uzbekistan – 2030" strategy [6]. However, the rapid development of AI necessitates the regulation of the serious ethical, legal, and security issues it raises.

One of the main problems in Governance theory is the imbalance between Ethical Alignment and Technical Capacity: countries' desire to adopt high ethical standards is challenged by the lack of necessary infrastructure and human capacity for their practical implementation. The lack of transparency in AI systems, algorithmic errors, and potential risks to human rights, particularly issues of non-discrimination and privacy, place new demands on national governance systems.

Therefore, it is crucial to compare Uzbekistan's emerging AI legislation (even though much of it is at the conceptual stage) with international norms set by the OECD and UNESCO, to assess the compatibility of national policy with international standards, and to identify institutional gaps. The main objective of this scientific article is to conduct a comparative analysis of Uzbekistan's national AI strategy (expressed through decrees, resolutions, and conceptual documents) with the international ethical and legal frameworks established by the Organisation for Economic Cooperation and Development (OECD) and the United Nations Educational, Scientific and

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Cultural Organization (UNESCO), as well as to assess institutional gaps and strategic choices in legislation, considering practical constraints within the Central Asian context.

The study seeks answers to the following main questions:

- How does the level of AI readiness in Uzbekistan practically impact the implementation of global ethical principles?
- Are the key ethical and technical principles of UNESCO and the OECD (accountability, transparency, security) sufficiently reflected in national legislation and at a level where they can be practically enforced?
- Which path does Uzbekistan's AI governance model prioritize: international cooperation (interoperability) or the pursuit of AI sovereignty, and what are the consequences?

METHOD

The research primarily relies on normative-legal analysis and comparative analysis methods. Normative analysis involves reviewing the main legal documents and concepts of the Republic of Uzbekistan regarding the development and regulation of AI. Comparative analysis focuses on comparing these national foundations with global standards, such as UNESCO's Recommendation on the Ethics of AI and the OECD AI Principles. Regional research materials on digital readiness and the geopolitical context in Central Asia are also used to identify practical constraints affecting national governance models.

RESULTS

The foundations for AI development in the Republic of Uzbekistan are set by Presidential decrees and Government resolutions, primarily aimed at digitizing the public administration system and implementing AI in sectors such as healthcare, education, and agriculture. The main goal for AI implementation in national conceptual documents is to increase economic efficiency and improve the quality of public services. These documents primarily regard AI as a technological tool, but specific mechanisms for regulating its social and ethical implications often remain in the formative stage.

The successful implementation of global ethical principles into national legislation is directly dependent on the country's digital infrastructure and overall AI readiness level. Uzbekistan's score on the Government AI Readiness Index (2024) is 53.45, ranking it 70th among world countries and 1st among Central Asian countries [1]. The main reasons for this moderate readiness score are cited as significant disparities in digital infrastructure construction, slow development of the digital economy, low adoption of technology, deficiencies in the population's digital literacy, and differences in governance structures [2].

For instance, Transparency and Explainability [3], required by the OECD principles, demand a high level of technical competence and deep digital literacy to audit AI models. Due to the low literacy rate in the region, even if these requirements are included in the legislation, the scope of human and technical resources necessary for their practical enforcement is considered very low. This situation creates a number of practical difficulties in AI governance. As a result, institutional fragility is observed in the implementation of high ethical requirements. There is a risk that the accountability mechanism will remain merely formal accountability in official documents, instead of true functional accountability. Furthermore, the multi-stakeholder governance required by UNESCO loses its effectiveness in conditions of low digital literacy, as civil society representatives may not fully understand the risks of AI, which could lead to strengthening state-centric governance instead of democratic values (an OECD requirement) [4].

Uzbekistan's legal approach to AI stems from its existing internet and telecommunications governance systems. Studies show that approaches to AI governance follow the theory of "path dependency" reflecting the country's previous experience in internet regulation [2,6]. High levels

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of state control over information technologies are observed in many Asian countries, including Central Asia.

DISCUSSION

UNESCO's Recommendation on the Ethics of AI (2021) establishes ethical foundations for AI governance globally. Key ethical principles include Proportionality and do no harm, safety and precaution, Fairness and non-discrimination, and Sustainability [4]. These Recommendations require the legal and technical assurance of the principles of human autonomy and control, transparency and explainability, responsibility, and accountability. A crucial aspect of UNESCO's approach is its emphasis on the Recommendations being adaptive. The organization recognizes the impossibility of legislating and strictly regulating every aspect of AI to avoid hindering innovation. This means that global norms serve as guidelines, not rigid rules. This flexibility creates an opportunity for developing countries like Uzbekistan to avoid imposing excessive restrictions on AI, but it also carries the risk of weakening ethical responsibility and creating uncertainties in clearly defining legal liability for AI-caused harm. The principle of accountability will not be practically fulfilled if national legislation does not clearly specify who (developer, operator, or data provider) is responsible for AI-caused harm.

The OECD AI Principles are the first intergovernmental AI standard, aimed at promoting innovative, trustworthy AI and respecting human rights and democratic values. These principles consist of five value-based principles and five recommendations. The main value-based principles include: inclusive growth, sustainable development and well-being, human rights and democratic values (including privacy and fairness), transparency and explainability, robustness, security and precaution, and accountability [3]. The global significance of the OECD principles lies in the fact that its definition and life cycle of AI systems have been adopted by the European Union (EU), the USA, and the UN, which creates a basis for international interoperability.

This situation is a serious technical and legal pressure on Uzbekistan. If Uzbekistan does not align its legislation with the core definitions and cycles of the OECD, its AI products and services will face serious difficulties entering international markets or conforming to global technical standards. Therefore, the technical compatibility of the national strategy with the OECD foundations is not an intellectual choice, but an economic necessity.

In the Asian context, a key aspect of AI governance is the rise of the concept of AI sovereignty [5]. This concept reflects the tendency of states to establish national control over AI technologies. The convergence of diverse legal systems, cultural values, and geopolitical realities in Asia presents unique challenges for ensuring AI sovereignty in an interconnected world. International law faces new problems such as regulating cross-border data flows and governing dual-use technologies. For Uzbekistan, AI sovereignty means ensuring national security through data localization requirements and controlling foreign AI platforms. Such an approach may conflict with the OECD's recommendations for international cooperation and fostering an open ecosystem. As a governance solution, a state-centric approach is expected to be adopted more often, as AI sovereignty is seen as a way to protect national interests in the region.

Uzbekistan's strategic documents, while generally acknowledging the need for AI to be fair, transparent, and human-centred, face difficulties in forming specific legal mechanisms for the practical implementation of international principles. The OECD and UNESCO consider these principles fundamental requirements for ensuring citizens' trust in AI decisions. However, it is crucial how clearly mechanisms such as the right to appeal against AI decisions, algorithm auditing, or mandatory notification of the use of an AI system are defined in Uzbekistan's emerging legislation.

UNESCO places particular emphasis on the principles of Sustainability and inclusive growth of AI systems. In Uzbekistan's plans for the development of AI centers, it is important that factors

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such as high energy consumption and environmental impact are adequately considered. From an inclusion perspective, the principle of Fairness and non-discrimination requires assessing cumulative errors in AI algorithms. This means ensuring the quality of data in algorithms and that they do not lead to ethnic or gender discrimination.

Accountability, as required by the OECD, is one of the most difficult aspects of AI governance. The complexity of AI systems and the low level of technical literacy in the Central Asian region create a major obstacle to implementing this principle. If the national legal system cannot clearly define responsibility for AI decisions, the accountability mechanism becomes paralyzed.

It is important for Uzbekistan to study international experience, especially risk-based approaches, in shaping its AI legislation. The European Union's AI Act introduces a risk-based approach, classifying AI systems according to their risk level (e.g., high-risk, limited-risk) and setting corresponding regulatory and accountability requirements. Uzbekistan studying such approaches would ensure proportional regulation for different applications of AI.

Regarding Asian models, while countries like Singapore rely on ethical codes and voluntary regulation, China, conversely, has established strict state control over AI technologies and data. Uzbekistan's pursuit of AI sovereignty may indicate that it leans closer to China or other centralized governance systems. However, for integration into the global market, alignment with the OECD's principles of openness and cooperation is necessary.

The biggest obstacle to the practical enforcement of AI governance is the regional low readiness indicators and the low level of digital literacy. The effectiveness of legal measures is severely limited if the technical and human capital needed to understand and monitor them is absent. If literacy is not increased, ethical principles such as explainability and transparency of AI will remain merely academic concepts, and citizens will not be able to effectively exercise their right to appeal against AI decisions. In conditions of low readiness, the state cannot rely on sufficient participation of civil society representatives or technical experts in controlling AI ethics. Therefore, as a temporarily effective measure, the creation of an Internal Ethical Governance system is important. This can be implemented by mandating the appointment of an AI Ethics Committee or AI Auditors in every state body or large company. This measure allows the transfer of the accountability mechanism required by the OECD from external oversight to internal institutions, serving to ensure the continuity of ethical governance until national human capacity and digital literacy levels increase.

Strategic foundations for Artificial Intelligence governance exist in Uzbekistan, primarily focused on economic efficiency and the digitalization of public services. However, regional constraints and the pursuit of AI sovereignty have created points of conflict with global ethical standards (UNESCO/OECD).

CONCLUSION

The main conclusion of the analysis is that Uzbekistan's biggest challenge in AI governance is the lack of technical and institutional capacity to enforce ethical requirements. Even if high-level ethical principles are formally adopted (e.g., transparency and accountability), low digital literacy, underdeveloped infrastructure, and a tendency towards state-centric control severely reduce their practical effectiveness. This situation forces Uzbekistan to find a delicate balance between international cooperation and national control.

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