# THE IMPACT OF ARTIFICIAL INTELLIGENCE ON THE FUTURE OF TAXATION AND ACCOUNTING IN UZBEKISTAN

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| ARTICLE INFO | ABSTRACT: |
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| **ARTICLE HISTORY:**<br>*Received:09.10.2024*<br>*Revised: 10.10.2024*<br>*Accepted:11.10.2024*<br><br><br>**KEY WORDS:**<br>*artificial intelligence, accounting, taxation, automation, Uzbekistan, tax compliance, digital transformation, AI policy.* | *Artificial Intelligence (AI) is at the forefront of technological transformation, with significant implications for accounting and taxation systems globally. In Uzbekistan, integrating AI into these sectors can greatly enhance operational efficiency, transparency, and compliance. This article explores the potential benefits and challenges of AI in Uzbekistan's tax and accounting systems, backed by current data and global best practices. The paper concludes by providing policy recommendations that would enable Uzbekistan to fully capitalize on AI technologies, thus ensuring its financial infrastructure is aligned with global trends.* |

**INTRODUCTION.** Artificial Intelligence (AI) is redefining business processes globally, particularly in accounting and taxation. AI offers advanced solutions in data processing, auditing, and compliance monitoring, which can revolutionize Uzbekistan's financial sector. As Uzbekistan continues its economic reforms, the adoption of AI-driven systems could improve tax collection, reduce fraud, and streamline accounting procedures. However, the successful integration of AI requires substantial investments in technology, regulatory reform, and capacity-building efforts. This paper examines how Uzbekistan can leverage AI technologies in the context of global trends and provides policy recommendations for achieving this goal.

**Literature Review**

Globally, AI has already begun transforming tax administration and accounting processes, especially in advanced economies. Wolters Kluwer highlights the increasing use of AI to automate complex tax compliance processes, improve audit accuracy, and optimize tax revenue collection [1]. In the European Union, AI algorithms have improved risk

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management by identifying irregularities in taxpayer behavior, reducing fraud, and enhancing compliance.

Uzbekistan, although relatively new to digital transformation, has made strides in modernizing its tax system, especially with its 2019 tax reforms aimed at simplifying the structure and promoting transparency. However, as B.Ismailov points out, the adoption of AI technologies could further enhance these reforms by automating manual processes, improving data accuracy, and boosting fraud detection capabilities[2]. Currently, the lack of adequate infrastructure and AI expertise poses significant barriers to full-scale implementation. Uzbekistan's regulatory framework is not yet fully equipped to handle the complexities of AI integration in accounting and taxation. D.Sharipov suggests that an overhaul of legal and technological infrastructure is necessary to facilitate AI adoption. Moreover, there is a need for clear guidelines on data privacy, cybersecurity, and the ethical use of AI to safeguard both businesses and taxpayers. Without a robust regulatory environment, the risks of AI misuse, such as biased decision-making or data breaches, may overshadow its benefits [3].

**Research Methodology**

The research adopts a mixed-methods approach, combining qualitative analysis from local experts and international literature with quantitative data on Uzbekistan's tax revenues, compliance rates, and digital transformation progress. Primary data is gathered from government sources, including the Ministry of Economy and Finance and local tax authorities, while secondary data comes from international reports such as those from the World Bank and OECD. The study also provides insights into the opportunities and challenges associated with AI implementation in Uzbekistan.

**Analysis and Results**

The adoption of AI in accounting and taxation can significantly improve the efficiency of administrative processes in Uzbekistan. In countries where AI has been fully implemented, such as Estonia and the UK, tax agencies have reported reductions of up to 50% in processing times for tax returns and audits[4]. In Uzbekistan, AI could streamline the currently labor-intensive processes of tax filings, tax return audits, and financial reporting, which are often slowed by the reliance on manual data entry and verification.

A key area where AI can provide efficiency gains is in automating routine but time-consuming tasks like tax declaration submissions and audits. By using AI to process forms and automatically detect inconsistencies, tax authorities in Uzbekistan could reduce the burden on auditors, allowing them to focus on higher-value tasks. For instance, research

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from Thomson Reuters found that AI-based tax software can analyze and cross-check thousands of transactions in seconds, a task that would typically take auditors days to complete [5].

In Uzbekistan, if AI were to be applied to financial statement audits, the estimated time savings could reach 35%-45% depending on the complexity of the dataset. With the introduction of AI-driven automation, the State Tax Committee of Uzbekistan could potentially decrease the manual workload by up to 40% within the first year of implementation [6]. This efficiency boost would directly impact the timeliness and accuracy of tax collections, enhancing overall fiscal discipline.

One of the most compelling benefits of AI integration in taxation is its ability to improve tax compliance and detect fraudulent activities. Globally, tax authorities are leveraging AI's ability to process large datasets and identify patterns that signal potential tax evasion. For instance, AI models can analyze a taxpayer's historical data, financial transactions, and social behavior to flag anomalies that suggest under-reporting or misreporting of income.

In Uzbekistan, the potential for AI to improve tax compliance is enormous. Currently, Uzbekistan's informal economy accounts for around 45% of its total GDP, a significant portion of which remains untaxed [7]. AI could help detect informal economic activities by cross-referencing transactions recorded in the formal economy with unexplained discrepancies in income reporting. In countries like Australia, the use of AI has improved tax compliance by 15%, leading to a significant increase in tax revenues [8]. If Uzbekistan implements similar AI-based compliance monitoring, it could potentially increase tax revenues by an estimated 12%–15% over the next five years.

Additionally, AI algorithms can be employed to detect and prevent tax fraud by analyzing taxpayer data against established risk profiles. Machine learning models could assign risk scores to taxpayers based on historical patterns of behavior and flag those with suspicious activity for further investigation. In countries like the Netherlands, AI-backed fraud detection has reduced tax fraud by nearly 30%. For Uzbekistan, a similar system could lead to a marked decrease in both individual and corporate tax fraud, potentially boosting tax revenues by as much as $200–300 million annually [9].

A key challenge in Uzbekistan's tax system is the prevalence of the informal sector, which includes untaxed activities such as small-scale agriculture, street vendors, and other cash-based businesses. As mentioned earlier, Uzbekistan's informal economy contributes to a sizable tax gap, meaning a significant amount of potential tax revenue is lost annually. AI-powered data analytics tools, when integrated into Uzbekistan's tax system, could address

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this issue by identifying discrepancies between the formal economy and unreported activities. For example, AI tools can analyze sales data from businesses, cross-referencing it with inventory records and purchase invoices to detect under-reporting of revenue. By deploying such tools, Uzbekistan could track transactions that occur within the informal economy, estimating that 10%–15% of the current tax gap could be closed within three years of AI implementation. This could translate to a potential increase of $500 million–$700 million in tax revenues annually, contributing to improved fiscal health and reduced reliance on external borrowing [10].

While AI offers significant opportunities for the tax and accounting systems in Uzbekistan, several challenges must be addressed for successful implementation. The first major challenge is the lack of skilled professionals who are trained in AI and its applications. According to A.Saidov, without substantial investments in education and training, Uzbekistan risks not having the human capital necessary to effectively implement and manage AI-driven systems. This includes the need for both data scientists and IT professionals capable of handling the complexity of AI technologies [11].

Another significant challenge is the country's digital infrastructure. While Uzbekistan has made strides in improving its IT infrastructure, the current systems may not be sufficient to support the large-scale data processing requirements of AI systems.

Additionally, the regulatory and legal frameworks in Uzbekistan are still in the developmental stages when it comes to AI and digital technologies. The lack of clear guidelines on data privacy, AI ethics, and liability issues poses significant risks for both taxpayers and the government.

Furthermore, there is the issue of financial resources. Implementing AI systems requires substantial upfront investments, not only in technology but also in training and system upgrades. The government must balance these costs with the potential long-term gains of increased efficiency and revenue. In the short term, this might place pressure on the national budget, which is already stretched by economic reforms and other developmental priorities.

Lastly, public acceptance of AI technologies is another challenge. The general public and businesses may be hesitant to trust AI-driven systems, especially in areas as sensitive as taxation. Building public confidence through transparency, clear communication, and demonstrating the effectiveness of AI systems will be crucial for the successful implementation of these technologies.

From the perspective of businesses and taxpayers, AI-driven systems can reduce the administrative burden and compliance costs associated with tax reporting and accounting.

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With AI systems automatically calculating taxes, filling out forms, and checking for errors, businesses can save significant time and resources typically spent on tax-related activities. Studies have shown that businesses in countries with advanced AI-based tax systems have reduced their compliance costs by 20%–30% [12].

For the government, AI implementation can result in significant cost savings as well. By reducing the need for manual audits and other labor-intensive processes, Uzbekistan's tax authorities could cut administrative costs by as much as 25% over a five-year period [13]. This would allow the government to allocate resources more efficiently, focusing on areas where human oversight is necessary and strategic

**Policy Recommendations**

**1.** The government must prioritize investments in digital infrastructure, particularly in cloud computing and high-speed internet, which are critical for AI adoption. These investments should focus on upgrading the existing tax administration systems to handle AI's computational demands.

**2.** Introducing specialized training programs and curricula focused on AI technologies is crucial to developing a skilled workforce. Collaboration with international institutions for training tax officials and accountants on AI tools can accelerate the adoption process.

**3.** Establishing a comprehensive regulatory framework is essential to ensure the ethical use of AI in taxation and accounting. This includes creating guidelines on data protection, cybersecurity, and AI ethics, tailored to the unique needs of Uzbekistan's tax system.

**4.** The government should encourage collaboration between the private sector and academic institutions to promote innovation in AI applications for tax and accounting. Tax incentives and grants can be offered to companies developing AI-driven solutions for financial systems.

**5.** Before nationwide implementation, Uzbekistan could benefit from pilot projects that test AI integration in smaller, localized tax offices. Lessons learned from these pilots can guide a phased rollout across the country, ensuring the scalability and adaptability of AI systems to Uzbekistan's needs.

**Conclusion**

The potential of artificial intelligence in revolutionizing Uzbekistan's taxation and accounting systems is immense. AI can significantly enhance operational efficiency, improve compliance, and reduce the risks of fraud. However, Uzbekistan must address several challenges, including technological infrastructure, regulatory readiness, and workforce education, before fully integrating AI into its financial systems. By following a

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structured roadmap that includes targeted investments, regulatory reforms, and capacity-building efforts, Uzbekistan can leverage AI to align its tax and accounting systems with global best practices and drive sustainable economic growth.

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