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Tax Compliance Behavior and its Determinants in the Digital Economy

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Abstract

This study examines tax compliance behavior and its determinants in the context of the digital economy. The main objective is to analyze how digitalization influences taxpayer behavior and improves compliance rates. The research is based on a mixed-method approach combining statistical data analysis from 2021–2024 and qualitative institutional analysis. The findings show that digital tax systems significantly increase voluntary compliance, reduce tax evasion, and improve transparency. The novelty of the study lies in its integrated analysis of technological and behavioral factors influencing tax compliance. The results highlight the importance of trust, digital infrastructure, and policy design. The study suggests that further development of digital tax systems, along with improved taxpayer education and institutional transparency, is essential for enhancing compliance.

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INTRODUCTION

Tax compliance is widely recognized as one of the fundamental pillars of an effective and sustainable fiscal system. It ensures the steady flow of public revenues necessary for financing government expenditures, maintaining macroeconomic stability, and supporting long-term economic development. In modern economies, the level of tax compliance directly reflects not only the efficiency of tax administration but also the degree of institutional trust, transparency, and economic discipline within society. In recent years, the rapid expansion of the digital economy has significantly transformed the traditional mechanisms of taxation and compliance behavior. Digitalization has introduced new forms of economic activity, including e-commerce, digital services, and platform-based transactions, which challenge conventional tax systems [1], [2]. These changes have compelled governments to rethink their tax policies and administrative approaches in order to adapt to a more complex and dynamic economic environment.

At the same time, digital technologies have created unprecedented opportunities for improving tax compliance. The implementation of electronic tax filing systems, real-time transaction monitoring, big data analytics, and artificial intelligence has enhanced the capacity of tax authorities to detect tax evasion and improve transparency. These tools reduce administrative burdens for taxpayers, lower compliance costs, and increase the overall efficiency of tax collection processes. In the context of Uzbekistan, digital transformation has become a key priority of economic reforms. Within the framework of the “New Uzbekistan Development Strategy (2022–2026),” significant efforts have been made to modernize the tax system, including the introduction of online cash registers, electronic invoices, and integrated digital platforms for tax reporting. These reforms aim to increase voluntary compliance, reduce the shadow economy, and improve the overall business environment. However, despite these positive developments, several challenges remain [3]. The rapid growth of the digital economy has also created new risks related to tax evasion, particularly in cross-border transactions and informal digital activities. In addition, disparities in digital infrastructure, limited financial literacy, and unequal access to technology continue to affect compliance behavior, especially among small businesses and rural populations.

Furthermore, tax compliance is not determined solely by enforcement mechanisms [4]. Behavioral and psychological factors such as trust in government institutions, perceived fairness of the tax system, and social norms play a crucial role in shaping taxpayer behavior. The concept of “tax morale” has become increasingly important in understanding why individuals and businesses choose to comply with tax regulations.

From a theoretical perspective, tax compliance has traditionally been explained by economic deterrence models, which emphasize the role of penalties and audit probabilities. However, in the digital era, these models are complemented by institutional and behavioral approaches that highlight the importance of governance quality, transparency, and taxpayer engagement [5]. The relevance of this study lies in the need to comprehensively analyze tax compliance behavior in the context of digital transformation. Understanding the determinants of compliance is essential for designing effective tax policies that balance enforcement with trust-building

measures. The main objective of this research is to examine the key factors influencing tax compliance in the digital economy and to assess the impact of technological, institutional, and behavioral changes on taxpayer behavior. The study also aims to identify existing challenges and propose policy recommendations for improving tax compliance in Uzbekistan and similar transition economies [6].

METHODOLOGY

This study is based on a mixed-method approach combining statistical analysis, comparative analysis, and behavioral assessment.

Quantitative data from 2021–2024 were analyzed to identify trends in tax compliance rates, tax evasion cases, and digital system usage. Descriptive and trend analysis methods were applied to evaluate changes over time.

In addition, qualitative analysis was conducted based on policy documents, institutional reports, and taxpayer surveys. This allowed for the identification of key determinants of tax compliance, including technological, institutional, and psychological factors.

The study also incorporates elements of behavioral economics to examine how trust, perception of fairness, and awareness influence taxpayer decisions.

RESULTS

Empirical Analysis of Tax Compliance Behavior in the Digital Era

The analysis reveals that tax compliance behavior has undergone significant transformation in the digital economy, driven by technological innovation, institutional reforms, and changes in taxpayer perception. Based on data from 2021–2024, the level of voluntary tax compliance in Uzbekistan has shown a steady increase, particularly after the introduction of digital tax administration systems [7].

According to official reports, the share of voluntarily submitted tax declarations increased from approximately 72% in 2021 to 81% in 2023 and reached nearly 85% in 2024. This improvement is strongly associated with the implementation of electronic tax filing systems and automated reporting mechanisms, which have reduced compliance costs and simplified tax procedures [8]. Furthermore, the results indicate that digitalization has significantly reduced tax evasion. The introduction of online cash registers and real-time transaction monitoring systems led to a measurable decline in underreported revenues, especially in retail and service sectors. Between 2022 and 2024, detected cases of tax underreporting decreased by nearly 18%, reflecting improved transparency and monitoring efficiency [9], [10].

Another important finding is the role of taxpayer awareness and trust in tax authorities. Survey-based indicators suggest that taxpayers who perceive the tax system as fair and transparent are more likely to comply voluntarily. In 2023, approximately 64% of respondents expressed confidence in tax institutions, compared to 52% in 2021. However, the results also reveal persistent challenges [11]. Small businesses and self-employed individuals demonstrate lower compliance rates compared to large enterprises. This is largely due to limited financial literacy, complexity of tax regulations, and partial adaptation to digital tools. In addition, regional disparities in tax compliance are evident. Urban areas with better digital infrastructure show higher compliance rates, while rural regions lag behind due to limited access to digital services.

DISCUSSION

The findings confirm that tax compliance in the digital economy is influenced by a combination of economic, institutional, and behavioral factors. From a theoretical perspective, the results align with the Allingham-Sandmo model, which explains tax compliance as a function of enforcement probability and penalty severity [12], [13].

However, the digital economy introduces new dimensions to this model. Technological tools such as big data analytics, artificial intelligence, and e-invoicing systems increase the probability of detection, thereby encouraging compliance. This supports the argument that digitalization strengthens tax enforcement without necessarily increasing tax rates.

At the same time, behavioral factors play a crucial role [14]. The increase in voluntary compliance suggests that trust in tax authorities and perceived fairness of the tax system are as important as enforcement mechanisms. This aligns with the concept of "tax morale," which emphasizes the psychological and social aspects of compliance.

Despite these positive developments, the study highlights structural issues such as the digital divide and unequal access to technology. These factors limit the effectiveness of digital tax systems in certain regions and among specific groups [15].

Moreover, the rapid digitalization of the economy creates new forms of tax evasion, particularly in e-commerce and informal digital transactions. This requires continuous adaptation of tax policies and monitoring tools.

CONCLUSION

This study has comprehensively examined tax compliance behavior in the context of the digital economy, with particular emphasis on recent reforms and technological advancements in Uzbekistan. The findings confirm that digitalization has significantly transformed the nature of tax administration and compliance, shifting it from a traditional enforcement-based model toward a more integrated, technology-driven system.

From a fiscal perspective, the increase in voluntary compliance rates and the reduction in tax evasion cases between 2021 and 2024 indicate that digital tax systems have enhanced the efficiency and effectiveness of revenue collection. The implementation of electronic reporting, real-time monitoring, and automated control mechanisms has reduced administrative barriers and improved transparency, thereby strengthening the overall tax system.

From a behavioral perspective, the study highlights the growing importance of non-economic factors such as trust in tax authorities, perceived fairness of the tax system, and taxpayer awareness. The observed improvements in compliance levels suggest that digitalization not only increases enforcement capacity but also contributes to building a more cooperative relationship between taxpayers and the state. This reflects a shift toward a compliance culture based on trust and voluntary participation.

However, the research also identifies several critical challenges that must be addressed to ensure the sustainability of these positive outcomes. The digital divide remains a significant barrier, particularly in rural areas and among small businesses with limited access to digital infrastructure and financial literacy. In addition, the emergence of new forms of tax evasion in digital platforms and cross-border transactions requires continuous adaptation of tax policies and regulatory frameworks.

Moreover, the potential risks associated with over-reliance on digital systems, including cybersecurity concerns and data privacy issues, must be carefully managed. Policymakers

should ensure that technological advancements are accompanied by robust legal and institutional safeguards.

In light of these findings, the study suggests that future tax policy should adopt a balanced and integrated approach. This includes further development of digital infrastructure, strengthening institutional transparency, enhancing taxpayer education, and improving enforcement mechanisms. Special attention should also be given to reducing regional disparities and supporting small businesses in adapting to digital tax systems.

In conclusion, tax compliance in the digital economy is a multidimensional phenomenon influenced by technological, institutional, and behavioral factors. A comprehensive and adaptive policy framework is essential to maximize the benefits of digitalization while minimizing its risks. Strengthening these elements will contribute not only to improved tax compliance but also to broader economic stability and sustainable development.

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