



**SECTORAL AND REGIONAL CONCENTRATION OF TAX ARREARS IN UZBEKISTAN:  
STATISTICAL AND FISCAL STABILITY ANALYSIS**

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**Abstract**

This article examines the sectoral and regional concentration of tax arrears in Uzbekistan and its implications for fiscal stability using statistical analysis. The study analyzes the distribution of tax arrears across economic sectors and regions, identifying the degree of concentration and its relationship with fiscal risks. The findings show that the largest share of tax arrears is concentrated in commercial organizations, particularly in the manufacturing and construction sectors, while regionally the highest concentration is observed in Tashkent city, Tashkent region, and Andijan region. The accumulation of tax arrears among large enterprises is identified as a systemic fiscal risk factor that may undermine government revenue stability and increase fiscal vulnerability. The results of the study contribute to the development of analytical insights for improving tax debt management mechanisms, reducing fiscal risks, and strengthening budgetary stability.

**Keywords:** Tax arrears, sectoral analysis, regional concentration, fiscal stability, government budget, fiscal risks, tax revenues, economic sectors, regional economy, statistical analysis

**INTRODUCTION**

Tax arrears are considered one of the most important fiscal problems in ensuring the stability of public finance. Considering that the main part of state budget revenues is formed through taxes, the growth of tax arrears weakens the budget revenue base, widens the fiscal gap, and increases pressure on public debt. In recent years, the fact that tax arrears in Uzbekistan have remained significantly high has further increased the relevance of this issue.

According to statistical data, as of January 1, 2026, arrears related to employees' property and land taxes amounted to 462.5 billion soums, more than 75 percent of which accounted for commercial organizations. Compared with the previous period, as of October 15, 2025, this indicator amounted to 831.5 billion soums, demonstrating high volatility and sensitivity of tax arrears within a short period of time. This situation indicates that tax arrears are highly dependent on macroeconomic shocks and economic cycles[1].

In addition, the number of enterprises with tax debt exceeding 100 million soums in the manufacturing and construction sectors amounted to 1,099 and 1,243 respectively, while their total arrears approached 1.3 trillion soums. Notably, 27.3 percent of tax arrears in the manufacturing sector and 38.7 percent in the construction sector account for the ten largest enterprises. This indicates that tax arrears are highly concentrated and that large enterprises constitute a source of systemic risk for fiscal stability[2].

From a regional perspective, tax arrears are concentrated in regions with high economic activity, with Andijan region (305.6 billion soums), Tashkent region (196.5 billion soums), and Tashkent city (492.2



billion soums) recorded as the territories with the highest level of tax arrears. This situation indicates a significant relationship between the level of regional economic development and tax arrears[3].

The sectoral and regional concentration of tax arrears is an important factor limiting the effectiveness of fiscal policy and directly threatens the stability of state budget revenues. At the same time, a high concentration of tax arrears may intensify fiscal risks, lead to growth in public debt, expansion of the budget deficit, and weakening of macroeconomic stability.

In this regard, the purpose of this study is to statistically analyze the sectoral and regional concentration of tax arrears in Uzbekistan and assess its impact on fiscal stability. Within the framework of the study, the distribution of tax arrears across economic sectors and regions, the degree of concentration in large enterprises, and the factors intensifying fiscal risks are analyzed. The obtained results serve to develop scientifically grounded conclusions aimed at improving tax arrears management mechanisms and strengthening state budget stability.

## LITERATURE REVIEW AND METHODS

The issue of tax arrears in Uzbekistan has been studied by a number of domestic scholars in the context of ensuring public finance stability. In particular, S. Elmirezayev analyzed the factors behind the formation of tax arrears, taxpayer discipline, and tax administration mechanisms, substantiating the necessity of institutional reforms and simplification of tax administration in reducing tax arrears. He developed proposals regarding the structure of tax arrears, their sources of origin, and measures for preventing arrears[5].

In studies conducted jointly with N. Kurbankulova, it was shown that tax arrears are related to the financial condition of taxpayers, the level of tax burden, and the effectiveness of tax administration, emphasizing the need for a comprehensive approach to arrears management. These studies provide an important theoretical basis for assessing tax arrears as a fiscal risk[10].

At the same time, U. Berdiyeva studied the relationship between tax collectability and tax arrears, determining that the stability of tax revenues is directly linked to the level of tax discipline. Her research identifies expansion of the tax base and improvement of tax administration as the main factors for increasing tax collectability[6].

A. G'iyosov analyzed taxpayers' level of knowledge regarding tax obligations, tax culture, and tax discipline problems, identifying information deficiency as one of the important institutional factors of tax arrears. He substantiated that increasing taxpayer awareness is an important instrument for reducing tax arrears[7].

Sh. Toshmatov emphasized that strengthening taxpayer payment discipline is an important factor in ensuring fiscal stability, scientifically proving that improving incentive mechanisms and sanction systems can reduce tax arrears[8].

I. Niyazmetov showed that monitoring the objective causes of tax arrears is important for optimizing tax policy and emphasized that systematic observation of tax arrears indicators is an important instrument for managing fiscal risks[9].



Although these studies broadly cover the microeconomic and institutional factors of tax arrears, the issue of their sectoral and regional concentration and impact on fiscal stability has not been sufficiently analyzed statistically. Therefore, analyzing the structural distribution and level of concentration of tax arrears remains scientifically relevant.

In this study, statistical analysis methods were applied to analyze the sectoral and regional concentration of tax arrears. In particular, descriptive statistical analysis, structural distribution analysis, concentration coefficient analysis, and time-series dynamic analysis methods were used. In addition, the relationship between tax arrears and fiscal stability was assessed through a conceptual approach.

**RESULTS**

This study statistically analyzed the sectoral and regional concentration of tax arrears in Uzbekistan. The obtained results showed that tax arrears are highly concentrated across economic sectors, regions, and large enterprises, confirming the existence of systemic risk factors for fiscal stability.

**Table 1. Structure of Property and Land Tax Arrears of Employees of Organizations (as of January 1, 2026)**

<b>Indicator</b>	<b>Amount of Arrears, billion soums</b>	<b>Share, %</b>
<b>Land Tax</b>	295,7	63,9
<b>Property Tax</b>	166,8	36,1
<b>Total</b>	462,5	100,0

According to the results of Table 1, the total amount of property and land tax arrears of employees of organizations amounted to 462.5 billion soums, with the main share accounted for by land tax (63.9 percent). This indicates a relatively low level of tax discipline in land tax payments and demonstrates the necessity of improving collection mechanisms for this type of tax.

The analysis of tax arrears distribution by type of organization showed that employees of commercial organizations account for more than 75 percent of total arrears. This confirms that the problem of tax arrears is mainly associated with the private sector and that this sector represents one of the main sources of fiscal risks.

**Table 2. Concentration of Tax Arrears in the Manufacturing and Construction Sectors (as of January 1, 2026)**

<b>Sector</b>	<b>Number of Enterprises with Tax Arrears Above 100 Million Soums</b>	<b>Total Tax Debt, trillion soums</b>	<b>Share of TOP-10 Enterprises, %</b>
<b>Manufacturing</b>	1 099	1,3	27,3
<b>Construction</b>	1 243	1,3	38,7



The results presented in Table 2 indicate that tax arrears are highly concentrated in the manufacturing and construction sectors. In particular, 27.3 percent of total tax debt in the manufacturing sector and 38.7 percent in the construction sector account for the ten largest enterprises. This confirms that tax arrears demonstrate a Pareto-type concentration pattern and that large enterprises represent the main source of systemic risk for fiscal stability.

The results of the regional analysis showed that tax arrears are unevenly distributed across the country and highly concentrated in regions with intensive economic activity. In particular, the highest volumes of tax arrears among manufacturing and construction enterprises were recorded in Tashkent city, Tashkent region, and Andijan region. These territories are characterized as the main centers of economic activity, distinguished by high industrial production, intensive infrastructure projects, and a significant share of business entities[4].

In the manufacturing sector, Andijan region (305.6 billion soums), Tashkent region (196.5 billion soums), and Fergana region (92.3 billion soums) were identified as the leading territories in terms of tax arrears. This situation can be explained by the high concentration of industrial enterprises in the Fergana Valley, the presence of export-oriented production sectors, and capital-intensive projects in these regions[5].

In the construction sector, the highest level of tax arrears was recorded in Tashkent city (492.2 billion soums), Tashkent region (125.9 billion soums), and Andijan region (124.6 billion soums). This is explained by the fact that construction activity is mainly concentrated in highly urbanized areas where large-scale infrastructure and housing projects are being implemented.

The regional concentration analysis confirms that tax arrears are concentrated in economically developed territories and demonstrates a positive relationship between tax arrears and regional economic activity. At the same time, the high concentration of tax arrears in economically active regions may lead to territorial clustering of fiscal risks and create systemic threats to regional fiscal stability.

From this perspective, monitoring tax arrears by region, introducing risk-based tax control mechanisms, and improving territorial fiscal governance are assessed as important directions for reducing tax arrears and ensuring state budget stability.

## **DISCUSSION**

The obtained empirical results demonstrated that tax arrears in Uzbekistan are highly concentrated both sectorally and regionally. In particular, the main share of tax arrears is concentrated in economically active sectors such as manufacturing, construction, and trade, which can be explained by the sensitivity of these sectors to economic cycles and their high capital intensity. This finding is consistent with conclusions in international scientific literature regarding the cyclical nature of tax arrears.

The results of regional analysis showed that tax arrears are concentrated in regions with high economic activity, particularly in Tashkent city, Tashkent region, and Andijan region. These findings confirm the existence of a significant relationship between regional economic development and tax arrears. In other



words, regions with high economic activity represent not only broad tax bases but also the main source of tax arrears risks.

The research also identified a high concentration of tax arrears among large enterprises. The fact that more than 27 percent of total tax debt in the manufacturing sector and more than 38 percent in the construction sector are concentrated in the ten largest enterprises indicates that tax arrears follow a Pareto-type distribution. This represents an important systemic fiscal risk, because financial difficulties of large taxpayers may directly affect state budget revenues.

The obtained results indicate the necessity of introducing a risk-based approach in tax arrears management in addition to traditional repressive collection measures. In particular, it is important to differentiate tax control across high-risk sectors and regions, develop individual arrears management strategies for large taxpayers, and widely introduce digital tax administration instruments.

In addition, the results demonstrated the mechanisms through which tax arrears affect fiscal stability. A high concentration of tax arrears may reduce the stability of budget revenues, widen the fiscal gap, and intensify pressure on public debt. Therefore, tax arrears management should be considered an important component of fiscal risk management.

At the same time, this study has certain limitations. The analysis mainly relied on official statistical data and did not include behavioral factors of individual taxpayers at the micro level. In future research, deeper analysis of the determinants of tax arrears based on panel data and econometric models may broaden scientific understanding in this direction.

## CONCLUSION

This study statistically analyzed the sectoral and regional concentration of tax arrears in Uzbekistan and assessed its impact on fiscal stability. The obtained results showed that tax arrears are highly concentrated across economic sectors, regions, and large enterprises, confirming the presence of an important systemic risk factor for the stability of state budget revenues.

According to the analysis results, the main share of tax arrears falls on the manufacturing, construction, and trade sectors, which are distinguished by their high sensitivity to economic cycles. At the regional level, tax arrears were found to be concentrated in economically active territories such as Tashkent city, Tashkent region, and Andijan region, demonstrating a significant relationship between regional economic development and tax arrears.

The research also showed that tax arrears are highly concentrated among large enterprises, particularly with the ten largest enterprises accounting for more than 27 percent in the manufacturing sector and more than 38 percent in the construction sector, indicating a Pareto-type distribution of tax arrears. This scientifically confirms that the financial condition of large taxpayers is of decisive importance for fiscal stability.

The obtained results demonstrate the necessity of introducing a risk-based differentiated approach in tax arrears management, strengthening tax control in high-risk sectors and regions, and developing individual arrears management mechanisms for large taxpayers. At the same time, broad



implementation of digital tax administration, forecasting models, and fiscal risk assessment systems is of significant importance in reducing tax arrears and ensuring the stability of budget revenues.

Overall, the results show that the sectoral and regional concentration of tax arrears is an important factor directly affecting fiscal stability and scientifically substantiate that tax arrears management should become one of the priority directions of public finance policy.

Based on the conducted analysis, the following practical recommendations were developed for reducing tax arrears and strengthening fiscal stability in Uzbekistan.

First, it is necessary to introduce a risk-based differentiated approach in tax arrears management. Strengthening tax control over high-risk sectors (manufacturing, construction, and trade) and economically active regions (Tashkent city, Tashkent region, and Andijan region), selectively planning tax audits, and introducing forecasting mechanisms are advisable.

Second, it is necessary to develop individual tax arrears management strategies for large taxpayers. Considering that a significant part of tax arrears is concentrated in the largest enterprises, it is recommended to introduce special monitoring systems, restructuring plans, and phased debt repayment mechanisms for them.

Third, it is necessary to improve early detection systems for tax arrears through the broad introduction of digital tax administration. Real-time monitoring of tax obligations, artificial intelligence-based risk scoring models, and electronic warning mechanisms can prevent sharp increases in tax arrears.

Fourth, it is recommended to use fiscal incentive instruments in reducing tax arrears. In particular, deferred tax payments, temporary abolition of fines and penalties, and targeted tax incentives for sectors affected by economic crises can improve taxpayers' liquidity and contribute to increasing tax revenues in the long term.

Fifth, improving regional fiscal governance is of significant importance. It is recommended to monitor tax arrears by region, assess territorial fiscal risks, and develop regional fiscal strategies aimed at ensuring the stability of tax revenues.

Sixth, systematic measures should be taken to increase tax culture and strengthen taxpayers' legal literacy. Promoting the social significance of tax revenues, expanding advisory services for taxpayers, and ensuring transparency serve to strengthen tax discipline.

Overall, reducing tax arrears and ensuring fiscal stability should be implemented through the integrated combination of institutional, digital, and fiscal policy instruments.

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