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THE IMPACT OF TAX POLICY ON ECONOMIC DEVELOPMENT

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Introduction

Today, ensuring sustainable economic development, improving public welfare, and strengthening state budget revenues are among the key priorities facing every country. In this process, tax policy plays a significant role as one of the main instruments for regulating the economy. Through taxation, governments influence economic activities, encourage entrepreneurship, improve the investment climate, and contribute to the expansion of production.

International experience demonstrates that a well-designed tax policy is a crucial factor in a country's economic development. An effective tax system promotes economic growth, supports the development of small businesses and private entrepreneurship, creates new employment opportunities, and strengthens the financial stability of the state.

Main part.

To examine the relationship between the tax burden and economic development in greater depth, an econometric analysis was conducted. In this study, Gross Domestic Product (GDP) was selected as the main indicator of economic development, and the effects of the tax burden and government budget revenues on GDP were evaluated. The econometric approach makes it possible to identify the quantitative relationship between these factors and economic growth, assess the magnitude of their impact, and provide a scientific interpretation of the observed trends.

The analysis was based on statistical data for Uzbekistan covering the period 2010–2024. The dataset was compiled using information obtained from the Ministry of Economy and Finance of the Republic of Uzbekistan, the National Statistics Committee, and other official open statistical sources. The impact of the tax burden and budget revenues on GDP was assessed using econometric methods, enabling a more precise evaluation of the relationship between these variables.

nitial Data for the Econometric Analysis of Economic Development and Tax Indicators in Uzbekistan[1]

Table 1

Year	GDP volume (bln.soum)	Natural logarithm of (GDP)	Tax burden rate (%)	Budget revenues (bln.soums)	Natural logarithm of budget revenues
	Y	**LNY**	**X1**	**X2**	**LNX2**
2010	88 102,40	32,11	15,4	15 689,0	9,66
2011	115 627,80	32,38	13,27	17 061,3	9,74
2012	142 333,00	32,59	13,8	21 295,7	9,97
2013	173 201,50	32,79	13,65	25 633,5	10,15
2014	210 998,30	32,98	13,55	31 070,6	10,34

[1] Compiled by the author based on data from the Ministry of Economy and Finance of the Republic of Uzbekistan and the National Statistics Committee.

2015	250 544,60	33,15	13,09	35 840,7	10,49
2016	290 213,40	33,30	12,5	39 641,5	10,59
2017	369 612,80	33,54	12,05	48 265,9	10,78
2018	494 814,80	33,84	14,07	77 571,1	11,26
2019	620 083,20	34,06	15,79	112 165,4	11,63
2020	705 076,50	34,19	16,01	132 938,0	11,80
2021	861 170,80	34,39	16,05	164 799,4	12,01
2022	1 041 877,90	34,58	15,33	201 863,7	12,22
2023	1 261 806,00	34,77	14,62	231 721,3	12,35
2024	1 535 431,70	34,97	14,04	274 423,0	12,52

In the analysis, Gross Domestic Product (GDP) was selected as the dependent variable (Y), while the tax burden (X_1) and budget revenues (X_2) were chosen as independent variables. To reduce data dispersion and improve the accuracy of the model, the natural logarithm transformation was applied to GDP and budget revenue indicators, which were included in the model as LNY and LNX_2, respectively.

The econometric analysis was conducted using the regression method, and the Ordinary Least Squares (OLS) technique was employed to estimate the model parameters. The statistical significance and explanatory power of the model were evaluated using the coefficient of determination (R^2), the Fisher test (F-statistic), the Student's t-test (t-statistic), and the corresponding probability values (p-values).

Source	SS	df	MS	Number of obs	=	15
				F(2, 12)	=	4555.12
Model	11.4797635	2	5.73988173	Prob > F	=	0.0000
Residual	.015121141	12	.001260095	R-squared	=	0.9987
				Adj R-squared	=	0.9985
Total	11.4948846	14	.821063186	Root MSE	=	.0355

LNY	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
X2	-.0832278	.0085276	-9.76	0.000	-.1018079	-.0646478
LNX4	.9590134	.0109262	87.77	0.000	.9352073	.9828195
_cons	4.303265	.3072311	14.01	0.000	3.633866	4.972664

Figure 1. Results of the Regression Analysis of the Relationship between Economic Development and Taxation

A multiple regression model was constructed to assess the impact of the tax burden and budget revenues on Gross Domestic Product (GDP) in Uzbekistan. The model parameters were estimated using the STATA statistical software package.

LNY=4.303 + 0.959LNX2 - 0.083X1

The statistical significance and reliability of the econometric model were evaluated using several diagnostic criteria. According to the results of the Fisher test, the model produced an F-statistic of 4555.12 with a probability value of Prob > F = 0.0000 (<0.05), indicating that the model is statistically significant as a whole. This suggests that the explanatory variables included in the model have a significant impact on Gross Domestic Product (GDP).

The coefficient of determination (R^2) was estimated at 0.9987, indicating that 99.87 percent of the variation in GDP is explained by the variables included in the model. Furthermore, the adjusted coefficient of determination (Adjusted R^2) was equal to 0.9985,

confirming the strong explanatory power of the model and suggesting the absence of redundant explanatory variables.

The statistical significance of the regression coefficients was assessed using the Student's t-test. The results show that the tax burden variable is statistically significant, with a t-statistic of -9.76 and a p-value of 0.000 (<0.05). The negative coefficient indicates that an increase in the tax burden has a negative effect on GDP.

For budget revenues, the estimated t-statistic was 87.77 with a p-value of 0.000 (<0.05), demonstrating a statistically significant positive relationship with GDP. This finding implies that increases in budget revenues are associated with higher levels of economic output.

In addition, the Root Mean Squared Error (Root MSE) was estimated at 0.0355, indicating a relatively low prediction error and a high degree of consistency between the model estimates and the observed data. Overall, the obtained results confirm the statistical adequacy, reliability, and strong explanatory capacity of the estimated econometric model.

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Conclusions and Recommendations

Based on the results of the analysis, several recommendations can be proposed to further improve tax policy and promote economic growth in Uzbekistan. First, it is advisable to gradually optimize the tax burden in order to reduce its potential negative impact on economic activity. In particular, creating a favorable tax environment for small businesses and private enterprises would contribute to increased investment and enhanced production activity.

In addition, efforts to increase budget revenues should focus not on raising tax rates but on broadening the tax base and reducing the size of the shadow economy. Such an approach would make it possible to increase government revenues while simultaneously reducing the tax pressure on the economy.

Furthermore, improving tax administration and expanding the use of digital technologies and electronic tax systems would enhance the efficiency of tax collection. At the same time, the effective application of tax incentives aimed at encouraging entrepreneurial activity would contribute to accelerating economic growth.

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