

Analysis of the threat level of the increase of the state debt in the gross domestic product in ensuring the economic security of the country.

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<https://doi.org/10.5281/zenodo.10467692>

Keywords: Gross domestic product, state budget revenues and expenditures, external debt, debt burden, external debt servicing costs, economic growth, crisis, econometric analysis, economic security.

Abstract: The article examines the public debt in the GDP of the Republic of Uzbekistan, the cost of servicing the public debt in the state budget revenues and their dynamics, and also, based on the method of econometric analysis, reveals the relationship between the change in the share of public debt in GDP and the change in the level of threats to the economic security of the country.

1 INTRODUCTION

One of the main reasons for the financial crises occurring in the world in the context of the globalization of the world economy is related to the problems of foreign debt and its payment. It is not difficult to observe that the ill-considered foreign debt policy of many countries has left their economies weak, dependent on external factors, vulnerable and vulnerable to dangerous situations. Public debt is a financial resource of the state obtained by issuing securities from domestic and foreign financial markets. Public debt is incurred when there is a budget deficit.

Public debt has different effects on economic growth in different countries. In particular, countries such as South Korea and Japan had a large amount of public debt in the 1950s and 1960s, but these debts had also a positive effect on the recovery of the economy and even its development. Furthermore, in some countries, especially in Indonesia, the public debt did not give its results and hindered the economic growth. Similar patterns can be observed in many countries.

Public debt plays an important role in the development of the economy of the Republic of Uzbekistan. During its independent development, Uzbekistan has always followed the principle of long-term and preferential interest rates, abandoning short-

term speculative loans. In his address to the Oliy Majlis (parliament), the President of the Republic of Uzbekistan stated that “in the current complex conditions in the world, we will consistently continue an open and pragmatic foreign policy based on mutual trust and respect [1]. In particular, from 2023, in the management of public debt in relation to the GDP, the goal is to ensure that the amount of newly attracted external debt does not exceed 4.5 billion US dollars per year [2].”

2 Background literature

That includes those foreign scientists such as J.M. Keynes., D. North, A.B. Adams, E. Soto, Dj. Forrester, S.P. Lee, Ya.L. Ngning, T. Blake, K. Ogawa, M.F. Al-Refai, E. Kim, G.S. Becker and others who have studied the impact of public debt on the economy and its regulation.

Russian scientists V.V. Gerasimov, V.S. Zagashvili, V.V. Volchik, N. V. Tseikovets, A.V. Kolosov, E. Yu. Kolesnikov, M. Ya, Kornilov, Yu. V. Latov, D.D. Burkaltseva, V.A. Bogomolov, A. Prokhojev, M. Kornilov and others conducted scientific research work on this topic.

The scientific-theoretical aspects of public debt in the development of the economy of the Republic of Uzbekistan and its effective management were discussed by Abulqosimov Kh.P., Abdupakhmonov K.Kh., Vakhobov A.V., Jo'raev T.T., Rasulev A.F., Rasulev T.S., Vakhobov A.V., Olmasov A.,

Mamatov A.A., Asatullaev X.S., Tursunov B.O., Tokhtaboev J.Sh., G'aniev D.A., Urmonov J.J., Sh.R. Qabilov and others conducted scientific research work in this field.

Foreign scientists P. Zondi and S. Robinson evaluated the impact of public external debt on economic growth using the autoregressive distributed lag model based on statistical data from 1994-2019. According to the results of the analysis, the impact of the state external debt on economic growth was positive in the short term. However, in the long term, the impact of public external debt on economic growth was negative [3].

Russian scientists Prokhorov A., Kornilov M. He assessed that security in the foreign economic sphere is characterized by the country's competitiveness in the world market, the stability of the national currency, the state's foreign debt, and the state's financial situation [4]. Professor Bogomolov V.A. expressed an opinion on the importance of foreign debt in the country's economy, "The problem of foreign debt requires constant monitoring, because it can have a very serious negative impact on the country's development in the long term. He points out that Latin America's deep, protracted decline in production and very high inflation caused the crisis that took place for more than a decade, precisely because of the large foreign debts"[5].

Among the economists from Uzbekistan D.A. According to Ganiev, one of the positive aspects of the state's domestic debt is the impetus for the development of the domestic financial market. Because government securities are highly liquid assets, the demand for them is high in most cases[6]. According to the research conclusions of J. J. Urmonov, the development of energy, water supply, transport and communication infrastructures, necessary for the population's living, production and business, requires a large amount of state investment. In the case of limited domestic opportunities, the external debt of the state is directed mainly to infrastructure, industrial and agricultural projects [7].

From the opinions and analyzes of the above scientists, we can see that the impact of public debt on economic growth depends firstly on its size and secondly on its source.

2.1 Research methodology.

The article includes dialectical, systematic, integral and synergetic approaches, economic, logical, scientific abstraction, analysis and synthesis, modeling of economic processes and systems, table, comparison, generalization, grouping, graphic, econometric modeling methods were used

Analysis and discussion of results

One of the threats to the institutional foundations of the country's economic security is in

the country's GDP, which is a threat related to the growth of the state debt and the change in the share of its service costs in the state budget revenues. As we may know, the country's economy requires additional capital for its financial improvement and economic development. If government spending exceeds tax revenues, it will lead to a budget deficit, which will have to be financed by borrowing from the domestic sector or international governments. An increase in the share of public debt in the country's GDP becomes a public debt burden, which consists of internal and external debts. Choosing the fastest and painless methods of solving and managing the problem in the context of the external debt crisis is of great scientific and theoretical importance.

Despite the dynamics of the growth of public debt in the Republic of Uzbekistan in recent years, according to international standards, the public debt of the Republic of Uzbekistan (40.4% of GDP), including public external debt (36.5% of GDP) remains at a moderate level. It should also be noted that the International Monetary Fund assesses Uzbekistan's foreign debt ratio of 55% to GDP as moderate or stable. In addition, the Fitch Ratings international rating agency rated Uzbekistan's long-term credit rating at the "BB-" (stable) level, which means that the country has the potential to attract additional foreign funds.

As of July 1, 2022, the total state debt of Uzbekistan is 25.9 billion USD, of which 23.2 bln. dollars is the state's external debt. The public debt is attracted in the following directions: 6 billion to support the budget, 5.6 billion to the fuel and energy sector, 2.5 billion for transport and transport infrastructure, 2.4 billion for agriculture and water industry, 2.2 billion for housing and communal services, 1.5 billion to support business activities, 1.1 billion for the chemical industry, 700 million to support the education and health sectors, and 1 billion for other strategic and socially important projects.

By the end of 2020, the total debt of the countries of the world was 97.6% of GDP (83.5% in 2019). According to the International Monetary Fund, the total amount of debt is 89.6 trillion dollars. It was predicted that this indicator would be 99.5 percent of GDP in 2021 . The debt of the EU countries was 102% of the GDP, and in 2020, the total GDP decreased by 14% [8] .

The increase in external debt is certainly a negative situation, but in the context of the global crisis and the pandemic, even some countries that are powerful in financial sense had to borrow money from international financial institutions. The question is whether the increase in public debt in developing countries will help economic growth or become a burden for future generations to pay.

According to S. P. Lee and Ya. L. Ng, foreign scientists, the existence of a high amount of public debt can have a negative impact on economic development [9]. T. Blake used the ARDL approach

to study the effect of public debt on economic growth in Jamaica from 1990 to 2014 and found that debt has a negative effect on economic growth[10]. A study conducted by E. Kim et al. found a negative relationship between public debt and economic growth in 77 countries from 1990 to 2014[11]. M.F. Al-Refai (1990-2013) used the ordinary least squares (OLS) method to study the impact of public debt on the Jordanian economy. According to him, domestic debt and gross fixed capital formation have a positive effect on economic growth in Jordan, but long-term external debt has a negative effect on economic growth in Jordan[12].

In our research, since the measurement units of the data included in the multifactor econometric model covering the period from 2017 to 2022 in Uzbekistan were different, they were all logarithmized and brought to a single measurement unit. Empirical analysis uses the logarithm of GDP and debt. The model is estimated using annual data.

$$\ln YIM = \beta_0 + \beta_1 \ln DQ + \beta_2 \ln BX + \beta_3 \ln TQXK + \varepsilon_t$$

Public debt is a dependent variable on the logarithm of Gross Domestic Product (GDP) in this model. Whereas public debt (GDP) is an indicator expressed as debt to GDP, which allows determining the direct impact of public debt on economic growth. The impact of the debt burden on GDP is determined by including many variables, such as budget expenditure (DB), external debt service (DFS). The problem under consideration was solved using the STATA program.

Table 1
Descriptive statistics results for factors

	<i>LnGDP</i>	<i>LnDQ</i>	<i>LnBX</i>	<i>LnTQXK</i>
Mean	3.841995	3.446209	2.446627	-0.07115
Standard error	0.224312	0.120701	0.155153	0.205447
Median	4.040277	3.514367	2.504033	0.08244
Standard deviation	0.549449	0.295656	0.380047	0.50324
Kurtosis	-0.05232	1.136631	0.737601	1.17152
Skevness	-1.04274	1.20283	0.85018	0.203988
Interval	1.447852	0.785049	1.077698	1.335001
Minimum	2.939162	2.928524	1.811562	0.69315
Maximum	4.387014	3.713572	2.88926	0.641854

Sum	23.05197	20.67725	14.67976	-0.42689
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The average value (mean), median, maximum and minimum values of each factor can be seen from the table data. Other than that, the standard deviation of each factor (std. dev. (Standard Deviation) - the coefficient of standard deviation shows how much each variable deviates from the average value) is presented.

Skevness is a coefficient of asymmetry, and if it is equal to zero, it means that the distribution is normal and the distribution is symmetrical. If this coefficient is significantly different from 0, then the distribution is asymmetric (that is, not symmetrical). If the coefficient of asymmetry is greater than 0, that is, positive, then the normal distribution graph for the studied factor is shifted to the right. If it is less than 0, that is, it is negative, then the normal distribution graph for the studied factor is shifted to the left. It can be seen that the asymmetry coefficients of all factors for the processes we are studying are less than zero (Table 1) and the function graphs are shifted to the left (Figure 1). These shifts mainly indicate changes in the dynamics of the studied factors. In some years, some factors had a sharp increase, while others did not change significantly.

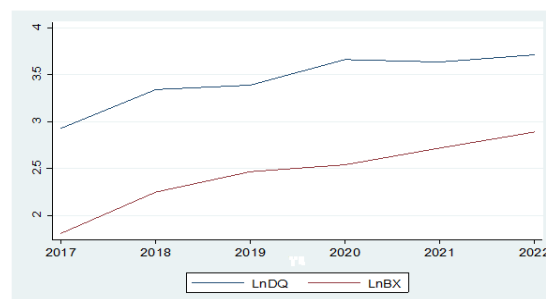


Figure 1. 2017-2022 during state debt with budget expenses graphic analysis

As can be seen in the graph, the budget expenditure is increasing in relation to the public debt, and the increase in the public debt has decreased after 2020.

Table 2
Correlation matrix between factors

```
. pwcorr LnYaIM LnDQ LnBX LnTQXK

          |  LnYaIM   LnDQ   LnBX   LnTQXK
-----+-----
LnYaIM |  1.0000
LnDQ   |  0.6950   1.0000
LnBX   |  0.7774   0.4597   1.0000
LnTQXK |  0.8581   0.3947   0.4492   1.0000
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Two types of correlation coefficients can be determined from the data in Table 2: individual and pairwise correlation coefficients.

Specific correlation coefficients reflect the individual correlation of the resulting factor (LnGDP) with each influencing factor. Pairwise correlation coefficients reflect relationships between influencing factors.

It can be seen that the relationship between GDP (LnGDP) and Public Debt (LnDQ) is 0.6950. This shows that these indicators are high. Also, there is an above-average relationship between GDP (LnGDP) and budget expenditures (BDP) relative to GDP, that is, the private correlation coefficient between them is equal to 0.7774. Gross Domestic Product (LnGDP) and there is an above-average relationship between external debt service (DFS). The private correlation coefficient between these factors is equal to 0.8581.

The values of the pairwise correlation coefficients in the correlation matrix show that there is no multicollinearity between the studied influencing factors. That is, the values of pairwise correlation coefficients between influencing factors are less than 0.6. This is the basis for including all factors in a multifactor econometric model. Calculated values based on here are an analytical view of the multifactor econometric model:

$$LnYIM = 6,267 - 0.762LnDQ + 0.119LnBX + 1.252LnTQXX$$

The calculated multifactor econometric model shows that the increase in the size of the public debt (DQ) has a negative effect on the growth of the Gross Domestic Product (LnGDP). An average increase of one percent of budget expenditures (BSE) and external debt service (DFS) relative to GDP leads to an increase of the Gross Domestic Product (LnGDP) by 0.119 and 1.252 percent, respectively.

Now, in our research, we will analyze how the increase in the share of public debt in the country's GDP and the change in the share of its service costs in the state budget expenditures affect the level of economic security of the country. In the world experience, the percentage share of public debt servicing costs in the state budget revenues is expressed in coefficient indicators from 1 to 10. This amount represents a change from 1 to 10, a change in the share of public debt service expenses in the state budget revenues, a threat to the level of economic security of the country, i.e. if there is a coefficient of 1 it is equal to a 10% threat level, if there is a coefficient of 10 it is equal to a 100% threat level. For example, in 2021 in the Russian Federation, this indicator was equal to 10.5 coefficients[13]. So, in 2021, the growth of the state debt in the Russian Federation and the change in the share of its service costs in the state budget revenues indicate that the level of threat to the economic security of the country is equal to 105%.

Based on the data of the "Open budget" portal of the Republic of Uzbekistan, we calculated the data on the public debt in % of GDP in the Republic of Uzbekistan in 2017-2022, the public debt service costs (billion soums) and the share of public debt service costs in the state budget revenues (see Table 3 see).

Table 3
Analysis of the risk impact of changes in the ratio of public debt to GDP on the country's economic security [14]

No	GDP (billion soums)	State debt (billion soums)	Public debt to GDP in %	Public debt servicing costs (billion soums)	Share of public debt servicing costs in state budget revenues	To the economic security of the state level of apprehension
2017	317476.4	59368,1	18.7	3129.9	6.3	63%
2018	426641.0	120739.4	28.3	5220.5	6.6	66%
2019	532712.5	158215.6	29.7	7739.4	6.9	69%
2020	605514.9	236150.8	39.0	9438.6	7.1	71%
2021	738425.2	280601,6	38.0	12515.7	7.6	76%
2022	888341.7	364220,1	41.0	15947.2	7.9	79%

From the data of the table, it can be seen that in the Republic of Uzbekistan, the cost of servicing the state debt in 2017 was 3129.9 billion. from soums, 15947.2 billion by 2022. increased to soums, and as a result, the share of public debt service expenses in state budget revenues changed from 6.3 to 7.9, respectively. This shows that the level of threat to the economic security of the state has increased from 63% to 79% today.

CONCLUSIONS

Based on the econometric analysis, we made the following conclusions:

- GDP (LnGDP) and Public Debt (LnDQ) is 0.6950. This shows that these indicators are high among;
- As the growth of the public debt (DQ) has a negative impact on the growth of the Gross Domestic Product (LnGDP). An average increase of one percent of budget revenues (BD) and external debt service (DFS) relative to GDP leads to an increase of the

Gross Domestic Product (lnGDP) by 0.119 and 1.252 percent, respectively;

- In the Republic of Uzbekistan, the share of public debt service costs in the state budget revenues will increase from 6.3 in 2017 to 2022 increased to 7.9. This shows that the level of threat of the state debt to the economic security of the State has increased from 63% to 79%.

- The increase in the level of public debt threat to the economic security of the state from 63% to 79% means that the Republic and local state executive authorities in Uzbekistan should develop appropriate measures to reduce its growth.

In conclusion, in the context of the globalization of the world economy, in order to ensure the economic growth of the state and optimize the state debt, the following is proposed:

- in order to prevent economic crises occurring in the world economy, pandemics and economic crises arising as a result of military operations, attracting foreign loans at reduced preferential rates as a means of reducing the state budget deficit;

- to increase the transparency of budget revenues and ensure the efficiency of expenditures, reduce the external debt of the state, increase tax revenues by reducing the scale of the hidden economy, and improve tax administration;

- Increasing the weight of sovereign international bonds of the Republic of Uzbekistan, especially national currency sovereign international bonds, in international financial markets;

- Development of a methodology for determining the safe level of public debt relative to GDP (60 percent) and determining its optimal amount.

Summing up from the above, borrowing should be aimed at improving the socio-economic situation of the country, ensuring economic growth, reducing the budget deficit, improving infrastructure facilities, providing social support to the population, and creating a favorable investment climate for entrepreneurship. It will be necessary to develop mechanisms to control borrowing and its targeted spending without exceeding the established economic standards. Because the debt burden should not hinder the development of the future generation and serve development.

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