



Assessment of the Impact of Budgetary Policy on Macroeconomic Indicators in the Country's Financial Security

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Abstract

This article explores the theoretical and methodological foundations of financial security in the context of national macroeconomic development. The research highlights the growing importance of financial security as a key component of sustainable economic stability, especially under the influence of global financial volatility, fiscal imbalances, and geopolitical uncertainties. The article systematizes and classifies scientific views and approaches regarding the essence, structure, and strategic goals of financial security, drawing from both domestic and international academic literature.

Special attention is paid to analyzing the multidimensional nature of financial security, including its fiscal, monetary, banking, and investment components. The authors examine the opinions of leading economists and experts from different countries, identifying similarities and differences in their interpretation of threats and protection mechanisms related to national financial systems. Moreover, the study identifies critical macroeconomic indicators such as inflation rate, budget deficit, debt sustainability, foreign exchange reserves, and capital adequacy that directly affect a country's financial security level.

Based on the analysis, a conceptual model and implementation mechanism are proposed to ensure financial security at the macroeconomic level. This includes policy recommendations aimed at strengthening fiscal discipline, increasing the efficiency of budget expenditures, diversifying public revenue sources, and creating effective institutions for monitoring and mitigating financial risks. The proposed framework may serve as a basis for developing national strategies to safeguard financial sovereignty and long-term economic resilience.

Keywords: financial security, financial stability, fiscal policy, tax policy, budget policy, financial indicators.

INTRODUCTION

When implementing reforms aimed at addressing challenges related to financial security, it is essential to systematically identify and analyze the key factors influencing it. Among these, budgetary policy—recognized as a structural component of broader monetary policy—plays a particularly significant role. In essence, budgetary policy can be regarded as an alternative channel of money inflow into the national economy, independent of the direct regulatory authority of the central monetary institution. This distinction highlights the importance of assessing the influence of fiscal measures on monetary indicators, especially in scenarios where the monetary authority lacks full control over economic dynamics.

It is important to note that government budget expenditures can significantly affect the overall money supply in the economy. An increase in public spending, for instance, often results in greater liquidity in the system, thereby exerting upward pressure on monetary aggregates. Consequently, this creates conditions for potential misalignment with the objectives of monetary policy, particularly in relation to inflation targeting and exchange rate stability.

Given this interdependence, it becomes essential to identify and evaluate the impact of fiscal policy on macroeconomic indicators such as gross domestic product (GDP), inflation rate, exchange rate, and public debt. Empirical and theoretical research in this area can provide valuable insights into how fiscal interventions shape the monetary landscape, and contribute meaningfully to the design of integrated strategies aimed at strengthening the country's financial security. We

argue that scientifically grounded conclusions derived from such analyses will serve as an important contribution to ensuring macroeconomic stability and resilience.

LITERATURE REVIEW

In our opinion, budget policy is one of the main elements that has a significant impact on macroeconomic balance and is one of the main elements in the formation of aggregate demand of the population. In ensuring financial security, the trends in budget expenditure change are of great importance. In this case, an increase or decrease in each state expenditure leads to a change in national income in the economy. As a result, changes occur in the country's financial security indicators. We think so. Therefore, we believe that ensuring the stability of budget expenditure changes in many respects leads to ensuring financial security.

A study by G. Kuta et al. aimed to assess the impact of government spending on GDP growth [1]. They used statistical data from 25 European Union countries for the period 1996-2017. They found that social protection spending had a negative and statistically significant impact on GDP growth. General government spending had a negative impact, while spending on education and health had a positive impact.

J. Zhang's study aimed to determine the impact of government budget expenditures on GDP [2]. He selected China's GDP and fiscal expenditures for 1998-2019. According to his conclusions, there is a high correlation between government budget expenditures and GDP, and the positive relationship between them ensures joint growth. In general, it is noted that their relationship ensures economic growth.

Prof. U.Normurzayev in his scientific article highlights the specific aspects of the use of tax incentives in regulating the economy [3]. He pays attention to justifying the fact that the widespread use of tax incentives is not always effective. At the same time, he emphasizes that the priority of using tax policy in stimulating the creation of new jobs in rural areas through the use of modern technologies is distinguished by the fact that it serves the social protection of the population.

F. Zayniyev focuses on substantiating his scientific views on the possibilities of regulating income inequality through fiscal policy [4]. In his opinion, tax policy is used primarily to reduce income inequality. It is noted that income tax and social insurance contributions play a key role in income redistribution. He also notes that the decrease in the Gini index before and after income tax is paid indicates that the redistributive "power" of fiscal policy is positive.

ANALYSIS RESULTS

We will attempt to estimate the impact of budget expenditures on GDP using the VECM (Vector Error Correction Model). To do this, we will first examine the descriptive statistics of our selected indicators in Table 1 below.

The trends we are considering may also replicate the findings of the above studies or may lead to other cases. We will try to find out the results of this during our research.

Table 1. Descriptive statistics of budget policy and some financial indicators for 2016-2024

Indicator name	Mean	Std. err.	[95% confidence.	interval]
Social costs	20313.4	1935.215	16384.7	24242.1
Expenditures on social sphere and social support of the population	18188.79	1691.108	14755.65	21621.92
Transfers to the Pension Fund	1695.036	294.0186	1098.147	2291.926
housing costs	426.8	58.84418	307.34	546.26
Economic costs	5273.461	630,524	3993.429	6553.493
Centralized investment	4232.869	599.5563	3015.705	5450.033
Costs of maintaining government agencies	1927.906	227.1727	1466.72	2389.091
Costs of maintaining judicial bodies	162.2861	23.95738	113.65	210.9222
reserve funds	294.8056	34.97722	223,798	365.8131
NGO expenses	53.47222	16.95662	19.04845	87.89599
Public debt costs	873.0639	214.1232	438.3706	1307.757
Other expenses	6957.944	647.7557	5642.93	8272.958
GDP	189538.8	16885.15	155260.1	223817.4
Average quarterly inflation	12.16944	.503004	11.14829	13.1906
Exchange rate	9172.475	509.7422	8137.643	10207.31

We first perform their cointegration test, that is, the Johansen Trace Test, and set the number of lags equal to one. As a result, we obtain the test results shown in Table 2 below. In this case, the number of observers is 35 and the number of

lags is one. It should be noted that in this model, the number of ranks is 97.7653 and the cointegration is also higher than 1, and it is possible to construct a VECM model based on it.

Table 2. Cointegration test results of the indicators selected for the model

Maximum rank	Params	L.L.	Eigenvalue	Trace statistics	Critical value 5%
0	13	-3377.4553	.	726.5205*	.
1	38	-3289.407	0.99347	550.4241	.
2	61	-3234.3079	0.95708	440.2259	277.71
3	82	-3180.8283	0.95292	333.2666	233.13
4	101	-3143.8519	0.87912	259.3137	192.89
5	118	-3110.5064	0.85124	192.6229	156.00
6	133	-3085.0106	0.76704	141.6313	124.24
7	146	-3063.0777	0.71444	97.7653	94.15
8	157	-3047.8888	0.58018	67.3876	68.52
9	166	-3036.3119	0.48394	44.2338	47.21
10	173	-3025.9978	0.44533	23.6056	29.68
11	178	-3018.049	0.36506	7.7080	15.41
12	181	-3014.6552	0.17629	0.9203	3.76
13	182	-3014.195	0.02595		

*-selected rank

Accordingly, we can see the model's output in the results presented in Table 3. It allows us to assess the impact of budget expenditures on GDP changes in the long and short run. It should be noted that the impact of budget expenditures in the short and long run is different, and some of them have no effect.

Table 3. The impact of budget expenditures on GDP VECM model

Sample:	2016q2-2024q4	Number of observations	=	35			
Log likelihood	= -3063.078	AIC	=	183.3759	SBIC	=	189.8639
Det(Sigma_ml)	= 9.86e+59	HQIC	=	185.6155			

Equation	Parmesan	RMSE	R-square	chi2	P>chi2
D_YAIM	8	25153.9	0.6751	49.87791	0.0000
D_Social costs	8	2370.81	0.7304	65.03095	0.0000
D_Expenditures on social sphere and social support of the population	8	2126.2	0.7791	84.66685	0.0000
D_Transfers to the Pension Fund	8	751.55	0.5495	29.27373	0.0003
D_housing costs	8	291,569	0.1238	3.391906	0.9074
D_Economic costs	8	1648.57	0.4507	19.68902	0.0116
D_Centralized investment	8	1587.26	0.7610	76.40973	0.0000
D_Costs of maintaining government bodies	8	277,222	0.7120	59.33094	0.0000
D_Costs of maintaining judicial bodies	8	26.2757	0.4811	22.24991	0.0045
D_reserve funds	8	132,802	0.6399	42.65255	0.0000
D_NGO expenses	8	33.4038	0.7331	65.92038	0.0000
D_Public debt expenses	8	476,226	0.7384	67.72945	0.0000
D_Other expenses	8	815,293	0.7360	66.9075	0.0000

Overall, we can draw the following conclusions regarding the impact on GDP in the long run:

First, it can be seen that the costs of maintaining judicial bodies, reserve funds of the Government of Uzbekistan and regional khokimiyats, and NGO expenses are having a reducing effect on GDP.

It should be noted that public debt spending creates conditions for GDP growth in the long term.

Secondly, we can see indicators that cause GDP to change in the short term.

This shows that the costs of maintaining state bodies, the costs of maintaining judicial bodies, and other costs have a positive impact on GDP growth. It can also be seen that social costs, NGO costs, and public debt service costs lead to a short-term decrease in GDP.

In our opinion, it should be noted that the only indicator that affects GDP growth in the long term is public debt service. It should be noted that this is due to the fact that the implementation of these expenses in the current period will lead to a decrease in the tax burden in the future. On the other hand, it should be noted that in the short term, administrative and government expenses create the basis for GDP growth in the short term.

It should also be noted that there are types of expenditures that do not have an impact on GDP. In particular, in the long run, it should be noted that social expenditures, expenditures on social sphere and population support, transfers to the pension fund, expenditures on providing housing for the population, expenditures on the economy, centralized investment, and other expenditures do not have an impact.

In our opinion, the fact that budget expenditures for social expenditures, investment programs in the economy and centralization do not have a long-term impact on GDP may indicate some complexity. It should be noted that the fact that these expenditures should have a long-term impact can also be attributed to some hypotheses known from economic theory. In our opinion, the lack of impact of these expenditures on the country's financial security makes it necessary to increase their effectiveness.

It is also necessary to add that the costs of providing housing to the population, the costs of the economy, financing centralized investment programs and other costs do not have an impact in the short term. This means that budget expenditures do not play a significant role in the change in GDP. Therefore, it is advisable to implement changes that increase the likelihood of its positive impact.

It should be noted that budget expenditures have their own impact on GDP growth. Despite this, in our country, in recent years, it can be seen that some budget expenditures do not reflect their positive characteristics. From this perspective, there is a need to improve reforms aimed at forming aggregate demand to ensure the country's financial security.

Also, the qualitative structure of financing medical services from the state budget within the social sphere has a positive impact on GDP growth. However, the absence of an impact on GDP of total social sphere expenditures is directly related to the effectiveness of medical services and the improvement of the medical culture of the population. In particular, in 2024, the largest share of the volume of purchases of medicines in the population's consumption structure was occupied by the population. At the same time, in the report on fiscal receipts in 2024, 19.7 trillion soums were spent on medicines as the most purchased goods by Uzbeks [5]. This also indicates that the effectiveness of state budget healthcare expenditures is not high.

Continuing our research, we will try to assess the impact of state budget expenditures on exchange rate fluctuations. In doing so, we will focus on using methods to assess the impact on inflation.

Continuing our research, we will try to determine the impact of government spending on the exchange rate. In this, we will conduct analyses based on the methods of our research conducted above. In this, we will consider the case of cointegration based on the VECM model.

Also, in Table 4, some of the budget expenditures are presented, and the impact of selected expenditures on the formation of the exchange rate is presented for the long and short term. In general, it can be observed that there is no significant impact on the exchange rate. This may indicate that the importance of monetary factors in influencing the exchange rate with budgetary policy is not high.

Table 4. Estimation of the impact of government spending on inflation based on the VECM model

Sample:	2016q3-2024q4	Number of observations	=	34
		AIC	=	84.71357
Log likelihood	= -1386.131	HQIC	=	85.5403
Det(Sigma_ml)	= 1.77e+29	SBIC	=	87.13779

Equation	Parmesan	RMSE	R-square	chi2	P>chi2
D_exchange rate	10	748,868	0.3071	10.63762	0.3864
D_Social~r	10	1850.1	0.8537	140.0136	0.0000

D_Economics	10	1587.88	0.5465	28.91638	0.0013
D_Government Loan	10	559,097	0.6794	50.87094	0.0000
D_Other expenses~r	10	901,433	0.7131	59.64919	0.0000

According to the analysis presented in Table 4, in the short run, social spending has no statistical effect, the impact of economic spending is very small, public debt service spending has a small effect on the exchange rate, but it is not statistically significant. It can also be observed that other spending does not have an effect either.

It should also be noted that in the long run, budget expenditures have a small impact on the exchange rate. We can see that other expenditures can depreciate the exchange rate. We can note that the impact of social and economic expenditures is absent. It should be noted that only public debt servicing expenditures have the property of depreciating the exchange rate.

DISCUSSION

The interaction between budgetary policy and macroeconomic indicators represents a critical axis in the broader context of a nation's financial security. The findings of this study reaffirm the hypothesis that fiscal operations—especially government expenditures and revenue generation strategies—significantly influence key economic metrics such as GDP growth, inflation, exchange rate dynamics, and the general stability of the monetary system.

In particular, the analysis confirms that expansive fiscal policy, while potentially beneficial for stimulating aggregate demand and supporting social or infrastructural development, also increases the money supply. In economies where monetary policy autonomy is limited or where coordination between fiscal and monetary authorities is weak, such increases may result in inflationary pressure and currency depreciation. These outcomes, in turn, can undermine the objectives of macroeconomic stability and lead to broader vulnerabilities in financial security.

The study also underscores the dual role of budgetary policy—as both a catalyst for economic activity and a latent risk factor when applied without proper fiscal discipline. For example, excessive reliance on deficit financing, without adequate alignment with monetary capacity or market absorption ability, may lead to unsustainable debt accumulation and erosion of investor confidence. This necessitates the implementation of medium-term expenditure frameworks, improved budget forecasting models, and risk-sensitive budget planning.

Furthermore, the correlation between fiscal imbalances and inflation supports existing literature emphasizing the importance of coordinated policy frameworks. Countries that manage to align fiscal injections with monetary policy targets are generally more successful in maintaining macroeconomic equilibrium and resisting external shocks.

Finally, the discussion points to the need for continuous empirical monitoring of fiscal impacts on macroeconomic variables. Developing countries, such as Uzbekistan, stand to benefit significantly from building analytical capacities within government institutions to better evaluate the feedback loops between budget policy and financial security. Such efforts are essential not only for achieving short-term economic goals but also for fostering sustainable long-term development.

CONCLUSION

In our assessment, the impact of social budget expenditures particularly in the areas of education and human capital development manifests more significantly over the long term. As the population's level of education improves, labor productivity tends to increase, leading to enhanced capacity for generating added value within the economy. This, in turn, contributes to qualitative structural changes in gross domestic product (GDP), particularly through the creation of knowledge-intensive and innovation-driven sectors.

We contend that increased government spending on education, especially higher education, should be viewed as a long-term investment that will eventually yield measurable returns in the form of higher-value economic output. Accordingly, future research should focus more deeply on the qualitative assessment of such expenditures and their delayed but profound effects on macroeconomic development.

Additionally, based on the findings of this study, we argue that the influence of budgetary expenditures on the exchange rate appears to be limited. This is largely due to the nature of government and household spending, which predominantly involves domestic consumption rather than direct foreign currency transactions. As such, fluctuations in the exchange rate are more strongly tied to external trade dynamics and monetary policy actions than to fiscal spending patterns.

In conclusion, while fiscal policy remains a powerful tool for influencing macroeconomic performance and ensuring financial security, its impacts vary in scope and timing across different indicators. Strategic, well-targeted budget allocations particularly in the social sectors can play a critical role in achieving sustainable economic growth and resilience.

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