



IMPROVEMENT OF THE STATE BUDGET REVENUE FORECASTING SYSTEM

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ABSTRACT

The article highlights the issues of considering and improving state budget projects in developed and developing countries, forecasting state budget revenues, developing scientific proposals and practical recommendations. It is substantiated that the international practice of forecasting state budget revenues is considered as an important tool for effective implementation of fiscal policy and financial stability. The article highlights the mechanism of rational and effective use of state budget funds in the context of instability in the world market, as well as in the context of many tax reforms.

KEYWORDS: *revenue forecasting, state budget, inter-budgetary relations, tax, tax policy, tax system, macroeconomic policy, tax revenues, value added tax, property tax, income policy, tax and customs reforms, public finance, revenue bases, public administration, legal entities, individuals, mandatory payments, tax rates, local budget, local budget planning, local taxes.*

INTRODUCTION

Socio-economic reforms in the Republic in the context of globalization, strengthening the position of the Republic of Uzbekistan in the world market make ensuring macroeconomic stability as one of the urgent tasks. To achieve this goal, it is required that state budget revenues are stable and do not decrease sharply as a result of various external factors. Improving the system of forecasting state budget revenues will play an important role in ensuring this task. Therefore, the issue of increasing the efficiency of the system of forecasting state budget revenues in order to rationally carry out tax and customs reforms, price and tariff policy in the country is becoming increasingly important. Therefore, the state budget requires regular research to improve the system of revenue forecasting.

In the context of instability in the world market, as well as in the context of many tax reforms, scientific research is being conducted aimed at the rational and efficient use of state budget funds, and therefore the effective development of fiscal policy. In particular, scientific work is underway to forecast state budget revenues using micro-simulation, econometric models and macroeconomic indicators. This is due to the fact that the globalization of the world economy, the deterioration of relations between countries, the assessment of changes in the

revenue base of the state budget requires the consideration of many factors.

MAIN PART

In developed and developing countries, a serious approach to this issue is required, as the forecast of state budget revenues has been the subject of debate between various parties during the consideration of the draft state budget. In international practice, the system of forecasting state budget revenues is an important tool in the effective conduct of fiscal policy and ensuring financial stability. "Errors in the forecasting of state budget revenues can lead to financial instability and major financial problems." [1]

According to industry experts like V.I. Boresovich and G.A. Kandaurova "Forecasting of state budget revenues is based on scientific calculations and assumptions that determine the future amount, sources and timing of receipts in the budget" [2].

Well-known economist N.G. Based on the general view of the economic model prepared by Menkyu [3], it is possible to observe the general view of the budget revenue forecasting model through Figure 1 developed by the author.

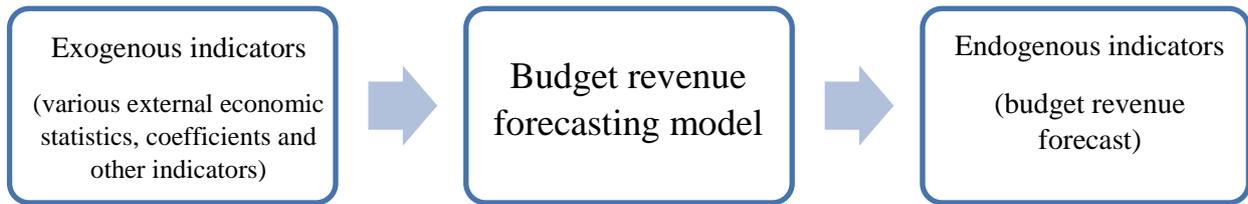


Figure 1. An overview of the process of forecasting budget revenues

As shown in Figure 1, budget revenue planning using exogenous indicators; calculation of endogenous indicators based on the previously observed or economic-mathematical relationship between the data obtained and budget revenues.

According to the theory of D. Keynes, one of the leading economists of the twentieth century, the forecast of government revenues in the economy affects GDP according to the following formula:

$$\Delta Y = (-MPC / (1 - MPC)) \times \Delta T \quad (1)$$

Here,

ΔY - gross domestic product growth;

MPC is a limited propensity to consume
 ΔT - change in state budget revenues.

Because of this relationship, it is possible to assess the forecast of the impact on government GDP growth by forecasting government revenues.

According to Lienert and Sarraf, "the lack of development of rules and procedures leads to a high forecast of budget revenues". [4] Also, according to Stephen Dunninger, "the lack of effective methods of budget planning in developing countries and the lack of clear rules have a negative impact on revenue projections". [1]

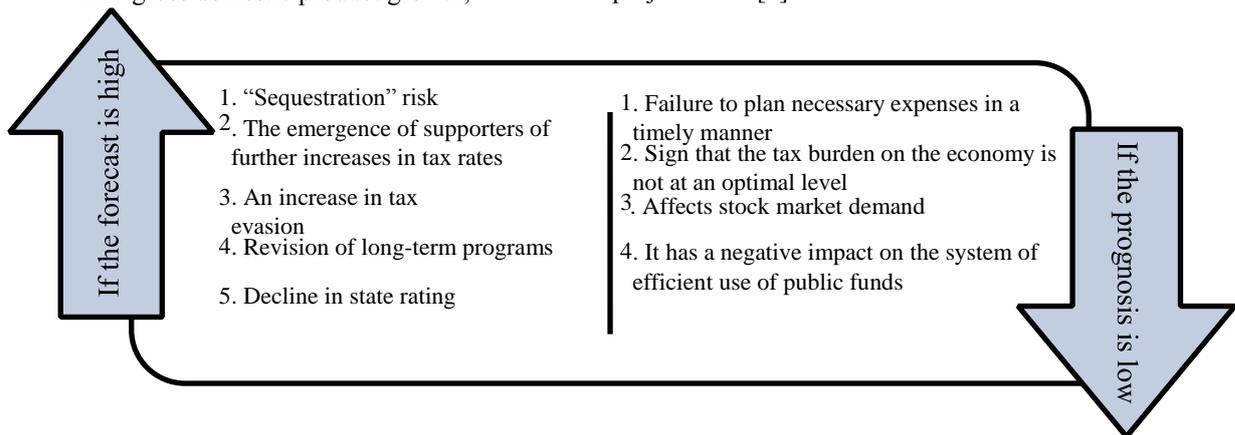


Figure 2. Consequences of errors in forecasting state budget revenues

All of the consequences shown can come at a certain cost to the economy (see Figure 2).

Specialists of the International Monetary Fund Golosov M. and King J. "Higher forecasting of budget revenues in Canada in the 1990s led to a radical overhaul of the budget process, an optimistic approach to forecasting in the UK led to insufficient value-added tax revenues, and a pessimistic forecasting system in Ireland resulted in the entire

forecasting system in 2000. was the basis for radical reform". [5]

In international practice, state budget revenues are forecasted by extrapolation, normative or "expert assessment" method, multifactor regression models, periodic series, balanced methods.

The current mechanism for generating the data needed to forecast state budget revenues is shown in Figure 3.

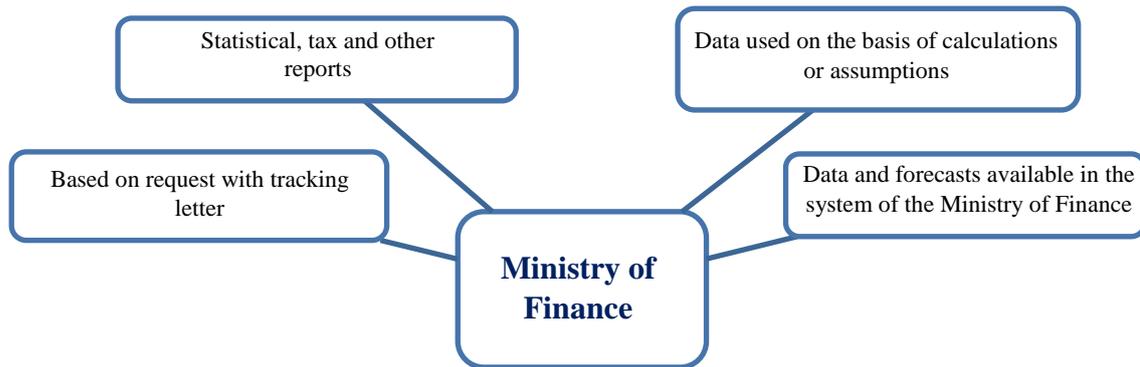


Figure 3. Data generation channels for forecasting state budget revenues

In practice, there are the following problems in the formation of exogenous data for forecasting state budget revenues:

1. There is no stable system for collecting, modifying and using data;
2. It takes 5-16 working days to form the information and calculations necessary for forecasting state budget revenues;
3. Most importantly, because the forecast is set for the data providers, they will not be interested in providing accurate information.

There is a practice of making “pessimistic” proposals to reduce the forecast of state budget revenues, while information providers try to downplay the database at their disposal. For example, in 2017, 37.7 trillion soums were actually collected, while at the beginning of the year it was possible to raise 30.7 trillion soums. In 2018, 54.2 trillion soums of revenue was collected, compared to 39.9 trillion soums at the beginning of the year (see Table 1).

Table 1.

The average ratio of actual revenues to the state budget to the proposals submitted by the State Tax Committee and the State Customs Committee to set the forecast for this period

	2014	2015	2016	2017	2018
According to the State Tax Committee	118,0	121,0	116,0	123,0	136,0
According to the State Customs Committee	113,0	109,0	114,0	115,0	141,0

The fulfillment of the forecast of state budget revenues in Uzbekistan for the last ten years has been as follows.

Table 2.

Fulfillment of the forecast of state budget revenues in Uzbekistan (forecast fulfillment)

2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
104,0%	103,7%	105,5%	103,3%	104,5%	105,2%	100,9%	101,3%	111,7%	127%

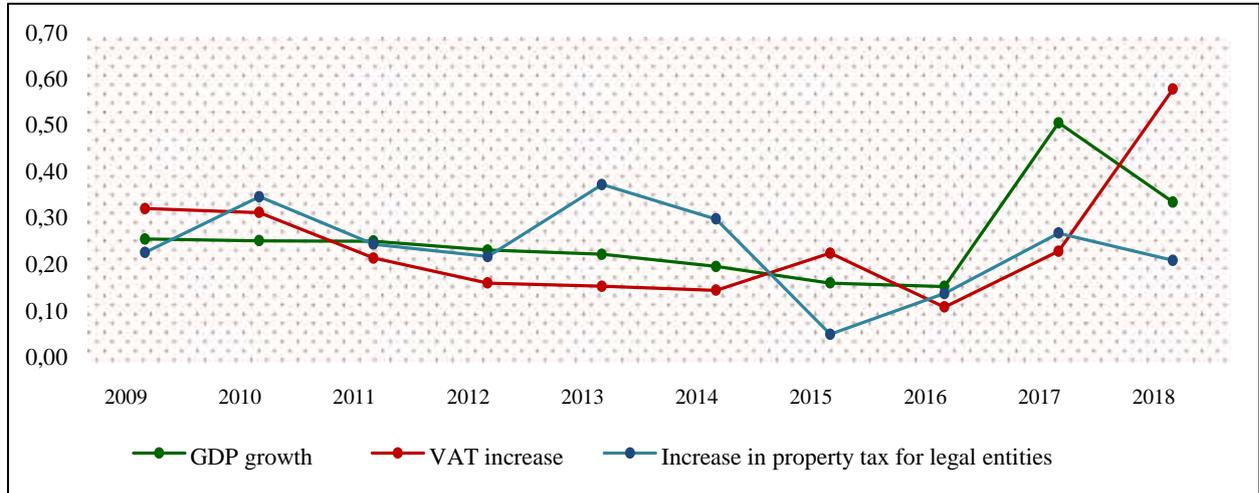
In 2009-2016, the difference between actual revenues and the forecast averaged 3.55%. In this case, the use of the traditional prediction model - a simple extrapolation method did not give large errors. In 2017 and 2018, the set parameters were performed at high rates (11.7% and 27%, respectively). The main reason for this is the liberalization of the

foreign exchange market from September 2017. The fact that the current methodologies for forecasting state budget revenues are inconsistent today can be seen through the following dynamics between the growth of gross domestic product, which is the main base of tax revenues, and some taxes: value added tax and corporate income tax.

The relationship between GDP growth and value added tax and property tax increases for legal entities is not significantly strong, i.e., even the simplest regression relationship may not produce a

qualitative result (see Figure 4). In particular, the correlation coefficient between GDP growth and value added tax growth is 0.39, and with corporate income tax revenues is 0.29.

Figure 4. Dynamics of GDP growth and growth of some taxes



Nevertheless, a regression model has been constructed that allows for the prediction of value-

added tax revenues for 2009-2018 using GDP growth.

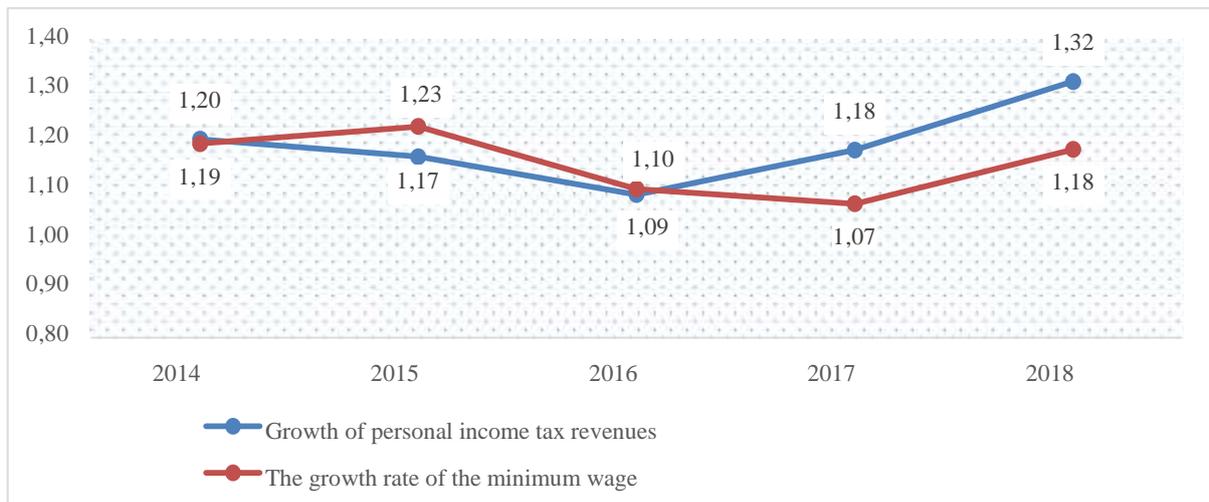


Figure 5. Dynamics of personal income tax revenues and minimum wage growth rates

An empirical analysis of the dynamics of the relationship between the tax base and the key indicator that led to its growth showed the advantages of forecasting using regression models. It can be seen that from year to year, tax revenues are accelerating at the rate of minimum wage growth. This suggests that the use of the extrapolation method in later years may give errors in forecasts. A regression model

(periodic series) was constructed based on the correlation between the size of the payroll fund for 2017-2018 and the previous months during the 1st half of 2019.

When recalculating the state budget for 2019 using the existing and proposed models, it was possible to forecast state budget revenues by more than 2.0 trillion soums. In particular, corporate



income tax amounted to 183 billion soums (1.2%), value added tax - 523 billion soums (1.5%), single tax - 95.0 billion soums (8.7%). The use tax was projected to increase by 426 billion soums (3.4%). It is proposed to increase the amount of the wage fund for the next year, which is the basis of personal income tax, at the expense of tax-exempt funds due to the reduction of other tax rates in business entities,

for example, the single social payment, property tax rates for legal entities.

In addition, the effects of legalizing the activities of workers in the informal sector to improve tax administration and identify additional reserves to the state budget will need to be taken into account in personal income tax forecasts.

Table 3.
State Budget Revenue Forecast for 2019

(billion soums)

Types of income	According to current models	According to the proposed models	The difference	%
STATE BUDGET REVENUES	100 610,5	102 627,5	2 017,0	102,0
1. Direct taxes	28 652,5	29 125,5	473,0	101,7
1.1 Corporate income tax	15 797,0	15 980,0	183,0	101,2
1.2 Single tax payment	1 097,1	1 192,1	95,0	108,7
1.3 Income tax from individuals	11 180,4	11 367,4	187,0	101,7
1.4 Fixed tax for entrepreneurs	578,0	586,0	8,0	101,4
2. Indirect taxes	46 173,8	47 029,8	856,0	101,9
2.1 Value Added Tax	35 470,5	35 993,5	523,0	101,5
2.2 Excise tax	8 849,5	9 017,5	168,0	101,9
2.3 Customs duties	1 853,8	2 018,8	165,0	108,9
3. Resource fees and property tax	16 268,9	16 905,9	637,0	103,9
3.1 Property tax	1 721,0	1 851,0	130,0	107,6
3.2 Land tax	1 766,3	1 834,3	68,0	103,8
3.3 Subsoil use tax	12 526,1	12 952,1	426,0	103,4
3.4 Tax on the use of water resources	255,5	268,5	13,0	105,1
4. Additional income tax	125,0	130,0	5,0	104,0
5. Other income and tax-free income	9 390,3	9 436,3	46,0	100,5

At the beginning of 2019, a number of value-added tax exemptions in the country, including imported wood, hydrocarbons, agricultural products produced in the country, in particular cotton and grain, will not be subject to this tax. This situation, on the one hand, leads to incomplete use of the state budget revenue base, on the other hand, makes it difficult to predict as a result of the rupture of the "value added tax chain". Based on the analysis, the study proposes to restore the "value-added tax chain" by reducing the value-added tax rate from 20 percent to 15 percent and abolishing existing benefits. This allows the tax burden on the economy to be

maintained at a certain level, i.e., redistributed across the 'value chain' and accurately forecasted revenues.

According to the current procedure, the property tax and land tax levied on individuals are projected based on the actual revenues of the previous year and the expected revenues of the current year. This situation, on the one hand, does not allow to fully cover the objects of taxation, and on the other hand, instead of encouraging the region that generated additional income this year, the forecast for next year may be increased again and "punished". To overcome this situation, it is proposed to forecast



revenues from these taxes by setting the minimum values of the tax amount for each object.

A correlation analysis of tax-free receipts with respect to the base amount (since many rates are set in multiples of the base amount) was conducted.

No strong correlation was observed between base rate growth and tax-free revenues. For example, the correlation coefficient for the state duty is 0.70, for fines - (-0.24), i.e. it is not advisable to continue using the extrapolation method for non-tax revenues (see Table 4).

Table 4.
Analysis of the correlation between tax-free payments and minimum wage growth rates (growth rates compared to last year)

	2014	2015	2016	2017	2018	The correlation coefficient with respect to the growth rates of the base quantity
Base rate growth rates	1,19	1,23	1,10	1,07	1,18	x
State duty	1,17	1,41	0,88	1,15	1,18	0,70
Fines	1,26	0,99	1,24	1,05	0,85	-0,24
Fees from traffic safety agencies	1,02	1,16	1,10	1,38	1,32	-0,42

In the Russian Federation, each administrator has a system of providing the expected income, which is formed on an electronic platform introduced by the Ministry of Finance.

In the Republic of Korea, data for forecasting state budget revenues are formed on the basis of a special survey (covering 5,000 households). It analyzes not only data, but also proposals on fiscal policy and the attitude of households to the ongoing reforms.

Scientists from the Institute for Economic Research in Munich and the Ludwig Maximilian University, T. Butner and B. Kauders concluded that "in OESD countries, the independence of institutions that forecast state budget revenues, the development of infrastructure ensures the quality of state budget revenue forecasting" [6]. It is also proposed to set the forecast of state budget revenues in accordance with the organizational classification - by payers, in order to expand the capacity to analyze the forecast indicators of state budget revenues and effectively organize the activities of state tax authorities and local governments in the implementation of forecasts.

CONCLUSION

The following conclusions were made on improving the system of forecasting state budget revenues:

- Correct organization of the system of forecasting of state budget revenues and compliance with socio-economic reforms will have a positive impact on economic growth of the state. In history and today in many countries, errors in forecasting state budget revenues have led to fiscal problems;

- The forecast of state budget revenues affects the amount of gross domestic product by

changing the amount of planned expenditures according to the theory of the "Keynesian cross". According to economists from the International Monetary Fund, budget revenue forecasting is one of the key tools for improving tax administration in developing countries;

- In international practice, state budget revenues are forecasted by extrapolation, normative and factor regression methods. In Uzbekistan, the method of extrapolation and the normative method are used;

- The current state of the state budget revenue forecasting system in Uzbekistan does not meet the requirements of the current directions of public financial management reform and many elements need to be reconsidered;

- Due to the lack of an integrated and interrelated model of forecasting state budget revenues, the error of forecasting in the process of tax and other reforms is growing. In particular, this figure, which averaged 3.55% for many years, was 11% in 2017 and 27% in 2018 as a result of the liberalization of the foreign exchange market;

- The high rate of value added tax and the abundance of benefits lead to the break of the "value chain". This does not allow for a rational distribution of the tax burden and accurate forecasting of state budget revenues. Therefore, it is proposed to reduce the VAT rate from 20% to 15% and abolish the existing benefits. As a result, it will be possible to improve the system of forecasting state budget revenues and properly distribute the tax burden;

- In forecasting personal income tax, it is possible to increase the reliability of the forecast of state budget revenues on the basis of the addition of funds released at the disposal of taxpayers as a result



of tax reforms to the forecast of the wage fund. At the end of 2019, as a result of tax reforms, the forecast of personal income tax is expected to be fulfilled by more than 11%;

- As a result of establishing a system of forecasting property and land tax revenues from individuals based on the minimum value of tax payments for each taxable object, it will be possible to accurately assess the tax potential of the regions and the correct formation of state budget revenues;

- The task of collecting tax payments allows you to accurately forecast state budget revenues and accurately assess the expected effects of fiscal policy measures on the basis of forecasting revenues based on the number and dynamics of legal actions on the basis of data from the agencies charged. A correlation analysis between tax-free revenue receipts and base rate growth rates showed the predominance of forecasting based on data provided by collection agencies;

- In the submission of the forecast of state budget revenues to the State Tax Committee, the allocation of large payers and local payers, as well as the allocation of revenues with special emphasis on collection will ensure the quality of forecasting and additional revenues to the state budget.

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