

## SYSTEM OF STATISTICAL INDICATORS CHARACTERIZING THE STATE BUDGET

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**Abstract:** This article examines the performance indicators of state budget parameters, an important aspect of optimizing state budget expenditures, and the importance of effective planning in achieving fiscal stability and maximizing the impact of public spending.

**Keywords:** state budget indicator system, budget expenditures, expenditure structure, planning, efficiency, fiscal stability, optimization, impact of state expenditures.

### ENTRANCE

The Program Budgeting System ensures that funds spent from the state budget are linked to the strategic goals set in each country's national strategy (5-10 years).

In this regard, at the initial stage of the transition to this system, target indicators for budget expenditures of ministries and departments were determined over the next three years, based on the strategic goals set in the country's development strategy and national sustainable development goals.

Also, the establishment of parliamentary and public control over funds allocated from the state budget is of particular importance. In this regard, reports of ministries and departments on the implementation of target indicators of budget expenditures are being submitted for discussion in the chambers of the Oliy Majlis.

### RELEVANCE OF THE RESEARCH TOPIC.

In 2022, in collaboration with UNICEF Uzbekistan, the reforms implemented in the Program Budgeting System in recent years were analyzed and international experts were involved to develop future plans. Based on the results of the assessment carried out by the experts, the following key recommendations were made on the problems and their solutions:<sup>8</sup>

- development of indicators for monitoring the use of budget funds allocated based on the new method;
- As a pilot project, develop and implement budget expenditures of the Ministries of Health and Agriculture in 2025-2026 within the framework of budget programs;
- Approval of target indicators for the use of budget funds by first-level budget allocators for 2024-2026.

### ANALYSIS OF RELATED LITERATURE.

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<sup>8</sup>Budget 2024-2026/page 109.

During the writing of the article, there are scientific and educational literature by a number of economists, which contain the scientific-theoretical and practical foundations of local budget revenues and expenditures, their management. In particular, foreign economists Maria N. [ 2 ], Busch, D., Strehl, W [ 3 ], B. Gashi, G. Asllani, L. Boqolli [ 4 ], Akif Musayev, Khatai Aliyev [ 5 ] and others have widely covered this in their scientific research. Uzbek economists A.V. Vahobov, T.S. Malikov [ 6 ], N.Khaydarov [ 7 ], T. Eshnazarov [ 8 ] and others have contributed to the formation of the scientific-theoretical foundations of the state budget system.

### RESEARCH METHODOLOGY .

To achieve the research goal, the following tasks were initially identified: to collect statistical data on the parameters of the State Budget of the Republic of Uzbekistan, process them and divide them into certain groups; to present descriptive statistics based on the grouped data in tables and graphs; to calculate the efficiency indicators of the State Budget parameters and compare them with internationally recommended norms; to critically analyze the results obtained using induction and deduction methods and to develop proposals on the possibilities of planning and increasing the efficiency of state expenditures.

### ANALYSIS AND RESULTS.

Using the above-mentioned foreign experience, the following indicators were calculated for the state budget of the Republic of Uzbekistan in order to monitor the use of budget funds provided for in Recommendation 1:

**Table 1.** Parameters of the State Budget of the Republic of Uzbekistan for 2023 indicators calculated based on<sup>9</sup>

Indicator group	The importance of the group	Main indicators	Calculation algorithm	Estimated indicators for 2023	Recommended value
Budget balance indicator	0.33	Budget coverage ratio	BR/BE	0.90	
		Budget sustainability ratio	IT/BR	0.10	< 0.3
		General tax stability coefficient	TR/BE	0.72	≥ 0.2-0.5
		Cost recovery ratio between budget transfers	IT/BE	0.09	< 0.3

<sup>9</sup> Author's calculation based on data from the official website of the Ministry of Economy and Finance of the Republic of Uzbekistan ( <https://openbudget.uz/budget-system/local-budget/> ).

Financial independence indicator	0.3	Budget dependency ratio	$\frac{IT}{BR + IT}$	0.09	$\leq 0.1$
		Tax independence coefficient	$\frac{TR}{BR}$	0.80	$\geq 0.3$
		Revenue Base Stability Ratio	$\frac{(TR + NTR)}{BR}$	1	$\geq 0.6$
Budget efficiency indicator	0.27	Local budget deficit ratio	$\frac{(TR - NTR)}{BE}$	0.5	$\leq 0$
		Budget revenue sustainability indicator	$\frac{TR}{IT}$	8.0	$\geq 1$
Budget debt indicators	0.1	Debt load ratio	$\frac{DA}{OI}$	0.37	$(\leq 0.5)$
		Debt service ratio	$\frac{DSP}{BR}$	0.15	$\leq 0.1$

According to Table 1, it can be seen that the local budget deficit ratio and debt service ratio exceeded the recommended norms by 0.5 points in 2023.

The efficiency indicators of state budget expenditures may vary depending on the research objectives and the specific goals of the government. However, some common efficiency indicators that are often used in assessing state budget expenditures include:

Outcome indicators: These indicators measure the results achieved based on the costs. Examples include:

- Number of jobs created;
- GDP growth;
- Infrastructure improvements (e.g., kilometers of roads built or repaired);
- Number of students enrolled or graduated (for educational expenses);
- Number of patients treated (for healthcare costs)

Cost-effectiveness indicators: This indicator compares the costs of achieving a particular result or output. It is often measured as cost per unit of output or result achieved. For example:

- Payment for the work created;
- Fee for registered student;
- Cost of the treated patient

Program Performance Indicators: For specific programs funded by the state budget, performance can be assessed by comparing inputs and outputs. This involves comparing the resources allocated to the program (such as funds, staff, and time) with the results achieved by the program. Key indicators may include:



- Program completion rates;
- Timely provision of service;
- Achieving program goals and objectives.

Social impact indicators: Some indicators assess the broader social impact of government spending beyond direct outcomes or results. These include:

- Reducing poverty levels;
- Improve overall quality of life;
- Reducing income inequality;
- Improving environmental quality.

Transparency and accountability indicators: Efficiency can also be measured by how transparently and accountably funds are used. Indicators include:

- Compliance with budget rules and procedures;
- Timeliness and accuracy of financial reporting;
- Public access to information on budget funds and expenditures.

Long-term sustainability indicators: assessing the long-term sustainability of budget expenditures involves considering whether the benefits achieved can be sustained over time. Indicators include:

- Maintenance costs for infrastructure projects;
- The costs of stimulating long-term economic growth with investments;
- Reducing future costs (e.g., reducing healthcare costs through preventive measures);

Value for money indicator: This indicator assesses whether the benefits obtained from the expenditure justify the expenditure. It involves assessing the quality of the results achieved, whether they are worth the resources spent.

Performance indicators need to be aligned with the government's specific goals and priorities, and regularly monitored and evaluated to ensure that taxpayer funds are used effectively and responsibly.

Below is an analysis of the results obtained in a study on the development of cost-effectiveness indicators in the healthcare sector.

By the end of 2023, healthcare spending amounted to 28.4 trillion soums, or more than 10 percent of total State Budget expenditures. This shows how important it is to assess the effectiveness of healthcare spending.<sup>10</sup>

Calculating the efficiency of public health spending involves analyzing various aspects of health spending and its outcomes. Some key efficiency indicators can be calculated as follows:

- Payment for a patient treated or service provided:

Total healthcare costs - includes the sum of all healthcare-related costs, including personnel, facilities, drugs, equipment, and administrative costs.

<sup>10</sup>Budget 2024-2026/page 31.

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Number of patients treated or served: The total number of individuals who received medical care from the state budget.

Formula:

$$\text{Cost per patient} = \frac{\text{Total healthcare costs}}{\text{Number of patients treated or served}}$$

- Usage rates;

Number of healthcare services used: This includes hospitalizations, outpatient visits, emergency room visits, surgeries, diagnostic tests, and more.

Population served: The total population covered by the public health system.

Formula:

$$\text{Utilization rate} = \frac{\text{Number of health services used}}{\text{population served}} * 100\%$$

- Average length of hospital stay;

Total number of hospital beds: the sum of the days each patient spent in the hospital.

Total Hospitalizations: The number of all patients admitted to the hospital.

Formula:

$$\text{Average length of stay} = \frac{\text{Total number of hospital beds}}{\text{Total number of hospitalized patients}}$$

- Hospital readmission rates;

The number of patients readmitted to the hospital within a certain period of time after treatment.

Total number of hospital discharges: The number of all patients discharged from the hospital.

Formula:

$$\text{Readmission rate} = \frac{\text{Number of readmissions}}{\text{Total number of releases}} * 100$$

- Prophylactic indications;

Number of preventive services provided: This includes vaccinations, screenings, counseling sessions, etc.

Population eligible for preventive care: The portion of the population that should receive preventive services based on guidelines.

Formula:

$$\text{Preventive care indicator} = \frac{\text{Number of preventive services provided}}{\text{Population entitled to preventive care}} * 100$$

- Health outcomes;

In addition to the health outcomes listed above, other indicators include mortality rates, morbidity rates, disease prevalence, life expectancy, and others. These indicators need to be tracked over time to see changes in health care costs.

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In 2023, the State Budget allocated 60.4 trillion soums to the education sector, which is more than 21 percent of the total State Budget expenditures.<sup>11</sup> These figures indicate how necessary it is for the budget to assess the effectiveness of funds allocated to the education sector.

Indicators for assessing the effectiveness of funds allocated from the state budget to the education sector are calculated based on various criteria. These indicators help determine the overall effectiveness of the education system, how rationally and effectively the allocated funds are being used. Below is detailed information on how these indicators are calculated:

- Efficiency and effectiveness indicators :

a. Educational attainment: The educational attainment rate among pupils or students, i.e. the rate of progression from grade to grade or school completion during the school year. This indicator plays an important role in assessing the effectiveness of the education system.

b. Student academic performance: Student performance on state-level exams, national tests, and international assessment programs (e.g., PISA). These indicators directly measure the quality of education and demonstrate the impact of allocated resources on educational outcomes.

c. Graduation and employment rates: The employment rate of graduates in their professional fields. This indicator is used to assess the impact of education on employment.

- Quality and Equity Indicators;

a. Equity and access to education: The level of access to educational opportunities, including for girls, children in rural areas, and children from low-income families. These indicators assess the extent to which allocated resources are aimed at ensuring equity in education.

b. State of educational infrastructure: The level of infrastructure, equipment, and resources of schools and higher education institutions. These indicators help assess how effectively funds allocated for education are being used.

- Management and Innovation Indicators;

a. Teacher training and development: Results of teacher training programs and the funds allocated for them. This indicator is important in assessing the effectiveness of funds allocated to improve the quality of education.

b. Introduction of innovations in the education system: The level of introduction of new technologies and pedagogical approaches in the education sector. These indicators are used to determine how effectively the allocated funds are spent on supporting innovations.

Indicators for assessing the effectiveness of funds allocated to the education sector are broad and cover a variety of areas. While financial indicators determine the overall effectiveness of allocated funds, efficiency and quality indicators allow us to assess the

<sup>11</sup>Budget 2024-2026/page 31.



real results of the education system. Decisions made on the basis of these indicators serve to effectively manage state budget funds and further develop the education sector.

of state budget expenditures on agriculture involves analyzing various aspects of agricultural expenditures and their results. Here are some key efficiency indicators and how to calculate them:

- Water use efficiency:

Total water used for irrigation or agricultural purposes: the volume of water used for watering plants, watering livestock, etc.

Gross agricultural product: The total amount of crops, livestock, or other agricultural products produced.

Formula:

$$\text{Water use efficiency} = \frac{\text{Gross agricultural product}}{\text{Total water used for irrigation}}$$

- Subsidies effectiveness:

Total government subsidies to agriculture: This includes financial support, incentives, or other assistance to farmers or agricultural enterprises.

Impact on agricultural production or outcomes: Measuring changes in agricultural output, productivity, or sustainability as a result of subsidies.

Formula:

$$\text{Subsidy efficiency} = \frac{\text{Impact on agricultural production}}{\text{Total subsidies to agriculture}}$$

To calculate these indicators, we need data from a variety of sources, including agricultural production records, financial statements, labor statistics, water use data, and environmental assessment data. Ensuring the accuracy and consistency of data is essential to obtain meaningful information on the effectiveness of government spending on agriculture. In addition, these indicators need to be monitored over time to assess trends and assess the impact of policy interventions or investment strategies.

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