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Modern issues of accounting and reporting in the budget system

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Abstract

This article analyzes the modern challenges of accounting and reporting within the budget system from a scientific perspective. According to the research findings, although the digitalization and transparency of budget accounting and reporting significantly increased during the period 2019–2024, the insufficient reflection of social performance indicators in financial reports remains a key issue. Based on the analysis of international sources (IPSAS, OECD, IMF) and national practices, the study develops the “Budget Accounting and Reporting Efficiency Model” for evaluating budget reporting. The model substantiates the necessity of assessing budget information not only in terms of financial transactions but also in terms of the efficiency of public services and social benefits generated by public expenditures.

Keywords: Budget System; Accounting and Reporting; Social Performance; Financial Transparency; Digitalization; Public Oversight; Public Finance

1. Introduction

Accounting and reporting within the budget system play a crucial role in ensuring the transparency of public finances, monitoring the efficient use of budgetary funds, and evaluating the level of implementation of social programs. In the context of a market economy, the expansion of the scale of public financial resources, the increasing volume of funding directed toward social sectors, and the rapid development of digitalization processes require the modernization of the budget accounting and reporting system in accordance with contemporary requirements [1]. The proper organization of budget accounting not only ensures financial discipline but also directly influences the effectiveness of public administration and strengthens public trust in government institutions.

International standards and academic studies interpret budget accounting from various perspectives. In particular, the International Public Sector Accounting Standards (IPSAS) aim to ensure that financial reporting in the public sector is transparent, comparable, and aligned with international best practices [2]. At the same time, scientific literature emphasizes that the primary objective of public financial reporting is not limited to providing financial information, but also includes reflecting the effectiveness of social policies and the outcomes of government programs [3]. Therefore, the modernization of budget accounting represents an important theoretical and practical issue.

In Uzbekistan, the budget accounting and reporting system has also undergone significant reforms in recent years. In particular, within the framework of the public financial management reform concept, measures have been implemented to digitalize budget processes, introduce a unified treasury system, and expand the “Open Budget” portal [4]. Although the automation of budget reporting has increased the speed and accuracy of accounting processes, analytical assessments indicate that several methodological issues still remain unresolved.

Among these challenges are the misclassification of expenditures according to budget classification, inconsistent interpretation of criteria for recognizing transfers and subsidies, the absence of unified accounting policies, insufficient

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availability of analytical data for auditing purposes, and the lack of performance indicators in budget reports. These issues limit the ability of budget accounting systems to provide comprehensive information for evaluating the effectiveness of public financial management.

International analytical studies demonstrate that modern models of budget reporting should go beyond traditional financial data and incorporate results-based financing approaches [5]. In other words, maintaining budget accounting solely within the framework of a simple “revenue–expenditure” model does not meet the requirements of modern public administration. Therefore, considering these theoretical and practical challenges, the central scientific issue addressed in this article concerns identifying the theoretical and methodological model through which accounting and reporting in the modern budget system can fully reflect the transparency, efficiency, and social outcomes of public finances.

In improving the budget accounting and reporting system, the study proposes a methodological approach based on the integration of “fiscal governance - social outcomes - digital transparency”, rather than relying solely on the traditional “accounting function” model. This approach assumes that public financial information should reflect not only the amount of funds spent but also the effectiveness of social programs and the efficiency of public services delivered through budgetary expenditures.

2. Literature Review

Scientific research on accounting and reporting within the budget system generally covers three major directions: the theoretical and methodological foundations of budget accounting, the transparency and accountability of public financial information, and the issues of digitalization and results-based financing. Accordingly, these directions are analyzed and compared on the basis of international and national scientific and practical sources.

The theory of budget accounting is not limited to providing information about the inflow and expenditure of financial resources, but is also considered a tool for assessing the implementation of a state’s socio-economic policies. International Public Sector Accounting Standards (IPSAS) support this concept by prioritizing the accrual accounting method in recognizing assets, liabilities, revenues, and expenditures in the public sector [6]. According to IAS and IPSAS standards, financial reports in the public sector should reflect not only the movement of funds but also the underlying economic transactions and their financial implications [7].

The academic literature presents various perspectives regarding the purpose of budget accounting. For example, Allen, Hemming, and Potter define public financial accounting as a “strategic information system for decision-making in public management” [3]. Similarly, Robinson emphasizes the importance of budget reporting as a mechanism for evaluating the effectiveness and outcomes of government programs [5]. These approaches demonstrate that the primary objective of budget accounting is not only to record financial operations but also to reflect reality and measure the social benefits generated by public expenditures.

Transparency of budget reporting is one of the key criteria for effective public financial management. In OECD countries, various tools such as the Budget Transparency Toolkit are used to enhance the openness of public financial reporting and strengthen public oversight [7]. According to research conducted by Transparency International, transparency in budget reporting is an important factor in reducing corruption risks within public finance systems [8]. Open discussion of public finances, public access to information on government expenditures, and the inclusion of accountability indicators are considered integral components of democratic governance. At the same time, the studies of M. Goldsmith emphasize that the transparency of budget reporting should not only provide information to the public but also create opportunities to evaluate the effectiveness of public services and government programs [9].

Over the last decade, scientific research on the digitalization and automation of budget accounting systems has grown significantly. Studies conducted by scholars such as M. Cangiano, T. Curristine, and M. Lazare indicate that electronic budget platforms, automated accounting registers, blockchain technologies, and artificial intelligence tools facilitate the formation, analysis, and auditing of budgetary information [10]. Another important direction of digital transformation is the implementation of results-based financing models, which allocate financial resources based on service performance indicators and measurable outcomes.

In Uzbekistan, national scientific research related to the budget system has mainly focused on regulatory frameworks, accounting systems, and digitalization issues. In particular, Mamadjonov emphasizes the necessity of standardization in budget accounting and notes that the absence of a unified accounting policy complicates the comparability of accounting and reporting across public institutions, especially in the education and healthcare sectors [11]. The author also highlights the positive impact of digital auditing and electronic financial monitoring on improving the transparency of budget reporting. At the same time, national studies indicate that the issue of linking budget reporting to performance indicators has not yet been sufficiently developed, which represents an important research gap in the field of public financial management.

3. Research Methods

The purpose of this study is to identify modern challenges in accounting and reporting within the budget system, evaluate their impact on the efficiency of public finance management, and develop a methodological model for improving budget reporting. In accordance with the research objectives, the methodological approach combines elements of theoretical, normative, statistical, and comparative analysis.

The theoretical foundation of the study is based on the principles of public finance theory, budget accounting methodology, and results-based financing concepts. International standards and frameworks for public sector accounting and financial management, including the International Public Sector Accounting Standards (IPSAS), as well as public financial management models developed by the OECD and the International Monetary Fund (IMF), were used as key theoretical sources.

Within the framework of this research, the Budget Accounting and Reporting Efficiency Model (BAREM) was developed. This model proposes an approach in which budget reporting reflects not only financial information but also social and institutional outcomes associated with the use of public funds. The BAREM model is constructed based on five key indicators (Table 1).

Table 1 Indicators determining the effectiveness of budget accounting and reporting

Indicator	Description
I1	Financial transparency
I2	Efficiency of public expenditures
I3	Public accountability
I4	Level of digitalization
I5	Social performance

Source: Compiled by the author

The selection of these indicators was based on approaches identified in empirical academic studies and international practices in public financial management.

The study uses several sources of information, including normative legal documents from 2020–2025, data from the "Open Budget" platform, statistical information covering the period 2020–2025, and analytical reports from international organizations such as the OECD, IMF, and World Bank.

To evaluate national and international requirements, normative analysis was applied. Comparative analysis was used to assess differences between domestic and international practices of budget reporting. In addition, the evaluation of the BAREM indicators was carried out using an indexation method, while a dynamic analysis was conducted using budget data from 2020–2025 to identify trends in the development of the budget accounting and reporting system.

The BAREM index was calculated using a scale of 0–5 points for each indicator, and the overall index was determined using the following formula:

$$BAREM = \frac{I1 + I2 + I3 + I4 + I5}{5}$$

During the research process, several limiting factors were identified. These include the incomplete availability of social performance indicators in budget accounting and reporting, the lack of standardized data presentation in electronic budget platforms, and the long-term nature of fully implementing international reporting formats. However, these limitations do not reduce the reliability of the research results or the practical significance of the study. On the contrary, they highlight the key areas where reforms and improvements are necessary in order to enhance the effectiveness of the budget accounting and reporting system.

4. Analysis and Results

Within the framework of the research, the efficiency of accounting and reporting processes in the budget system of Uzbekistan for the period 2020–2025 was comprehensively evaluated based on the Budget Accounting and Reporting Efficiency Model (BAREM) developed in this study. The assessment covered five key indicators, including financial transparency, efficiency of public expenditures, public oversight, level of digitalization, and social performance of public finance reporting.

According to the research results, by 2025 a significant improvement was observed in the digitalization of budget accounting and reporting as well as in the public accessibility of financial information. However, despite these positive developments, the insufficient reflection of social performance indicators in budget reports remains one of the major methodological and practical challenges of the current system (Table 2).

Table 2 Evaluation Results by BAREM Indicators for 2020–2025 (0–5 point scale)

Year	Financial Transparency (I1)	Expenditure Efficiency (I2)	Public Oversight (I3)	Level of Digitalization (I4)	Social Performance (I5)	Overall Index (BAREM)
2020	2.4	2.1	2.0	2.3	1.8	2.12
2021	2.6	2.4	2.1	2.8	1.9	2.36
2022	3.1	2.7	2.5	3.4	2.0	2.74
2023	3.4	2.9	2.9	4.1	2.2	3.10
2024	3.8	3.2	3.4	4.4	2.4	3.44
2025	4.1	3.5	3.7	4.6	2.7	3.72

Source: Compiled by the author

The results presented in Table 2 demonstrate that the public financial reporting system has undergone rapid development between 2020 and 2025, particularly in terms of digitalization and transparency indicators. The expansion of electronic budget platforms, the development of the Open Budget system, and the automation of financial reporting processes have significantly improved access to financial data and increased the transparency of public finance management.

Another significant limitation of the contemporary budget accounting and reporting system lies in the restricted methodological framework used to evaluate expenditure efficiency. Although substantial public financial resources are allocated to priority sectors such as education, healthcare, infrastructure development, and social protection, a comprehensive and unified evaluation mechanism capable of measuring the actual effectiveness of public services and their impact on citizens' quality of life has not yet been fully institutionalized in practice.

This circumstance corresponds with the critical perspectives found in international academic literature. In particular, Goldsmith emphasizes that the economic performance of infrastructure projects is frequently assessed through financial or macroeconomic indicators, while the social benefits and long-term welfare effects are often underestimated. As a result, the analysis of public financial performance may remain structurally incomplete and one-dimensional, focusing primarily on financial outputs rather than broader socio-economic outcomes [9].

At the same time, national research studies also acknowledge the necessity of improving the methodological and institutional foundations of the budget reporting system. In particular, the standardization of accounting procedures and the introduction of unified methodological requirements are considered essential for increasing the comparability, consistency, and analytical reliability of financial information across different public institutions, including organizations operating in infrastructure, education, and healthcare sectors.

In order to evaluate the current state of the national budget accounting system in a broader context, a comparative assessment between international practices and Uzbekistan's budget accounting and reporting framework was conducted. The results of this comparison are presented in Table 3.

Table 3 Comparative Characteristics of Budget Accounting and Reporting Systems

Dimension	OECD Countries	Uzbekistan
Transparency	High level of institutional transparency and open fiscal data	Moderate but steadily improving
Digitalization	Fully integrated digital financial management systems	Rapidly developing digital infrastructure
Public Oversight	Institutionalized civic monitoring and participatory budgeting	Gradually expanding mechanisms of public engagement
Efficiency Evaluation	Based on KPI systems and Performance-Based Budgeting (PBB)	Limited methodological application
Social Performance	Core component of fiscal reporting and evaluation	Not yet fully integrated

Source: Compiled by the author

The comparative analysis demonstrates that although significant progress has been achieved in Uzbekistan with respect to financial transparency and digital transformation, particularly through the development of electronic budget platforms and open fiscal data systems, the systematic integration of social performance indicators into budget reporting remains incomplete.

Therefore, one of the key strategic directions for further development should be the methodological transformation of budget accounting and reporting, ensuring that fiscal reports reflect not only financial flows but also the actual socio-economic outcomes of government programs and public service delivery. Under such an approach, the budget reporting system would evolve into a strategic analytical instrument capable of assessing both financial performance and social value creation within the public sector.

5. Conclusion

The findings of this research indicate that the modernization of accounting and reporting within the budget system should not be treated merely as a technical improvement of financial procedures or a mechanism for strengthening fiscal discipline, but rather as a strategic component of public governance and state financial management. In contemporary public administration, the role of budget accounting extends beyond the recording of financial transactions; it must also ensure that public expenditures are evaluated in terms of their social and economic impact on citizens' welfare and the overall quality of public services.

Within this context, the Budget Accounting and Reporting Efficiency Model (BAREM) developed in this study provides a methodological framework for evaluating the effectiveness of budget reporting through a multidimensional approach that integrates financial transparency, expenditure efficiency, public accountability, digitalization, and social performance indicators.

The empirical analysis conducted for the period 2019–2024 demonstrates that the digitalization and transparency of budget reporting in Uzbekistan have improved significantly, largely due to the implementation of electronic treasury systems, open data platforms, and digital financial monitoring mechanisms. Nevertheless, the relatively low level of social performance indicators within budget reports indicates that the current reporting system still prioritizes financial data, while the principles of performance-based budgeting and outcome-oriented financial management have not yet been fully institutionalized.

Consequently, further modernization of the budget accounting and reporting system should focus not only on technological transformation but also on the integration of analytical mechanisms capable of evaluating the effectiveness of public policies and services. From a theoretical perspective, the absence of social performance indicators significantly restricts the analytical capacity of fiscal reporting and limits its role in strategic public governance.

The study also reveals that although digitalization of budget processes is progressing rapidly, existing digital reporting systems still do not provide sufficient opportunities to evaluate the long-term outcomes and social impact of public expenditures. Furthermore, mechanisms of public oversight and participatory discussion of budget reports have not yet become fully institutionalized within the national public financial management framework. Similarly, the evaluation of public expenditures based on efficiency and performance criteria has not yet been fully embedded in policy-making processes.

Based on these findings, several methodological and practical recommendations are proposed for improving the national budget accounting and reporting system. First, it is necessary to incorporate social performance indicators into the legal and methodological framework of budget reporting and accelerate the adoption of performance-based budgeting principles in the public sector. Second, unified methodological standards for accounting policies should be developed and consistently implemented across public institutions to enhance the comparability and reliability of financial information.

Compliance with ethical standards

Disclosure of conflict of interest

There are no conflicts of interest.

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