

The use of digital technologies in methods of managing the budget process of the Russian Federation

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Abstract - The article deals with the study of the digital technologies role in optimizing the budget process of Russian Federation. The authors conducted a comparative analysis of information systems and software systems to support the budget process; special attention is paid to the analysis of the main information systems used by the bodies of state financial control, tax administration and budget execution. Based on the technologies analysis for implementing the budget process, the authors attempted to suggest possible ways to optimize it.

Purpose: the authors attempted to justify the need for continuous monitoring of the effective distribution of budget expenditures assessment and the ability to quickly obtain information for analyzing the performance of government agencies that regulate the budget process, which is realized only through digital financial technologies.

Main results: the authors showed that the financial and legal side of the budget process is developing in the direction of the growing importance of information technology for the implementation of the principle of budget transparency.

Keywords - *budget process, automated information system, optimization of the budget process, digital technology, electronic budget, digitalization.*

I. INTRODUCTION

The implementation of budget reforms in Russia at the beginning of the first decades of the 21st century, as well as in a number of Western countries, is aimed at improving the budget process. Technologies that allow the management of state funds are generated by an inevitable and very rapid transition to the new forms of budgetary services financing. Along with technological effectiveness, the methods of medium-term budgeting and program-targeted distribution of funds of both the budgets of sovereign states and individual regions and consolidated forms - the budget of the European Union, are being updated. Undoubtedly, the role of information technology in the budget process is acute, which, however, is limited to the use of information technology, which serves to strengthen the integrity and increase the sustainability of the budget process at all its stages [2]:

- coherence of interaction among subjects of the executive vertical - from federal authorities to local governments;
- constructive interaction of various branches of government;
- crisis-free development and smoothing of fluctuations in gross product production by improving financial management increasing the sustainability of development and security of banking structures.

To the weaknesses of public administration of the budget process, requiring coordination with budget legislation, the authors, agreeing with existing opinions on this issue, consider it appropriate to attribute [3, 4, 5]:

- prevention of conflict and crisis socio-political situations;
- search for the best decisions in the field of budget planning based on existing theories and decision-making models;
- assessment of the possible consequences of decisions;
- identification of trends and patterns in the development of financial and socio-economic parameters of the economic system;
- substantial control and assessment of the effectiveness of budget execution;
- construction and predictive assessment of alternative socio-economic scenarios and others.

The goals of ensuring transparency, openness and accountability of information on the activities of public authorities and local governments involved in the budget process are becoming increasingly relevant. The tasks of equality in providing social guarantees to all members of civil society, the achievement of which is entrusted with the redistribution of budget funds based on the principles of social justice, come to the fore. Whether the principles of Pareto-efficiency are realized or others that are equally fundamental, the question is quite

debatable, so modern research is based on the principles of optimization for specific conditions.

II. MATERIALS AND METHODS

The works of Russian and foreign authors are devoted to the methods of budget process optimization, however, due to the non-universal nature of the countries' legislation, it is extremely difficult to single out the only correct, ready-to-use method (or set of methods) in this direction, which makes it possible to consider prospective work on the search of researches, possibly non-fundamental but of scientific and practical importance.

A budget as an economic category is a set of economic relations in the process of which centralized monetary funds are formed, redistributed and used, intended for financial support of the functions and tasks of the state and local self-government.

The economic essence of the budget is shown in its functions. Since the budget is the basis of the financial system, it has the inherent functions of finance:

- formation of cash funds;
- use of funds;
- control over the formation and use of cash funds.

The first function is performed by budget revenues. Through financial relations, a centralized state fund is formed, the main source of which, approximately 80.0%, is taxes. Revenues can also be generated from the sale and use of property owned by the state, from the provision of paid services by the state, borrowed funds, that is, from non-tax sources.

The second function is carried out by redistributing budget funds, that is, implementing areas of budget spending to support sectors of the economy, stimulate investment, maintain the state apparatus, and conduct economic, social, and tax policies.

The control function is carried out simultaneously with either the first or second functions. A control function is showed in the course of activities of financial bodies endowed with control powers [10].

The budget functions manifestation as an instrument of redistribution and control is carried out in the process of activity of state authorities and municipalities, and is reflected in the state budget mechanism.

The budget mechanism is a set of forms of inter-budget relations organization, methods of accumulation and use of budget funds, with the aim of implementing budget policy.

The budget mechanism is formed on the basis of the budget structure of the country (Table 1).

The central link of the budget structure of the Russian Federation is the budget system. The Budget Code of the Russian Federation defines the budget system as based on economic relations and the state structure of the Russian Federation, the aggregate of the federal budget, the budgets of the constituent

entities of the Russian Federation, local budgets and the budgets of state extra-budgetary funds regulated by the legislation of the Russian Federation [1].

TABLE I. BUDGET STRUCTURE OF THE RUSSIAN FEDERATION

BUDGET STRUCTURE OF THE RUSSIAN FEDERATION		
<i>Budget system</i>	<i>Budget classification</i>	<i>Principles of a budget system building</i>
Federal budget and budgets of state extra-budgetary funds		<ul style="list-style-type: none"> - unity of the budget system; - differentiation of income, expenses and sources of financing budget deficits between budgets; - independence of budgets; - equality of budgetary rights of subjects, municipalities; - the completeness of reflection of income, expenses and sources of financing budget deficits; - balanced budget; - the effectiveness of the use of budget funds; - total coverage of budget expenditures; - transparency (openness); - reliability of the budget; - targeting and targeted nature of budget funds; - jurisdiction of budget expenditures; - cash desk unity.
Budgets of constituent entities of the Russian Federation and budgets of territorial state extra-budgetary funds Local budgets, including budgets: <ul style="list-style-type: none"> - municipal areas; - urban districts; - urban districts with intracity division; - intracity municipal formations of cities of federal significance of Moscow, St. Petersburg and Sevastopol; - urban and rural settlements; - intracity areas. 		

The budget process is a set of actions of representative and executive authorities in the development and implementation of the financial and budget system. The budget process is the regulated legislative activity of authorities in the preparation, review, approval and execution of all types of state budget.

An important element of the budget process is financial control, which ensures the efficiency of the state budget system and acts as a necessary and mandatory procedure that accompanies all stages of the budget process [6]. The legality of the formation and implementation of budgets of all levels, the efficiency of distribution and targeted use of budgetary resources, the suppression of offences in the budgetary sphere largely depend on the choice of mechanisms of state financial control and the quality of legal regulation of the activities of financial control bodies[7]. Effective financial control cannot exist and develop without highly efficient management systems based on the use of digital technologies, since the volumes of the analyzed information are growing at an enormous pace, which cannot be ensured by the old methods of processing speed and accuracy.

Technological support of budget control procedures in the context of optimizing the mechanisms of legal regulation of the

budget process in the Russian Federation, taking into account the experience of European countries, is the most relevant and promising in the theory and practice of financial science.

The tasks of improving the information support of the budget control process are realized through the creation of automated information systems (AIS), which are a form of organizational management of the budget process based on high-tech tools and data processing methods and information technologies. AIS allows expanding the range of possibilities of financial control, increasing its validity, timeliness and rationality of operations; reduce the complexity of the activities of budgetary management through the use of digital technologies and methods of economic and mathematical modeling and structuring of information flows [8, 9, 10].

The implementation of AIS for financial control is aimed at implementing a number of advantages of automation of management processes, in particular: simplification of the procedures for the collection and analysis of information on control measures and the implementation of financial obligations under budget federalism; checking the validity of the use of budget funds at all levels of the budget process; reduction of time for collecting and analyzing information; quick access to the results of previous control measures; automation of the process of monitoring violations of financial discipline; compliance with state financial control standards; ensuring transparency of information on the results of the activities of financial control bodies.

III. RESULTS

In the Russian Federation, the main AIS are as follows[12]:

1. The State Information and Analytical System of the Control and Accounts Bodies of the Russian Federation (GIAS KSO), which is a collection of information contained in the databases of the control and account bodies of the RF. GIAS KSO provides processing, systematization, analysis and storage of the following information: on the planned control and audit and expert analytical measures and the results of their implementation by the control and accounting authorities of the Russian Federation; on the budget process and the main indicators of socio-economic development of the Russian Federation and constituent entities of the Russian Federation; on standards of financial control of the Accounts Chamber of the Russian Federation and normative (methodological) documents on conducting state and municipal financial control and others.

2. Automated information system "Finances", which is an integrated database that provides automation of functions and powers assigned to the Ministry of Finance of the Russian Federation for the implementation of the powers to draft federal budget; maintaining a consolidated budget list of the federal budget; public debt management of the Russian Federation; accounting for information on debt obligations of constituent entities of the Russian Federation and municipalities; organization of transfers of intergovernmental transfers; ensuring the provision of budget loans and budget credits; Management of the Reserve Fund and the National Wealth Fund;

organization of monitoring of the budget sector, a methodological guide to budget planning.

3. The automated information system of the Federal Tax Service, which performs the functions of collecting, organizing, processing, storing and providing information data, format-logical data control, integration with other information systems; interaction with taxpayers; the formation of registers, directories and classifiers; assessment, analysis and control of information; the formation of regulatory, statistical and analytical information bases.

Information system of state and municipal payments, which ensures the receipt and placement of information on the payment by tax agents of payments for the provision of public services and payments, which constitute a significant source of budget revenues of the budget system of the Russian Federation.

In all leading countries in the field of digital technologies, the state acts as a driver of relevant initiatives. Without its active participation, it is not possible to imagine both the successful development of the technological offer in leading countries and the commercialization of technologies, including the creation of flagship corporations that form the "digital look" of the modern economy.

The deadlines for the implementation of the national project "Data Economy" are set from October 1, 2018 to December 31, 2024. Declared targets:

1. The increase in domestic costs for the development of the digital economy from all sources (by share in GDP) is not less than three times compared to 2017.

2. Creation of a stable and secure information and telecommunication infrastructure for high-speed transmission, processing and storage of large volumes of data, accessible to all organizations and households.

3. The use of predominantly domestic software by state bodies, local governments and organizations.

The "Data Economy" as a national project consists of six federal ones, the largest of which in terms of allocated financing (627.9 billion rubles) was the "Information Infrastructure" project. In second place in terms of funds is Digital Government Administration (233.1 billion rubles), followed by Personnel for the Digital Economy (138.9 billion rubles), and the federal project Digital Technologies (125.3 billion rubles).), "Information Security" (18 billion rubles) and "Normative regulation of the digital environment" (1.5 billion rubles).

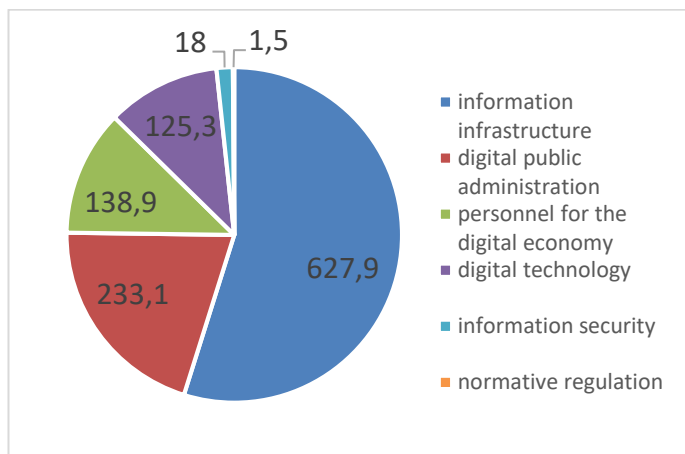


Fig. 1. Expenditures of the Russian Federation in the areas of the national project "Data Economy", billion rubles [15]

The electronic budget (EB) is a state-integrated information system that provides public finance management and optimization of state financial control in the public sector. The use of the electronic system promotes openness and accountability of the activities of state authorities and local self-government for public control in a single information space. Traditionally, e-budget systems in the countries where they exist consist of subsystems:

1. Centralized subsystems - budget planning, management of revenues, expenses, purchases, debt and financial assets; financial control;
2. Service subsystems - for users using the information resources of a single portal of the Russian Federation budget system and centralized subsystems;
3. The unified portal of the Russian Federation budget system contains information on the financial and economic activities of public law entities.

The implementation and operation of the Electronic Budget system improve the efficiency of public and municipal finance management at all levels of the budget system.

The electronic budget for the budget system is designed to provide:

1. The application of a unified methodology for the design and use of the budget for all participants in the budget process, the formation of budget reporting.
2. Lack of information duplication.
3. Saving budget funds and increasing the efficiency of budget expenditures by unifying procedures and shortening the time for their implementation, eliminating paper workflow.

There are no analogues of the Russian electronic budget information system in terms of the scale and level of technological support in the world; full-scale financial management and budget management information systems are being created in Brazil, South Korea, and Spain.

To a large extent, the automation of budget control at all stages of the budget process is connected both with the political atmosphere in the territory of any state and with the economic

situation. An example for this could be the political changes in Russia in the 1990s, which subsequently affected the introduction of a result-oriented budgeting system, contractual relations in the budget process, and reforming the field of public procurement.

Budgetary relations in Russia today are built on the basis of digital technologies. The processes of digitalization and openness of budgetary relations are designed to solve the issues of the efficiency of spending budgetary funds with the optimal functioning of the state apparatus. The openness of data, processes, decisions, and budget, in particular, reduces transaction costs, thus, inevitably contributes to the saving of budget and other resources.

Over the past years, studies of the budget system of the Russian Federation have been carried out, which allow identifying the main problems that need to be resolved, but there are also unsolved problems, the authors consider it appropriate to attribute them [14]:

- incomplete decentralization of the budget system (intergovernmental relations);
- low efficiency of spending budget funds;
- improvement of the tax system;
- increasing the efficiency (profitability) of using state property, property of constituent entities of the Russian Federation and property of municipalities;
- improving the regulatory framework fixing the mechanism for the transition of upper-level expenses to the budgets of the lower levels of the budget system;
- optimization of the budget system based on a generalization of the theory and integration of its provisions into the practice of the budget process.

These tasks can be solved by implementing budget policy in the following areas:

1. Significant expansion of the fiscal powers of regional and local authorities and increased responsibility for their use while maintaining a competitive environment; tight budget constraints and an increase in the share of the federal budget in consolidated budget revenues.
2. Revision of the structure of budget expenditures by reducing unnecessary expenditures, increasing the share of capital investments in budget expenditures, improving the sphere of education and healthcare, regulating the remuneration of social workers, creating a mechanism to ensure citizens have access to public goods; tenders for the procurement of goods and the provision of services for budgetary organizations.
3. Improving the system of budget expenditures focused on stimulating economic growth and ensuring the optimal use of budget funds.

IV. DISCUSSION

In many countries, improving the effectiveness of fiscal revenue policies is based on:

- ensuring the quality functioning of the tax system. A key area of tax policy should be the provision of acceptable fiscal conditions for activities for entities at various levels of the budget system;
- the formation of an effective system for managing the return on state assets. The role of the state in the economic sphere should be determined on the basis of the principle of necessity and effectiveness, fixed degree and forms of participation;
- optimization of income from foreign economic activity within the framework of unification of customs tariffs, reduction of customs privileges, harmonization of customs procedures which are aimed at improving the transparency of foreign economic operations and ensuring the growth of state budget revenues from foreign economic activity.

V. CONCLUSION

The planning of budgetary policy in the field of state budget expenditures in the medium term is based on the following principles [13]:

- state budget expenditures are formed on the basis of the implementation of the priorities of socio-economic policy, the creation of conditions for raising investment and innovation activity, the formation of other necessary prerequisites for sustainable development;
- the formation of a clear system of criteria for substantiating the assessment of the effectiveness of budget expenditures;
- implementation of the targeted program approach in compliance with the established standards for financing state budget expenditures.

Effective management of state assets and liabilities, the transition to active management of public debt is another important goal of optimizing the budget process. For an effective system of managing foreign assets, the Russian Federation has developed and is conducting operations to transfer part of the debt of debtor countries to the equity of Russia in investment projects in the territories of debtor countries in order to more actively promote Russian foreign economic interests. Improving credit policy is being implemented in relation to non-CIS countries and CIS member states. Such a settlement consists of a long-term economic policy that aims to stimulate industrial production and export of finished products; expansion of sales markets and an integrated approach to resolving financial issues with debtor states.

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