PROSPECTS FOR REFORMING THE BUDGET INVESTMENTS MANAGEMENT IN UKRAINE IN THE CONTEXT OF INTERNATIONAL EXPERIENCE

ABSTRACT

Budget investments are a necessary prerequisite for investment development of the state. In the EU member countries, budgetary investment contributes to the implementation of profitable or non-profitable, but socially significant projects, which enable the activation of investment processes, both at the macro and micro levels. The need to use budget investments as a stimulus for economic growth determines the need for an in-depth study of the theoretical and applied principles of their implementation, as well as substantiation of the prospects for reforming the management of budget investments in Ukraine in the context of international experience.

Based on the analysis of domestic experience and the generalization of foreign practice, the components and key principles of budget investment management are defined, which emphasize the need for cooperation at all levels of government in the context of coordination, facilitation, and institutionalization.

A set of measures to reform the management of budgetary investments in Ukraine is proposed, based on the use of an information model, which, in contrast to the known ones, provides for the improvement of planning (through the development of a national strategy and/or plan of budgetary investments, the use of medium-term fiscal frameworks, the introduction of budgeting based on results, the introduction of preliminary assessment of budgetary investments and the introduction of their independent expertise), distribution (for the implementation of the strategic goals of post-war infrastructure restoration, the development of the green and digital economy and ensuring social and economic stability) and use (on the basis of the introduction of repeated technical and economic substantiation, the introduction of accrual accounting, timely and full financing and control of implementation) of budget investments, which enables the implementation of only the most high-priority state investment projects that have clear technical characteristics, have undergone a thorough approval and selection procedure, are financially accessible and to a large extent ensure economic growth and public welfare.

Keywords: budget, investments, budget investments, budget expenditures, budget capital expenditures, state investment projects, sustainable development

JEL Classification: E21, E62, F42, H72, O23

INTRODUCTION

Budgetary investments involve the investment of funds from the budgets of different levels, aimed at increasing state assets and supporting social and economic well-being. In addition, budget investments, by fulfilling their role in increasing state assets, allow for the creation of new sources of state revenues and increase the flexibility of the budget in general. Despite the crisis conditions in which the economy of Ukraine exists at the moment, budget investments contribute to the achievement of the set goal of development by increasing the efficiency of the use of budget expenditures and their optimization.
The study of budget investment management becomes especially relevant in connection with the modern military and economic situation because the problems of the efficiency of spending funds directed to budget investments are becoming more and more obvious and need to be solved as soon as possible. At the moment, the issue of the effectiveness of budget investment management is being studied in depth from all possible aspects. The allocation of budget funds to the extent that they are allocated for budget investment provides strict control over their use and requires high efficiency of spending. At the moment, despite the significant interest in the topic of increasing the effectiveness of budget investment management in the scientific environment, there are still a large number of unsolved problems related to the applied component of budget investment.

**LITERATURE REVIEW**

The issue of budgetary investments has not found a clear justification either in the legal field or in scientific circles. Thus, European legislators consider not budgetary, but public investments as a general governmental gross accumulation of fixed capital [4], which includes investing budgetary funds in housing; other buildings and constructions, including major land improvements; machinery and equipment such as ships, cars and computers; weapons systems; cultivated biological resources such as trees and livestock; costs of transferring ownership to unproduced assets such as land, contracts, leases and licenses; R&D, including production of freely available R&D; exploration and evaluation of mineral resources; computer software and databases; entertainment, literary or artistic originals; other intellectual property rights [34]. According to EU legislation, public investments are also called investment expenditures of budgets [34].

Ukrainian legislators do not define the content of either budgetary or public investments, but taking into account the interpretation of European legislators, most fully to the concept of "budgetary investments" corresponds to the definition of "capital expenditures". The latter is defined as "expenses directed to the acquisition of fixed capital (equipment and items of long-term use), non-current assets (including land, intangible assets, etc.), capital investments, major repairs; to create state stocks and reserves; for the purchase of capital assets; gratuitous payments, compensation for losses associated with damage to fixed capital" [28].

Representatives of Ukrainian financial science mostly pay attention to the theoretical aspects of budget investments, in particular, they try to substantiate their essence, functions, specific features and role in the social and economic development of the state. Thus, M. Blikhar reveals the meaning of budget investments as "investment of budget funds in the reproduction of fixed capital with the aim of increasing state (municipal) assets and implementing national (municipal) tasks" [2]. O. Getmanets defines budget investments as "the amount of budget funds established by law, directed to the implementation of state or local investment projects" [14]. O. Kyrylenko and O. Maksymchuk characterize budget investments as "the investment of funds from budgets of all levels in the creation, restoration and modernization of material assets of long-term use with the aim of obtaining economic and social effects and/or increasing budget revenues in the future" [20]. O. Lisnichuk and V. Havrysh describe budget investments as "all capital expenditures directed to tangible and intangible assets, as well as expenditures for financing a specific investment project financed from the state or local budget" [21]. N. Slobodyaniuk, Ye. Checheta understand budget investments as "funds allocated from the budget and aimed at increasing and improving the value of property owned by the state, with the aim of obtaining investment income based on capitalization and achieving of socio-economic effects" [42]. Most of the mentioned scientists, considering budget investments, associate them with investments of budget funds in tangible and intangible assets (real investments), while leveling investments in financial assets (financial investments), which are a significant component of investments. Therefore, we propose to interpret budget investments as the investment of budget funds in the creation or increase in the value of assets (real and financial) for the implementation of national (municipal) tasks and obtaining investment budget revenues.

Representatives of foreign financial science emphasize the practical side of budget investments, in particular, they try to assess their impact on the development of the state (territory), identify problems of budget investment management and propose ways to solve them. For example, M. Postula and K. Rachkovsky investigate the influence of budget investment management on sustainable development and competitiveness in EU member states [29]. M. Miller and Sh. Mustafa offer a concrete and pragmatic set of recommendations for improving the management of budget investments in countries with a low-income level or low potential for economic growth [22]. J.-H. Kim, J. A. Fallow, and S. Groom describe the advanced international practice of budget investment management and justify directions for its reform, taking into account the internal conditions of development of specific countries [19]. B. Opalka and K. Yarosynskyi analyze factors that affect the effectiveness of budget investments and also argue for the possibility of implementing effective methods of managing them from a strategic perspective [7]. A. Rajaram, Le T. Min, K. Kaiser, J.-H. Kim and J. Frank identifies key institutional principles that countries must introduce so that budget investments support growth and development [33]. M. Kh. Hanis,
B. Trigunarsyakh and C. Susilavati characterize the experience of budget investment management in developed countries and determine the possibilities of its transfer to developing countries [15].

At the same time, recognizing the fundamental value of the work of these scientists and their significant contribution to the development of financial science, it is necessary to note that in the conditions of the transformation of budgetary relations caused by economic crises, pandemics, full-scale military operations, scientific approaches to the management of budgetary investments require methodological rethinking, clarification and addition.

AIMS AND OBJECTIVES

The purpose of the study is to substantiate a set of measures for reforming the management of budget investments in Ukraine based on the use of an infologic model, which, unlike the known ones, provides for the improvement of planning, distribution and implementation of budget investments, which makes it possible to implement only the most high-priority state investment projects that have clear technical characteristics, have undergone a thorough approval and selection procedure, are financially affordable and largely ensure economic growth and social well-being. In view of the goal, the following tasks were set and performed in the study:

- the state of budget investment management in Ukraine was assessed;
- mandatory elements of budget investment management in international practice were described;
- the principles of budget investment management in international practice were considered;
- an infologic model of reforming the management of budgetary investments in Ukraine was developed, taking into account foreign experience;
- the possibility of adapting the infologic model of reforming the management of budget investments to Ukrainian realities was substantiated.

METHODS

When conducting the research, various methods were used, which are ways of theoretical study and practical knowledge of theoretical and practical aspects of managing budget investments. The used research methods include philosophical, general scientific and concrete scientific.

Philosophical methods include a set of research methods that are universal in nature. The most common philosophical method is dialectical, which made it possible to study the management of budgetary investments in all its diversity from the standpoint of development, and transition from an anachronistic, outmoded to a new, modern one [38].

General scientific methods include research methods that ensure the connection and optimal interaction of philosophy with special scientific knowledge. Among such research methods, it is worth highlighting: methods of abstraction and concretization, which made it possible to single out the essential characteristics and form a general idea about the management of budget investments; the induction method, thanks to which the management of budget investments was studied based on the consideration of its components and specific phenomena and processes accompanying its development; the deduction method, by means of which each component of budget investments management was studied on the basis of knowledge of the general laws of the evolution of the budget sphere; the functional-comparative method, which contributed to the determination of the main factors of the development of budget investments management, taking into account the leading world experience; the method of analysis and synthesis, the use of which enabled an in-depth study of the conditions and features of the development of budget investments management in Ukraine; modeling method, thanks to which an infological model of budget investments management was developed; graphic method – for visualization of the obtained research results.

Specific scientific methods are determined primarily by the specific nature of financial science in general and budget investments in particular, which lead to the use of special methods of research activity. In particular, among the methods of financial science in the study of the fiscal mechanism, the following can be distinguished: an esoteric (essential) method, which made it possible to reveal the principles and components of budget investment management; an exoteric (phenomenal) method, which made it possible to find out the specifics of budget investments management in Ukraine; a holistic (essential and phenomenal) method, with the help of which it was possible to substantiate the provision of state development thanks to the effective management of budget investments.
RESULTS

The use of budget investments to influence investment processes from an important regulatory function that was inherent to states in the middle of the 20th century, at the beginning of the 21st century turned into a technical or, at best, a residual regulatory or coordinating function of line ministries. However, the global financial crisis of 2008-2009, the coronavirus pandemic of 2019-2021, and the full-scale invasion of the Russian Federation on the territory of Ukraine caused renewed interest in anti-cyclical budget policy, under which countries began to adopt budget stimulus packages that included accelerated infrastructure maintenance and increased investments in ready-to-launch state investment projects. In Ukraine, when the war with the Russian Federation ends, there will also be a need to actively use budget investments, because the investment opportunities of households and enterprises will be limited, while the budgets will receive significant revenues from the international community, which will be directed to the implementation of state reconstruction projects.

It is worth emphasizing that the use of budget expenditures to regulate the investment development of the state in the form of implementation of budget investments is technically different from the implementation of other types of expenditures. Thus, foreign scientists single out a number of specific characteristics of budget investments [5; 22]:

- the decision on the preparation and implementation of budget investments is carried out in accordance with the procedure established by the relevant authority depending on the level of the budget from which the funds are provided;
- budget investments in the form of state investment projects usually involve significant costs and may last for several years, which makes it difficult to accurately prepare a budget;
- it is difficult to accurately estimate costs, because budget investments are often one-time and technically complex, accordingly, state investment projects, as a rule, are subject to overspending, which can be the main source of fiscal risks for the budget;
- budget investments are usually “one-time”, that is, payments made by the state are not always regular and/or predictable;
- there is an imbalance in the timing of costs and benefits, because state investment projects usually require significant pre-financing, while benefits accumulate over years and can be fully realized only decades after the asset has been built;
- budgetary investments create long-term assets that need to be maintained, therefore, the decision to continue the implementation of one or another state investment project today creates future financial obligations regarding the operation and maintenance of such assets;
- budgetary investments are mostly subject to significant political pressure, therefore large amounts of invested funds and the visibility of such investments attract the close attention of politicians and citizens to decisions regarding the feasibility of continuing state investment projects;
- the nature of budget investments makes them especially prone to corruption, because the cost of implementing state investment projects is usually high, accordingly, the potential benefits from participating in their implementation are significant, which causes the spread of fraudulent schemes, bribery and political conspiracies.

The tasks of budgetary investments, which arise from the internal content of budgetary relations, are also specific. Thus, the first task is to materially ensure the performance of the regulatory function of the state. To regulate the development of the state, long-term and capital-intensive investments, characterized by high risks, are necessary. Of course, it is impossible to do with private investments alone so it is important to implement large-scale projects with the help of budget funds. The second task is to support regional development. In Ukraine, even before the war, there was an asymmetry of regional development, which will deepen even more after the end of hostilities. In order to prevent these negative phenomena, the state should carry out the necessary regulation of the social and economic development of the regions, which can be carried out with the help of budgetary investments.

Budget investments play an important role in regulating the investment processes of any state. In particular, all EU member states, as well as Ukraine, use budget investment as a stimulus for social and economic development, and the formation of a competitive market environment, successfully overcoming its shortcomings and increasing the effectiveness of implementation (Figure 1).
Figure 1. The average share of budget investments in total investments in EU countries and Ukraine in 2013-2022, in per cent. (Source: Compiled by the authors based on [25; 26]).

On average, in 2013-2022, the largest share of budget investments in total investments was observed in the countries of Eastern Europe, the rest of the developed EU member states used them as a supplement or a factor for stimulating private sector investments. This situation is due to the fact that the long period of dominance of the command-administrative economy in Eastern European countries was reflected in the desire of states to actively intervene in investment processes. In addition, in these countries, there is a need for public investment in the development of social and economic infrastructure that meets the requirements of the EU member states and is financed by EU structural funds. Compared to the EU member states, on average for 2013-2022, Ukraine had the largest share of budget investments in total investments. This situation is due to the fact that the State Program initiated by the President of Ukraine “The Large Construction” is being implemented from 2020, aimed at the large-scale development of high-quality infrastructure in the country, which requires significant budget investments. In addition, in 2022, in the conditions of full-scale military operations, under unfavourable political and economic conjuncture, the state became the key investor. It should be noted that in the studied period, both the share of investments from the state budget and the share of investments from local budgets were significant in Ukraine (Figure 2).

It should be emphasized that after the decentralization reform, the share of investments from local budgets in total investments exceeded the share of investments from the state budget. This was a consequence of the transfer to the local level of a significant amount of authority in the field of budgetary investment. However, the initiatives of the President of Ukraine to improve transport, educational, social and sports infrastructure, as well as the need to make budgetary investments in defence in wartime conditions contributed to the preponderance of the share of investments from the state budget in total investments over the share of investments from local budgets.
Figure 2. The share of investments at the expense of state and local budgets in total investments in Ukraine in 2013-2022, in per cent.
(Source: Compiled by the authors based on [26; 26])

Despite the importance of budget investment in ensuring economic growth, the share of budget investment in the total expenditures of the consolidated budget in the EU member states and in Ukraine is insignificant (Figure 3). On average, during 2013-2022, the largest share of budget investments in the total expenditures of the consolidated budget was also observed in the countries of Eastern Europe. Moreover, since 2020, many EU member states have reduced their share of budget investments, which is due not so much to the reluctance of states to participate in investment processes, but to the need to increase current state costs for measures to respond to COVID-19.

Figure 3. The average share of budget investments in the total expenditures of the consolidated budget in the EU countries and in Ukraine in 2013-2022, in per cent. (Source: Compiled by the authors based on [24; 25])
In EU member states, budget funds were used to finance health care, in particular, the purchase of medicines, and material equipment for hospitals, as well as monetary and other incentives for medical personnel. There was also public support for households, which varied from country to country, but the main focus was on providing for those who lost their jobs or experienced reduced hours. In addition, state support was provided to enterprises and self-employed persons most affected by the pandemic, to affected sectors of the economy (air transport, agriculture, tourism, etc.), as well as to exports in conditions where the pandemic caused a gap in international cooperation within added value chains. In fact, the state used budget funds to compensate economic entities for losses incurred by them or forgone income in order to maintain consumption at an appropriate level, which had a negative impact on the scale of budget investment [39].

In addition, in recent years in EU countries, budget investments, especially in the form of implementation of state investment projects, have demonstrated relatively high inefficiency due to a number of reasons [33]:

- involvement of many government institutions in the process of development, approval and financing of state investment projects and weak coordination between them, which leads to delays both at the planning stage of such projects and at the stage of their implementation;
- influence of political motives on the development and implementation of state investment projects, which causes the application of various criteria and terms for making management decisions regarding such projects;
- multi-year implementation of state investment projects creates an additional burden on unstable budget systems with poor management of annual budgets;
- large-scale state investment projects are often associated with problematic acquisition of facilities and population resettlement, environmental protection and complex public procurement, which cause significant delays and increased costs for the implementation of these projects;
- weak systems of public administration and accountability create conditions for corruption to flourish, often to the extent that significant amounts of budget funds intended for the implementation of public investment projects are diverted to private accounts without creating public assets and without receiving any of the expected benefits.

In Ukraine, the share of budget investments in the total expenditures of the consolidated budget in 2013-2022 compared to the EU member states was at an average level (Figure 4).

![Figure 4. The share of state and local budget investments in total budget investments in Ukraine in 2013-2022, in per cent. (Source: Compiled by the authors based on [24; 25])](image-url)
As in the EU countries, in Ukraine, the effectiveness of implementation of budget investments, in particular in the form of state investment projects, is at a low level. Problems with the implementation of state investment projects are directly related to the general shortcomings of budget investment management in Ukraine, in particular [1; 3; 31; 32]:

1. The lack of a strategy for the implementation of state investment projects at the national level, which complicates the determination of priorities and makes the process of selecting such projects dependent on lobbying influence and backroom agreements.

2. The lack of unified procedures for consideration and selection of state investment projects, which affects the validity of relevant management decisions and the possibility of completion and full functioning of such projects in the future.

3. The lack of a detailed methodology for economic assessment and review of the assessment of state investment projects due to limited human resources and the lack of uniform technical standards, which causes the low institutional capacity to conduct the latter and the similar professional level of civil servants in the investment field.

4. Insufficient resource provision of the budgetary investment management coordination system and the lack of personnel reserve of professional managers for the implementation of large-scale investment projects, which in most cases causes the low quality of preparation of such projects and complicates their implementation.

5. The competition of numerous state investment projects for limited funding and the inclination of politicians to new projects usually lead to the conservation of resources in objects of unfinished construction, at the same time, the long-term non-fulfilment of construction and installation works cause destructive processes, as a result of which the objects of unfinished construction are depreciated.

6. The use of subsidized funds from the state budget to local budgets for the implementation of investment programs (projects) with numerous violations of state building regulations, which leads to a delay in the implementation of such projects, an increase in their cost contrary to the approved design and estimate documentation and the need to allocate additional financial resources in the future from the state budget for their completion.

7. The lack of complete inclusion in the State Register of Investment Projects of all projects that receive various types of state financial support, because the support of such projects is carried out by various institutions, in particular, the Ministry of Economy of Ukraine, the Ministry of Finance of Ukraine, the Ministry of Education and Science of Ukraine, the Ministry of Development of Communities and Territories of Ukraine, which makes their comprehensive analysis and effective implementation impossible.

Taking into account the above, the management of budget investments acquires special importance and requires appropriate institutional and economic capabilities. Therefore, the International Monetary Fund conducts an assessment of public investment management (Public Investment Management Assessment – PIMA), which analyzes 15 institutions that directly relate to three key stages of the public investment cycle [17]:

1. Planning of sustainable investment in the public sector.

2. Allocation of investments to the necessary sectors and projects.

3. Implementation of investment projects to create productive and long-lasting public assets.

Each component of the stage of budgetary investment is evaluated both by institutional design (institutions, policies, formal rules and procedures) and by economic efficiency (the degree of achievement of the established goal in practice or the presence of a clear beneficial impact).

The assessment of budget investment management involves providing three possible points for the parameter (1 – not implemented, 2 – partially implemented, 3 – fully implemented), and their average value for the relevant institution provides an estimate for it. It allows you to realize four main benefits: comprehensiveness (enables coverage of the full cycle of budgetary investments); availability of results (allows to visually display the country's results, in particular with the help of visualized diagrams, which helps to identify gaps and priorities of fiscal reforms); practicality of implementation (provides specific recommendations adapted to the specific needs and capabilities of the country, which are ready for implementation); coordination (serves as a catalyst for greater coordination and further support from the IMF's development partners, because it promotes a common understanding of key challenges in public investment). Scores are summarized in a diagram that allows countries to be compared with other countries, regions, or the world as a whole. On the diagram, the farther from the centre, the higher the IMF estimates of budget investment management.

In terms of institutional design, the IMF's assessment of budget investment management in Ukraine showed the weakness of institutional support for this process, especially in comparison with global indicators (Table 1).
According to the IMF, Ukrainian institutions for managing budget investments are weak at all stages of this process. With the exception of completeness and unity of the budget and project selection, Ukraine performs poorly in almost all areas compared to the world. On average, institutions in the stages of planning (1-5), distribution (6-10) and implementation (11-15) have low scores, with particular weaknesses in the management of public-private partnership (PPP), multi-year budgeting and project management. Recent initiatives to reform some institutions related to public investments, such as: improving the coordination of inter-budgetary relations; improving the legislative and supervisory framework for public-private partnership (PPP); introduction of a multi-year budget process and the introduction of integrated evaluation of project selection processes (at least for some investments) have improved the management of budgetary investments, but they have not made sufficient progress to significantly affect many of the scores for this evaluation.

In terms of economic efficiency, the IMF's assessment of budget investment management in Ukraine showed its low level, especially compared to global indicators (Table 2).

### Table 1. The IMF’s comparative assessment of the institutional design of budget investment management in Ukraine and the world.  
(Source: Compiled by the authors based on [16])

<table>
<thead>
<tr>
<th>Stages of management of state investment projects</th>
<th>World indicator</th>
<th>Indicator of Ukraine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Fiscal goals and rules</td>
<td>2.006</td>
<td>1.750</td>
</tr>
<tr>
<td>2. National and sectoral planning of state investment projects</td>
<td>2.124</td>
<td>2.000</td>
</tr>
<tr>
<td>3. Coordination between public authorities</td>
<td>1.700</td>
<td>1.333</td>
</tr>
<tr>
<td>4. Project assessment</td>
<td>1.667</td>
<td>1.333</td>
</tr>
<tr>
<td>5. Alternative financing of state infrastructure projects</td>
<td>1.900</td>
<td>1.667</td>
</tr>
<tr>
<td>Distribution</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Multi-year budgeting</td>
<td>1.900</td>
<td>1.000</td>
</tr>
<tr>
<td>7. Completeness and unity of the budget</td>
<td>2.119</td>
<td>2.667</td>
</tr>
<tr>
<td>8. Budgeting of state investment projects</td>
<td>1.979</td>
<td>1.500</td>
</tr>
<tr>
<td>9. Maintenance and financing of state investment projects</td>
<td>1.578</td>
<td>-</td>
</tr>
<tr>
<td>10. Selection of state investment projects</td>
<td>1.600</td>
<td>1.667</td>
</tr>
<tr>
<td>Implementation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Public procurement</td>
<td>2.205</td>
<td>2.000</td>
</tr>
<tr>
<td>12. Ability to finance state investment projects</td>
<td>2.038</td>
<td>1.000</td>
</tr>
<tr>
<td>13. Management of the portfolio of state investment projects and supervision</td>
<td>1.095</td>
<td>1.000</td>
</tr>
<tr>
<td>14. Management of implementation of state investment projects</td>
<td>1.786</td>
<td>1.000</td>
</tr>
<tr>
<td>15. Monitoring of state assets</td>
<td>1.652</td>
<td>1.333</td>
</tr>
</tbody>
</table>

According to the IMF, Ukrainian institutions for managing budget investments are weak at all stages of this process. With the exception of completeness and unity of the budget and project selection, Ukraine performs poorly in almost all areas compared to the world. On average, institutions in the stages of planning (1-5), distribution (6-10) and implementation (11-15) have low scores, with particular weaknesses in the management of public-private partnership (PPP), multi-year budgeting and project management. Recent initiatives to reform some institutions related to public investments, such as: improving the coordination of inter-budgetary relations; improving the legislative and supervisory framework for public-private partnership (PPP); introduction of a multi-year budget process and the introduction of integrated evaluation of project selection processes (at least for some investments) have improved the management of budgetary investments, but they have not made sufficient progress to significantly affect many of the scores for this evaluation.

In terms of economic efficiency, the IMF's assessment of budget investment management in Ukraine showed its low level, especially compared to global indicators (Table 2).

### Table 2. The IMF’s comparative assessment of the economic efficiency of budget investment management in Ukraine and the world.  
(Source: Compiled by the authors based on [16])

<table>
<thead>
<tr>
<th>Stages of management of state investment projects</th>
<th>World indicator</th>
<th>Indicator of Ukraine</th>
</tr>
</thead>
<tbody>
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<td>Planning</td>
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<tr>
<td>1. Fiscal goals and rules</td>
<td>1.837</td>
<td>1.250</td>
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<tr>
<td>2. National and sectoral planning of state investment projects</td>
<td>1.657</td>
<td>1.333</td>
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<tr>
<td>3. Coordination between public authorities</td>
<td>1.595</td>
<td>1.000</td>
</tr>
<tr>
<td>4. Project assessment</td>
<td>1.405</td>
<td>1.333</td>
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<tr>
<td>5. Alternative financing of state infrastructure projects</td>
<td>1.564</td>
<td>1.333</td>
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<tr>
<td>Distribution</td>
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<td></td>
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<tr>
<td>6. Multi-year budgeting</td>
<td>1.429</td>
<td>1.000</td>
</tr>
<tr>
<td>7. Completeness and unity of the budget</td>
<td>1.900</td>
<td>2.333</td>
</tr>
<tr>
<td>8. Budgeting of state investment projects</td>
<td>1.862</td>
<td>1.000</td>
</tr>
<tr>
<td>9. Maintenance and financing of state investment projects</td>
<td>1.415</td>
<td>-</td>
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<tr>
<td>10. Selection of state investment projects</td>
<td>1.271</td>
<td>1.333</td>
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<tr>
<td>Implementation</td>
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<td></td>
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<tr>
<td>11. Public procurement</td>
<td>1.676</td>
<td>1.000</td>
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<tr>
<td>12. Ability to finance state investment projects</td>
<td>1.876</td>
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<tr>
<td>13. Management of the portfolio of state investment projects and supervision</td>
<td>1.569</td>
<td>1.000</td>
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<tr>
<td>14. Management of implementation of state investment projects</td>
<td>1.591</td>
<td>1.000</td>
</tr>
<tr>
<td>15. Monitoring of state assets</td>
<td>1.433</td>
<td>1.000</td>
</tr>
</tbody>
</table>

According to the IMF, the economic efficiency of budget investments in Ukraine, with the exception of the completeness
and unity of the budget and the selection of projects, is lower than the average compared to the world. The gap between the economic efficiency of budget investments in Ukraine, based on the quality indicator, and the world as a whole is about 32%. This is due to the fact that economic efficiency strongly depends on the strength of institutional design, which the IMF also rates poorly.

We cannot disagree with the IMF’s low assessment of budget investment management. It is worth at least paying attention to the Strategy for Reforming the State Finance Management System for 2017-2020, in which one of the priorities was to ensure the planning of state investment projects based on strategic priorities and the medium-term budget perspective, their selection in accordance with a unified and transparent procedure [9]. However, in the next Strategy for Reforming the State Finance Management System for 2022-2025, the priority remained the same, because most of the tasks remained unfulfilled, in particular regarding [10]:

- implementation of strategic planning of budgetary investments;
- formation of methodological principles for the preparation and evaluation of state investment projects, taking into account their scope and implementation conditions;
- strengthening of requirements for the assessment of state investment projects on the basis of clear responsibility for the quality of their expertise;
- implementation of centralized monitoring of state investment projects based on clear criteria for timely identification of projects with a high risk of problems during their implementation, taking necessary measures to reduce relevant risks, as well as initiation of enhanced monitoring of the state of implementation of such projects.

Therefore, currently, the issue of reforming the expenditure component of the fiscal mechanism for regulating the investment development of the state in the form of budget investment management is gaining particular relevance.

Turning to international practice, it is advisable to take into account the fact that in order to organize the management of budgetary investments, it is necessary to take into account its key elements, which are of crucial importance for the support of efficient and productive budgetary investments (Figure 5).

![Figure 5. Mandatory elements of budget investment management. (Source: Compiled by the authors based on [19; 33])](image-url)
According to J.-Kh. Kim, J. A. Follow and S. Groom, eight mandatory elements are key to managing budget investments [19]:

1. Strategic investment guidance, project concept development and preliminary assessment. Provides broad strategic guidance for officials, making decisions at the industry level, and pre-selection of projects to ensure that their concepts are consistent with minimum criteria for compliance with the government strategic objectives and the economic classification of budget expenditures.

2. Formal assessment of the project. Contains a regulated set of stages of project preparation: preliminary and technical and economic justification, including a sketch design; an environmental and social impact assessment that must be completed before a project can be approved for funding; as well as methods appropriate to the technical capabilities, scale, and scope of the project.

3. Independent supervision. It consists of the verification of the project by the Ministry of Finance, the Ministry of Economy or an independent agency in order to counteract the optimistic bias – that is the overestimation of demand and the underestimation of costs.

4. Final decision on project selection and budgeting using a well-managed budget process. This means linking the evaluation and selection of state investment projects to the budget cycle, even if the project evaluation cycle has a different schedule; checking the acceptability and priority of the project; careful analysis of future costs and implementation of financing during budgeting.

5. Effective implementation of the project. It is characterized by checking the realism of project implementation, including organizational measures; planning of the public procurement schedule; using an adequate monitoring system and a system for managing the total costs of the project.

6. Ability to make adjustments to the project. It provides flexibility that allows changes to be made to the profile of payments, including the termination of non-working projects, taking into account changes in the circumstances of project implementation.

7. Ensuring sustainable operation of facilities. Covers the processes that ensure that the new facility is ready for operation and that the planned services can be provided on a sustainable basis; requires the effective transfer of management responsibility for the operation and maintenance, and support of reliable and up-to-date registers of capital assets.

8. Basic final review and actual assessment. It involves a systematic review of all projects after completion to assess the adequacy of implementation, timeliness and budget compliance, and a more complex factual assessment to analyze project outcomes against objectives set in the project.

The specified elements should be combined with the principles of budget investment management developed by the OECD, which emphasize the need for cooperation at all levels of governance in the context of coordination, assistance and institutionalization, and are also aimed at effective, targeted and productive use of budget funds as investments (Figure 6).

Figure 6. Principles of budget investments management. (Source: Compiled by the authors based on [23])
The principles of budget investment management are grouped into three main categories [12; 23]:

- **Category A:** coordination of budget investments at different levels of governance and policy. This category focuses on the importance of finding and creating complementarities in policies and programs, vertically between levels of government and horizontally between local authorities to improve the effectiveness of budget investments;
- **Category B:** strengthening capacity for budget investments and promoting policy learning at all levels of governance. This category highlights the various capabilities that must be present at all levels of government to support the conditions for effective investment and to facilitate continuous improvement from the strategic selection of investments to their implementation;
- **Category C:** provision of appropriate framework conditions for budget investments at all levels of governance. This category emphasizes the importance of good practices in fiscal decentralization, public finance management, public procurement, and regulatory quality at all levels of governance.

In the Strategy for Reforming the State Finance Management System for 2022-2025, a number of priority directions have been defined in terms of improving the management of budget investments, including [10]: implementation of medium-term planning of state investment projects; harmonization of approaches to evaluation and selection of proposals for financing state investment projects; increasing the capacity of line ministries in the management of state investment projects; improvement of monitoring and increasing transparency of implementation of state investment projects; modernization of approaches to the management of state investment projects financed from local budgets.

We suggest reforming the management of budget investments to be carried out comprehensively, taking into account all components of this process, as shown in Figure 7.

![Figure 7. Infologic model of reforming budget investments management in Ukraine.](image_url)

Planning of budgetary investments should take place on a strategic and priority basis. The strategic basis is key, and the rest of the efficiency factors are built on it. As T. Tuvlui notes, even in the case of timely and within-budget implementation of state investment projects, but without a unified national investment strategy or plan, in the end only separately implemented projects appear that will not create a systemic impact and will not lead the country to sustainable development [45]. The priority basis is closely related to the strategic basis because, in the case of having a clearly defined investment strategy and tactical plans for its achievement, it is much easier to decide which projects should be implemented as a priority, which can wait, and which are impractical to implement at all.

At the planning stage, a basis for further effective management of budget investments should be created. In our opinion, this stage should include the following measures:
1. Development of a national strategy and/or budget investment plan. Ukraine has national strategic documents, in particular the Decree of the President of Ukraine “On the Goals of Sustainable Development of Ukraine for the Period Until 2030” [11], Vectors of Economic Development 2030 [43], as well as sectoral strategies such as the National Transport Strategy until 2030 [6], Energy Strategy of Ukraine for the period until 2035 “Security, Energy Efficiency, Competitiveness” [7], Long-term Strategy for the Development of Ukrainian Culture – Reform Strategy [8], State Strategy for Regional Development for 2021-2027 [35], etc., which contain provisions on the implementation of individual state investment projects. Such a set of multi-directional documents of a strategic nature does not allow for forming a coherent picture of state investment projects and effectively managing them.

There is a need to develop the National Budget Investments Strategy, which will serve as the main reference point for the state and private investors. It must be approved at the highest level to ensure that it reflects Ukraine’s national policy and investment objectives. It is necessary to encourage the initiatives of the public and private sectors and provide support to strategic projects aimed at achieving general social and economic objectives. In addition, taking into account its prospective orientation, the National Budget Investments Strategy should define the priority sectors that will receive the greatest support from the state.

This Strategy should be based on experience and best practices, which can be divided into two key blocks. The first block provides for the collection of current information about the state investment projects necessary for implementation and taking into account the opinions of international experts from Foreign Investment Promotion Agencies. The second block consists of the most modern approaches used for strategic coordination of goals, actions and tasks. It may involve the calculation of public investment projects, results and performance indicators, cross-sectoral coordination and connection of the strategy as a whole with national, sectoral and territorial medium and/or long-term planning.

2. The use of medium-term fiscal frameworks, i.e., fiscal measures that allow expanding the horizon of fiscal policy development beyond the annual budget calendar. As M. Sherwood notes, the main advantages of using medium-term fiscal frameworks in planning include the following [40]:

- increase the transparency of the country’s medium-term budgetary goals, providing economic agents with information about current trends in public finances;
- ensure better consistency in time of the implementation of fiscal policy;
- help to solve the problem of joint pooling of budgetary resources, which occurs when a group that benefits from a certain type of budgetary expenditure or tax exemption does not bear the full cost of such measures;
- improve the budget planning process, improving the quality and stability of the decision-making process, contributing to the implementation of structural reforms.

The medium-term fiscal framework has a sliding nature, i.e., the indicators of recent years are used as a starting point for drawing up proposals for the next year’s budget, and deviations in allocations from year to year are transparently presented and explained. These steps usually involve the creation of a detailed annual budget and provide a strategic financial basis for this process. This practice is used in Ukraine, however, medium-term fiscal frameworks exist in a too-aggregated form and do not determine the maximum upper indicators of budget investments, broken down either by administrators or by state programs. Accordingly, they do not provide reliable guidelines for the sectoral distribution of budgetary investments.

The medium-term fiscal framework in Ukraine must be implemented precisely in the management of budget investments, under the conditions of:

- implementation of investment projects with variable operating costs;
- making capital expenditures near the end of the year, when their full scale does not materialize in the first year;
- invisibility of the consequences of budget investments in the current year, but with significant effects in the following years.

It is also appropriate to consider that the time horizon of this instrument is too short for large-scale investment projects, so it is necessary to ensure a reliable process of investment planning and selection of the most effective investments.
3. Implementation of budgeting based on results, which uses performance information to allocate, spend, and manage state budget resources. In our opinion, such budgeting has indisputable advantages precisely in terms of budget investment planning, because: it clearly outlines the goal and tasks, for the achievement of which investment implementation is necessary; constantly improves the performance of budget units; ensures transparency of the investment project formation process; helps in making decisions regarding the allocation of budget funds; acts as a tool for checking the effectiveness of investment projects; integrates the process of planning, programming and budgeting. The specified budgeting has certain limitations in its use in relation to budgetary investments, in particular, it is focused on the quantitative assessment of investment projects, rather than on the qualitative one, it is ineffective without a proper and systematic system of accounting and reporting, it does not allow for a quantitative assessment of social benefits; does not provide for an accurate assessment of the benefits of an individual investment project. Therefore, when using budgeting based on results, it is necessary to improve the monitoring of the productivity of budget investments.

4. Introduction of preliminary assessment of state investment projects. Currently, Ukraine does not have an official procedure for the preliminary assessment of state investment projects, taking into account their strategic significance. As a result, few projects are rejected at the stage of identifying new projects due to their low strategic importance or weak processing of technical and economic justification. In connection with the lack of a thorough preliminary assessment of state investment projects at the planning stage, the opportunity to ensure the consideration of alternative ways of meeting identified public needs is also missed. Therefore, we propose to introduce a preliminary assessment of the feasibility of public investment projects in order to form a budget and financial management plan for new large-scale projects. The purpose of the preliminary assessment of state investment projects, according to J.-Kh. Kim, is to prevent budget wastage and promote the improvement of financial management efficiency by ensuring transparent and fair implementation of new state investment projects in accordance with established priorities based on an objective and neutral study of the feasibility of such state-funded projects [18]. Such an assessment should be introduced exclusively for large-scale state investment projects, while typical construction projects, local utility projects, emergency recovery projects, and military projects should be exempted from this procedure.

5. Introduction of the independent examination of state investment projects. In Ukraine, in accordance with the Procedure for Conducting State Examination of Investment Projects [36], such examination is carried out by central executive bodies that implement state policy in the field to which the investment project relates, or by relevant local state administrations if the investment project relates to the development of the relevant region. As evidenced by the experience of the leading EU member countries (France, Ireland), the conclusions and recommendations made as a result of the project evaluation, as well as the research on the basis of which they were developed, are subject to independent examination. This is due to the fact that the main assumptions, forecasts and conclusions, in particular regarding the social profitability and sustainability of investments, submitted by the project initiator must be checked for reliability and realism. In Ukraine, an independent examination of public investment projects should be conducted for three main reasons: 1) the project-initiating agency may be weakly interested in submitting a high-quality project proposal, even though it may have the information necessary to formulate and analyze such a proposal; 2) officials of the project-initiating agency may experience difficulties when challenging the projects proposed by their management; 3) in different periods of time, when planning projects, there is a tendency to overestimate the benefits and underestimate the costs associated with the proposed project, as a result of which the financial and/or social profitability of investment is overestimated.

The functions of the independent examination should be performed by an objective institute that will not later benefit from the state investment project. Ideally, it should be an entity that does not belong to the structure of the project initiator or the body that carried out its assessment but is still a state institution, which may involve consultants from the private sector or experts from other government institutions. Taking into account the presence of a significant number of state investment projects, the independent expertise of large-scale projects should be carried out by a specialized state institute, while the expertise of minor projects can be carried out by the department of the project-initiating agency that is not interested in the results of their further implementation [23].

The distribution of budget investments involves making decisions about which precisely projects budget funds should be directed to. It is based on a strategic vision of the direction in which the country is developing. Moreover, prioritization should facilitate the selection of projects and the distribution of budget investments.

At the stage of distribution, the direction of investing budget funds in the most effective sectors of the national economy
should be selected. Moreover, the allocation of budgetary investments to the most productive projects requires comprehensive, unified, medium-term planning and objective criteria for evaluating and selecting projects.

In the post-war period, the amount of investment resources will be much smaller compared to previous years, and such (reduced) indicators will be maintained for at least several years (investment costs of enterprises will recover quite carefully and will be significantly inferior to household consumption costs). Therefore, it will be more important and effective to use the fiscal mechanism to stimulate investments in certain “breakthrough” areas, the acceleration and strengthening of which will largely depend on the success of transformations (or reforms) in the most important areas of the economy.

In the EU member countries, also in the post-pandemic period, there is a decrease in the investment opportunities of enterprises and households, therefore, unprecedented measures of budgetary support for investments are being taken. In particular, in order to provide large-scale support for budgetary investment, which will make the economies of the member states more stable and better prepared for the future, the formation of the Recovery and Resilience Fund is foreseen [13].

In order to receive funds from the Recovery and Resilience Fund, EU member states adopted and agreed with the European Commission on National Recovery and Resilience Plans. Moreover, the European Commission demanded compliance with the target indicators — a minimum of 37% of expenses for the development of a green economy and a minimum of 20% of expenses for the development of the digital economy, the rest of the expenses must be related to ensuring social and economic sustainability.

The concept of a green economy development assumes that economic and environmental policies can stimulate green growth and increase carbon, energy effectiveness and efficiency of materials use while conserving natural assets and improving people’s quality of life. Responding to the challenge of the times, the EU member countries took a course on greening the economy, which requires the improvement of production processes and the creation of new, more efficient products, the stimulation of innovations and structural changes in the economy, the creation of conditions for financial consolidation by reviewing the composition and efficiency of budget expenditures and increasing revenues due to increasing environmental taxation, strengthening investors’ confidence due to greater predictability and stability, creating more balanced macroeconomic conditions and stable prices for natural resources.

Ukraine, like the EU member states, also plans to carry out measures for the development of the “green” economy for 2022-2024. Thus, thanks to budgetary investments, the following measures are expected to be implemented [37; 39]:

- achievement of a “good” state of water, in particular, the protection of settlements, agricultural lands and estates from the harmful effects of water; water supply to low-water regions; measurement of water quality indicators;
- preservation and restoration of natural ecosystems by ensuring sustainable development and rational nature management;
- waste management, including radioactive waste management, prevention and adaptation to climate changes;
- support of energy efficiency measures for economical use of energy resources in the residential sector;
- increasing energy independence by supporting the production of domestic energy sources.

The modern scientific and technical revolution, the transition to a new technological system, and the ongoing process of strengthening the interdependence of national economic systems led to the rapid development and introduction of digital-based technologies into all spheres of the economy. The concept of the digital economy includes not only the restructuring of the applied information technologies but also the improvement of business processes themselves through the use of technologies based on cyber-physical solutions in order to achieve effective performance indicators. In connection with the implementation of digital technologies, thanks to budget investments, EU member countries seek to change the economic system, modify traditional markets, and social relations and, as a result, public administration in general.

Ukraine, following the example of the EU member states, also plans to conduct activities for the development of the digital economy in 2022-2024. Thus, it is envisaged to use the expenditure component of the fiscal mechanism for the implementation of the following measures [37; 39]: 1) providing establishments of general secondary education with modern educational equipment and updating the material and technical base; 2) ensuring digitalization of the most popular public services; 3) introduction of electronic interaction between electronic registers and their optimization; 4) development of the Internet networks, creation of conditions for mobile technologies of the fourth and fifth generations; 5) ensuring access of social infrastructure institutions, local self-government bodies and citizens to high-speed Internet; 6) creation of conditions for the development of IT business and other branches of the creative economy; 7) ensuring the availability of digital literacy training by developing existing and introducing new training tools; 8) improving the road safety management system to ensure the protection of life and health of the population.
The concept of ensuring socio-economic sustainability involves ensuring the equal satisfaction of people’s needs for development and quality of life, including the quality of the environment, the level of culture and education, as well as ensuring similar opportunities for future generations. Sustainable socio-economic development means the realization of three interrelated and mutually determined goals: creation of a more competitive, highly efficient and low-cost economy; raising the standard of living of the population; improvement of the natural environment. To achieve these goals, EU countries will use budget investments to implement the following measures: expanding the social safety net, improving the quality and expanding the range of public services, modernizing infrastructure and maintaining debt stability, etc.

Focusing on EU member states, Ukraine also plans to implement measures to strengthen social and economic stability in 2022-2024. Thus, it is planned to use the fiscal mechanism in terms of budget expenditures for the implementation of the following measures [37; 39]: 1) implementation of reforms aimed at creating an effective and perfect system of social protection of the population in the medium term; 2) provision of high-quality, modern and accessible education at all levels; 3) restoration of the status of Ukrainian science as a driver of technological development of the state by forming a new model of management and funding of science; 4) reorientation of the health care system from treatment policy to disease prevention policy by creating a capable public health system; 5) creation of conditions for implementation of innovative research and development of new competitive technologies; 6) formation of a decent judiciary, increasing the efficiency of justice institutions, implementation of European standards and the best world experience.

Therefore, in the future in EU member states and Ukraine, budget investments should ensure adequate financing of the medical and educational spheres, as well as the development of green and digital infrastructure. Such investments are highly likely to contribute to social integration, increase the overall productivity of the economy, and strengthen resilience to new climate conditions and future pandemics.

It should be noted that the directions outlined above are promising. The post-war recovery of Ukraine will require completely different tactical investment goals in the first stages. Thus, the Recovery Plan of Ukraine, developed by the Cabinet of Ministers of Ukraine, is divided into three key stages: 1) reconstruction here and now of objects critical to people’s lives; 2) restoration of schools, hospitals, construction of temporary housing after the end of hostilities; 3) long-term transformation according to the European model, that is, the development of a green and digital economy and ensuring social and economic stability.

According to O. Shutkevych, a few tasks must be completed for the successful implementation of investments in the restoration of Ukraine. The first is to maintain intellectual and professional potential in Ukraine. The second is to investigate requests for infrastructure rebuilding and in consolidation with military and war survivors. The third is to create an integrated map of destruction in order to be able to attract grants, create temporary housing projects, and have the possibility of buying apartments from developers into communal property. The fourth is to legislate the issue of reconstruction of Ukraine with the important participation of architects and engineers. The fifth is to develop principles and approaches, to create road maps, so that after the end of the war, the reconstruction process can be quickly started. The last thing is to provide visions of cities with cross-functional teams with clear strategies for the implementation of investments in the revival of Ukraine. Stakeholders who invest and understand how to build and finance should also be involved [41].

After the allocation of budget investments according to priority areas of development, their implementation takes place. Timely and full implementation of budget investment requires effective assessment, accounting, implementation and monitoring of implementation. Therefore, at this stage, we consider it appropriate to take the following measures:

1. Introduction of reassessment of state investment projects, which is carried out if it is necessary to make changes to the cost of their implementation. While preliminary assessment focuses on analyzing the feasibility of projects, reassessment pays relatively more attention to finding alternatives to reduce the scale and cost of projects.

It should be noted that making significant changes to state investment projects in terms of cost, work schedules and requirements can not only change demand characteristics but also affect the profitability of projects, therefore reassessment of such projects is necessary. It should be carried out without taking into account the costs of past periods and should include the costs of ending the project. If the results of a fundamental project review indicate that the project is not profitable any more, procedures are needed to initiate a redesign of the project to reduce costs or to terminate the project if no such solution is found.

The fundamental review mechanism is usually started when costs (expressed in constant prices) exceed a set threshold or projected benefits may turn out to be less than the evaluation indicated. In this regard, according to J.-Kh. Kim, it is critically important to have reliable reporting and monitoring mechanisms that allow you to launch a review mechanism when necessary [18].

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The fundamental review of the project is carried out at the stage between planning and implementation of the project (if factors that change the initial information adopted during the preparation of the feasibility study are revealed), as well as at the stage of project implementation.

2. The use of accrual accounting, which provides a more accurate picture of the capital assets of the state, facilitates integration between capital and current budget decisions and more rational choices about when to start new investment projects. In cash accounting, an asset refers to expenses when staged payments are made during its construction. In accrual accounting, an asset is expensed because it is “consumed” during its useful life, while payments made during construction are recorded as the acquisition of the asset. According to M. Cangiano, T. Kurristin, and M. Lazar, accrual accounting increases the transparency of asset management and budget investment decisions, particularly by focusing on maintenance costs. It provides a comprehensive view of assets, allowing the government to systematically report on the use of resources from the moment of creation of the asset during the entire period of its operation [5]. However, this method of accounting requires the capacity and significant improvement of the awareness of stakeholders in the use of the asset. It should be noted that currently accrual accounting has been introduced in Iceland and New Zealand; Canada, the USA, Sweden and Finland are in the process of implementing such accounting before the preparation of national financial statements; and Germany, Ireland and the Netherlands are using this accounting on a pilot basis in some budget institutions.

3. Provision of full and timely financing of budgetary investments. The unpredictability of the receipt of funds in modern conditions in Ukraine makes it much more difficult to accept and fulfill budgetary investment obligations. Overly detailed control over budget implementation also leads to a certain extent to slow down the implementation of public investment projects due to delays in the allocation of funds and obtaining the necessary approvals for making commitments or spending funds. Slowing down the implementation of projects delays the receipt of benefits from them. A serious shortage of funds, due to which there are periodic stops during the implementation of projects, can lead to an increase in their cost of implementation due to the appearance of additional costs for the restoration of works.

In our opinion, it is worth introducing the possibility of redistributing funds between investment projects within the investment portfolio of one manager of budget funds, which will ensure the effective implementation of such a portfolio as a whole. We propose to grant the right to managers of budget funds to redistribute smaller amounts, not exceeding the established maximum level, between state investment projects within their portfolios. For more significant redistribution of funds, it is advisable to introduce obtaining consent from the ministry responsible for budget investment issues, while for redistribution of the most significant amounts, it is advisable to introduce obtaining approval at the level of the government and/or parliament (by clarifying the budget during the year). The rules of redistribution, in particular the threshold values of the amount of redistributed funds for different levels of decision-making, must be fixed in the budget legislation. In addition, international practice also provides for the presence of provisions in the legislation that ensure the protection of capital expenditures, that is, preventing the redistribution of budget allocations from capital to current expenditures.

4. Improvement of control over budget investments. We believe that such control should be carried out in the following main areas:

- cost control: managing the design and construction processes to achieve the best quality-price ratio and ensure that the final cost does not exceed the budget;
- time control: managing the design and construction processes so that the project is completed on or before the agreed completion date;
- quality control: ensuring compliance of the quality and efficiency of the completed project with the initial goals of the project sponsor;
- change control: ensuring that any necessary changes are made within the approved budget, that they represent a good quality-price ratio and that permission to proceed has been obtained from the project sponsor.

In this regard, it is necessary to develop a system for monitoring the implementation of measures from the stage of inclusion of the object in the list of construction objects to direct commissioning. The transition is necessary from the control of costs for investment projects to the control of the results of their implementation: conducting of the real control aimed at achieving the set target indicators, as well as the effective use of funds in the implementation of investment projects. However, currently, the main emphasis during internal and external audits of budget investments falls primarily on the targeted use of budget funds, and audits do not allow for assessing whether expenditures correspond to the obtained results. To improve the efficiency of budget investments, it is necessary to improve the system of both internal
and external control and develop recommendations for deciphering the results of the analysis of project implementation and the effectiveness of budget expenditures.

Thus, budget investment management should include institutional decision-making mechanisms for the selection of state investment projects and their management. Key stakeholders should be involved in these mechanisms, including state and local authorities, and public and private investors who make a significant contribution to budget investments. However, quite often budget revenues and expenditures are not enough for investment support of economic agents, then the state should resort to debt instruments, which are an integral component of the fiscal mechanism for regulating investment processes.

**DISCUSSION**

Management of budgetary investments in Ukraine has many problems and is characterized by the need to adapt to difficult circumstances caused by military actions. Over the past decade, budget investments in developed countries have undergone significant transformations, as a result of considerable experience has been gained in their effective management.

We have developed an infologic model for reforming the budget investment management in Ukraine, the use of which will allow to improve both the institutional structure and the economic efficiency of budget investments. However, the specified model is based on the experience of reforms in developed countries and may become debatable. After all, the proposed budget transformations in Ukraine will require sustained political will over several political cycles in the face of "fatigue from reforms" and opposition from business groups having their own interests.

**CONCLUSIONS**

Budget investments regained their weighty importance during the period of the COVID-19 pandemic and the full-scale military aggression of the Russian Federation on the territory of Ukraine because the investment capacity of households and business entities has significantly decreased. An infologic model of reforming the management of budget investments in Ukraine is proposed, which involves improving planning (by developing a national strategy and/or budget investments plan, using medium-term fiscal frameworks, implementing budgeting based on results, introducing a preliminary assessment of budget investments and introducing their independent expertise), distribution (for the implementation of the strategic goals of post-war infrastructure restoration, the development of a green and digital economy and ensuring socio-economic stability) and implementation (on the basis of the introduction of repeated technical and economic substantiation, the introduction of accrual accounting, timely and full financing and implementation control) of budget investments. The use of this model will make it possible to implement only the most profitable state investment projects that have clear technical characteristics, have undergone a thorough approval and selection procedure, are financially accessible and to a large extent ensure economic growth and public welfare.

In order to ensure the post-war recovery of the economy, Ukraine should borrow the practice of budgetary investment of EU member states and implement its own model of reforming the management of budgetary investments in Ukraine based on foreign experience. For this purpose, it is necessary to reorient budget expenditures mostly to effective budget investment implementation. State support for enterprises and households at this stage should be more selective and directed towards helping viable economic entities or the preservation of which is critically important for the country's economy. Therefore, the prospects for further research are to find ways to solve the problems of budgetary investment and its activation, for which it is necessary to study and use the experience of the EU member states.

**ADDITIONAL INFORMATION**

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CONFLICT OF INTEREST
The Authors declare that there is no conflict of interest.

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ПЕРСПЕКТИВИ РЕФОРМУВАННЯ УПРАВЛІННЯ БЮДЖЕТНИМИ ІНВЕСТИЦІЯМИ В УКРАЇНІ В КОНТЕКСТІ МІЖНАРОДНОГО ДОСВІДУ

Бюджетні інвестиції є необхідною передумовою інвестиційного розвитку держави. У країнах-членах ЄС бюджетне інвестування сприяє реалізації прибуткових або неприбуткових, проте соціально значимих проектів, що дозволяють активізувати інвестиційні процеси й на макро-, і на мікрорівні. Необхідність використання бюджетних інвестицій як стимулу економічного зростання обумовлює потребу поглибленого вивчення теоретико-прикладних засад їх здійснення, а також обґрунтування перспектив реформування управління бюджетними інвестиціями в Україні в контексті міжнародного досвіду.

На основі аналізу вітчизняного досвіду та узагальнення зарубіжної практики визначено складові й ключові принципи управління бюджетним інвестуванням, які підкреслюють необхідність співробітництва на всіх рівнях влади в контексті координації, сприяння та інституціоналізації.

Запропоновано комплекс заходів щодо реформування управління бюджетними інвестиціями в Україні на основі використання інфологічної моделі, яка, на відміну від відомих, передбачає вдосконалення планування (шляхом розробки національної стратегії і або плану бюджетних інвестицій, використання середньострокових фіскальних рамок, упровадження бюджетування за результатами, запровадження попередньої оцінки бюджетних інвестицій і введення їх незалежної експертизи), розподілу (на реалізацію стратегічних цілей повоєнного відновлення інфраструктури, розвитку зеленої й цифрової економіки та забезпечення соціально-економічної стійкості) та використання (на основі запровадження повторного техніко-економічного обгрунтування, введення обліку за методом нарахування, своєчасного та повного фінансування й контролю виконання) бюджетних інвестицій, що дає змогу реалізувати тільки найпідприємницькі державні інвестиційні проекти, які мають чіткі технічні характеристики, проїшли ретельну процедуру ухвалення та відбору, є фінансово доступними й значною мірою забезпечують економічне зростання та суспільний добробут.

Ключові слова: бюджет, інвестиції, бюджетні інвестиції, видатки бюджету, капітальні видатки бюджету, державні інвестиційні проекти, сталий розвиток

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