Formation of effective mechanisms of organizational and economic ensuring the public administration of development of transport infrastructure

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Annotation. The analysis and substantiation of theoretical and practical provisions regarding the formation of effective mechanisms of organizational and economic support of the state management of the construction and development of transport infrastructure in Ukraine was carried out. It was revealed that when developing infrastructure, it is necessary to operate existing facilities more efficiently and reduce the construction of new transport infrastructure facilities. To achieve this task, government authorities need to develop long-term intersectoral programs taking into account a technical analysis of the existing infrastructure, as well as apply various government mechanisms that stimulate more efficient use of transport infrastructure. According to established international practice, the system of financing infrastructure projects is provided through investment companies, investment banks and insurance companies, special projects for foreign direct investment, financial information agencies, rating agencies, and investor clubs.

In the context of using public-private partnership approaches to solve these problems, the experience of implementing an infrastructure development model, in which various models of support for the infrastructure sector were used: American, British, French, providing for direct state regulation of infrastructure projects, deserves attention. The result is a public-private partnership model with financial leadership, in which the leading role in the management of a special project company is played by investment banks, which are responsible for the tender process and can provide credit to the company implementing infrastructure projects.Since the controlling stake in the company belongs to banks, the decision on the conditions for the participation of economic entities in the project, control over their implementation, as well as the fulfillment of financial obligations are ensured by the above-mentioned banks. By concentrating the implementation of the project under the unified control of the investment bank and its active participation in the project, transaction costs are reduced due to more rapid financing and a more optimal redistribution of financial flows.

Keywords: public administration, public-private partnership, management mechanisms, project management, risks, transport infrastructure.

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Introduction

Creating the necessary conditions to ensure the effective use of the economic potential of the territory is the main task of transport infrastructure. The existing infrastructure in many countries of the world was formed in the 20th century. and does not fully correspond to the modern innovative and technological level, and therefore there is global obsolescence [3; 5].

The process of obsolescence is also facilitated by population growth, which leads to more intensive use of existing infrastructure. However, by 2050, according to UN experts, a significant reduction in fertility rates is expected in 83 countries, including developed countries, which account for 46% of the world population. Thus, the development of transport infrastructure is characterized by a disproportion in terms of the lack of facilities in the current period and the unnecessary need to create new infrastructure facilities in the future [6; 7].

Peculiarities of administration and management of the construction and development of transport infrastructure are the object of research by Ukrainian and European scientists in the field of public administration, law and economics. In particular, it is necessary to mention the scientific publications of M. Buryk, A. Veremchuk, O. Dmitriev, I. Dragan, A. Zelenkov, V. Mykytenko, O. Nazarkevich, I. Sadlovska, H. Ferdman and others. At the same time, theoretical and practical approaches to the formation of effective mechanisms of organizational and economic support of state management of the construction and development of transport infrastructure in Ukraine require further research.

The purpose of article – formation of theoretical and practical provisions regarding of effective mechanisms for the organizational and economic support of public administration and management of development of transport infrastructure in Ukraine.

RESULTS

The most reliable and cost-effective is road transport. To use it, a minimum of infrastructure is required, it is the most mobile and economical. But the problem with road transport is that it requires serviceable roads.

Problems associated with the obsolescence of road transport facilities naturally arise two to three decades after a period of economic recovery, when facilities built during a period of intensive development simultaneously begin to deteriorate. During such a period, the question of the proportion between newly created infrastructure facilities and existing ones that require major repairs and significant renovation in accordance with new trends in society becomes relevant.

Currently, in developed countries, due to a clear disproportion between the construction of new infrastructure facilities and the maintenance of existing ones, a situation has developed that can lead to complete obsolescence of the infrastructure and a decrease in economic sustainability with subsequent economic decline.

According to Barclay's, in the post-crisis year 2009, companies made profits due to a sharp reduction in capital costs for updating infrastructure facilities [6]. Inappropriate use of capital expenditures has led to a decrease in the suitability of their use.

In the context of the economic crisis, the budgets of countries lack financial resources for a broad nationwide renewal of infrastructure. At the same time, economic losses from underfinancing of infrastructure facilities for developed countries amount to 1-3% of GDP, for developing countries – 4-9% of GDP [3].An increase in financing for infrastructure projects is possible due to an increase in public debt, as, for example, was done in Japan. The same development path was implemented by the US government in 1929–1933. and 1945–1960 Currently, using this approach when there is a shortage of transport infrastructure financing, this will lead to a significant

increase in public debt [7], which is not compensated by the multiplier effect of investing infrastructure in economic development.

Also, financing of infrastructure projects can be carried out by increasing taxes, which, on the one hand, will improve the labor market, and on the other, can lead to an increase in the burden on business, as well as to negative dynamics of the socio-economic development of the territory [6]. For example, in 2008, the US government allocated $106.1 billion for the development of transport infrastructure [6; 7], which amounted to 26% of the funding for infrastructure development.

The allocated funds for infrastructure development did not increase the efficiency of operation of the existing transport infrastructure and, as a result, did not have a positive impact on the growth of US GDP, which in nominal terms in 2009–2010. remained at about 14 trillion US dollars [6; 7]. For example, following the implementation of a project to increase the highway in Los Angeles (investment cost of more than $1 billion), traffic on the highway worsened, which in terms of economic development of the territory resulted in a negative increase in the profits of transport companies [7].

In Germany, as a result of considering alternative project options and residents' objections to their implementation, experts came to the conclusion that the construction of additional new highways is economically ineffective. Based on the results of an analysis of the state of Japan's infrastructure in 2013, experts also proposed limiting the amount of investment in new infrastructure facilities and directing capital investments to maintain the condition and update of worn-out infrastructure [1].

As part of control in the UK in 2008, ineffective management approaches were identified, which resulted in a decrease in attracting investment in infrastructure. For example, infrastructure projects were not coordinated with each other in terms of resources due to weak intersectoral coordination, insufficient planning and excessive regulation [1].

To solve this problem, the UK government has optimized the resources of more than 500 infrastructure projects with an investment volume of 250 billion pounds sterling, transformed the management and planning system for infrastructure projects, for the implementation of which new government bodies have been created and new parameters for assessing the effectiveness of infrastructure projects: the level of innovation in the project, the volume of investments attracted and the level of contribution to the development of the economy of the country or local territory. The government has also formed a long-term intersectoral infrastructure financing program for the period until 2042 with balancing indicators for the medium term. In addition, the UK government sets the task of conducting a technical analysis of infrastructure projects under various options for their implementation.

In Sweden, a systematic approach to the selection of effective projects has also been approved at the government level and is a generally accepted standard, including four stages [1; 4]: 1) consideration of measures that may have an impact on reducing or distributing the load on the operation of transport infrastructure; 2) implementation of measures aimed at increasing the efficiency of use of existing infrastructure; 3) making a decision on the possibility of minor changes in the urban planning of the existing territory (if necessary); 4) consideration of the possibility of allocating and attracting financial resources (investments) for the construction of new infrastructure facilities or large-scale urban planning changes (used if it is impossible to eliminate problems in the field of infrastructure with the above measures).

The implementation of the sequence of these four stages made it possible to increase the efficiency of the use of financial resources, taking into account the needs of consumers and the technical condition of infrastructure facilities. In this strategy,

transport infrastructure facilities were considered as separate assets of the region.

Using the experience of Sweden and the UK when planning and selecting infrastructure projects will reduce the risks of ineffective management of infrastructure projects.

To create and maintain infrastructure that allows social production to function normally, the state itself either acts as the main institution for the creation and development of transport infrastructure, or transfers these powers to private individuals by providing guarantees and preferences.

Developed countries have accumulated extensive experience in creating and operating a system of development institutions covering the most important areas of the economy - these are pan-European institutions (EBRD), and agencies supporting exports, including export insurance (French COFACE, Italian SACE), and institutions supporting innovation and high technology (SITRA venture fund in Finland). For example, in the USA there is such a form of territorial management as a “business improvement district”, which began to be created in industrial zones and business districts of the largest US cities from the 1970s, and by the mid-1990s. More than 1,000 "improved business districts" were formed. The governing bodies of such an area are private and public partnerships. Their activities are aimed at facilitating the work of resident firms, increasing the external attractiveness and improvement of industrial areas, including road repairs, artistic decoration of streets and buildings, cleaning areas, and ensuring law and order.

Within the framework of this article, it was revealed that when developing infrastructure, it is necessary to operate existing facilities more efficiently and reduce the construction of new transport infrastructure facilities. To implement this task, government authorities need to develop long-term intersectoral programs taking into account the technical analysis of the existing infrastructure, as well as apply various government mechanisms that stimulate more efficient use of transport infrastructure [2; 5].

According to established international practice, the system of financing infrastructure projects is provided through investment companies, investment banks and insurance companies, special projects for foreign direct investment, financial information agencies, rating agencies, and investor clubs.

In order to minimize financing risks and attract not only bank investments, various forms of interaction between investors, the state and direct participants in the implementation of infrastructure projects (public-private partnerships) are used in practice: life cycle contracts, public-private enterprises, joint venture companies, division agreements products, leasing, preferential rental payments when creating/recreating an object with the subsequent preservation of the social component, concession agreements. The implementation of projects on the principles of public-private partnership has shown more significant efficiency compared to projects implemented exclusively under the management of government agencies [8].

Infrastructure development through public-private partnerships does not fully solve the problem of deteriorating infrastructure, its maintenance and operation, since private operators are aimed at maximizing the use of the facility within its validity period [5; 8].

In the context of using public-private partnership approaches to solve these problems, the experience of implementing an infrastructure development model in Australia deserves attention. Modern world experience was applied there, in which various models of support for the infrastructure sector were used: American, British, French, providing for direct state regulation of infrastructure projects.

Considering that the Australian states were formed as separate British colonies, they have almost autonomous powers in the

use of land resources (planning, control), stimulating economic activity through the provision of various forms of state support.

As a result, a public-private partnership model with financial leadership was introduced, within which the leading role in the management of a special project company is played by investment banks, which are responsible for the tender process and can provide credit to the company implementing infrastructure projects. Since the controlling stake in the company belongs to banks, the decision on the conditions for the participation of economic entities in the project, control over their implementation, as well as the fulfillment of financial obligations are ensured by the above-mentioned banks.

By concentrating the implementation of the project under the unified control of the investment bank and its active participation in the project, transaction costs are reduced due to more rapid financing and a more optimal redistribution of financial flows.

The implemented concept of public-private partnership in the Australian states has been actively used in other foreign countries, showing an average efficiency increase of three times compared to traditional methods of public financing. For example, the indicators of exceeding the planned cost of the entire project and its deadlines in traditionally organized projects in the UK were 73% and 70%, respectively, while the indicators of projects organized according to the principle of a public-private partnership model with financial leadership in the Austrian states showed results of 20% and 24% respectively [7]. Therefore, greater use of a public-private partnership model with financial leadership could contribute to greater reductions in government budget expenditures.

CONCLUSIONS

Thus, we can conclude that public administration mechanisms must be aimed at creating conditions for self-development of the territory in order to stimulate economic development and growth of regions without direct government intervention. One of these areas is the implementation of infrastructure projects. The analysis made it possible to highlight the following directions for the development of transport infrastructure: 1) development of existing transport infrastructure and construction of new facilities, changes in management approaches to the management of transport infrastructure; 2) reconstruction and development of the existing transport infrastructure, as well as adjustment of management decisions in terms of attracting investment funds; 3) monitoring of transport infrastructure and maintaining existing management decisions for its development.

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