

# **ORGANIZATIONAL AND ECONOMIC MECHANISM OF INVESTMENT DEVELOPMENT OF THE REGIONS INFRASTRUCTURE**

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## **Abstract**

The theoretical and methodological principles of the organizational and economic mechanism of investment development of the region's infrastructure have been generalized, that allowed to substantiate the necessity of complex and systematic research of the economic space in the regions, infrastructure complex and investment potential of the regions. The main directions of the organizational and economic mechanism of investment development of the infrastructure in the regions are outlined, and these directions in common are the corresponding stages of analysis, forecasting, modeling and strategic management at the level of the economic system of the regions, potential investors and the territorial community.

**Keywords:** investment, mechanism, infrastructure, development, region.

Reducing regional differentiations in the levels of social and economic development and living standards of the population in the regions, activating of investment activity, promoting the efficient use of budget funds and local resources, strengthening the competitiveness of the regional economy and harmonizing priorities of regional economic development with the corresponding national –wide priorities require development of a clear organizational and economic mechanism of investment development in the

regions. At the present stage, the development of the infrastructure complex is a foundation for competitiveness of Ukrainian regions forming. Simultaneously infrastructure development of the Ukrainian regions requires adequate investment support, the development of the appropriate programs and strategic planning, which will affect on the functioning of all economic sectors.

Peculiarities of regional infrastructure development were researched by Sotnichenko L.L., Sadchikova I., Koval M., Bilyk V.V., Abramova I.O., He L., Duchin F., Susantono B., Husin A., Berawi M., Dikun S., Ilyas T., Berawi A., Estache A., Grégoire G., Morgenroth E., Agénor Pierre-Richard, Nabli Mustapha K., Yousef Tarik M. [1-8; 10-12]. At the same time, the scientific works of Gavrilyuk O., Heytsya V., Gubsky B., Zaharina S., Miklovdi V., Sidenko V., Lukyanenko D., Fedorenko V., Kharlamova G. , Shevchuk L., Onischenko V. O. [9] etc. are devoted to the research of regional investment processes in Ukraine.

In particular, assessment of the level of infrastructure development in the regions of the state Sotnichenko L.L. determines through the delineation of their positive and negative sides, as well as through cluster analysis of the regions in the country. The author, while analyzing the infrastructure of the regions of Ukraine, points out the uneven situation and certain disproportions of its development; therefore, it suggests using an integral indicator based on indicators such as the dynamics of the branch specific weight, the dynamics of the value of fixed assets and the dynamics of cargo transportation in branch [1].

The authors of the analytical research [2] point out that the development of infrastructure depends on the specifics of branches and regions and is carried out in accordance with changes in the manufacturing sector. The structure of production in modern conditions is characterized by a growing orientation not to the branch, but to the regional system of management. In current conditions, Ukraine has an urgent need to accelerate the solution of the problems concerning development of infrastructure components. Formation of an adequate market

infrastructure is one of the most important and necessary conditions for the transformation of economic relations in the country.

According to He L. and others [3], definition of significant economic disproportions, for example, in eastern, central and western regions of China, based on unambiguous problems of social equality and political stability in the country. The main obstacle for economic development is the lack of transport infrastructure, so the government is investing exactly in this area. The authors analyze the results of projected transport infrastructure for the comparative advantage of the Western region and its interregional trade.

Susantono B. [4] notes that regional development is an approach to planning an integrated spatial development that enhances not only social and economic growth but also reduces the regional differences. The approach combines various available resources such as natural resources, human resources, infrastructure, financing, institutions and environments for large-scale development support, that's why coordination is crucial for many reasons. Regional development requires strong synergy between different sectors.

Due to Husin A. [5] infrastructure plays an important role in supporting of long-term development in order to raise economic growth. Analyzing the overall infrastructure plan for accelerating and expanding of Indonesia's economic development for 2011-2025, the author suggests applying demand forecasting approach using the simulation modeling called System Dynamics, which could provide a reliable assessment and generate scenarios for comparing the financial feasibility of the project before and after implementation, which associated with the innovative features of a project.

Estache A. and others [6] have a similar position indicating that infrastructure is important for growth, and its impact can easily be underestimated. In order to avoid underestimating of its impact, it is necessary: to isolate infrastructure and public capital, since the latter one tends to underestimate the impact of infrastructure growth, to take into account the

national payments that can be made from supranational projects, if necessary. The authors note that infrastructure investments are necessary to maintain growth and vary in different regions, as well as they differ in the needs of sub-sectors by regions.

Morgenroth E. [7] considers infrastructure and especially investment in transport infrastructure as an important policy tool for regional development. In particular, politicians and residents of most peripheral regions tend to lobby for the involvement of centralized investments in transport infrastructure. The supporters of such transport infrastructure projects, as a rule, argue about the benefits of access, employment growth, effects of economic growth and the improvement of social integration.

Exploring the impact of public infrastructure on the formation of private capital in three countries in the Middle East and North Africa-Egypt, Jordan and Tunisia, Agéno Pierre-Richard and others [8] highlights the various channels through which public infrastructure can affect on private investment. They describe their empirical structure based on the vector of auto regression model (VAR), which reflects the flows and reserves of public infrastructure, private investment, as well as changes in production, private sector loans and real exchange rates.

It should be noted that regional development in general and the effective functioning of the infrastructure complex in particular are directly related to the investment policy of a state. According to V.O. Onishchenko [9, p. 4], influencing the investment process, the state uses legal, legislative, organizational, economic mechanisms, institutes and instruments. State investment policy, the formation and improvement of laws and other normative and legal acts, granting of tax privileges, strengthening control over the purposeful use of state investment funds are the main instrument of state management of investment process. This situation requires from the state as an important participant in the investment processes, special mobilization,

concentration attention on the performance of functions concerning correction of the development conditions in the investment sphere, the transition to management of large investment projects etc.

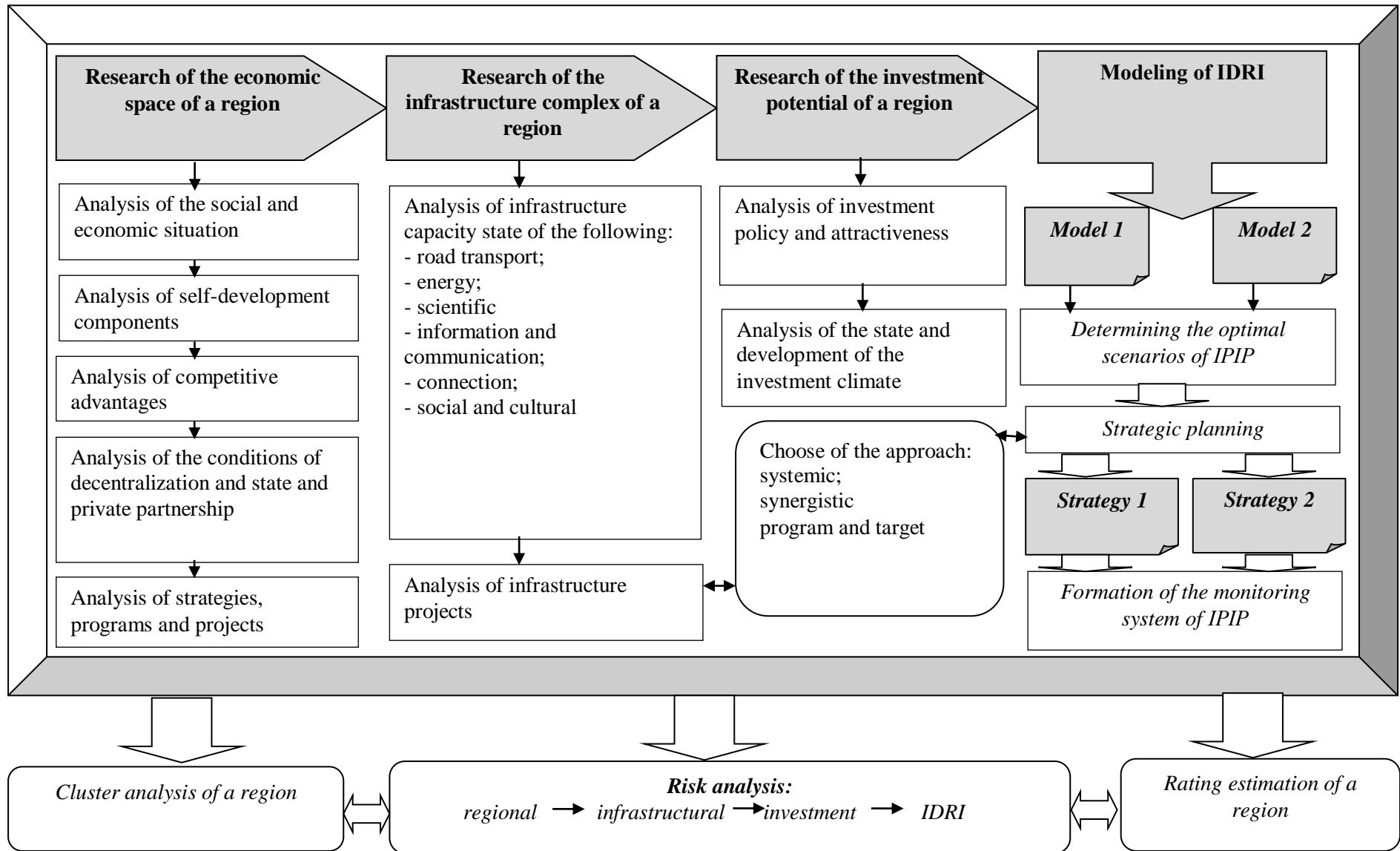
Thus, the issue of investment processes intensification in the development of the infrastructure of Ukrainian regions, increasing the efficiency of the organizational and economic mechanism requires a deeper and more comprehensive scientific research and the development of an appropriate algorithm for its application.

Develop the organizational and economic mechanism of investment development of the infrastructure of the Ukrainian regions with the selection of stages, criteria and indicators of evaluation is a purpose of the research.

In general mechanism of stimulation of regional infrastructure development is a way of transforming the economic relations between the subjects in the direction of coordinating their interests and resolving conflicts that arise between them in the process of economic activity. The structural aspect of this mechanism consists of following blocks: definition of the integral goal by the subjects, specified in the form of a "tree of goals" by spheres and levels; realization of goals by appropriate methods and tools for achieving a complex infrastructure impact on the economic space of a region; detection of the necessary and sufficient sources of investment and budget revenues that allow to achieve the goals and objectives set; diagnostics and monitoring of the results of complex infrastructure maintenance promotion [10, p. 36].

In our opinion, the organizational and economic mechanism of the investment development of the region's infrastructure (IDRI) (Fig.) should be based on the following directions:

I. Research of the economic space of a region: an analysis of the social and economic situation; analysis of self-development components; analysis of competitive advantages; analysis of conditions for decentralization and state and private partnership; analysis of regional development policy, strategies,



**Fig. Organizational and economic mechanism of investment development of the regional infrastructure (IDRI)**

programs and projects. At the same time, the possible indicators for evaluation are the following: gross regional issue; gross regional product (GRP); gross added value (GAV); gross net profit of a region; profitability indicators; resource efficiency of production of GRP (GAV) per unit of potential in a region, by branches, sectors of the economy; the cost of production of goods and services (GRP, GAV) for 1 UAH of current expenses (wages, consumption of materials, etc.) generally and by the branches in a region; volumes of export-import of goods-services; volume of net exports per head; the number of economically active enterprises per 10 000 of population; volumes of industrial production; the size of population income; the volume of retail turnover per head; the volume of construction works performed etc.

It should be noted that in the scientific literature there is no single approach to the criteria for determining the social and economic development of the regions.

In particular, I.O. Abramova [11, p. 8] determines the social and economic development of the regions according to three following criteria:

1) the critical level of deviation of social and economic indicators from the average indicators of territories development, defined as the amount of the average indicator territories development of the corresponding group and the coefficient of 0.75 - for stimulants indicators and 1.25 - for disinfectants;

2) dynamics of GRP as a general indicator of social and economic development of a region;

3) assessment of the threshold values of the social and economic development of a region.

The following indicators of social and economic development as the following: fertility and mortality, crime rate, load per vacancy and unemployment rate, housing provision to the population, income per head, are also used:

II. Investigation of the infrastructure complex of a region should provide an analysis of the state of infrastructure potential in the following spheres: road transport; energy; scientific; information and communication; connection; social and cultural. At the same time, it is advisable to determine the level of regional needs provision for infrastructure maintenance, as well as the conditions and trends of infrastructure capacity modernization in order to integrate the region's economy into the global economic space on the basis of infrastructure interaction.

It should be noted that nowadays there is no developed methodology for complex assessment of infrastructure provision of the regions both at the level of the Ministry of infrastructure of Ukraine and at the regional level. The results of economic research are often based on the monitoring methodology of infrastructure, built according to indicators developed by the European Bank for Reconstruction and Development (EBRD) [12]. The purpose of a research is to carry out a regular, in-depth analysis of reform of six key infrastructure sectors: electricity, gas and water, telecommunications, rail transport and highways. It is also advisable to implement international practice in the use of a complex indicator that assesses the state of an important component of infrastructure support - logistics. The Logistics Performance Index (LPI) is based on a worldwide survey of market operators (global forwarding companies and express carriers).

III. Research of investment potential of a region should be directed in the following directions: analysis of investment policy and attractiveness; analysis of the state and development of the investment climate. Simultaneously the possible indicators are the following: the volume of direct foreign investments per head, by types of economic activity and by groups of countries; volume of capital investments by types of assets, by sources of financing and by types of economic activity, etc.



IV. IDRI modeling and determination of optimal scenarios should take into account the results of the conducted research and analysis of the economic space of a region, the infrastructure complex, the investment potential of a region, according to the risk factors, rating and clusterization.

The cluster approach facilitates more effective interaction with business and potential investors, taking into account its strategic guidelines and development priorities, enables targeted and realistic long-term planning of investment resources of a region and territories development. The prerequisites for cluster formation in the regions are the following: organizational (common market of transport services, highly skilled personnel, interest and support from the regional authorities, reduction of fixed costs due to the scale effect), financial and economic (financing of the governing body at the expense of voluntary contributions of the participants, increase of the share on the market and, accordingly, revenues and deductions to all funds, reduction of fixed costs due to the scale effect, etc.), synergistic (revenue growth, improvement of service quality, harmonization of interests of carriers and consumers, increase of efficiency of investment use and competitiveness of the industry).

The analysis of risks in the system of organizational and economic mechanism of the IDRI should be directed in the following spheres: regional risks; infrastructure risks; investment risks.

In the system of organizational and economic mechanism of the IDRI, the rating assessment of the investment attractiveness of the Ukrainian regions, which should be based on the definition of the following: the investment potential, that is, the region share in the investment market of Ukraine; investment risks, that is, the coherence and scale of social and economic problems of the region, is an important stage. It should also be noted that the availability of information, the formation of regional investment projects and the activity of the regional authorities positions, greatly affects on the competitive

advantages of the regions and the efficiency of the ratings of investment attractiveness of the regions formation.

As follows, the state investment policy should be diverse and form [9]: the state legislative base in the field of investment activity; the administrative regime of the regions of Ukraine; selection of priority directions for financing from the state and local budgets; granting of tax and other privileges to entrepreneurial structures for realization of competitive advantages to the territory; choose and justification of investment projects on a competitive basis, taking into account the realization of competitive advantages of a state and its regions; choose of participants for realization of investment projects of the state and regions; calculation of the required amount of investments, sources of their coverage and financing order; PR campaign of investment opportunities in the regions of Ukraine, interaction with investors, creation of data bank; monitoring of investment activity.

Thus, the researched theoretical and methodological principles of the organizational and economic mechanism of investment development of the infrastructure of the Ukrainian regions allowed forming the main directions that in general are a research of economic space of a region, the infrastructure complex and investment potential. A thorough analysis of the isolated areas of the research allows for efficient modeling of IDRI, strategic planning of regional infrastructure projects and programs of social and economic development of the regions, and the formation of scenarios for their effective implementation. At the same time, creation of a monitoring system with a complex analysis of financial and economic indicators, the number of implemented projects and programs, an assessment of changes in conjuncture of the region subjects, the selection of deviations and the reasons for their occurrence and so on and so forth remains the extremely important aspect in the system of organizational and economic mechanism of investment development of the infrastructure of the Ukrainian regions.

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