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Organizational and Economic Mechanism of Investment Management in the Renovation of Residential Buildings in Moscow

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Abstract: Moscow as one of the megacities of the world is subjected to socio-economic transformation, the introduction of innovative technologies, changing the urban environment. The main purpose of these changes is to create a comfortable living environment for citizens. A number of investment projects are currently being implemented in the capital. One of them is an investment and construction project of renovation of residential buildings of the first period of industrial housing construction in Moscow. Investment and construction program of renovation in Moscow started in 2017 and is designed to 2032. The renovation program is the second stage of the complex reconstruction of the panel five-story buildings in Moscow. Successful implementation of the state program largely depends on the well-established organizational and economic mechanism of investment management in the renovation of residential buildings in Moscow. The effectiveness of such a mechanism will require a number of complex tasks. The article examines the organizational and economic mechanism of investment management in the investment and construction project for the renovation of residential buildings in the metropolis. The analysis of the purpose, subject, object, stages and tasks of the investment and construction project containing innovative components. Based on the results, recommendations are made for making a decision on the further implementation of the state program of innovative nature. That will optimize the expenditure of budgetary and extra-budgetary funds, reduce the time of construction, improve the quality of construction of residential and social infrastructure, improve the consumer quality of residential areas, houses, apartments and non-residential premises.

1. Introduction

A significant part of the housing stock of the city of Moscow was built in the era of industrial housing construction, which began with the plan of reconstruction of Moscow in 1951-1960.

In connection with the development of production of precast concrete structures and parts in Moscow, in the first period of industrial housing, for 1956-1970 years was built 25504 thousand square meters.m. total area of 5-storey residential buildings. In the second period from 1965 to 1995 was built 57647 thousand square meters of stone block 8-9-10-12 storey residential buildings [1]. The rapid development of industrial housing has led to a rapid moral aging of typical residential buildings, both the first and second stage of housing construction. The physical deterioration of structures, which is the result of a number of reasons: shortcomings in the design, limited material resources, imperfection of production technology and installation of prefabricated structures, the impact of the



environment and other factors, contributed to the reduction of consumer qualities of residential buildings.

The first stage of the investment project of renovation of residential buildings in Moscow was implemented a program of comprehensive reconstruction of residential areas of the first period of industrial housing in the 90s of the last century. The financial mechanism of complex reconstruction of the 5-storey housing stock of the city of the first stage of renovation was mixed. Funding was provided from urban sources, extra-budgetary funds, administrative districts and investors.

Investment and construction renovation program in Moscow, as the second stage of the complex reconstruction of residential buildings in Moscow started in 2017.

The investment project of renovation brings together representatives of various circles of society: state and municipal employees, architects, engineers, urban planners, economists, developers, employees of financial companies, investors, technology startups, representatives of the media and residents of the capital.

As stated in the decree of the Government of Moscow from August 1, 2017 No. 497-PP, renovation of the housing stock in the city of Moscow - a set of measures aimed at the upgrading of living environment and creation of favorable living conditions of citizens and public space in order to prevent the growth of emergency housing in the city of Moscow, development of residential areas and their improvement [2]. The program was approved until 2032 to prevent an emergency situation in the city in the next 15 years.

Thus, the adopted program of renovation involves the residual demolition of emergency and dilapidated houses, technological demolition, the elimination of obsolete housing, the creation of resettlement Fund.

The Department of economic policy and development of the city of Moscow will continuously monitor the implementation of the renovation Program.

The main objective of the renovation Program, declared in the legal act-to prevent the mass occurrence of emergency housing in the city of Moscow and at the same time to adjust the accumulated over the past decade, the disproportions of the city and to create a city environment of a fundamentally new quality.

The order of implementation of measures for the implementation of the renovation program is consistent with the approved for this purpose urban planning documentation, the technical condition of apartment buildings included in the renovation Program, financing mechanisms and socio-economic factors of urban development of the capital.

The renovation of the housing stock is carried out taking into account the development of the network of infrastructure facilities, creating additional conditions for the development of human potential, the environment, which ensures comprehensive development of the territory in accordance with modern requirements for the urban environment.

2. Literature review

In the implementation of the renovation Program also plans to address the following tasks: unloading of transport infrastructure; the creation of a new urban environment, adapted for a comfortable stay, rest and work; the construction of energy-efficient apartment buildings, leading to a reduction in the cost of their operation; improving the environmental situation of residential development; renewal and modernization of engineering infrastructure; the formation of modern architectural appearance of the city of Moscow.

It should be noted that as a result of the tasks to be solved in the process of renovation, the consumer properties of residential buildings will inevitably increase, and, consequently, the cost of housing as a market product. Currently, there is a trend of a sharp decline in supply and an increase in demand for apartments in five-storey buildings included in the renovation program in Moscow. Many families refused to sell apartments, as in the future plan to buy comfortable housing at the expense of the city budget.

Successful implementation of the investment and construction renovation program depends on competent and quality management of this investment project.

The problems of management of investment projects were engaged in Western scientists R. Bacon, J. Keynes, A. Marshall, O. Morgenstein, F. Knight, J. Math. Neiman, M. Friedman and others their research and conclusions have both theoretical and practical character and are based on scientific achievements and experience gained in the field of project management since the 50s of the last century.

Such scientists as Yu.A. Avdeev, G. M. Adelson-Velsky, V. I. Voropaev, S. p. Nikanorov, A. I. Teiman, and M. V. Sheinberg were at the origins of project management in Russia.

Currently, such Russian scientists as A. N. Asaul, A. K. Bazhenov, V. V. Buzyrev, V. I. Voropaev, V. L. Elm, V. A. Zarenkov, C. A. Ishchenko, V. I., Liberzon, I. I. Mazur, A. M. Nemchin, H. A. Olderooge, E. B. Smirnov, A. C. Toub, E. P. Utkin, G. N. Zipes, V. D. Shapiro, E. L. Mesnac and others are actively engaged in theoretical and practical issues of project management.

Issues of economic effectiveness of investment construction projects have been studied by many Russian scientists-economists [3, 4, 5, 6, 7, 8, 9, 10, 11].

Currently, there is a need to adopt best practices in the management of investment and construction projects that are innovative.

Moscow can become an experimental platform for the regions in the implementation of the model of organizational and economic mechanism of investment management in the renovation of residential buildings of the city.

Moscow has allocated 300 billion rubles for the implementation of the housing Fund renovation program for the next three years, 100 billion rubles annually, thanks to these funds, the city authorities will fulfill the indicators laid down in the law on renovation. In 2017, about 100 billion rubles were also allocated for the renovation program in Moscow.

Within three years, 600 new infrastructure facilities — schools, hospitals, extensions, engineering structures, overpasses, bridges, underground passages and other social infrastructure will appear in Moscow.

In financing of the target investment program it is planned to invest only about 1.5 trillion rubles. The duration of the program is estimated at 15-20 years. An important feature of this investment renovation project is that the main investor of the project is the Government of Moscow, and the financing of the renovation program will mainly be carried out from budget city sources.

In the capital, a vote was held on the renovation program, the majority of residents supported the program. The list of houses that are subject to renovation included 5175 houses.

3. The main sources of formation of investment resources of renovation

Economist B. A. Raisberg defines the organizational and economic mechanism as a set of organizational structures and specific forms and methods of management, as well as legal forms, which are implemented in the current economic laws in specific conditions, the process of reproduction. That is, the control system and the control mechanism are not the same. They differ in that the mechanism includes methods, types, forms and functions of management. The system, in addition to the above, includes in its composition also a control apparatus that performs control functions. [12].

The organizational and economic mechanism of investment management of the renovation program is part of the organizational and economic mechanism of investment in the construction industry and can be defined as a set of organizational and economic structures that form methods of impact for the construction industry, and levels of management, including legislative, financial, economic and organizational and administrative methods of impact, ensuring the implementation of the renovation program on the basis of the principles of focus, consistency, application of the integrated potential of the construction industry, coordination of interests of interacting subjects, innovation.

The management mechanism is part of the organizational and economic mechanism of renovation and represents the system of Executive authorities through the use of methods and tools to influence investment and construction processes on the basis of mutual interest between the participants-investors of the program and the management of the state policy of renovation.

For effective work of the organizational and economic mechanism of investment of renovation, the basic principles aimed at the formation of economic incentives for economic activity should be observed.

The organizational and economic mechanism of the renovation program investment is the development and adjustment of such a mechanism, which consists of the main engine – the state policy and "communicating working details": financing, investment, lending, financial and material reserves, risk insurance, compensation for damage, economic incentives, economic responsibility, and many others.

The renovation program is a major investment and construction project, sub-program of the state program "Housing".

In each investment project, along with organizational and administrative, social and psychological, there are scientific organizational and economic methods of investment management for the project, as well as their specific, inherent only to this project methods.

Each hierarchical management level has the goals and objectives of management, system of methods, organizational and economic mechanism, financial policy, legal framework of the project.

Economic regulation of investment processes is carried out by attracting the optimal number of measures, tools, methods and forms of economic influence on the economic activity of market participants. A regulatory instrument is a way of influencing an entity on an object (depreciation, tax and monetary policy). The control method explains how the impact on the object is ensured. The form of regulation shows the conditions for the application of certain methods of influence by specific entities on the subject of regulation. The presence of various forms and methods of state regulation of economic processes is associated with the versatility of the state, long-term investment activity, participation in the creation of surplus value, investment movement for the purpose of mass renewal, the features of depreciation of active and passive parts of fixed assets.

During the transition to a market economy, the main thing is to maintain a balance between state regulation and self - regulation of market relations.

State regulation is the adoption of legislative and regulatory legal acts that allow all subjects to interact with each other in a civilized manner, within the framework of the law. Some administrative documents are aimed at defusing social tensions, they prescribe preferential conditions for individual project participants.

In the investment program of renovation the participants of the project invest capital in various forms: budget funds, borrowed funds of credit institutions, borrowed funds and property (movable and immovable) in the form of land, buildings, structures, equipment, intellectual property, property rights. Regardless of the form, all investments have value.

According to the decree of the Government of Moscow of August 1, 2017 № 497-PP "on the program of renovation of housing in Moscow" financing of the renovation Program is carried out with the involvement of the budget of the city of Moscow, as well as from other sources in accordance with the legislation of the Russian Federation. Public-private partnerships are important.

Thus, there should be a balanced ratio of domestic centralized sources of investment financing and external decentralized sources of investment financing.

Internal centralized sources of investment financing, a native of city and municipal budgets, Foundation for the renovation.

External decentralized sources of investment financing - attracted funds and borrowed funds.

Attracted funds: funds of entrepreneurs donated for renovation; public funds provided for targeted investment of renovation in the form of grants, equity participation in the program; budget investments in the authorized capital of organizations involved in the renovation.

Borrowed funds: loans from banking and other credit institutions, targeted state investment credit, investment leasing.

The main sources of formation of investment resources of renovation are shown in Fig. 1.

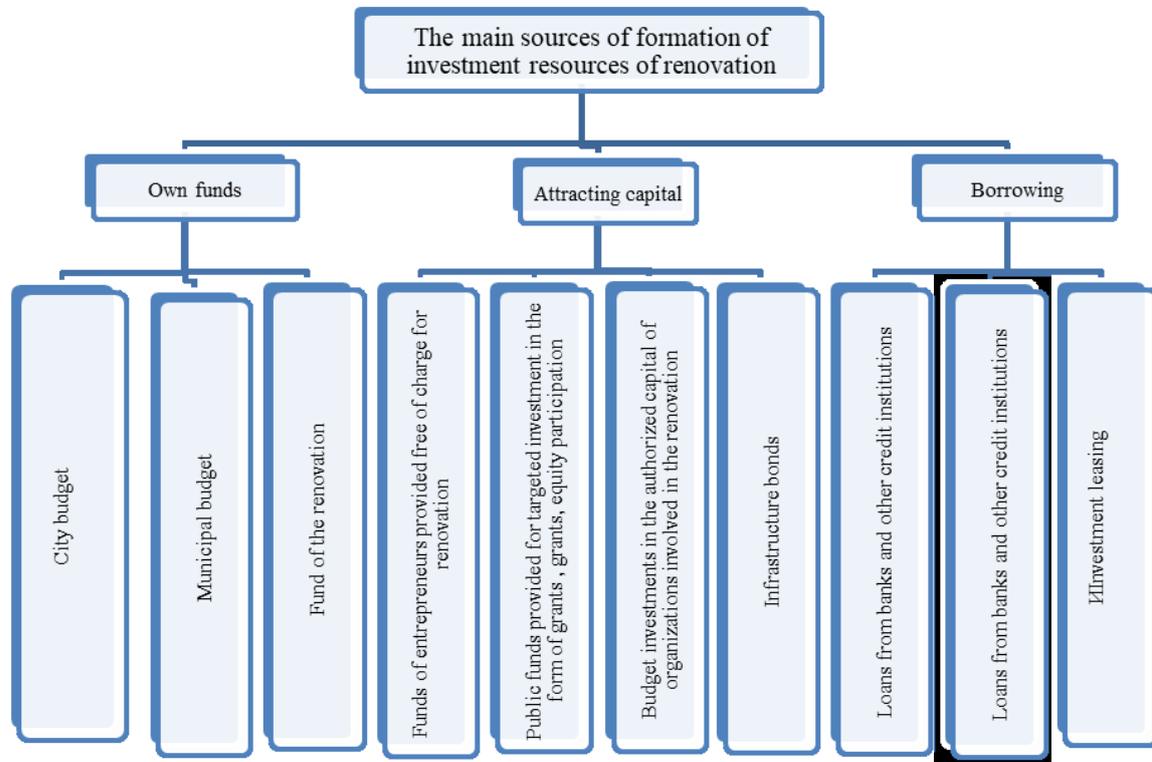


Figure 1. The main sources of formation of investment resources of renovation.

The need to attract borrowed capital for investment in renovation should be based on the calculation of profitability. It would be beneficial if the amount of service deleveraging lower profitability of investments in the renovation. Given the long-term renovation, the attraction of long-term debt capital will bring financial stability to the economic activity of construction companies. It is possible to apply a mixed scheme of borrowed funds, as short – term borrowed funds, for example, in the formation of stocks of innovative material values and long-term borrowed funds-with the acquisition of new technical systems. The use of borrowed funds has a number of advantages and disadvantages. The advantages include: diversification of the company's activities; tax exemption, as interest on the loan is attributed to operating expenses; increase in financial activity, additional profit on equity due to the effect of financial leverage (financial leverage Degree of financial leverage – DFL), the availability of attraction. The disadvantages include: risks of reduced financial stability and loss of solvency; additional debt service costs, therefore, a reduction in the rate of return on capital; vulnerability of borrowed funds from the situation in the financial market; the complexity of the procedure of attracting large loans for a long time, as may require third-party guarantees or collateral; quality imperfection of the domestic capital market [13].

A popular measure to attract long-term investment in construction projects, in particular, in the renovation of residential areas of Moscow, may be the introduction of infrastructure bonds. Infrastructure bonds are debt for financing the construction of an infrastructure facility. Securities issued by private corporations or state-owned companies of the state administration, on the territory of which this facility is built, provide guarantees for bonds issued, which makes them attractive to

participants in the financial market, as it reduces the risk. Due to the long payback period of infrastructure facilities, the term of bond circulation is also quite large (often several decades). [14]

According to the draft Federal law "on peculiarities of investment in infrastructure using infrastructure bonds" - "Infrastructure bond – bond issued by a specialized project organization in order to attract funds intended to Finance the creation and (or) reconstruction of infrastructure, the fulfillment of obligations under which is provided in the amount and procedure provided for by this Federal law."

Published the decree of the RF Government from 17.11.2008 N 1662-R (ed. from 10.02.2017) "On the concept of long-term socio-economic development of the Russian Federation for the period till 2020", which envisages the creation of a market in bonds, particularly for infrastructure projects.

Currently, the practical application of infrastructure bonds is still available in the projects of construction of Federal roads.

In the future, it is possible to use such target bonds for the implementation of long-term investment construction projects.

Investment and construction project of renovation of residential buildings in Moscow has a long-term character and social importance, so expect high rates of return is not necessary. But the low income will be compensated by the high reliability of investments and the guarantee of their return with the optimal rate of return on investment.

4. Organizational and economic mechanism of investment management of the renovation program

The current technical condition of residential buildings in Moscow of the first period of industrial housing construction required the city authorities to carry out systematic measures for the renovation of residential areas.

The successful solution of this problem is possible with the participation of both own (budget) and attracted private capital. For this, the public administration of the capital should create favorable investment conditions. It is necessary to form and develop financial institutions that will improve the efficiency of investments.

A progressive direction in this regard can be considered a public-private partnership, which combines the interests of the people and private entrepreneurs. Mutually beneficial cooperation is manifested in the fact that state structures, implementing a complex expensive investment project of renovation, find real support from entrepreneurs, as partially Finance the renovation program and assume all kinds of risks, use economic methods of involving private companies in the investment project.

The legal basis of public-private partnership is the Federal law "on concession agreements".

In construction, as in the leading sector of the national economy, concession agreements are popular.

Various forms of improving the investment climate will be used for the implementation of the investment renovation project. Support public-private partnerships will be: project budgeting; state trust loans and bond issues; budgetary subsidies and loans; subsidizing interest rates on commercial loans; issuance of investment tax credit and tax breaks; government guarantees; government insurance investments; inclusion in the target state program; introduction to urban targeted investment programme.

The renovation program is characterized by the fact that in the areas, instead of dilapidated housing, along with modern residential buildings, social infrastructure facilities are being created.

The development of public-private partnership events may be as follows.

First option: to build, to own the rights of ownership-control (build-own-operate), when the state creates favourable conditions for the private investor that the investor had built, and received the ownership of the infrastructure facility.

The second option: build-manage-transfer (build-operate-transfer), when the state creates favorable conditions for the private investor to build, the object remains in state ownership with the condition of subsequent operation of the infrastructure on a contractual basis.

The third option: buy-build-manage (buy-build-operate), when the state sells the infrastructure to a private investor in the property for the implementation of renovation with subsequent operation.

The fourth option: build-own-operate-transfer (build-own-operate-transfer), when the state accepts the constructed and put into operation object in property from the investor who built and operates the object only until the moment of payback for the private investor.

Important features of the public-private partnership in the renovation will be: time constraints, as the normative fixed terms of construction and operation of the object; spatial barriers, because the contracts are concluded on certain objects; competitive basis, namely, contract bidding will be held between potential project participants.

In world practice, there are four main stages of the investment project: pre-investment, investment, operational, liquidation. The UNIDO – UN industrial development organization (UNIDO, United Nations Industrial Development Organization) Handbook identifies four stages of the pre-investment phase: 1. Search for investment concepts (opportunity studies) 2. Preliminary project preparation (pre-feasibility studies). 3. Final preparation of the project and assessment of its technical, economic and financial acceptability (feasibility studies). 4. The stage of final review and decision-making (final evaluation)[15].

The Russian specifics of the analysis of the efficiency of investment projects distinguish the following four stages of development and implementation of the investment project: the stage of development of the investment proposal and the Declaration of intent (rapid assessment of the investment proposal); the stage of investment justification; the stage of development of feasibility studies (feasibility study of the project); the stage of implementation of the investment project (economic monitoring). [16].

The key issue of the investment project is the analysis of its efficiency. The project will be successful if the investment in renovation pays off in the planned time and their profitability is achieved.

The implementation of such a project, when it reaches the planned level of efficiency, will increase the country's GDP, which will be divided between the participants - investors of the project. The effectiveness of the renovation programme as a whole, the effectiveness of each subprogramme and the effectiveness of participation in the project should be assessed.

Figure 2,3 shows the organizational and economic mechanism of investment management in the renovation of residential buildings in Moscow.

5. Discussion and conclusions

Successful implementation of the investment project is achieved subject to the following factors:

- conditions of investment attractiveness of renovation are created;
- the conditions of effective use of production resources are formed;
- close scientific and technical cooperation with leading companies is being established;
- encourages innovative activities in construction;
- financing of innovative projects;
- guarantees and protection of investors' rights;
- innovative infrastructure is being created and developed;
- there is an opportunity to attract foreign investment for Russian technologies necessary for the development of own production;
- indirect methods of investment process stimulation (tax, depreciation, investment policy) are applied);
- there is an interest in improving the efficiency of entrepreneurs in the renovation;
- assistance to the development of small and medium-sized businesses;
- open information about the economic activities of the subjects is provided;

- industry institutes and research and production organizations are involved in the application of high-tech products in the renovation process;
- measures are being developed and taken to directly and indirectly subsidize unprofitable social facilities;
- conditions for fair competition are created.

All these measures can be achieved with the correctly established organizational and economic mechanism of relations between representatives of the state administration and residents of Moscow, with entrepreneurs, as well as between all the above subjects of urban relations within the framework of legal regulation.

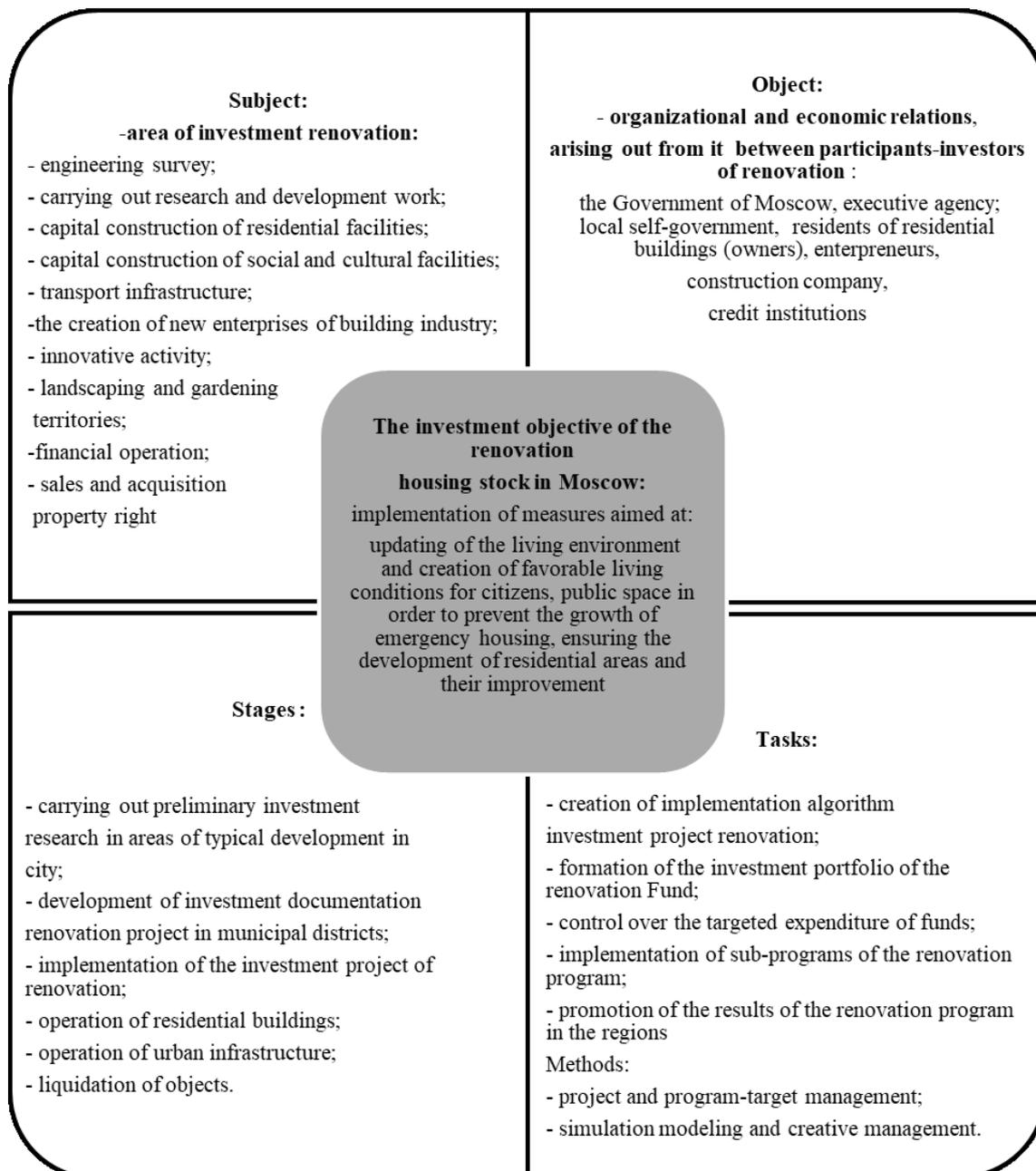


Figure 2. Organizational and economic mechanism of investment management

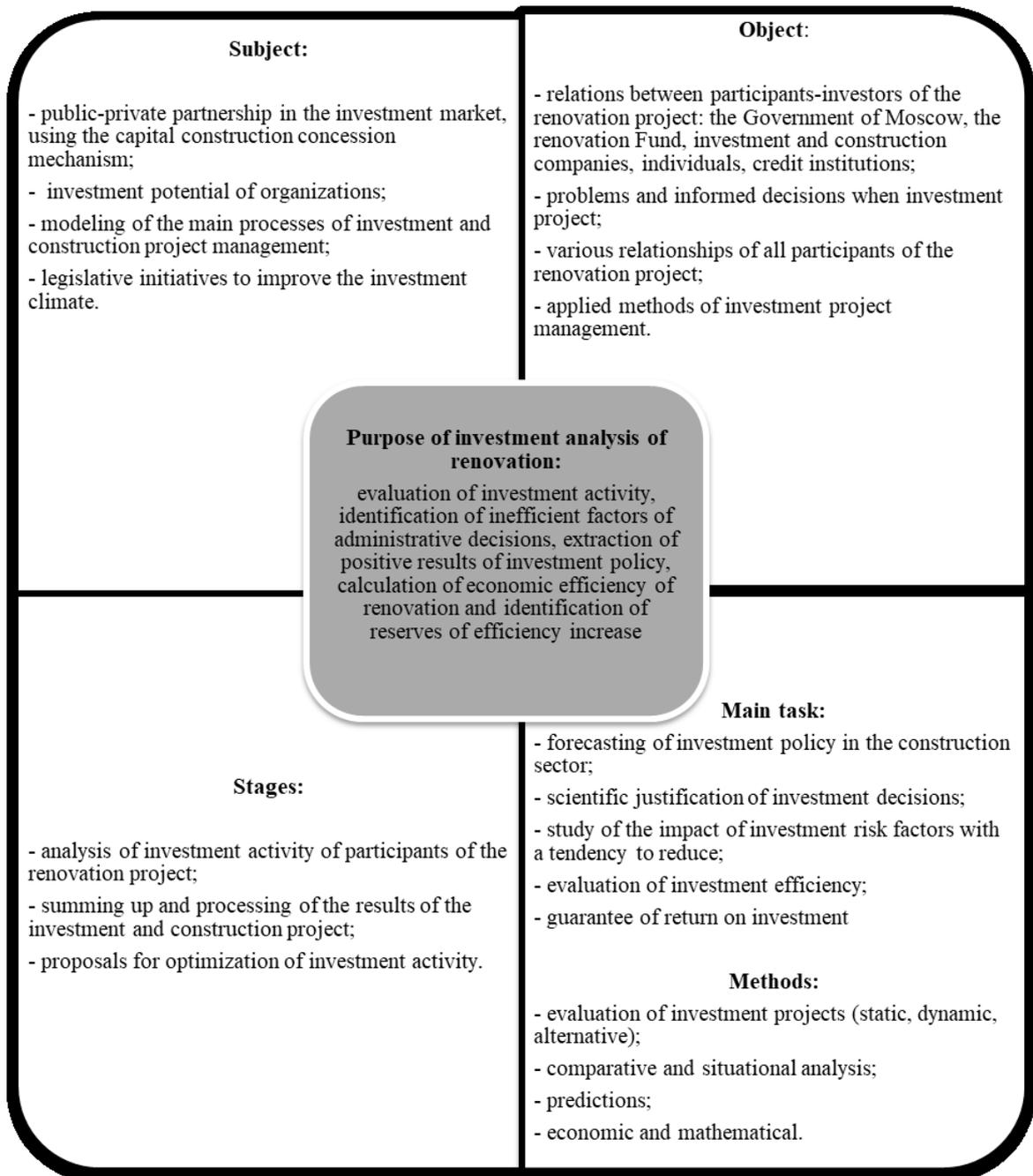


Figure 3. Organizational and economic mechanism of investment management in the renovation of residential buildings in Moscow.

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