

The Investment and Construction Activities Transformation at the Modern Development Stage of Russia

N Yaskova¹ and T Kolosova²

¹ Dr. Sci. (Econ.), Professor, Head of the Department of Investment and Construction Business of Russian Presidential Academy of National Economy and Public Administration (RANEPA), Prospect Vernadskogo, 84, bldg 2, Moscow, Russia

² Program administrator of the Department of Investment and Construction Management of Russian Presidential Academy of National Economy and Public Administration (RANEPA), Prospect Vernadskogo, 84, bldg 2, Moscow, Russia

E-mail: mcua3@yandex.ru

Abstract. Global changes related to demographic and migration processes, technological revolution, anthropological shifts call for quality changes in the capital fund structure. Their qualities, purpose of uses, location and other aspects are determined by the readiness of the investment and construction activities to solve crucial issues in the country's social and economic development. It requires the transformation in the investment and construction activities. *The methodology.* Taking into account the country's economic condition, the project approach to development will affect all the industries and spheres of the national economy. The necessity of applying systemic, structural and projective methods for investment and construction activities analysis is being updated. Systemic and dynamic modelling of evolutionary trends in various types of construction activities will require the development of ways to bring them into mutual conformity, as well as the adoption of approaches for the territorial localization implementation, which together will make it possible to give methodological tools an expedient nature, as well as justify not only "points of increase", but also the negative trends' "break points". *The results and their discussion.* The debatable perspective for specification of goals and measures for the construction development currently mainly deals with housing development sector, the creation of the environmental amenity, relocating the citizens from the failing housing stock, as well as digitalization. Particular types of the construction activities, infrastructure construction, and organizational, economic, technical and technological aspects of the investment and construction activities are still left beyond the scope of the National Projects and Development Programs. *The conclusions.* Following the established line of research, the development of new objectively sought-after investment and construction activities characteristics shall provide for its target mode and give national economy capital funds development the sustainable anti-crisis nature.

1. Introduction

The substantial shift in Russia's national economy development vector is related to the orientation given by the President of the Russian Federation towards solving country's internal problems with an emphasis on their social context [1, 2]. In this connection the demands to development of the industries providing the citizens with high quality of living are going to change as well [1]. In its core there is the living environment, the conditions and principles of work and leisure, the working hours



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and free time balance, the availability of social elevators, etc. Modern interpretations of the economic context for the fundamental element of living environment life sustenance quality take into consideration not only the housing facilities characteristics, their location peculiarities, infrastructure (transport, trade, education, entertainment, etc.) sufficiency, ecological conditions, tourist, cultural and historical attractiveness, etc., but also workplaces structure and level of comfort, as well as the level of comfort at job application areas.

The image of the environmental amenity is being transformed reflecting the economic set-ups evolution, the labour forces' new structure formation, the emergence of a new social landscape, etc. In relation to these deeply-rooted changes new requirements towards the investment and construction activities nature and results appear. Its immanent characteristics change according to new building products structure and quality, new competences appear, etc. It requires the formation of technical and technological, organizational and economic, social and psychological and, mainly, innovative changes.

Investment and construction activities, on the one hand, are aimed at the country's capital funds creation, development and maintenance and, on the other hand, at the elimination and disposal of dangerous and worn out buildings and structures. In the aggregate all these processes mostly determine the living environment amenity, including living conditions, included into the National Project's special block "Accommodation and urban environment" At the same time, the estimate for the investment and construction field, its objects, organizational and economic mechanisms, institutional basics readiness remains out of modern debatable perspective both in theoretical and practical ways.

2. The methodology

The necessary condition for an adequate activities framework creation and environmental amenity provision is the development of the real estate sector, featuring the inter-related network of different real property items types and kinds, located not only within urban agglomerations, but also in rural areas, industrial zones, natural reserves, coastal territories, etc. Therefore, Investment and construction activities in their broad sense are implemented aiming at the commissioning of new real property items of different functional nature, operation, maintenance and development of the existing previously constructed buildings, structures and infrastructure objects, as well as demolition and disposal of physically and morally worn out items. The essence of the real estate sector development is identified by various schools of thought as the potential growth in its value [3, 4]. The reasons of the growth are revealed by using *the method of structuring*. They result from:

- 1) creating new or complementing existing or reducing existing and outdated functionality;
- 2) constructive updates;
- 3) reduction in operating costs, distributed among the operation phases of the real estate life cycle;
- 4) growth in living environment and living conditions quality and level of comfort;
- 5) appearance of new possibilities for transformation implementation;
- 6) changes in the real estate aesthetic perception, etc.

Its capitalization methods at different phases of the real estate life cycle come forward as measures for residential areas and their public amenities development, implemented within the current and capital repair works complex, as well as reconstruction and renovation of the buildings, structures and infrastructure objects.

The target focus of real estate development measures is the real estate sector harmonious development. It is manifested in the provision of well-balanced investment and construction activities:

firstly, not only according to investment mechanisms kinds and type, but also taking into account repair works;

secondly, based on built-up areas attributable to all land resources classes;

thirdly, according to the structure of costs distributed by the construction stages;

fourthly, based on project stages and phases;

fifthly, on reproduction mechanisms of real estate, including new construction, overhauls and capital repair works, renovation, etc.

Thus, investment and construction activities should a priori create and maintain the balance on real

estate structure types and regional peculiarities. In this context, targeted focus measures [4] contribute to the real estate sector harmonization. Harmonization as a certain state of a real estate structure balanced in a certain way involves, within the living environment framework, the search for a correspondence or balance in the first approximation between real estate objects, as the final result of linear and land-based construction. It is reached by *the methods of territorial and objective balance provision* and sufficiency for reaching the strategic goals in countries, regions', territories' development, etc. Any land-based building types require various building services. They, in their turn, are based on the performance of special investment and construction activities types in general, as well as various construction types such as pipeline, road, energy construction, etc. The special construction types mentioned are combined into the class named "infrastructure construction" [7]. Its scope and structure should coincide with the scope and structure of the land-based construction on the whole range of the real estate items: housing, industry, sports, culture, education, etc. The insufficiency and/or technological inconsistency or arrears in construction capacity deprive the territories of the opportunity for harmonized development. This fact has been continuously proved by the results of the retrospective analysis. So, the infrastructure development, especially transport one, drives the enhanced territory development. The Trans-Siberian, built more than 100 years ago, became a stimulus for further rapid development of Siberia, and the revenue exceeded the expenses in less than 10 years [8]. Up to the present time the Railway carrying capacity has become insufficient. Demand for transportation exceeded expectations, which required the Trans-Siberian Railway technological upgrade. Thus, the proportional development issue for specialized and general construction types of investment and construction activities cannot but be taken into account by executive authorities, both at the macro- and the meso-level. This indicates the mandatory requirement to bring the investment and construction activities types in line with any project.

By synthesizing methodological tools for formulation of basic requirements to the operating investment and construction activities, it should be noted that it can be taken together as foresight-approach [9, 10], allowing not only to form new development trends, but also relate them to the necessary "break points" and evolution trends changes. At the same time, it is practical to supplement the foresight-approach with the basics of projective approach [11]. It is a projective analysis, covering the main components of investment and construction activities, that will allow identify imbalances in the national economy state and commercial sectors, construction products types, the project cycle stages, types of capital funds reproduction, etc. Forming and deepening imbalances, on the one hand, create objective conditions for the emergence of contradictions as the very heart of development problems. On the other hand, they create empiric basis for foresight methods application.

The modern investment and construction activities analysis has demonstrated the following.

Firstly, the highest level of investment and construction activities inhomogeneity (diversity). At the same time macroeconomic assessments allow revealing significant and deepening differences in the investment and construction activities nature and results, primarily, in the national economy state and commercial sectors. Sectoral conditions vary significantly, as the research results in Moscow region, Krasnoyarsk Krai and other regions demonstrate. For instance, at the planning stage, economic efficiency indicators - profitability and investment and construction activities performance - in Krasnoyarsk Krai's state sector exceed the estimations in commercial sector by 3-7%. At the same time on actual basis the state sector is more expensive by 12-15%. Moreover, the indicators of profitability in the public sector at the starting and finishing phases of construction for comparables are 3-4% higher than in the commercial sector, which generally indicates a large share of labour costs. As for the structure of costs, there are obvious arrears in commercial sector in terms of using fixed assets active part [12]. According to the criterion of the construction products unit cost, the commercial sector steadily shows a value up to 10% lower than the public sector. Specialized construction types are traditionally ahead of the general construction works based on the economic efficiency criterion by 8-12%. A comparative analysis of the types' inhomogeneity level in Moscow and the Moscow region has demonstrated a similar scatter for comparables [13].

Secondly, a comparison of economic efficiency indicators for investment and construction

activities in the territorial context revealed a gap in terms of efficiency and cost. Even for Central Russia it has reached up to 20-25% [14]. At the same time, real estate objects in the cities of Moscow and St. Petersburg, as well as in the northern provinces of the country still remain expensive for the market [15]. Such an obvious price range indicates a lack of unification of conditions and requirements for investment and construction activities.

Thirdly, the degree of territories provision with various types of building capacities is also very different. Moreover, according to the opinion of professionals from The Ministry of Economic Development and Trade [15], specialized construction capacities up to 70% are being concentrated in 10 biggest Russian cities. This indicates the need for activities localization at the interface points of the territorial development priorities. So, if mineral resource and fuel and energy minerals deposits (coal: Neryungrinsky and Ural Coal Mines, iron ore: Korshunovsky and Rudnogorsk Mines, Udokan Copper Mine, poly-metallic deposits at Kurgan and Katuginsky and many other mines) located on the territory of special economic zone at Sovetsko-Gavansky District are planned to be explored, it is advisable to concentrate specialized construction capacities there. Especially understanding that there is a steady demand for this group of raw materials, and the period of deposits effective exploitation is at least 40 years. At the same time, it is obvious that the planned and forecasting cycles of the vast Russian territories exploration and development should be synchronized with the new transport routes creation: roads, sea, river and air ports, which should be built in a timely manner. Concept analysis [16, 17] demonstrates that in fact, none of them is focused on the production capacities preparation for the investment and construction activities implementation.

3. Results

The results and their discussion. According to the logics of business activity conducting the spending on the investment and construction activities implementation in market economy are reasonable on the condition of economic efficiency potential outrunning growth. With regard to the social or environmental sphere, social (environmental) efficiency should also increase at a faster pace with respect to growing spending. Otherwise, the real estate recapitalization processes are being observed [18], and the investment and construction activities lose their economic/social/ecological and any other sense. Thus, the investment and construction activities should a priori possess certain *characteristics*, predetermining its effectiveness, both by the construction types, project cycle stages, forms of reproduction, and territorial affiliation.

The following are generally accepted characteristics of the investment and construction activities:

1) *process interlinking*. It is manifested in: firstly, in the work progress and investment schedules coordination, secondly, in a strict technological processes sequence for the construction cycle stages and phases, thirdly, in interlinking of real estate reproduction processes, etc.;

2) *standardized procedure* for project and construction works implementation, assuming mandatory compliance with norms and rules at their performance;

3) *permissive nature of activity*, banning the construction without design specifications and estimates coordination and requiring the initial permissive documentation preparation for construction;

4) investment and construction activities *submission to control*, consisting in the supervision over construction at all the project cycle stages;

5) *multicriteriality* in the investment and construction activities *results assessment*, taking into account their social, ecological, innovative, business nature and other characteristics.

The analysis carried out by the author has shown that, in addition to these properties, the modern nature of investment and construction activities has several others. The following are the most important among them:

1) *investment and construction activities interactive nature*, suggesting an active information exchange in relation to the dynamics of both the existing and emerging pattern of demand for construction products, and strategic priorities for the purpose of their parameters modern adjustment, development of missing building capacities, territorial localization and organizational formats

clarification for investment and construction activities;

2) *preventive and prearranged nature*, capable of preventing the breaking or change in already established trends and tendencies in the process of formation. That is, investment and construction activities should not only be ready for challenges, but also focused on the current cost-effective response to the future environment impact;

3) *mobility* as the required change in the investment and construction activities parameters across the entire range of their target orientation, technological support and resource filling. Moreover, the mobility characteristic implementation will require the development of mechanisms for resource, technological and other substitution;

4) *proportional nature* reflecting the requirements of a harmonious approach as mutual conformity (interlinking) and the optimal combination of investment and construction activities elements and processes.

It is important to understand that, regardless of the construction products inhomogeneity, which sets different requirements for regulatory and legal, as well as resource and technological support and, accordingly, has different efficiency potential, competencies for the investment and construction activities implementation should be fully formed for all investment and construction activities types without exception. It should be noted that territorial peculiarities of investment and construction activities conducting deal with the degree of resource provision, business traditions, production capacities existing structure and other features. Due to this, the explored activity type systemic transformation in the direction of maintaining the objectively necessary properties listed above, giving the investment and construction activity a *planned and proportional character of a harmoniously and intensively developing national economy sphere*, cannot be based on targeted (non-normative), and, in some cases. “Manual” nature of management, leading to the presence of many acceptable risk levels, technical, environmental, economic requirements and estimate criteria differentiation. Characteristics deviation or fragmentation objectively leads to negative consequences, namely:

1) intensification of arrears upon technological provision for different types of investment and construction activities and construction subjects. It is mainly manifested in poor technical equipment and low work force qualification at land-based construction falling behind linear construction both on the level of funds provision (according to data from [12], it is approximately by 17-20%) and on the skilled labour force share [19];

2) production capacity loss under the conditions of technological breakage and construction and investment cycles holds-off. The lack of the state budget funds, the investment and business activity weakening [20] forces not only general construction, but also specialized construction organizations to freeze production capacities, reduce staff, and lose qualified personnel. Moreover, within the current public administration system, manoeuvring related to resources is practically impossible;

3) investment and construction activities innovative development inhibition, as a consequence of a reduction in the construction and installation works volume as a result of the industry’s actual “drop-out” from the country’s strategic development priorities. The investment and construction sector’s artificial narrowing to the limits of housing alone does not allow a comprehensive solution to the technological renewal issue within the industry;

4) fragmentary, and in certain cases “emergency” nature of the development measures taken, being focused either on “image” projects (the Olympic Games and Championships objects) or on socially significant but problematic directions, calling for immediate actions and often implemented outside the systemic context of the investment and construction activities’ implementation and development.

Resulting from the lack of modern competences, capital investments development is actually at an extremely low efficiency level. Therefore, the basic reasons for *the first set of problems* in Russian investment and construction activities are the absence of strategy focus, the high level of unbalance and inhomogeneity in investment and construction activities that in its turn represents a lack

of its structuring and complex development. Different quantitative and qualitative resource content by the investment and construction activities types ruins the foundations of a harmonious approach, gives rise to more and more contradictions and exacerbates the existing imbalances.

The second group of problems deals with the separation of the planned and projected national economy, its industries and territories' development cycles from the planned cycle of investment and construction activities. This leads to the investment and construction activities chaotic development, and, in some cases, to their particular types' absence and the need to attract construction entities from other regions and even countries. Under such conditions problems with resource support activities are worsened as well. In all cases, the lack of basic construction capacities leads to a rise in the construction and installation works' cost. The analysis has demonstrated that the rotating scheme application for construction works actually leads to the increase in the cost of works by 10-15% [15]. At the same time, while low-skilled works can be performed by the so-called "guest workers" with lowered expectations for living conditions and low wages, then highly skilled labour, for example, in the conditions of linear construction during welding works will require the creation of comfortable living conditions and decent wages. Otherwise it will affect the works quality and may have irreversible industrial effects.

The third group of problems is the consequence of the actual lack of investment and construction in strategic development projects. Currently only housing development sector which makes up 10-15% of the whole construction works scope is presented in target priorities mainly in the National Project "Accommodation and Urban Environment" [21]. Project's four major blocks: "Mortgage", "Accommodation", "The Formation of the Urban Environment Amenity", "Ensuring Sustainable Reduction in Unsuitable Housing Stock" deal with a range of measures, but are not related to the solution of some systemic issues.

The analysis of the Program for Creation of Fundamentally New Markets and the Creation of Conditions for Global Technological Leadership of Russia by 2035 (The National Technological Initiative of Russia - NTI) has shown that their implementation does not include the development and bringing into compliance the national economy's supporting sectors including such as construction and etc.

A lot of studies have shown that construction is traditionally (and not only in our country [22, 23, 24]) located on the fringes of innovative trends, which is unacceptable due to:

activity's large-scale multiplicative nature and the transmitting of this arrearage to the other industries activities. Thus, the lack of orders for innovative building materials actually impedes new industries development and the latest technologies introduction in the construction industry;

objectively high risks of direct losses and lost profits at the project cycle construction phase implementation and the need for their compensation due to innovative factors. The risks of inefficient management over construction works performance are considered to be the highest ones within the national economy [25];

long-term and prolonged consequences of the construction phase inefficient implementation during the construction products (real estate) operation and their liquidation. The analysis has shown that the additional costs of objects' intellectualisation of at the project construction phase [26] can reduce the total costs of the real estate life cycle by 25% and vice versa;

peculiarities in partnerships interaction and a high degree of dependence of investment and construction activities participants from the activity's overall result.

4. Discussions & Conclusions

The conclusions. The new objective characteristics and competencies of investment and construction activities, as shown by the analysis, are one of the significant reserves for increasing its economic efficiency. In the framework of strategic initiatives taking them into account is not just desirable, but necessary in modern Russia. Due to this, a number of provisions adopted for the National Projects implementation should be expanded and supplemented. This is especially true for socially sensitive

projects such as “Accommodation and Urban Environment”. In particular, the strategic goal of ensuring affordable housing prices should be taken into consideration at the transition from shared construction to bank lending. For this purpose it is advisable to single out a section - a mechanism to compensate for the rise in housing prices and set price limits for a bank product of project financing using escrow accounts. In terms of measures to amend existing regulatory and technical documents and limit the use of outdated technologies in construction, the need for their coordination with the Program of Measures of the National Technological Initiative should be noted. With regard to reducing the administrative burden on the developer, in addition to the “road maps”, “one-stop-services” and digital technologies development, it is necessary to develop mechanisms of implementation, i.e. coercion to legitimate activities.

From the perspective of ensuring the efficient land use for mass housing construction, the need for the developed “Standard for the Territories Integrated Development” [27] does not raise any doubts. The only thing is that its development should be carried out via dialogue with residents, taking into account not only world experience, but also their ideas and aspirations, that is, be implemented in full accordance with the investment and construction activities interactive nature.

The federal project “The Formation of the Urban Environment Amenity” also requires the broadest possible discussion regarding evaluation mechanisms and interlinking with indicators of other federal projects, including National project “Small and Medium-sized Businesses and Support of Individual Entrepreneurial Initiative”. To the same extent, the mechanisms of citizens’ relocation should be associated with the processes of housing funds reproduction, which directly depend on plans for the living space restructuring and on the goals of the Strategy for Spatial Development. Thus, the planned and projected characteristics of investment and construction activities should also be fully taken into account.

The author’s suggestions to expand the boundaries and measures of National projects (for example, the project “Accommodation and Urban Environment”) set the search for practical formats not only for mandatory accounting, but also for the investment and construction activities modern properties and competencies formation.

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