Features of formation and functioning of the integrated structures in construction

Artem Subbotin and Daria Subbotina

Moscow State University of Civil Engineering, Yaroslavskoe shosse, 26, Moscow, 129337, Russia

E-mail: subbotin-art@mail.ru, subbotina.ds@mail.ru

Abstract. In today's economic environment it is becoming increasingly important integrated structure, including in construction, whose main purpose is the integration of tangible and intangible assets aimed at economic development. The article discusses the features of formation and functioning of the integrated structures in construction on example of public-private partnerships by building a cluster model of the organization. Given the confirmation of the world practice of study of these questions of foreign and Russian scientists. Examines the key aspects of the use of public-private partnerships, namely the state regulation of investment and construction activities. Refers to the concept of integration (vertical, horizontal) in terms of cluster models of organization allowing to systematically develop a certain territory, through the implementation of major investment and construction projects. Which will allow to use the whole building, investment, intermediary, scientific, educational, public and other organizations in the region. In conclusion, it should be noted that the application of this strategic tool as integration in investment and construction activities, it is possible to create a quality urban environment which will provide the regions with new jobs, to quality of production, housing and infrastructure facilities, thereby increasing the standard of living of the population.

1. Introduction

Key processes development of the world economy at the turn of XX – XXI centuries is progressing globalization and integration, namely a new stage in the development of the internationalization of social production. Under the influence of processes of globalization in the world economy, changes in production management. So, the main objects of production control are becoming the industrial, entrepreneurial network, which is a systematically organized on the basis of long-term contracts network of companies and organizations involved in the design, manufacture, sales of products (in construction, housing and utilities and maintenance).

One of the results of globalization of world production and economic processes was their integration. The definition of this phenomenon was given by Lawrence and Lorch: integration is the process of...
achieving unity of effort of all subsystems (departments) of the organization for the implementation of its goals and objectives.

The process of integration in the construction of the object is of a systemic nature, that is, it covers all sectors of the economy, as well as various participants in the construction process from the designer to operation. As a result, the terms and quality of works on the implementation of the construction object become more connected and more dependent on all its participants.

Therefore, the actual task is the study of peculiarities of formation and functioning of the integrated structures in construction.

2. Scientific work

Integration, according to N Yu Jaskowy and V A Voronin [10], is a reflection of the processes of globalization, and the Union of capitals of economic entities provides capacity building advanced development. In the processes of globalization and integration plays a special role in the competitiveness of territories (regions) with their developed economy that is attractive for business investment and labour resources. Progressive development of these areas determine the major investment projects of regional, branch and Federal levels. Their implementation necessitates not only the use of state budget funds, but also funds of private investors, as well as their management experience. An essential element of regulation of investment and construction activities is mutually beneficial cooperation between government and private business. The interaction between the state and private business for solution of socially important tasks, as well as the development of an efficient economy should be a partnership between government and private entrepreneurs. In foreign countries it is called as - Public-Private Partnership (PPP), translated into Russian language - the state-private partnership (PPP) [1, 2]. Foreign experience and multilateral scientific research in the field of organization and management has shown an interrelated system of regulation and control, when the bodies of state regulation of investment and construction activities provide [3]:

- the development of laws and regulations for this field of activity, as well as strict control over their observance;
- priorities and key objectives (the strategy) the investment policy and influence on the creation of appropriate structures and public and commercial;
- development and implementation of state programs;
- restriction of monopoly and promotion of competition;
- support of priority directions for the development of the construction sector;
- using tax, pricing, subsidiary leverage, that also develops scientific-technical and innovation potential of the construction.

Integration of production-business units and the formation of contemporary structures of corporate level one of the modern trends of organization and management as a science and practice. Permanent changes in the external and internal environments of investment and construction activity led to a huge diversity of institutional forms, which have implemented production and procurement processes. Thus, the evolutionary development of production structures in the process of integration was manifested under the influence of the principles of heredity, of variability, competition, and as a consequence there is a need to coordinate joint efforts, and implementation capacities in order to build efficient schemes of production and management within construction organizations and their complexes. An important modern phenomenon in the corporate level was the formation and development of integrated structures.

Integration is the process of achieving unity of effort of all subsystems (divisions) of the organization to meet its goals and objectives. Integrated structure is a stable cooperative group of related legal entities (participants), United on the basis of delegation of its rights to one of the participants – the Central company to run the shared interests of the structure as a whole.

There are two types of integrated structures: vertical and horizontal.
Vertical integration is a technological and organizational interaction of production units connected by a common participation from the development of the concept of the project to its final operation in a hierarchical interaction, namely the design, production, construction and operation of the completed facility. Participants in this process are:
- customers;
- investors;
- designers;
- scientific center;
- contractors;
- suppliers of material, technical, information resources;
- realtors;
- operating organization.

The basis of this type of integration is technological specialization, focusing on the performance of certain types of work or their complexes.

Horizontal integration is the Union of production units that produce uniform (identical) construction products and use similar technologies. Thus, horizontally integrated corporate structures are combined by type of construction products / activities of the enterprise, namely by types of construction works (finishing works, engineering communications), design and survey works, management and operation of real estate and so on.

The main objective of this type of integration is to expand the share of the occupied market of construction works and services through closer cooperation. As a result, the integrated structure may be able to influence the territorial level:
- price policy in the investment and construction sphere;
- quality standards of construction products;
- conditions of supply of material and technical resources;
- requirements for entities sales of finished construction products and structures engaged in its operation.

It should be noted that in the integrated structures of traditional type (holdings, concerns, trusts, etc.) organizations may be completely or partially deprived of legal, economic independence, etc. [10]. Such associations generally have a cumbersome management structure, which requires a large amount of maintenance. And this structure does not always react promptly to changes in the environment and tends to monopolize.

World and domestic experience show that devoid of these shortcomings, the network form of organization of scientific-production cycle, which is understood as the method of regulation of adjacent interconnected companies (suppliers, manufacturers, consumers, etc.) of participants of the unified technological process (working on one idea, goal), the so-called cluster, is presented in figure 1.
The need for integration through the formation of regional clusters is proved in works of many Russian and foreign scientists. These issues are investigated in the works of A Marshall, M porter, I Trenado, E Limer, M Enright etc. in relation to the conditions of the Russian economy were engaged in this problem such scientists as A N Asaul, N I Kalyuzhnova, L S Markov, A A Migranyan, A S Novoselov, V I Pilipenko, V P Tretiak, etc.

Therefore one of the priority directions of investment projects based on public-private partnerships is the formation and development of cluster models of the organization of the competition for participants of the unified technological process. Competition is the main mechanism of the modern
market. The creation of a competitive environment – an important condition for the functioning of a market economy. The cluster concept introduced by Michael porter in the "international competition" to show off the property's competitiveness not only for individual companies but for entire territories, regions, and Nations [5]. Cluster development concept of entrepreneurship focuses on the relationships between corporate structures, investment, intermediary, scientific, educational, public organizations of the region.

The benefits of cluster building an organization of investment and construction activities in the framework of public-private parterstva are:

1) clusters are based on the current stable system, which is based on a clear sequence of technological operations on the construction of the construction;

2) enterprises of the cluster have additional comparative advantages due to the possibility to carry out an internal specialization and standardization, as well as through active innovation policy;

3) specialized enterprises of the cluster operating on the basis of the contractual relationship have the possibility of quick and adequate reactions to the perturbation in the external environment of the construction industry, as well as inside the;

4) cluster development is extremely important for small business development, which provide small firms with a high degree of specialization in servicing specific business niches, facilitate access to resources.

The construction cluster is different from other types of associations because functioning with greater functional task decomposition. It combines all components of the production process, from raw material suppliers to the end consumer of the final product, and includes the service sector and specialised infrastructure. The main purpose of integration is to achieve a certain economic result, competitive products – (construction of facility) that meets all requirements of world standards [6, 7, 8].

3. Conclusion

Thus, the modern form of integrated structures in the investment and construction activities is the construction cluster, allowing, for example, public-private partnerships to create a quality urban environment, to ensure the attractiveness of the territory for life and human activities. The interaction of all industries, aimed at the implementation of the construction of the facility will provide new jobs, to quality of production, housing and infrastructure facilities, thereby increasing the standard of living of the population.

It should be noted that the construction investment projects implemented in the PPP format in the first place needs to be socially significant objects, such as airfields, Railways, utilities and other infrastructure facilities as well as the public transport system, health facilities, education, culture and sports. The construction of such facilities contributes to socio-economic development of the region and the country as a whole.

Acknowledgments

We express our gratitude to the head of the Department TOUS MGSU doctor of Economics, Professor Sborshikov S B for the contribution to scientific work and to all employees of the Department.

References

[1] Varnavsky V G partnership of the state and the private sector: forms, projects, risks. // M.: Nauka, 2005. P. 28, 36.

[2] Deryabina M A report at the sectional meeting of the scientific Council of the scientific field "Theory of Economics" "Theoretical and practical issues of public-private partnerships" // Website of the Institute of Economics Pp. 19-20
[3] Kalyuzhnova N I Competitiveness of Russian regions in the conditions of globalization // N I Kalyuzhnova.– Moscow: TEIs (Moscow state University), 2004. S. 526
[4] Linev I V Concession as a form of public-private partnership // Vestnik of ASTU. Ser.: Economy 2011. No. 2, P. 49-54
[5] Porter M Competition // M. Porter. – M.: Publishing house "Williams", 2005. S. 608
[6] Subbotin A S Principles of innovative development of the cluster model of organization involving public-private partnerships // Journal “Scientific review” No. 2, 2013. S. 243-245
[7] Subbotin A S, Sbornshchikov S. B. the Mechanism of state-private partnership as the prospect of the development of investment and construction activities // Integration, partnership and innovations in construction science and education: scientific publication. Moscow: MGSU, 2012. P. 632-634
[8] Subbotin A S, Sbornshchikov S B Organizational bases of creation and functioning of integrated structures in the investment and construction sector // Vestnik MGSU No. 4], 2014. From 167-171
[9] The enterprise Economy: the Textbook E V Arsenov, and Y D Balyk, I V Korneeva, etc.; ed. A Safronov. – M.: Yurist, 2003.
[10] Yaskova, N Yu Integration in construction: modern classic format process / N Yu Yas'kova, V A Voronin //Economics of construction. – 2010. – No. 2. – P. 46-54.