

Role of Construction Clusters in the Development of the Russian Economy

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Abstract: The article is about a role of clusters in economic development and it examines the state of the Russian construction complex, as well as prospects of development of the construction cluster in the North-Western territory. The article contains evidence of the number of organizations, their entrepreneurial activity, availability of public, professional, research and educational organizations, as well as cluster initiatives suggested by the federal and regional governments. It describes international experience of the functioning of construction clusters and benefits for members of the cluster.

Key words: Construction cluster • Construction companies • Self-regulatory organizations • Associations • Educational and research organizations • State and regional cluster policy • Cluster infrastructure

INTRODUCTION

In recent years, competitive clusters that best affect the efficiency of the operation and development of both the industry complexes and the economy as a whole are of great interest to scientists [1]. The Russian construction industry has not been left without attention as well [2, 3]. This is due to the need to improve the quality of construction products, reduce its costs, improve accessibility for the people and create conditions for enhancing scientific, research and development works (R&D) in the construction. However, despite a large number of both foreign and Russian studies of the issue, a number of problems preventing activation of cluster policy in Russia is still unresolved.

MATERIALS AND METHODS

The study was based on a comparative analysis of functioning of the regional economies in Russia and developed European countries, which allowed the author to identify the main characteristics of operation of the building clusters, obstacles and opportunities on ways to improving the competitiveness of countries.

The Main Part: The construction clusters are well represented overseas. The European Commission evaluated 15 leading clusters in the economy of 31 countries in 2007 [1] and made the rating based on the assessment of the level of regional specialization and employment in various sectors. The construction clusters were represented in 19 countries. Although, in most cases, construction industry does not belong to the field's leading economies of these countries, however, Portugal, Slovakia, Finland, Italy, Norway, Spain and Greece had several clusters in different regions of the country in the course of rating. In Lithuania and Portugal construction clusters are found in the first place.

In Russia such projects are already being implemented at the moment. The following are among them: construction cluster of Euroregion "Slabozhanschina" [2], construction cluster in the Krasnoyarsk region [3]. In order to create conditions for enhancing the innovation processes in the construction industry the Government of St. Petersburg adopted the Resolution in October 2011 on the early formation of the construction cluster (technology park) [4].

Clusters have a number of competitive advantages. Their strong point is expressed in the stability of relations between contractors and subcontractors in the process of projects implementation. Mr. M. Porter emphasizes that the benefits from the trust and organizational transmissibility, developing as a result of constant interaction and awareness of interdependence within a region or city, clearly promotes interaction in clusters, leading to increased productivity, diffusion of innovation and, ultimately, the creation of new businesses [5].

The main subjects of the construction cluster are the following: building companies specializing in core activities (small, medium, large); businesses that supply products or provide services to specialized companies; organizations of the market infrastructure (credit, insurance and leasing services, logistics, trade, real estate operations); research and educational organizations; non-profit and community organizations, business associations, chambers of commerce; organizations of innovation infrastructure and support infrastructure for small and medium-sized businesses.

Mandatory condition for functioning of a viable cluster is the availability of large, medium and small enterprises. The first type represents the core of sustainability possessing an objective competitive advantage. The second and third clusters are technologically and organizationally linked to the first featuring more flexible technologies and offering a more diverse range of products and services, providing a cluster with functional flexibility. They are the source of the cluster core functioning.

One of the major challenges facing small businesses is the innovative activity. Large enterprises are more conservative in their work. They are trying to maintain their dominance in the market by gradual introduction of innovations. At the same time, small businesses, despite the lack of financial resources, are more prone to radical innovation. There is cooperation of small and large businesses in a cluster in the area of R&D, thus, maximizing the benefits of each.

The establishment of a cluster leads to improved performance of all enterprises, which increases the tax expenses base and, consequently, tax revenues in the region. The small and medium-sized enterprises joining the cluster face significantly reduced barriers for entering the markets and for supply of raw materials and labor. Individual businesses can take advantage of the image of the cluster, which is supported not only by its members

but also by external partners. Using the reputation of the cluster, small and medium-sized businesses get a qualitatively different access to financial resources. Duplication, management of the acquired knowledge, successful methodologies and algorithms for other companies that are the members of the cluster, can significantly improve their overall economic stability. These small businesses, flexible and innovative active market entities, play the role of integrators in the cluster's structure.

The most common forms of interaction of small, medium and large enterprises are the subcontracting, franchising and business incubators that provide structural flexibility for the cluster. Thus, in the course of integration of small, medium and large business, all the parties get benefits.

The situation in the structure of the Russian construction complex has been far from being positive in recent years. The number of small businesses decreased in 2011 by 5,500, in 2012 - by 5 000 and the mid-sized businesses – by 250 companies. In general, the number of Russia's small businesses operating in the construction sector decreased 2 times over the last two years. This led to a situation that their share in the total scope of contractual work has decreased in St. Petersburg only from 40% to 10-12% [6] that, in the opinion of Mr. L.M. Kaplan, the chairman of "Soyuzpetrostroy", leads to the loss of jobs, loss of building capacity and human resource capacity, reduction of revenues to the city budget, hinders the development of the middle class and, therefore, the development of civil society. Meanwhile, it is small business that holds a dominant position in the construction industry in many countries. In the UK, small businesses make up 90 % of the total volume of construction works.

In Russia the situation is aggravated by the monopolization of the construction market. In St. Petersburg the share of vertically integrated companies accounts for 85% of housing construction and over 70% of brick production, extraction of inert materials, production of building structures are accounted for "LSR Group" in the territory of St. Petersburg [6].

Large companies create high barriers to small business, implementing full development cycle, from the purchase or lease of land, then lead the entire construction process and are later engaged in the operation of constructed real property. The specialized organizations integrated into large companies are doing

tons of work on the installation of utilities. This niche rests usually with the small construction businesses in the West. In Russian conditions, small enterprises are mainly involved in the repair work only.

In spite of this these are the small enterprises that are involved in construction in the North-Western part of Russia. Small businesses are involved in repair and reconstruction activities in the market, as well as in housing construction. They accounted for 12.4% of work performed on their own, which is higher than the nationwide indexes. However, this index is far from enough in the market economy and demonstrates the lack of development of a competitive environment. Construction is in the second place after the wholesale and retail trade in terms of added value of the gross regional product.

All transition economies are characterized by a weak role of unions and associations. However, Russia has developed and continues to develop over two decades a broad network of professional associations. Some of them have transformed from those that existed during the Soviet period, while some were formed under the influence of market requirements. For example, there is the Union of Building Associations and Organizations (UBAO), initiated by the construction companies, in the North-West of Russia. The need for such a structure has been dictated by the weakening of intra-industry links and decrease of the competitiveness of the construction companies. The Union is involved both in local and regional programs and is the largest professional association in the construction industry. In addition, other associations and organizations operate in the region, which are either founders or members of the UBAO, namely: Soyuzpetrosroy, Inzhstroy St. Petersburg CJSC, Union of Architects of St. Petersburg, Union of manufacturers of dry building mixes, Interregional North Western Construction Chamber, Abeton Association and others. There are 17 different professional associations and organizations in St. Petersburg and the Leningrad region alone. Russia seeks for implementing the model of waiving the direct governmental regulation and mandatory membership in the self-regulatory organizations (SROs).

Universities play the main role, the carrier of knowledge and innovation in the cluster. Interaction between the government, university and business community is represented by L. Leydesdorff and H. Etzkowitz as a DNA-like formation [7] or a triple helix [8].

Unlike the biological DNA, the “genes” are not given initially in this model, but are designed according to the social, technological and economic development of society, with opportunities to self-transformation and co-operative restructuring of their configuration. The interaction of the three subjects is carried out through horizontal links. The decisive factor in this inter-institutional cooperation is the existence of trust, which solves the problem of potential conflicts. In the course of such interaction the institutional capabilities of universities, industry and government are updated with new features that were previously characteristic of other participants [9]. Thus, the Universities, taking part in the development of innovation on a regional level, perform state functions and, rendering the services in charge of technology commercialization and creating innovative small businesses, are adapting functions of a business sector.

The University-industry interaction is based on the transfer of technology, namely the results of basic and applied research in the design, development, manufacture and commercialization of new or improved products, services or processes. This feature was developed in the 1970s. Technology transfer is also possible through informal activities such as scientific and practical conferences with the participation of both academic and professional communities.

The role of the regulatory subsystem defining the framework conditions for the functioning of the cluster is played by various departments, committees and services representing the interests of both the state and regional and municipal authorities. The degree of involvement of the state in the current practice of clusters functioning is not clear-cut, moreover, it is determined in all the countries by the prevailing mentality. Mr. M. Porter refers negatively to the government’s involvement in the development of the network. He argues that the role of government should not be more than the role of an “assistant”, a “broker”, an “initiator”, a “participant” and an “auditor”, who can modernize the development of the group and create the possibility of productive dialogue. According to Porter the governments, governmental agencies and regional development agencies should take an approach to the creation of a network based on non-interference and the latter, in turn, must be able to develop on their own. Otherwise, there is a risk that the innovation potential will never be implemented [10].

According to the scientist opinion, tackling the issue of competitiveness of the country, many governments make the same mistakes. They seek short-term gains, using the tools of subsidies, protection and organized merger and this is exactly the policy that slows down modernization. In practice, the creation of competitive advantages for an industry may require decades. This process takes a long time to improve workers' skills, investing in products and production processes, creation of clusters and promotion to foreign markets [5].

Earlier, August Loesch wrote in his book "The Spatial Organization of the Economy" that in fact, government officials should regulate a small number of issues, taking into account, however, the economic interest and needs of the economy [11-12].

The system of state regulation of construction sector in Russia targeted the following objectives:

At the State Level:

- Implementation of principles of federal relations and ensuring the integrity of the state;
- Leveling of social economic development of various entities of the Federation;
- Promotion of regional economic and social development;
- Creating conditions for increasing activity and responsibility of the regions in the tasks of socio-economic development;

At the Level of Regional Development Bodies [13]:

- Creating the conditions for improving the quality of nation's life; creating the conditions for sustainable and balanced functioning of the systems of life;
- Considering interests and priorities of regional development; providing conditions for socio-economic growth in the region.

The need to create clusters in Russia is widely discussed on the governmental level. The result was the adoption of a series of regulations aimed at strengthening the clusterization process. For example, O.V. Fomichev, the Deputy Minister of Economic Development of Russia, emphasized the priority measures to support the development of clusters at the third All-Russian scientific-practical conference "Principles and mechanisms of formation of the national innovation

system in Russia". The government subsidies for 2013-2017 for the following directions were discussed within the framework of the instructions of the Chairman of the Government of the Russian Federation of 28.08.2012 No. DM-P8-5060:

- Development of transport infrastructure;
- Development of energy infrastructure;
- Development of engineering infrastructure;
- Development of housing-related infrastructure;
- Development of innovation infrastructure, including that based on educational institutions;
- Development of educational infrastructure;
- Development of material base of culture and sports;

Work and projects in the field of research and development, innovation security, training and skills development, etc.

The entities entrusted with the regulation of cluster projects in certain areas, are the specialized centers, such as cluster development center of Voronezh region, Altai Cluster Development Center, Center for cluster development for small and medium-sized businesses of the Astrakhan region, Center of the cluster development of the Republic of Bashkortostan, Center for cluster development of the Voronezh region, the Regional Development Agency of Kaluga region, Center for cluster development of the Kurgan region, Cluster development center in Moscow, Center for cluster development of the Penza region, center for cluster development in the field of polymer processing of the Republic of Tatarstan, Center for Cluster Development of St. Petersburg, Center for innovation development and cluster initiatives of the Samara region, Center for cluster development of the Tomsk region, Center for Cluster Development (CCD) of the Ulyanovsk region and several others.

CONCLUSIONS

In the North-West region of Russia conditions for the viable construction cluster formation are satisfactory in general. However, the regional governments need to take efforts to invest in building the cluster infrastructure:

- Specialized organization for coordination of activities led by the cluster manager;
- Plans and programs for reducing barriers to the formation of the cluster;

- Information support system to the cluster members;
- Programs promoting cooperation between cluster members (organization of conferences, seminars, webinars, etc.).

As a result of cluster policy implementation, all actors, the members of the cluster, get benefits.

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