



**Cluster approach for Territorial Planning and Development at Regional and
Municipal Levels**

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ABSTRACT

The paper proves the cluster concept for planning the development of territorial entities of the Russian Federation as an effective way for spatial organization of regional economy. Development of solutions for formation of investment-attractive territories and placement of investment sites in the structure of production clusters is of particular importance in the management of the regional development.

An algorithm for integrated assessment of a territory is developed based on the analysis of the prerequisites and priorities for the development of production clusters in a region, assessment of investment potentials and risks of conducting priority economic activities. Solutions are proposed for the organization of investment-attractive territories for the creation of investment sites in the structure of production clusters, and a number of interrelated tasks defining the vector of development of clusters in the region have been identified.

Inclusion of the cluster approach along with the development of priority regional investment projects, and development of industrial parks in the process of program documents elaboration, is an effective way to harmonize the interests of the state and society, to achieve competitive success in the relevant sectors. The competitiveness of the region is determined both by the availability of efficient branches or segments of an industry, and by the ability of regional authorities to create conditions for enterprises in the region to achieve and retain a competitive advantage in certain areas. Over the past decade, the cluster concept for planning the development of a territorial entity of the Russian Federation has become increasingly important, according to this concept the region competitiveness depends on the presence of clusters of interconnected industries



on its territory, what requires a comprehensive assessment of conditions in the territory, its strengths and weaknesses, potential threats and opportunities for development.

Improvement of the current mechanism for preparation of a development strategy and elaboration of spatial planning documents for the long term at the regional level requires expanding the range of analytical tools for integrated assessment of the potential of a territory, investment potentials and risks, analysis of the prerequisites and priorities for the development of production clusters in order to optimize the territorial development at regional and municipal levels.

Keywords:

cluster, cluster approach, territorial planning scheme, región

1. INTRODUCTION

When determining the path of social and economic development in conditions of total progress it is necessary to perform a comprehensive analysis of the specific features concerning development of individual regions of Russia, taking into account political, economic, social, geographical and other priorities, as well as their specific features and differences.

From the point of view of the current socioeconomic, ecological and demographic situation, the market economy, in its classical form, according to its inherent functional relations between society and nature laying in its foundation, can not solve the problems facing humanity.

Currently, when determining the competitiveness indicators of a particular region, it is customary to focus not only on the existence of efficient industries or its segments, but also on the ability and desire of local authorities to create and retain competitive advantages in certain areas by creating favorable conditions for regional enterprises.

In recent years, special attention has been paid to the cluster concept in the planning of regional development, which determines the dependence of regional competitiveness on the availability of clusters of interconnected industries.

It is customary to understand a cluster as a group of geographically interconnected companies located in the immediate geographical proximity of companies and related organizations that operate in a specified area and are characterized by a unity of activity.



2. MATERIALS AND METHODS

Elaboration of effective solutions for the organization of areas that are investment-attractive, and creation of investment sites in the structure of production clusters has a special significance in the process of managing regional development.

Nevertheless, domestic and foreign economic literature does not fully disclose issues related to the analysis and solution of the problems on development of a regional cluster policy at the meso-level.

The conceptual foundations of the cluster theory were laid in the framework of economic geography and the theory of regional economy in the works of A. Weber, F. Perrou, W. Izard, M. Enrighty, N. N. Kolosovsky, A. G. Granberg, S. Goetz, and S. Rosenfeld. The practical use of a merger of individual enterprises and formation of corporate forms by concentrating production and capital was noted in A. Marshall's theory of industrial districts, and J. Becacutini's theory of industrial production districts. M. Porter defined clusters as "geographically concentrated groups of interrelated companies competing with each other, but working in the same vein". In A. Marshall's opinion, competitiveness, apart from individual characteristics, directly depends on the "economic environment" (Petrov A. P. 2014).

The main provisions of the modern regional cluster concept are outlined in the Methodological Recommendations for the Implementation of Cluster Policy in the Territorial entities of the Russian Federation and expanded in programs, projects and normative legal acts of the federal and regional level (Methodical recommendations on the implementation of cluster policy in the Territorial entities of the Russian Federation ,2008)

Addressing to foreign experience in formation of cluster policy is complicated by the absence of the developed methodological foundations for formation of cluster policy, which we come to when analyzing the work of a number of foreign researchers (Gulati M. 2003, Identification of experiences for the Exchange Fair of the World Congress on; Territorial Development Clustering in the Textile Industry 2003;The European cluster memorandum. 2007 ;Tiri M., Moreau R., Peeters L. 2000 ; Orekhovsky, P. A. Modeling, 2010).



These, as well as similar debatable and uninitiated aspects of the stated problems in the scientific literature were decisive in the choice of the research topic.

Theoretical and methodological basis of the paper was made by general scientific methods: systematic approach, logical approach, comparative multifactorial approach, functional analysis, and generalization.

3. RESULTS

The search for solutions for the creation of investment-attractive territories and placement of investment sites in the structure of production clusters is of special significance in the process of managing regional development.

The development of decisions when preparing a territorial planning scheme of a territorial entity of the Russian Federation is reasonable and justified from the point of view of the requirements of the Urban Development Code of the Russian Federation. In particular, in accordance with the requirements of paragraph 2, Part 5 Art. 19 of the Urban Development Code of the Russian Federation, the materials on the justification of the territorial planning scheme of territorial entities of the Russian Federation in text form should contain "a justification for the chosen variant for locating objects of regional significance based on an analysis of the use of the corresponding territory, possible directions of its development and the projected limitations of its use" (Urban Development Code of the Russian Federation dated 29. 12. 2004 N 190-FZ (edition as of July 29, 2017).). At the same time, information on planned regional objects (which are mainly of an infrastructural nature) is reflected in the approvable part of a territorial planning scheme of a territorial entity of the Russian Federation (according to parts 3, 4 and 5, Art. 12 of the Urban Development Code of the Russian Federation).

In connection with these requirements of the federal legislation, in the documents justifying the schemes of territorial planning at the level of the territorial entities of the Russian Federation, spatial allocation aspects for certain links of the cluster structure should be considered.

A cluster is represented as a system of interrelated spatial objects (enterprises, educational and research institutions, etc.) in a region. The forecast for the emergence of new production facilities and modernization of existing ones in the territory is being elaborated. Then, the obtained results of the analysis of clusters make it possible to



formulate in the approved part of the territorial planning scheme of a territorial entity of the Russian Federation the decisions on the location of objects which are of importance at the regional level in the areas of transport, engineering and social infrastructures that will be necessary for the effective functioning and development of production facilities in a given territory.

The basis for using the cluster approach in the development strategy of a territorial entity of the Russian Federation is that the most significant investment projects at the meso level built into the general vector of regional development, increasing in the efficiency and competitiveness of the territory, coupled with effective socio-economic policies of local authorities, create a powerful synergistic effect and complex influence on the integration of the entire resource conglomerate (including human, production, technical, organizational and scientific potential) within the general boundaries for the direction of economic development of the territorial unit.

At the same time, there are a number of difficulties in implementing the mechanism of territorial planning, especially noticeable at the municipal level, which is reflected in a number of sources (Territorial strategic planning. V. 2. 2001 ;T. Rubel, S. Paladino. 2000, etc.).

Obviously, the infrastructure should be created exactly where the emergence of production facilities that provide employment and material well-being of the population is potentially possible, is most likely, or is desirable. The territory should be ready for production facilities to appear on it. It should be noted that this approach to the development of the territorial planning scheme for a territorial entity of the Russian Federation also makes it possible to assess the influence of potential objects on formation and the scenario of development of the respective region as a whole. This circumstance also complies with the requirements of Cl. 3, Part 8, Art. 14 of the Urban Development Code of the Russian Federation. As a result, taking into account the planned location of regional objects and expected trends in the development of production clusters in materials on substantiation of the territorial planning scheme for a territorial entity of the Russian Federation, decisions are being made to create territories that are investment attractive and, accordingly, to organize investment sites in the structure of production clusters.



The analysis of the prerequisites and priorities for the development of production clusters on the territory of a region, the assessment of investment potentials and the risks of the priority economic activities for the region are applied as a means of integrated assessment of the territory.

This work involves a number of sequential steps:

1. Collection of initial data for all key areas of the regional economy.
2. Identification of cluster structures. At the same time, the analysis technique can be based on the methodological recommendations of the Ministry of Economic Development of the Russian Federation on the implementation of cluster policy at the territorial level, and on the methodology for identifying clusters developed by E. V. Ermishina (St. Petersburg, ICSEER Leontief Center). This stage allows to identify, on the basis of quantitative and qualitative indicators, the existing and potential cluster structures in a region, which could become full-fledged in the future.
3. Forming a certificate for each group of interrelated branches, in which the consistency or inconsistency with the main features characterizing the cluster structure is specified. The main criteria for the identification of cluster structures reflected in the passport are: high export potential of cluster members; advantageous geographical position, access to raw materials; geographic concentration and proximity of cluster communities; availability of suppliers of raw materials, products, services; research, educational structures, etc.
4. Analysis of the technological structure of an existing or potential cluster in order to identify missing links in the structure of each of the clusters (including potential ones). Such an analysis makes it possible to determine possible directions for the development of individual sectors of the regional economy, the creation of which would facilitate formation of a full-fledged cluster structure in the future.
5. Development of solutions on formation of investment-attractive territories in the region. At the same time, areas favorable for the emergence of key production facilities in the territory under consideration are also identified, corresponding to the strategic priorities of the regional development. For this purpose, a comprehensive analysis of the potentials and risks for the development of the respective types of production is carried out using the model "Investment Potentials - Investment Risks".



6. As a methodical basis of the model, the approach of the Rating Agency "Expert" in assessing the competitiveness of regions can be used. This approach has been modified to take into account the specific goals of developing a territorial planning scheme for a territorial entity of the Russian Federation, and the need to perform spatial analysis not within the whole country, but within a particular region. The principle of the model is to graphically display the conditions that affect the degree of favorable conditions for the location of new or development of existing production facilities for selected industries, as well as the risks inherent to this activity.

Factors of investment potentials and risks are spatial objects, with indicators assigned to them that determine the degree of impact of a certain socio-economic condition on the level of investment attractiveness of the territory in one or another part of it. The analysis of potentials and risks serves as a tool for checking previously adopted decisions, and a means to detect future ways of development of each complex, and obtain preliminary information about restrictions on the location of production facilities.

7. Formation of investment proposals for the creation of new enterprises and organizations within the framework of cluster structures. When determining the location of production facilities, the obtained results for the analysis of investment potentials and investment risks of the territory, the logic and patterns of development of each cluster, as well as the structure of the technological chains are taken into account. For each investment project, an approximate calculation of several economic indicators is carried out (cost, payback, profitability, profit, revenue, etc.).

8. Calculation of the budgetary, commercial and social effect from the implementation of the proposed investment projects in order to reflect possible positive results from implementation of the decisions of the territorial planning scheme. This allows them to demonstrate the potential change in the state of the regional economy as a result of the expected implementation of investment proposals based on the cluster approach.

9. Making solutions and determining the location and key parameters of investment sites on the basis of a forecast for creation of new enterprises and organizations within the framework of cluster structures.

4. CONCLUSION



A comprehensive analysis of the development of clusters, investment potentials and investment risks makes it possible to draw conclusions about the state and development of clusters in the region, to identify promising directions for the development of production, to prepare a forecast for the occurrence and development of production facilities in the territory of a territorial entity of the Russian Federation, to determine their economic characteristics and location, those objects of regional importance in the spheres of social, engineering and transport infrastructures, which will create the most favorable conditions to intensify investment activity.

5. DISCUSSION

Making solutions for the creation of investment-attractive territories and the allocation of investment sites in the system of production clusters is a complex task that requires a comprehensive assessment of the state of the territory, its strengths and weaknesses, threats and opportunities for its development.

Such a comprehensive assessment of the territory ensures the solution of several interrelated tasks:

- First, an assessment of the investment attractiveness of the territory and the allocation of areas most attractive for conducting certain types of activities;
- Secondly, when placing investment projects, making an assessment of the potential commercial, budgetary and social impact of project implementation;
- Third, the rationale for placing infrastructure facilities in order to create favorable conditions for the development of priority areas for economic activity in the region. It is advisable, at the same time, to use the variety of existing areas of assistance to regional and local authorities of entrepreneurship. For example, in the USA, such areas are, in particular: reformation of business regulation schemes; provision of a suitable tax base; increasing in the effectiveness of the training system for businessmen, their information support and public recognition of merit (Bryson I. and Roering W. 1988);
- Fourthly, the rationale for locating social infrastructure facilities based on assessment of attractiveness of a given territory for the population, which, among other things, is influenced by the creation of jobs in these territories, in economic activities which are of priority for the region. According to the Canadian researchers I. Bryson and W. Roring, the fundamental difference between strategic planning and the traditional one consists



precisely in consideration of the points of view which a significant and diverse circle of stakeholders have .

Supporting the development of clusters will allow not only to minimize the direct and indirect costs of enterprises for the production of finished and intermediate products in the value added chain, but also to strengthen the competitiveness of the region.

6. ACKNOWLEDGEMENTS

The work is performed according to the Russian Government Program of Competitive Growth of Kazan Federal University.

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