

ECONOMIC AND LEGAL ASPECTS OF THE DEVELOPMENT OF CLUSTER STRUCTURES IN THE FORMATION OF INTERNATIONAL TRANSPORT CORRIDORS

ASPECTOS ECONÔMICOS E JURÍDICOS DO DESENVOLVIMENTO DE ESTRUTURAS DE AGRUPAMENTO NA FORMAÇÃO DE CORREDORES DE TRANSPORTE INTERNACIONAL*

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Abstract: The purpose of the article is to substantiate the economic and legal aspects of the development of cluster structures in the formation of international transport corridors. The methodological basis of the study consists in the integrated use of a set of general and specialized scientific research methods. The base of the research was formed by legislative and regulatory acts, materials of state agencies and local authorities, and scientific publications. Transport clustering is found to contribute to the use of resource opportunities in the region. It is determined that clusterization is perceived as a specific institutional and legal form of the chosen course of effective management of the transport complex by the state and the region. The promising areas of research on the problem of clustering are proven to be the problems of national and local levels. It is determined that the most promising is the further development of regional transport clusters and the unification of all stakeholders in it, which should lead to an increase in economic potential at the regional level, ensuring high growth rates of the internal regional product, reducing the specific transport costs, and improving the technical level of vehicles and equipment.

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Keywords: Cluster. Transport corridor. Economic potential. Technical level. Economy. Region. Costs. Management.

Resumo: O objetivo do artigo é substanciar os aspectos econômicos e jurídicos do desenvolvimento de estruturas de agrupamento na formação de corredores de transporte internacional. A base metodológica do estudo consiste no uso integrado de um conjunto de métodos de pesquisa científica geral e especializada. A base da pesquisa foi formada por atos legislativos e regulamentares, materiais das agências estatais e autoridades locais, e publicações científicas. O clustering do transporte contribui para o uso de oportunidades de recursos na região. É determinado que a clusterização é percebida como uma forma institucional e legal específica do curso escolhido de gestão eficaz do complexo de transportes pelo Estado e pela região. As áreas promissoras de pesquisa sobre o problema do clustering são comprovadamente os problemas de nível nacional e local. É determinado que o mais promissor é o desenvolvimento futuro dos clusters de transporte regional e a unificação de todas as partes interessadas no mesmo, o que deve levar a um aumento do potencial econômico em nível regional, garantindo altas taxas de crescimento do produto regional interno, reduzindo os custos específicos de transporte e melhorando o nível técnico dos veículos e equipamentos.

Palavras-chave: Cluster. Corredor de transporte. Potencial econômico. Nível técnico. Nível econômico. Região. Custos. Administração.

1. INTRODUCTION

Globalization processes acquire new quantitative and qualitative parameters in the world, especially in the transport industry, where the instruments of globalization are actualized in the form of international transport corridors recognized by the continental commonwealth as a priority for international relations. Therefore, in the context of globalization, what becomes the source of regional competitiveness is the successful use of local peculiarities primarily through the implementation of regional innovation programs.

The Russian Federation has already accumulated certain experience in the development and realization of regional innovative programs, at the core of which is the creation of regional clusters as the key factors in the economic development of the region with consideration of regional peculiarities. Therefore, the regions where regional clusters are located become leaders in economic development. Such leader regions define the competitiveness of national economies.

The study of the problems of transport sphere development is reflected in the works of V.G. Bender (2021), E.V. Ermakova (2020), T.N. Kosheleva (2020), E.I. Kutsenko (2020), A.I. Milev (2021), A.S. Mikhailov (2021) and others. However, there is still a need to develop a more accurate conceptualization of what clusters and related phenomena are in order to draw conclusions for the regional economy. Although the cluster approach as a mechanism for the effective development of regions has been considered in the works of many scientists, the issue

of the organization of clusters in the transport sector remains little explored and far from practical application.

2. METHODOLOGY

The methodological basis of the study is formed by the following general scientific methods: analysis and synthesis in the analysis of the existing theoretical and methodological approaches, provisions, and scientific developments on the regulation of the transport sector; the structural-logical method used in the systematization of factors affecting the development of transport clusters.

The information base for the study consists of legislative and regulatory acts, materials of state authorities and local governments, and scientific works of Russian and foreign researchers on the regulation of cluster structures in the formation of international transport corridors (Agamirova et al., 2017; Malyugina et al., 2020; Ogloblina et al., 2020).

The purpose of the study is to develop approaches to the analysis of the problems of transport services market regulation, as well as to substantiate the strategies of the behavior of participants in transport clusters in the context of globalization. Another objective of the study is to provide substantiation for approaches to assessing the functioning of transport clusters, to identify and formulate the main directions for the development of the international transport services market in modern conditions.

3. RESULTS

As evidenced by practice, a regional cluster is a spatial agglomeration of economic activity that shapes the basis of the local environment, which ensures the exchange of knowledge and stimulates different forms of adaptation. Such clusters tend to consist of small and large enterprises, with the central element of their success residing in the forces of social capital and geographic proximity.

Mapping of clusters shows that they mostly include a large number of small and medium-sized firms. In these settings, not only firms are significant actors. In addition, clusters can enter into intensive alliances with various institutions, such as universities, research institutes, public authorities, and consumer organizations.

There are four main categories of parties that are essential for clusters and typically found in them: companies; public authorities; research associations; financial institutions. In this regard,

the positive conditions for the functioning of clusters may include the presence of technological and scientific infrastructures and psychological readiness for cooperation.

A critical hindering factor in the development of clusters is the short-term planning horizon – the real benefits from the development of a cluster appear only in 5-7 years, while the range of regional development management is limited to 4 years (the pre-election period). Therefore, regional cluster projects can only be developed and realized in the presence of a regional strategy.

Moreover, the successful implementation of a regional strategy and the strategies of development of particular clusters need to be mutually consistent. When developing a regional strategy, it is necessary to take into account what key points of growth exist in the region, and what various interest groups can do to develop these key points of growth. At the same time, when identifying promising clusters and when planning their development, the framework of regional strategies must necessarily be taken into consideration.

In the present conditions, the key point is not only that the need for the development of a certain cluster has to be enshrined in the local strategy but that the business and administrative elites of the region have to agree on the need for the development of clusters focused on ensuring sustainable development with consideration of the entire spectrum of the region's social and economic problems.

Clusters require their members to trust one another and a longer planning horizon. In most cases, there are problems with both of these. In this regard, a certain adaptation of the cluster approach is the creation of clusters with the assistance of vertically integrated entrepreneurial networks. That is, the development of clusters and vertical networks can complement each other.

Recently, the idea that vertically integrated entrepreneurial networks are the most natural and promising form of business organization and development in the Russian Federation has been actively promoted. In this case, the cluster implies a horizontal structure. The question arises: how can these two approaches reconcile? We believe that the cluster approach does not conflict with the development objectives of vertical corporations. At the same time, the presence of a developed infrastructure of services, consulting services, and component suppliers (in the cluster structure) will reduce costs and increase the competitiveness of any large corporation.

A striking example is the transport cluster that is being formed in Krasnodar Krai around a group of several southern ports. The presence of a well-developed system of associated business makes it possible to significantly reduce the cost of creating new participants within the cluster and increase the competitiveness of the existing ones (see Figure 1).

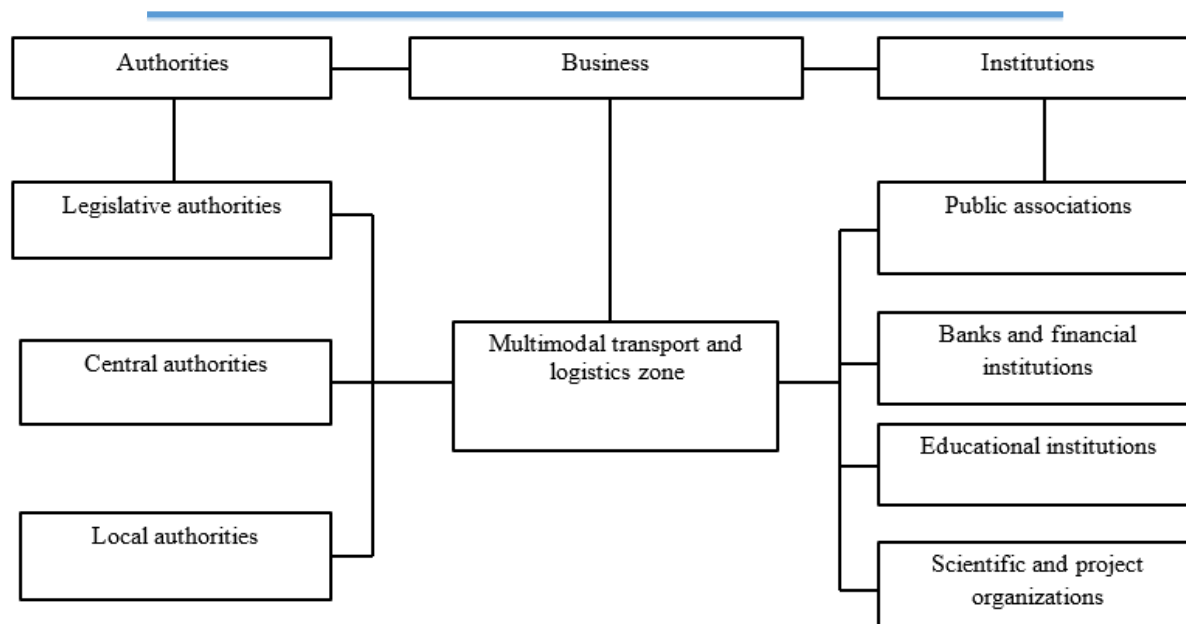


Fig 1. Transport cluster structure

In this case, administrations must use this interest wisely and promote the creation of clusters around the main leaders of regional business, which are the ports. In addition, ports act as the core of the cluster, and small and medium businesses, which develop around them at an accelerated pace, become important payers to the budget and the main source for the development of the territory.

Therefore, a targeted approach to the development of entrepreneurial networks around the port sphere significantly increases small businesses' chances for survival. Practice shows that the main point of applying the cluster approach to regional development in the context of participation in international transport corridors is that important reserves for improving the transport process in transit corridors can be identified when considering transport clusters in their totality, taking into account the existing links between them.

Cooperation of groups of enterprises and organizations in the form of a cluster can be successfully replicated even in the midst of an economic crisis. In particular, the scientific-intellectual and resource potential of Krasnodar Krai allows using such a prospective tool of innovative development as clusters to the full extent. The region has begun work on creating such a cluster in the use and development of transit potential by attracting, above all, the leading scientific and educational institutions in the sphere of transport and the most prominent transport enterprises of the region.

Since the transport industry occupies one of the main positions, the study of the formation of transport clusters in the South of the Russian Federation is very timely and in demand.

Krasnodar Krai is marked by an extremely favorable transport and geographical location, which has determined the leading role of systemic logistics services (see Figure 2).

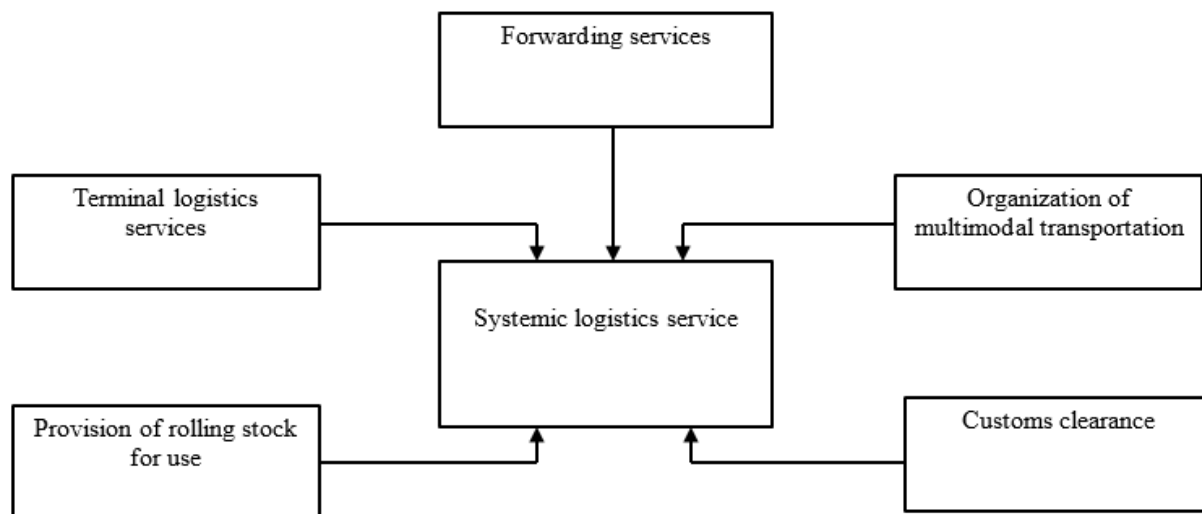


Fig 2. The structure of the systemic logistics service in the transport sector

At present, the transport complex is one of the priority spheres in Krasnodar Krai, the development of which is considered to shape the economic growth of both the region and the country as a whole. The inter-sectoral transport complex of Krasnodar Krai is represented by all types of transport – rail, road, water, pipeline, air, and electric.

Furthermore, assessment of the development of the regulatory and legal field in the Russian Federation and determination of the possibility of safe innovative development of the transport complex in the context of clustering of the national economy reveals the need to systematize the existing innovative legislation, as well as to supplement and further develop it in two areas: 1) legislative support of clustering; 2) legislative support of the basis for the development of cluster structures in the context of the formation of international transport corridors.

In accordance with the first direction, a number of transformations need to be made by groups: the creation (adoption) of individual laws and legislative acts of the Russian Federation; introduction of amendments to the existing legislation to enhance the legal basis of clusterization; accession to international conventions (clustering memorandums). In this respect, it is necessary to support the adoption of the Concept of clusters in the Russian Federation, which outlines the main types of clusters and the prerequisites and need for their creation and defines a set of measures to intensify the clustering of the economy.

In the second direction of the development of the normative basis of clusterization, there is a need to define recommendations for the development of the legal sphere of cluster structures

development in the conditions of the formation of international transport corridors. In this regard, it is possible to take into account the laws that can contribute to the development of cluster structures. In this, it is necessary to determine the order of creation and liquidation of transport clusters and the mechanism of their operation, as well as the general legal and economic foundations of their status and the general rules for the regulation of relations.

In addition, in the development of the regulatory and legal field of clustering in the transport sector, methodological guidelines for the implementation of cluster policy need to be developed. This fact necessitates changes in the legislation on regional development. In this context, the stimulation of regional development could also be based on the principles of the formation of transport clusters.

Since the development of transport clusters can be predicted not only in the corresponding types of economic activity but also in a particular territory (in the respective regions), it is necessary to identify the ways to develop the regulatory and legal field of their functioning. Thus, the changes can be reflected in the corresponding regional development strategies. Among the advantages of the transport industry, these strategies indicate the creation of clusters and special zones in seaports, while the problems of port areas are seen in the absence of a network of clusters.

Therefore, as part of the strategies' implementation, it is necessary to create a network of clusters by defining the list of seaports and types of clusters, expanding the list of services provided in seaports, attracting private investment for the development of seaports, transferring port industry enterprises and some port infrastructure facilities, in particular, into concessions.

Furthermore, the conditions for the entry of the Russian economy into the global and European regional economic system imply radical changes in the field of sea transport and in the system of seaports of the Russian Federation. Modern seaports can no longer be only passive points of transshipment of cargoes from one mode of transport to another.

The active part of seaports has to expand by means of their involvement in integrated transport systems based on the principles of logistics chains, that is, the sequence of services throughout the entire process of creation of value-added with a focus on the systems associated with international trade and the distribution of freight flows.

In the present and upcoming periods of development, ports need to be regarded as the elements of a unified transport system that, in its sequential integrity, links together the transport and production, and commercial processes to ensure competitiveness and provide better services. In this respect, an increase in the adaptability of ports to the needs of cargo and shipowners on the basis of reliability and quality of services becomes inescapable.

In these conditions, investments are not only allocated to ensure the rapid transshipment of goods but also become a means of creating the conditions required to provide cargo owners with an expanded system of services and rely on the needs of exporting and importing industries. In this context, the change of views on the role and significance of transport clusters and the increasing complexity of the structure and methods of operation of international transportation systems predetermine the need for appropriate changes, in particular, in terms of the problems of the forms of ownership, organization, and management, the status of ports, the rights and duties of port authorities, and relations with the public and private sectors, other modes of transport, business organizations, and customers.

4. DISCUSSION

The reliability of the examined approaches is supported by the clearly apparent insufficiency of the equipment of ports for the reception and handling of modern large-capacity vessels with the required intensity of cargo operations (Lukiyanchuk et al., 2020; Markova et al., 2021; Zavalko et al., 2017). The infrastructure and integrated service systems of ports for cargo owners, communications, and informatics are underdeveloped. This factor is accompanied by complications and losses from the depreciation of their material and technical base: hydraulic engineering structures, transshipment equipment, warehouses, buildings, engineering networks, intra-port transport, service and auxiliary transport, and other constituent groups of fixed assets.

From the point of international practice, a solution to this problem may be the creation of a transport cluster on the basis of the Novorossiysk seaport, as the backbone of the economic development of Krasnodar Krai. However, the amount of time spent on customs and border formalities is unreasonable.

A negative role is also played by the outdated organizational and technical approaches to the processing of various cargoes, as well as the lack of modern logistics centers, without which it is impossible to make the Russian Federation one of the centers of container cargo traffic. Another reason is intense competition on the part of the competitors that are actively pulling over a part of traditionally Russian cargo and passenger flows. The lack of coordination of all types of transport generates problems in the operation of international transport corridors.

In the meantime, the implementation of the cluster approach in the economy of Krasnodar Krai is supported by the regional innovative development center, which includes the representatives of enterprises specializing in consulting, marketing, information, and legal services. The center provides methodological support and generalization of experience in the creation and

operation of regional clusters, as well as promotes the attraction of investment support for the organization and operation of clusters.

5. CONCLUSION

In summary, it can be noted that transport clustering promotes the use of resource opportunities in the region. In this case, clustering is viewed as a specific institutional and legal form of the chosen course of effective management of the transport complex by the state and the region. Promising areas of research on the problem of clustering are the nationwide and local problems within the framework of this process.

The most promising is the further development of the regional transport cluster and the unification of all stakeholders in it, which should lead to an increase in economic potential at the regional level, ensuring high growth rates of domestic regional product, reducing specific transport costs, and improving the technical level of vehicles and equipment and the quality of transport services.

The main advantage offered by transport clusters is a real contribution to the region's future high competitiveness. Transport clusters need to be incorporated into regional development strategies. Of importance for clustering initiatives are also the so-called institutions of cooperation in the formation of international transport corridors.

REFERENCES

- Agamirova, Ek. V., Agamirova, El. V., Lebedeva, O. Ye., Lebedev, K. A., & Ilkevich, S. V. (2017). Methodology of estimation of quality of tourist product. *Quality - Access to Success*, 18(157), 82-84.
- Bender, V. G. (2021). Usloviia formirovaniia regionalnogo transportno-logisticheskogo klastera v Respublike Khakasiia [Conditions for the formation of a regional transport and logistics cluster in the Republic of Khakassia]. *Saint-Petersburg Economic Journal*, 3, 47-54.
- Ermakova, E. V., & Romanova, A. T. (2020). Analiz ekonomicheskoi ustoichivosti predpriatii, rabotaiushchikh na transportnom rynke [Analysis of economic stability of enterprises operating in the transport market]. *Vestnik MHEI*, 2, 114-137.
- Kosheleva, T. N., Grozovskaia, E. V., & Brazevich, D. S. (2020). Metodologicheskie osnovy razrabotki kontseptsii upravleniia razvitiem predprinimatelskoi deiatelnosti na transporte [Methodological foundations of the concept of managing the development of entrepreneurial activity in transport]. *Alma Mater*, 1, 99-103.
- Kutsenko, E. I., & Mishurova, A. I. (2020). Neirosetevoe modelirovanie sostoianiia transportno-logisticheskoi infrastruktury zarubezhnykh stran i Rossiiskoi Federatsii [Neural network modeling of transport and logistics infrastructure of foreign countries and the Russian Federation]. *Management in Russia and abroad*, 1, 29-39.
- Lukiyanchuk, I. N., Panasenko, S. V., Kazantseva, S. Yu., Lebedev, K. A., & Lebedeva, O. E. (2020). Development of online retailing logistics flows in a globalized digital economy. *Revista Inclusiones*, 7(S2-1), 407-416.
- Malyugina, N. M., Polyakova, R. I., Fedorova, E. A., Tretyak, E. B., & Shadskaja, I. G. (2020). The specifics of discourse modeling in intercultural communication. *Revista Inclusiones*, 7(4), 486-495.
- Markova, O. V., Listopad, E. Ye., Shelygov, A. V., Fedorov, A. G., & Kiselevich, I. V. (2021). Economic and legal aspects of the innovative activity of enterprises in the context of the digital economy. *Nexo Revista Científica*, 34(2), 964-672.
- Mikhailov, A. S., Mikhailova, A. A., & Khvalei, D. V. (2021). Otrasleye klastery prigranichia evropeiskoi chasti Rossii: Dinamika obrazovaniia v 2000-kh gg. [Industry clusters of the border areas of the European part of Russia: The dynamics of formation in the 2000s]. *Pskov Journal of Regional Studies*, 1(45), 3-20.
- Milev, A. I. (2021). Mesto transportnoi infrastruktury v razvitii regionov [The place of transport infrastructure in the development of regions]. *Human Progress*, 7(2), 7.
- Ogloblina, E. V., Serecina, M. I., Altunina, J. O., Kodolov, V. A., & Lebedev, K. A. (2020). Socio-economic consequences of digital development of the economy. *Revista Inclusiones*, 7(S3-5), 421-430.
- Zavalko, N. A., Kozhina, V. O., Zhakevich, A. G., Matyunina, O. E., & Lebedeva, O. Ye. (2017). Methodical approaches to rating the quality of financial control at the enterprise. *Quality - Access to Success*, 18(161), 69-72.