The article provides a thorough analysis of evolutionary research on the development of cluster formations and their global connections as an object of state administration. In the course of the study, the growing interconnection of cluster partnership systems is reflected, where resources and competences are combined, access to target markets and know-how becomes open, information and experience are exchanged between clusters, network systems are created using special technology, it becomes possible to use sources of knowledge with of the whole world and the development of a new field of knowledge. The existing approaches of scientists in terms of interregional and intercluster partnership are emphasized, it is highlighted that a significant number of authors describe systems of interaction in partnership, but do not explain the purpose of this process. However, eliminating the fact that researchers do not have a single opinion about the quintessence of cluster partnership systems both at the level of regions, industries, and clusters, it is justified that the researched ideas of scientists can be used in the development of the author's interpretation of the category of "cluster partnership systems". It is emphasized that all the considered approaches are complementary to the studied category. Each approach brings its own understanding of this concept. Accordingly, the author emphasized that the consideration of cluster partnership systems from the standpoint of only one approach does not give a complete idea of their essence and, when developing state programs for the development of cluster partnership systems, it is necessary to use these scientific concepts in various combinations, which will allow to objectively evaluate the activities of all economic partnership entities that provide innovative development of the national economy and will create a synergistic effect of the interaction of participants from the standpoint of strategic and transactional approaches.

Keywords: intercluster partnership; intercluster alliances; transregional network of cluster initiatives; interregional cooperation.
Statement of the problem. Scientific approaches to the study of the development of cluster formations and their global connections in terms of the formation of technological structures indicate a growing relationship between clusters, where resources and competences of clusters are combined, access to target markets and know-how becomes open, information and experience are exchanged between clusters, networks are created using special technology, it becomes possible to use sources of knowledge from around the world, as well as the development of a new field of knowledge. Among the treatises of modern scientists, due to the intensification of global integration and quasi-integration processes, the use of similar categories of cluster-territorial formations, such as "metaclusters", "intercluster partnership", "intercluster alliances", "intercluster alliance", "transnational cluster partnership", etc., is observed.

It is worth noting that none of these scientific categories has become generally accepted, both in foreign scientific literature and among domestic scientists, which actualizes the need for this research.

Analysis of recent publications on the problem. In order to present an economic projection, the definition of “cluster partnership systems” as an object of state regulation, let us critically analyze the essential content of similar economic categories.

Among the scientists who proposed the statement that clusters should develop global connections or global partnerships, one should single out professors of business economics H. Batelt, P. Maskel and A. Malmberg (2004), scientific works of scientists from Cornell University (USA). M. Gertler and J. Levitt (2005) [1, 2], professors of economic geography R. Martin and P. Sanli (2006). In these studies, scientists note that these partnerships can provide significant benefits to clusters, however, they are not without problems, especially in the formation, development and management. Clusters, building global networks, must choose the right partners, determine what information should be disclosed or remain confidential, and make decisions about joint activities and monitoring [24].

The Danish economist M. Lorenzen and the Temple University of Philadelphia scientist R. Mudambi (2013) in their scientific work: "Clusters, Connectivity and Catch-up" argue that the configuration of global connections constitutes "inter-cluster partnership". They suggest that in addition to global ties, which can be seen as organizational ties, inter-cluster ties can be personal. Personal ties are based on social proximity, kinship or friendship [32].

In their study, M. Voynarenko, A. Bereza define “inter-cluster partnerships” as business processes, formal and informal relations between participants who are competent in different areas of technology, grouped into different technology clusters [40].

Ukrainian scientist V. Omelianenko notes that economic inter-cluster communication is the development of inter-cluster relations, which are expressed through the conclusion of new contracts and economic agreements [42].

V.M. Yokhna and V.V. Stadnik [41] argue that the relationship between clusters should be expanded and defined as a three-level phenomenon: at the level of a person, at the level of an
organization (firm) and a cluster level. Partnerships at the cluster level usually take the form of agreements or alliances to attract local knowledge funds [43].

The joint implementation of value chains stimulates the formation of metaclusters. The concept of a meta-cluster is defined as "a trans-regional network of cluster initiatives focused on one or complementary technological areas or industries" [15]. It is believed that meta-clusters are formed through the cooperation of at least three regional clusters that combine the development of ideas and projects, products and services based on the use of participants' competencies to meet market needs. However, it should be noted that such a definition does not take into account the strategic synergy between clusters, and also that metaclusters do not focus on interdisciplinary or cross-cutting cooperation in the field of technology.

Under these conditions, clusters as an object of state regulation become important as a form of interorganizational network that promotes regional development and the competitiveness of the national economy [25]. For Italian scientists [3, 13], from this position, interclustering is synonymous with partnership.

Unlike corporate inter-cluster ties, links at the cluster level do not concern an individual enterprise [35]. Their goal is several different types of partner participants (business structures, research institutes, institutions of higher education, the state, etc.) in each cluster for joint involvement there are science-intensive, as a rule, large-scale projects that could not be implemented individual enterprises. However, although the development of links at the micro and nano levels is not the main goal of developing cluster partnership systems, the latter create a favorable environment for the development of such links.

In foreign and domestic scientific literature [42, 43], in terms of the development of cluster partnership systems, there is also a definition of the category "union". At the same time, it is noted that a single alliance is rarely enough to achieve strategic goals, especially when knowledge is distributed in different places. Strategic capacity building goals based on partnerships are more often achieved through alliances:
- cluster alliances [3–7];
- intercluster alliances as a "new area of research" [20, 24, 40, 43].

The new perspective on inter-clustering reflects the implicit postulate of cluster literature that such relationships create value for cluster structures as networked organizations [44].

Communication between clusters and inter-cluster alliance represents a configuration in knowledge-intensive industries when the rate of environmental change is high, which is typical for a knowledge-intensive industry. It follows that clusters working in such an area usually create a number of alliances or a portfolio of alliances instead of focusing on single alliances.

Of great interest are the interpretations of the types of inter-cluster partnerships by types of resources (economic, financial, administrative; personnel; information; technological; material and technical). The English scientist Maria Marston in her dissertation research "Inter-firm alliances as predictors of partnership success" considers the concept of transnational cluster partnership as a relationship characterized by a high level of customer orientation, common technologies. Business structures minimize risk and uncertainty using the cluster model through the use of a common communication infrastructure and gradual entry into world markets, which confirms the main provisions of the theory of creating international corporations and strategic alliances [24].

Consequently, the study of scientific works of foreign and domestic scientists on the concept of the category of "cluster partnership systems" as an object of state regulation allows us to conclude that researchers do not have a unified view of the essence of this definition, which determined the need for a deep and comprehensive study of the essence of cluster partnership systems from the perspective of interregional, inter-regional-industry and inter-cluster partnerships, which will clarify the specifics of the category under study in the context of this study.
Statement of the main results and justification. Analyzing the above approaches in terms of inter-regional and inter-cluster partnership, among the formulations of Ukrainian and foreign scientists, we can conclude that a significant number of authors describe systems of interaction in partnership, but do not explain the purpose of this process. However, leveling the fact that researchers do not have a common opinion on the quintessence of cluster partnership systems both at the level of regions, industries, and clusters (Table 1), this does not contradict the essence of this term, and therefore, the studied ideas of scientists can be used in development of an interpretation by the author of this category.

<table>
<thead>
<tr>
<th>Scholars-followers</th>
<th>The essential aspect of the category</th>
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<tr>
<td><strong>Approach from the standpoint of inter-regional partnership and internationalization of cluster structures</strong></td>
<td></td>
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<tr>
<td>O. Babinova [36]</td>
<td>Interregional economic cooperation is the interaction of territorial entities as subsystems in the structure of the national economy, legally fixed within certain territorial boundaries, having the basic unity of the power-administrative system and characterized by a certain commonality of natural, socio-economic, cultural and other conditions.</td>
</tr>
<tr>
<td>S. Bila, I. Babets, I. Valyushko, Ya. Zsalilo [38]</td>
<td>Interregional cooperation is one of the mechanisms for activating innovation processes and attracting investments for the implementation of highly effective innovative projects that can form new centers of economic development, around which areas of economic growth will be created due to the opportunities for consolidating the resources of interested regions in the implementation of projects of common interest.</td>
</tr>
<tr>
<td>T. Renkas [43]</td>
<td>Interregional cooperation is one of the mechanisms for enhancing cooperation between regions of countries or regions in a country, between public authorities and other structures, aimed at implementing innovative processes and attracting investments aimed at creating new centers of economic growth, by optimizing the use of regional resources as the main sources of social -economic development of the country.</td>
</tr>
<tr>
<td><strong>Approach from the standpoint of interregional-industry partnership</strong></td>
<td></td>
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<tr>
<td>O. Bakumenko [37]</td>
<td>Interregional industry partnership is the interaction of business structures of the regions to solve common problems, create production and technological chains, clusters, associations.</td>
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<td><strong>Inter-cluster partnership approach</strong></td>
<td></td>
</tr>
<tr>
<td>N. Vernydub, V. Omelianenko [42]</td>
<td>Inter-cluster partnership involves the formation of networks of clusters, the participants of which are both &quot;neighboring&quot; clusters and distant clusters, between which strong ties are established.</td>
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</table>

In view of the foregoing, the author's definition of cluster partnership systems is proposed as a voluntary partnership-network formation based on objectively determined principles, organizational and managerial algorithms, methods, and tools, as well as financial and economic support for the formation of strategic and tactical actions within the framework of policy. Innovative development of the national economy

It should be noted that the process of integrating independent economic entities, which are clusters, on the basis of partnership rights, is quite difficult. Solving the problems that arise during the formation and development of cluster partnership systems is possible only in the conditions of a
well-organized cluster partnership management system, which makes it possible to take into account the interests of all participants in the development of a common development strategy.

Consequently, the tasks of effective management of the cluster partnership system are, firstly, to form a motivated interaction between all participants in the integrated structure, and secondly, to develop sub-mechanisms taking into account the characteristics of each of the parties, ensuring its improvement.

Let us analyze approaches to managing the cluster partnership system as an object of state regulation, based on the approaches of inter-cluster partnership presented in foreign and domestic scientific literature (Table 2).

### Basic approaches to managing the cluster partnership system

<table>
<thead>
<tr>
<th>Approach</th>
<th>Feature</th>
<th>Attribute</th>
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<tbody>
<tr>
<td>Systemic</td>
<td>Compliance with the requirements of general systems theory: each object must be considered as a complex system, being, in turn, an element of a more general system.</td>
<td>CP is considered as a system of interrelated elements; emphasis on defining the goals and sub-mechanisms of the system, their consistency with each other.</td>
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<td>Strategic</td>
<td>The ability of the subjects of the KP to identify and evaluate the strengths and competitive advantages that make it possible to withstand the threats of the external environment, as well as the ability, based on planning, to take advantage of favorable opportunities for their development.</td>
<td>The indicators of production and marketing activities are determined, which determine the long-term successful prospects of the subjects of the KP in the conditions of fierce competition.</td>
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<td>Cluster</td>
<td>Interaction of legally independent entities of the KP, operating in the same territory and operating in interconnected industries. The development of the base industry provokes the growth of related industries.</td>
<td>A synergy effect is achieved; higher rates of commercialization of manufactured products (services) are ensured; favorable conditions are created for attracting foreign investment.</td>
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<tr>
<td>Transactional</td>
<td>Goal setting by the subject of the CP through maximum savings on transaction costs.</td>
<td>Minimization of transaction costs as a result of the development of a system of interaction between participants.</td>
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<tr>
<td>Informational</td>
<td>Identification and analysis of the most characteristic informational aspects that determine the functioning and development of the subjects of the KP.</td>
<td>Interrelation between different research methods is provided; interpretation of the experience of research activities of the subjects of the KP is provided.</td>
</tr>
<tr>
<td>Process</td>
<td>Study of the functions of strategic management in terms of interrelated actions.</td>
<td>The maximum concentration of KP resources aimed at the implementation of key processes is achieved.</td>
</tr>
<tr>
<td>Project</td>
<td>Emphasizing the importance of projects as the best way to solve the most important tasks for the subjects of the KP.</td>
<td>Requires the creation of additional structural units or the use of project and matrix structures that are more complex management; forms a link between strategic and operational management; ensures more efficient use of resources, directing them to the implementation of the project goals and controlling this process; improves the efficiency of business processes.</td>
</tr>
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</table>

*Source: systematized by the author based on [1–8, 24, 40–43].*
Conclusions and prospects for further research. The above analysis of the scientific works of foreign and domestic scientists allows us to draw the following conclusions:

- a significant number of scientists consider the process of managing inter-cluster partnerships in the context of cluster, system and strategic approaches, which indicates a certain commonality of their views on the essence of the category;
- consider the project approach as an opportunity to solve the common most important tasks of the participants in inter-cluster interaction;
- scientists who consider the category of "management of inter-cluster partnerships" from the position of the information approach, focus on minimizing transaction costs;
- despite the considerable number of approaches in general, there is a shortage of cluster partnerships that are adaptive to the management of the cluster partnership system, as an object of state regulation, which could be based.

In our opinion, all considered approaches complement each other with respect to the category under study. Each approach brings its own understanding of this concept. Accordingly, we can conclude that consideration of cluster partnership systems from the standpoint of only one approach does not give a complete picture of their essence and, in our opinion, when developing state programs for the development of cluster partnership systems, it requires the use of these scientific concepts in various combinations, which will allow us to evaluate the activity all economic entities of the partnership that ensure the innovative development of the national economy and will create a synergistic effect of interaction between the participants from the standpoint of strategic and transactional approaches.

It is appropriate to note that at the moment Ukraine lacks certain institutional support, which hinders the further development of cluster partnership systems as an object of state regulation.

References


Союз.


40. Войнаренко М., Береза А. Кластерні об'єднання: міжнародний досвід та українські реалії. Економіст. 2013. № 10. С. 27–30.


42. Омельяненко В. А., Вернидуб Н. О. Теоретичні основи та аналіз світового досвіду міжнародного розвитку високотехнологічних кластерів. Междисциплінарні ісследования в науке и образовании. 2013. № 2. URL: https://essuir.sumdu.edu.ua/bitstream-download/123456789/30161/3/Omelyanenko_Vernidub.pdf;jsessionid=AB1E64A8EBD84AAEACC126ACB38A9B45 [in Ukrainian].