

EXPERIENCE OF DEVELOPING SYSTEMS OF CLUSTER PARTNERSHIP IN THE EUROPEAN UNION



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Abstract. In this article, the author has developed ideas about development of cluster partnership systems in Europe. It examines the number of cluster partnerships and the scheme of organization of cluster partnerships in the European Union. An analysis of key programs and platforms for the development of cluster partnerships in EU countries. Conducts research on effective inter-cluster cooperation in EU countries.

Keywords: *cluster, organizational model, clusters structures, intercluster partnership, inter-cluster cooperation.*

Introduction

Among the developed countries of the world there is a growth of cluster formations, of which the organizational and functional structures do not change, but the process of joint interaction is increasing, which creates favorable conditions for the development of cluster partnerships based on integrated and quasi-integrated relationships and the economy of the territories of their base. Integration trends in conditions of accelerated globalization, increasing uncertainty, market turbulence and structural transformation of the national economy determine the search for alignment of interests of partner entities, conducting a balanced state cluster policy and active actions in terms of scientific and technological and socio-economic development, which actualizes the need to develop systems of cluster partnership of the national economy.

The absence in Ukraine at the level of the law to regulate the creation, organizational and legal forms, and levers of state support for cluster partnerships determines the relevance of the analysis of relevant foreign experience, in particular, the EU.

Literature review. Actual aspects of the formation and development of quasi-integrated structures are presented in part in the works Voinarenko M., Bereza A. (2013), Wolfe D. A., Gertler

M. S. (2004, 2012), Zu Köcker G. M., Lämmer-Gamp T., Nerger M. (2014). Issues of various aspects of the interaction of economic entities are considered in the scientific works of such scientists as: Ganushchak-Yefimenko L. (2010), Lindqvist G., Ketels C., Solvell O. (2013), Nifatova O. (2017) and others.

However, it should be noted that currently insufficient attention has been paid to research on the global practice of developing cluster partnerships. In addition, despite the significant contribution of the above studies to the overall paradigm of cluster interaction, they all lack integrity and complexity. However, the lack of legislation on cluster development in Europe determine the relevance of this study.

Research methodology. European politicians have begun to use cluster initiatives since the late 1990s. Today in Europe there are about 3500 cluster formations and similar structures (Fig. 1).

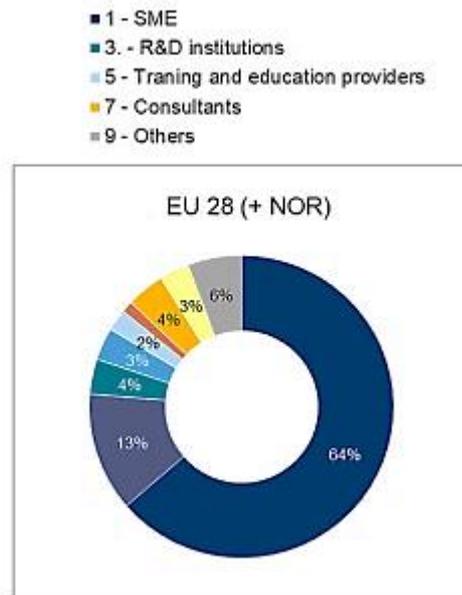


Figure 1. Composition of participants in cluster partnerships and initiatives in the European Union
Source: according to European Cluster Collaboration Platform.

Cluster partnerships form a significant part of the European industrial landscape. They are dynamic geographic concentrations of interconnected firms and associated economic actors that have achieved sufficient scale to develop specialized expertise, services, resources, suppliers, and skills.

Such cluster partnerships include mostly business companies, but also other important players of the industrial ecosystem, in particular research and academic institutions, science and technology parks, financial service providers, non-profit organizations, etc.

Today there are some 3,500 cluster formations and similar structures in Europe, employing over 50 million people (Figure 3.2), accounting for almost one in four jobs in Europe (61.8 million jobs, or 23.4% of total employment) and about half of the jobs in the exporting industries (50.3%).

Cluster partnerships in Europe vary in both size and format. They are at different stages of maturity and run different cluster development programs depending on the country and region. The fact that there are 30 national cluster programs in 20 countries demonstrates the importance of cluster groupings.

Thus, in 2007, the European Cluster Observatory was created, accumulating information on the implementation of cluster policies in European countries.

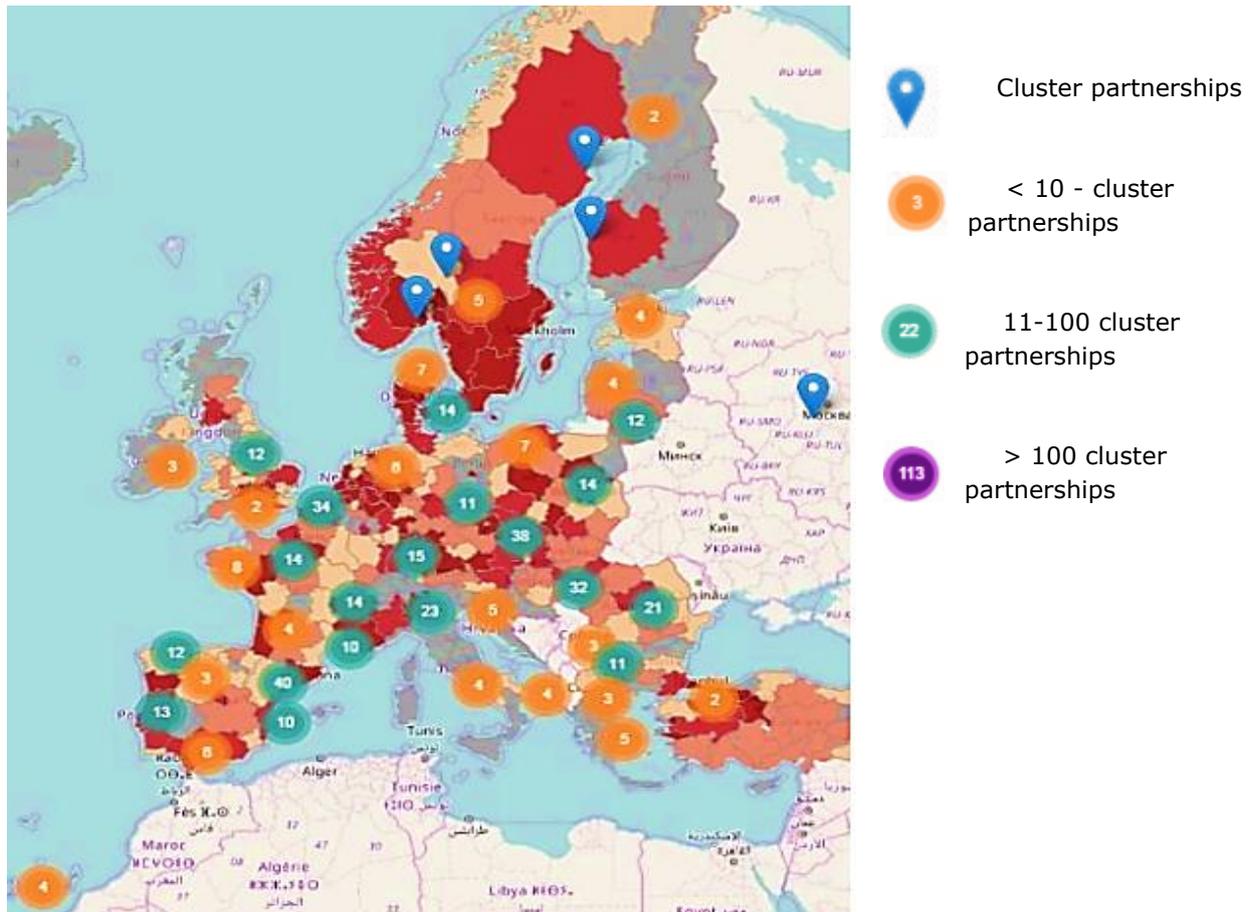


Figure 2. Cartography of the number of cluster partnerships in the EU in 2020
 Source: according to European Cluster Collaboration Platform.

According to the results of the survey on SMEs conducted by the agency Eurobarometer in 2020, more than half (51%) of all SMEs in Sweden are members of cluster partnerships, 38% in Belgium and 36% in Spain, and a total of twelve countries with at least one in ten SMEs are members of cluster partnerships (Fig.3).

Modern conditions of business processes and their internationalization determined the relevance of the issues of interaction between clusters in the countries of the European Union.

Q9 Which of the following statements applies to your enterprise? (MULTIPLE ANSWERS POSSIBLE)
 (% - It is a member of an industry cluster or another SME business support organisation in the region)

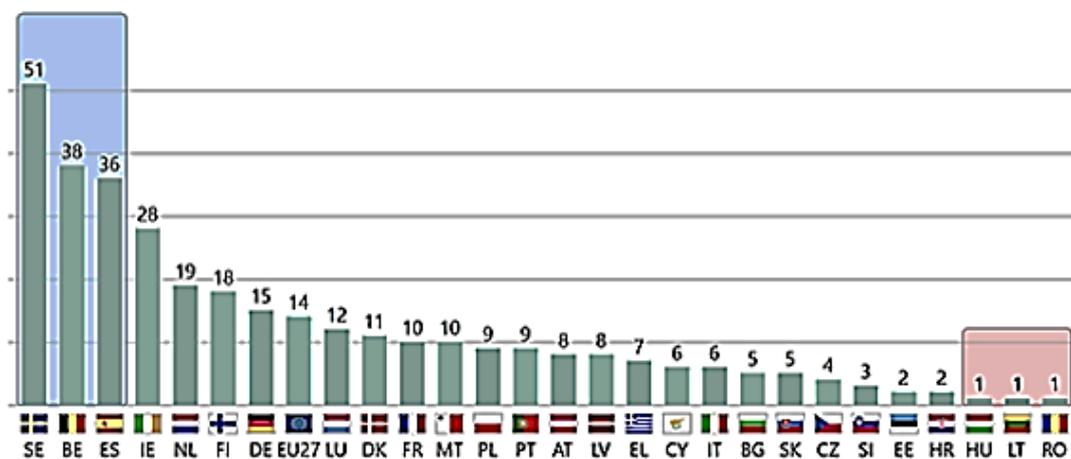


Figure 3. Eurobarometer of cluster partnerships in the EU for 2020

Source: according to European Cluster Collaboration Platform.

The role of cluster partnerships in the EU is to

- Strategic leadership on recovery and other systemic issues.
- Development and implementation of industrial policy in multilevel governance.
- Linking actors from different EU member states, regions and their industrial ecosystems.
- Managing the process of entrepreneurial discovery in smart specialization strategies.
- Active participation in retraining and professional development.
- Access to international markets in non-EU countries.
- Channeling EU public funding to SMEs.
- Building its own capacity to promote cooperation, capitalization and dissemination of technological and market information, as well as the provision of specialized services.

Considering the factor of competitiveness at the global level, the European Commission began to pay more attention to the development of innovation capacity, through the interaction between sectoral cluster partnerships of European countries.

Consequently, the development of cluster partnership systems began, providing the formation of industry clusters, the increase in the level of interaction of which greatly simplifies the access to markets of European countries (The European Cluster Collaboration Platform; The European Network for Social and Economic Research, December, 2020).

For the development of cluster partnership systems, several initiatives were developed, among which it is possible to highlight, in particular:

- Organization of the European Cluster Collaboration Platform (ECCP), facilitating cluster partnerships within the EU and helping clusters to enter international markets.
- Conducting international cluster networking events to provide cooperation for European cluster organizations with partners in Europe and beyond. Cooperation events can be organized both in Europe and in other markets to bring together cluster representatives from Europe and third countries to promote business opportunities and partnerships in strategic sectors of common interest. In order, to promote cross-sectoral cooperation and facilitate the emergence of new value chains, events are also held in Europe involving representatives of European clusters operating in different sectors.
- The formation in 2012 of the European Strategic Cluster Partnerships (ESCP), whose task is to pool resources and knowledge to work concretely on common strategies. ESCP aims to develop and test innovative approaches to facilitate cooperation between cluster organizations and cluster firms in Europe and beyond, to enhance internationalization through clusters and develop their level of competitiveness (The European Network for Social and Economic Research, December, 2020).

The rationale behind the creation of cluster partnership systems under the ESCP umbrella is the need to address key challenges that are beyond the power of individual clusters. The partnerships organized within the ESCP encourage the European clusters to work together, using synergies to develop a common "European" strategic vision with a global perspective and common goals, providing access to third markets.

The basis of formation of the Partnership is the agreement between its participants, within which the algorithm of development and implementation of management mechanisms is built (The European Cluster Collaboration Platform).

The candidate (cluster or network) for participation in the ESCP registers on the ESCP Platform, filling out the proposed questionnaire.

A big role in making a positive decision on the entry of the cluster into the partnership system is the presence of a "label", provided by independent experts of the European Initiative according to the results of the evaluation of 31 indicators, characterizing the activity of the potential participant (the minimum level - bronze label, the maximum - gold).

Candidates should be ready to work in conditions of close partnerships and have high potential for development of cluster partnership systems (Wolf, 2012).

Fig. 4 shows the Scheme of the organization of cluster partnership in the European Union.

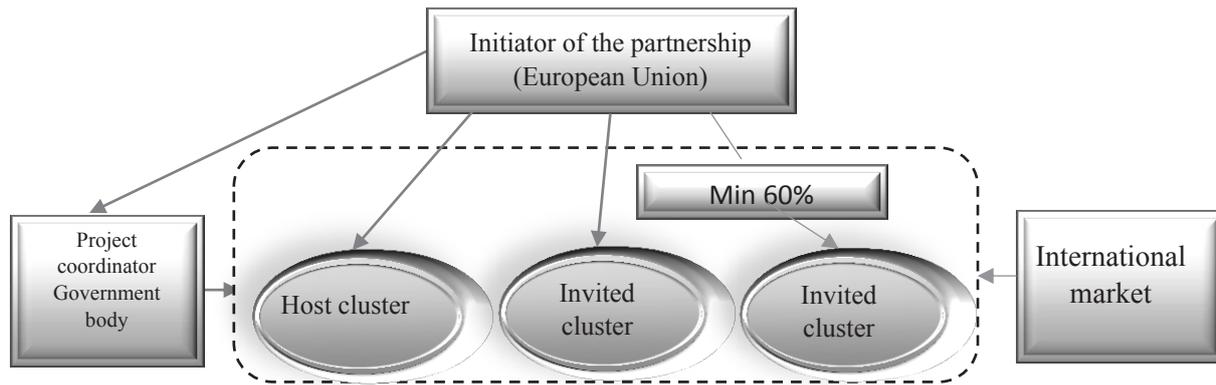


Figure 4. Organizational model of cluster partnership in the European Union

Source: according to «The European Observatory for Clusters».

Considering the above, we can state that the organization of cluster partnership in the European Union consists of the following structural elements:

- A project coordinator in the cluster partnership organization, represented by one regional or national public authority or agency, which is defined as the "host organization". The project coordinator has the administrative function of managing cluster and network programs designed to support international activities. His/her functions are also project management planning, task coordination (checking deadlines, reminders, etc.), reporting and financial administration of the project. The project coordinator is the link between the European Commission and the project partners.
- The host cluster (represented by the manager) plays the role of leader or "engine" of the project, especially regarding the mission and measures.
- At least two cluster and network organizations from other participating countries ("invited cluster organizations").

The organization of cluster cooperation can take place in the form of a consortium and has a short-term nature of links. Regarding the number of cluster members in each consortium, practice has shown that cooperation between 3-5 clusters of a grouping is most effective. This size of the consortium facilitates concrete actions and cooperation and makes it easier to achieve a common understanding to agree on a common international strategy (Ganushchak-Yefimenko, 2010, p. 12).

Besides the European Commission, in recent years EU member states have been developing policies for the further development of cluster partnerships. Although specific cluster partnership support programs for individual countries focus on different priorities and use different tools, they all have the same goals – they seek to meet the support needs of cluster partnership participants and contribute to improving conditions for sustainable national development.

Accordingly, relevant agencies have been created in the EU to support and develop cluster partnerships, among which should be highlighted:

- The European Cluster Observatory (ECO), established in 2007, headed by A. Solwell and R. Tyglund In 2012. The Cluster Observatory was separated from the European Cluster Observatory and is now managed by the Center for Strategy and Competitiveness at the Stockholm School of Economics;
- European Strategic Cluster Partnership and B2B Missions (ESCP), aimed at internationalizing the cluster partnership;
- The European Secretariat for Cluster Analysis (ESCA), promoting excellence in cluster management in cluster partnerships;
- The European Platform for Cluster Cooperation (ECCP), which ensures and facilitates knowledge exchange between cluster partners.

More than 1000 cluster organizations and partnerships from Europe and around the world registered on the platform can compare their performance with others, participate in special events allowing establishing mutually beneficial business relations with the necessary partners and finding important points of intersection. According to the executive decision of the European Commission, among the total funding of €397.6 million allocated to the COSME (Competitiveness,

Entrepreneurship and SME Program) in 2018, €5.9 million was allocated to "create a renewed ECCP ... which will be the main online hub for cluster participants in Europe through the merger of the European Observatory for Clusters and the European Knowledge Centre for Resource Efficiency" (The European Network for Social and Economic Research, December, 2020). A more detailed description of the key programs and platforms for the development of cluster partnerships in the EU is presented in Table 1.

The ESSR platform is one of the instruments of the European COSME program aimed at increasing the competitiveness of SMEs and prioritizing internationalization and export directions. This platform is the only common collaboration tool for hundreds of European clusters and their stakeholders and serves to improve collaboration.

Table 1.

**Key programs and platforms for the development
of cluster partnerships in the EU countries**

Name	Specialization	Organizers	Participants
The European Cluster Observatory	Collection of information about clusters, cluster initiatives and partnerships. It is an online, free and user-friendly platform that provides a single point of access to cluster data and analysis. In addition, it offers a cluster library and a classroom for cluster education.	2007, Directorate General for Internal Market, industry, business and small and SMEs of the European Commission, Center for Strategy and Competitiveness	Contains information, annual reports on the development of cluster partnerships in more than 36 countries of the world.
European Strategic Cluster Partnership (ESCP)	Internationalization of cluster partnership. The organization supports the international growth of companies.	2008 p., Eurocommission.	First generation (2016-2017): 15 co-funded partnerships and 10 volunteer partnerships. Second generation (2018-2019): 25 co-sponsored partnerships, including 2 partnerships in Earth observation data applications and 2 partnerships in the defense and security sector. Third generation (2020-2022): 24 co-sponsored partnerships, including 2 partnerships for Earth Observation Applications.

The European Cluster Collaboration Platform (ECCP)	Facilitates the exchange of knowledge between European cluster managers. Collects information, organizes specialized events, facilitates international communication between cluster partners. The ECCP COVID-19 Response Portal allows organizations to find each other and share knowledge.	2016 funded by COSME launched by the European Commission's DG Internal Market, Industry, Entrepreneurship and SMEs	Provides information on clusters, cluster partnerships, European cluster partnerships and initiatives, National cluster associations, cluster networks, national policies, development of cluster partnerships around the world.
	Benchmarking and certification of clusters and cluster management organizations. In addition, ESCA provides practical advice to cluster managers on cluster development and supports cluster policy makers and program owners with advice on developing cluster programs and partnerships.	2009 p., one of the participants European Cluster Excellence Initiative – VDI/VDE Innovation + Technik GmbH	
The European Network for Social and Economic Research (ENSR)	ENSR covers all aspects related to the business sector: entrepreneurship, labor, production, innovation, internationalization, CSR, impact assessment, social activities, etc.	Since 2004, the network has had an office in Brussels. Co-financed by the EU SME Competitiveness Program – COSME	The network consists of members from all 27 EU member states, as well as Norway, Iceland, Switzerland (including Liechtenstein), Turkey and the UK. In total ENSR covers 33 countries.

Source: systematized by the author based on: The Cluster Observatory and Cluster Mapping; The European Cluster Collaboration Platform; The European Network for Social and Economic Research (ENSR).

In addition, other organizational forms are actively developing. An example is the increase in the number of cluster partnerships in various spheres (food production; lighting engineering; aerospace; communications and information technology; hydropower; personalized health care; efficient use of natural resources, etc.), focused on developing a new approach to cooperation in the form of the so-called "big metacluster" with a critical mass of partners, which allows to combine interests of individual clusters with common project goals, focusing on a limited number

An interesting example of effective inter-cluster interaction is the experience of Denmark and Sweden in the bordering neighboring region Eresund, where a common megacluster (the sphere of life science, ICT, digital services, design and food industry) was formed by joint efforts of representatives of science, business and authorities of both countries (Wolf, 2012).

Conclusions

Analyzing the experience of the European Union in the field of cluster policy development, it should be noted that the European Commission pays special attention to this issue, considering cluster partnerships as a tool that helps to eliminate economic imbalances and ensures sustainable structural development of industry, increasing the competitiveness of the European economy.

This study points out that cluster partnership systems constitute a significant part of the European industrial landscape and encompass mainly business companies, but also include other important actors of the industrial ecosystem, such as research and academic institutions, science and technology parks, financial services providers, non-profit organizations.

It is established that the organizational model of the European Union cluster partnership system which is formed of such universal structural elements can be adaptive for use: a project coordinator which can be represented by one regional or national public authority or agency (defined as a "host organization") and project partners, namely the host cluster and respectively at least two cluster and network organizations.

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