Methodology for Forming Tourist Complexes and Clusters, European Experience

Natalia Silicheva - PhD candidate
University of Economics - Varna, Varna, Bulgaria
natalia.silicheva@ue-varna.bg

Abstract

The article is devoted to the problems of the methodology for the formation of tourist clusters as a special form of territorial organization of the production of tourism products in a market economy. In this regard, the cluster is considered as a system capable of creating a special innovative environment conducive to increased competition and development of the region. The prospects for further implementation of the EU cluster policy are considered, in particular, the results of the methodological analysis carried out suggest that increasing the efficiency of the economic clustering process in European countries is associated with the implementation of a number of aspects.

Keywords: cluster, methodology, cluster policy, tourist complexes, EU.

JEL code: O12; O31

Introduction

The rapidity with which clusters and the policies associated with them have firmly entered the economic circulation has not given time for well-founded answers to questions about their essence and role in economic development.

It is traditionally believed that clusters act as a means of increasing the competitiveness of territories, the transition to production processes with greater added value, and contribute to the establishment of constructive relationships between enterprises, research, educational, financial institutions and authorities.

A cluster is a system that is characterized by a number of distinctive features. An indispensable condition for the formation of a cluster is the geographical proximity of business units. A critical mass of firms from production and supporting industries, organizations that provide economies of scale and diversity, as well as economic resources, information, is concentrated in a limited area, a "cluster" of relationships is created, due to which the cluster achieves higher competitiveness. The geographic scope of clusters can vary from a single city or region to a country or even a number of neighboring countries.

1. Thesis statement and literature review

In the concept of M. Porter, the emphasis is on the links within the cluster, between its members - the main manufacturing companies, auxiliary (related) industries, as well as various institutions, such as universities, research organizations and government agencies. A cluster is a much more complex phenomenon than a simple association of firms for joint marketing activities or a coherent purchasing policy. It assumes their deeper technological cooperation based on participation in value accumulation systems. At the same time, firms are not only included in the process of cooperation, but, which is very important, they continue to compete with each other selectively in certain areas. This competitive neighborhood is the driving force behind constant product and technology updates, aimed at increasing the productivity of all factors of production, and ensures the rapid dissemination of innovations. A special innovative environment is being formed in the cluster, which contributes to increasing the competitiveness of its member firms and the prosperity of the region. Thus, M. Porter writes, "a cluster can be defined as a system of interrelated firms and organizations, the significance of which as a whole exceeds the simple sum of its constituent parts" (Porter, 2003).

Traditionally, the cluster approach has been applied to industrial production. The industrial districts in the US electronics and automotive industry, the chemical industry in Germany, the shoe

industry in Italy, the forestry and woodworking industry in Sweden, etc. are relatively well studied.

In the tourism industry, as well as in other sectors of the service sector, cluster studies are practically absent. Meanwhile, clusters play a crucial role in shaping tourism centres, attracting visitors to them and increasing their competitiveness.

2. Methodology and experimental methods

The tourism industry has a number of features that make the cluster approach relevant in the development of the leisure and travel industry. The tourism industry is distinguished by the breadth of intersectoral relations, a fragmented structure, which gives some researchers reason to question the legitimacy of classifying tourism as a sector of the economy, the predominance of small and medium-sized businesses, the intangible nature of the tourist product, its unequal perception by producers and consumers and etc. All this makes it particularly important emergence and development of tourism clusters. They help each of their participants to realize themselves as part of the whole.

Tourism clusters are a global phenomenon. They are found primarily in developed countries, but are also present in developing countries and countries with economies in transition. Here are just some examples of successful and promising tourism clusters in the world. In the USA, in the Nala Valley, there is a wine tourism cluster; in Australia, an ecotourism cluster has been formed in the state of Queensland. In South Africa, in 1999, a national strategy for the development of tourism clusters was adopted. In Mexico, the resort of Cancun can be considered as a tourist cluster, and in Indonesia, a resort on about. Bali. Macedonia and Jamaica, Sri Lanka and Kazakhstan announced the creation of tourist clusters. Croatia and Slovenia have agreed to create a cross-border tourism cluster.

In the tourism industry, the general patterns of formation and functioning of clusters, as well as the specifics of their manifestation in this area, are confirmed. As already noted, the essence of a cluster is revealed through the interconnections of its member firms, which appear in the form of value chains. Value added is a part of the value of goods and services that is added directly to a given enterprise, in a given firm. Each type of productive activity in the enterprise creates added value. Arranged in a certain sequence - one in continuation of the other - they form intra-company value chains. To achieve a competitive advantage, a firm must optimize both its own value chain and external chains that connect it with suppliers and consumers" (Porter, 2003).

In the tourism cluster, the value accumulation system includes four types of value chains of suppliers (primarily transport companies), accommodation , entertainment facilities and distribution channels for tourism products (tour operators, travel agents), as well as tourist buyers themselves.

According to the World Tourism Organization, between 10 and 20 chains operate during a visitor's seven-day stay in a remote tourist center. They involve 30-50 different companies, ranging from a tour desk, specialized tourist literature stores and insurance companies to souvenir shops, currency exchange offices, taxis , etc. (Public-Private Sector Cooperation, 2000).

Another essential feature of the cluster is the combination of cooperation and competition. Despite the apparent inconsistency of the statement, research confirms its validity. Companies that produce the same or similar products and belong to the same link in the value chain are direct competitors, but at the same time they often form joint strategic alliances.

One of the key issues of the cluster approach is the problem of identification - the allocation of relatively stable groupings in space.

As foreign experience shows, existing cluster identification algorithms vary significantly, however, most of them proceed from two main conceptual approaches. In the first one, which can be called "from below", clusters are searched for in a specifically chosen territory, based on the presence of previously known enterprises or leading industries. The second approach uses a technique, conditionally called "from above", where spatial localizations of production are searched for, focused on specific types of economic activity (Bergman et al., 1999).

It should be noted that reference clusters represent only the most likely agglomerations of related activities. Therefore, for the task of identification, they will be a kind of initial reference point in the direction of which we should expect the development of clusters. This guide should not be considered the only possible or the most preferable. Moreover, the rigid identification of such groupings contradicts the cluster concept.

So, Panchenko notes that "when forming complexes as an object of study, the principles of its selection, the criteria for formation and its composition will depend on the tasks that the researcher has to solve" (Panchenko, 1979).

Top-down approaches to identifying clusters, taking into account two complementary characteristics of clusters (functional connectivity and geographical proximity), are traditionally divided into 2 types:

1. functional, focused on identifying industrial clusters;
2. spatial, focused on identifying geographic clusters.

Over a fairly long period of existence and analysis of intersectoral balances, a wide range of approaches has developed that are applied to the identification of clusters based on functional relationships, the main types of which are:

1. approaches based on the criterion of maximizing intersectoral ties by excluding weak ties from consideration;
2. approach to assessing the degree of similarity of incoming and outgoing product flows of industries;
3. approaches based on graph theory.

The first group of methodological approaches to identifying industrial clusters is based on identifying the most significant material flows between industries. Industries, between which a sufficiently strong vertical connectivity is found, are combined into clusters. The main disadvantage of this group of methods is the subjectivity of the cut-off level for weakly related industries.

The second group of methods is based on statistical procedures for multivariate data analysis, such as factorial, discriminant and statistical cluster analysis. These approaches make it possible to determine which industries have common incoming and outgoing links (resource and product markets), thereby linking industries into clusters. Unfortunately, the results of the rather complex statistical procedures listed above often run into limitations imposed by the nature of the data, and, moreover, cannot always be meaningfully interpreted.

Regarding the third group of methods, we can say that in its simplest form, graph analysis acts as a means of visualizing the analysis of direct links identified on the basis of the analysis.

The study of the spatial connectivity of industries is a relatively less common approach than from the side of functional relationships, although in relation to clusters (if we separate studies of clusters from complexes), the study of the spatial aspect appears in the literature at about the same time as the industrial one. Here one should distinguish between the identification of meso- and micro-level clusters.

In the mid-1970s, a group of American researchers (Bergsman et al., 1975) in order to identify industrial groupings that exhibit similar patterns of colocation, the extent to which pairs of industries are systematically concentrated in urban agglomerations has been studied. For each pair of industries, the pair correlation coefficients were calculated and, thus, the relationships between the spatial distributions of industry employment were estimated. From the obtained correlation coefficients, a symmetrical matrix was formed, the application of methods of multivariate statistical data analysis to which made it possible to identify groups of the most closely related industries. In the future, despite changes in the tools used, the essence of the approach to determining the spatial proximity between industries has not fundamentally changed.

It should be noted that all approaches based on the calculation of localization coefficients have a significant drawback - they are sensitive to the actual administrative boundaries of the territories, while some clusters can only be identified at the interregional level, others at the

subregional level.

Clusters of enterprises (micro-level). To solve the problem of regional boundaries, which occurs when using spatial proximity methods using localization coefficients, B. Ripley a new method was proposed based on the assessment of the spatial concentration of enterprises. In our time, other researchers have proposed some of its modifications.

Such methods can be characterized as distance methods, since they are based on measuring the distances between enterprises, regardless of what type of cluster (single or intersectoral) is being studied. The main criterion for maximization here is the specific density of enterprises per unit area. A cluster is an area with the highest density of specialized companies. Like any other quantitative method, distance-oriented approaches allow us to speak only about the presence or absence of production concentrations in a certain area, but not about the presence of a cluster and its characteristics.

At present, it is generally accepted that the best results of identifying clusters "from above" are achieved through a combination of industrial and spatial approaches. Speaking about the need for such a combination when isolating complexes, B.L. Lavrovsky (Lavrovsky, 1983) notes: “It seems to us that attempts to divide the entire set of interbranch ties into (relatively) closed groups, in which all existing ties are concentrated within complexes, are fruitless. This is confirmed, in any case, by the experience of working with empirical matrices. A different methodological approach is needed in studies related to the identification of relatively independent groups of industries. This approach should be based on the concept of the closedness of a group of industries. At the same time, it is expedient, in our opinion, to take into account the ideas and principles of dividing the national economy on a regional basis”.

Such synthetic approaches include the approach of M. Porter (Harvard Business School), who builds his theory of the competitive advantages of countries (Porter, 1990) around the so-called "tradable" industries that export a significant part of their products, and, therefore, competitive in the foreign market. Porter identifies three types of industries:

1. tradable - supply their products outside the region, are the least dependent on their location;

2. local - serve local markets, often being infrastructure industries, evenly represented in different regions;

3. resource - are present in regions in which deposits of minerals and natural resources are concentrated.

As a consequence, such industries are limited in their choice of location.

The basis of M. Porter's approach (Porter, 2003) to the identification of clusters is based on the calculation of regional coefficients of localization of industries, allocated within the framework of a 4-digit standard industry classification (SIC). In accordance with the Porter methodology, tradable and resource industries are initially identified based on the calculation of indicators characterizing the "uniformity" of the industry's spatial representation in the regions. Further division of trading and resource industries is carried out based on the nature of the activity.

In order to take into account the spatial proximity of various traded industries, a correlation coefficient is used, on the basis of which, further, stable combinations of jointly localized industries are identified - economic agglomerations. In conclusion, the intersections of the detected economic agglomerations are studied, resulting in the discovery of industries that mediate inter-cluster ties. To eliminate possible false relationships, intersectoral balance tables and expert opinions on the development and interaction of industries are used.

M. Porter's method has become a classic and is one of the most widely used in other countries. Many European attempts at identifying and mapping clusters do not just use the Harvard approach as their own methodology, but are based on its results. Adaptation of the Porter methodology in these approaches is implemented by correlating the European NACE classifier with the United States SIC classification. At the same time, European researchers note the high

conventionality of such a transition.

The results of the methodological analysis carried out allow us to state that increasing the efficiency of the process of economic clustering in European countries is associated with the implementation of a number of aspects. The European approach to the development of this sphere and the creation of institutions to support it is quite consistent. Conventionally, the process of implementation of supranational cluster policy in the EU can be divided into four phases (Lindqvist et al., 2013), to which a fifth one should be added:

1. Phase 1 (2000-2006) - The European Commission has launched various pilot initiatives to support clusters through the PHARE program.

2. Phase 2 (2007–2009) – signing of the European Cluster Memorandum, creation of the Cluster Observatory, development of information and analytical materials.

3. Phase 3 (2010-2012) - focus on improving the quality of cluster programs, creating assessment and ranking tools, training "cluster managers".

4. Phase 4 (2013-2017) - integrating clusters into regional programs through the principles of "smart specialization" to promote structural change in parallel with the development of the strengths of the regions.

5. Phase 5 (2017 - current) - clusters as objects of the new EU industrial policy, development and strengthening of cluster institutions, creation of a working group on clusters.

The last phase is characterized by the completion of the seven-year cycle of the budget plan until 2020, to which most of the programs are tied, and the need to form a new vision of economic development priorities and agree on the budget for 2021–2027.

In the announcement of the new long-term EU budget cycle (2021-2027) under the Single Market program, clusters are mentioned as “a strategic tool to support the competitiveness and scaling of SMEs, as create a more favorable environment for doing business” (Commission Proposal…, 2018).

The total amount of funding proposed for approval of the Single Market program is 4 billion euros, of which 1 billion will be directed to the COSME program, used, among other things, to finance institutions for their development.

The 2017 Strategy for a Renewed EU Industrial Policy (COM (2017) 479 final) noted the establishment of a high-level expert group on clusters to provide advice on “how best to use them as a strategic tool for industrial policy”. In fact, such a group was created in mid-2019 (E03636) under the auspices of the Directorate-General for the Internal Market, Industry, Entrepreneurship, Small and Medium Enterprises until the end of 2020. It brings together 32 independent experts and representatives of the authorities of the EU member states.

In addition, clusters have a special role to play in the EU Industry Vision 2030. Industrial clusters are considered as the foundation of an ecosystem that promotes innovation and technological activity. As part of measures to accelerate digitalization processes, it is also planned to form “superclusters” with science-intensive start-ups in the field of artificial intelligence (Deep Tech AI). In this way, the EU seeks to maintain its competitiveness by paying significant attention to the development of innovations, including the overall digitalization of the economy (Tsirenshchikov, 2019).

The paper mentions the Clusters of Change program to support a new generation of value networks that are open, cross-sectoral, sustainable development goals driven, interconnected, entrepreneurial driven (A vision…, 2019). For the fourth time in a row (three meetings in 2018 and one in 2019), the European Cluster Policy Forum (hereinafter referred to as the Forum) has been used as a platform for exchanging views on the status and prospects for the implementation of cluster policy. The main focus of the last Forum was on international cooperation and assistance in the entry of SMEs participating in clusters into the global market.

The next step in the EU cluster policy, as noted in the documents on the establishment of a high-level expert group (European cluster.., 2022) and, as emphasized in the speeches of the Forum

participants, will be the formation of "Joint Cluster Initiatives". They are conceived as an attempt to combine the many efforts of the EU to stimulate the transformation of clusters into a single system. The results of this work will most likely be judged at the end of 2022, when the expert group has finalized its recommendations.

The analysis showed that the EU cluster policy is an integral part of the new industrial policy aimed at supporting innovation activity and technological development.

In its policy documents, the European Commission has repeatedly noted the potential of clusters in terms of creating favorable innovative regional ecosystems for the mutual strengthening of SME groups. The focus is not only on the industrial sector, but also on cross-sectoral and cross-border cooperation and innovation. It should be noted that the cluster policy in the EU is not considered as a single, unified document for all member countries, but it is a set of best / good practices, approaches, initiatives and recommendations both for representatives of such organizations and for national and regional authorities. .

In the absence of a unified system, there are certain disadvantages. They are associated with a variety of interpretations and uses of the term “cluster”, a lack of understanding by the companies themselves of the obvious advantages of support from EU institutions and the expediency of participating in their initiatives (underlined at the last Forum). Rethinking the experience gained in the implementation of cluster policy before the start of the next budget cycle 2021-2027 is seen as the right measure to avoid funding programs that have not shown sufficient results and the creation of new institutions without special need.

At the same time, the implementation of cluster initiatives, in particular in the tourism industry, attracts, first of all, investment funds and, as a result, the development of innovative technologies and approaches directly in the recreational and tourist complex.

Based on European experience, we can distinguish the following countries that are implementing a cluster model of tourism organization: Italy, France, Norway. For example, in Norway clusters are developing in the field of marine economy. In France, the tourist cluster "Nice" is visited annually by several million tourists, which is almost 1% of the world trade turnover in the field of tourism. Similar high-level models operate in Greece, Scotland, Belgium, Spain and Ireland. In Italy, the cluster organization of tourism has a high level of scientific justification. For example, in some areas of the country, special conditions have been established that are the basis for their creation: prerequisites for the development of several types of tourism, significant tourism resources, the importance of the tourist area, etc. Examples of clusters in Italy: the Trasimene Lake tourism system (Umbria) (Regional Clusters in Europe, 2002). With the Health Tourism Cluster established in 2011, Estonia plans to become one of the leading health resort countries in the world. This cluster brought together health centers, sanatoriums, spa resorts, as well as tourism and transport enterprises, and scientific institutions. The cooperation of its participants is aimed at developing the latest health tourism products and services, increasing their quality and popularity, as well as spa treatment services in Estonia and abroad. In the current period of time, spa resorts in Estonia are the leading exporters of health tourism. Finland, Russia, Sweden, Latvia, Norway remain the priority foreign markets, while Germany is a new market.

No less interesting is the experience of developing the recreational tourism sector in Turkey, in which today there are seven functional tourist clusters: Sultanahmet, Kusadasi, Marmaris, Fethiye, Taksim, Cappadoccia and Antalya. All tourist clusters, except for Sultanahmet and Cappadocia, are formed on the basis of beach tourism and the all-inclusive service system, which has become a marketing component of the national tourism product management strategy.

With the accession of Bulgaria to the EU at the strategic level, the implementation of the cluster approach has been widely recognized - it is set out in the National Development Plan, the National Strategic Reference Framework, the National Regional Development Strategy and sectoral strategies. In parallel with this support, with the active assistance of the government and as a result of project activities within the framework of the PHARE program, in 2006 one of the first tourist

clusters in Bulgaria, the Rhodopes, was created. Two years later, again with the help of the government, another cluster in the field of tourism is the Varna Tourism Cluster. There are also signs of the presence of hybrid clusters in this sector, which, according to experts, have a particularly high competitive potential. The identified groups are scattered throughout the country. On the territory of Bulgaria, the following tourist cluster structures can be distinguished based on localization: “Tourism of the Rhodopes B.G.” (Smolyan), Varna (Varna), Balkaniya (Troyan), Sofia Tourism Cluster. And it is possible to single out clusters on a thematic basis: "The ancient road of the Thracians" (Plovdiv), "The Way of Dionysius" (Plovdiv), "The Road of Orpheus" (Plovdiv) (Bozhinova et al., 2011).

3. Results and discussion

Thus, the formation and development of cluster initiatives in tourism requires the creation of certain prerequisites and involves the solution of a number of practical problems. First of all, when using the cluster method in the practice of managing the tourism and recreational activities of a transboundary region, the following is required:

- information and methodological support, organization and technologies for maintaining regional statistics, which will show in a detailed form the analytics of the studied transboundary region, with positive dynamics, this territory can be recommended for the implementation of cluster initiatives;

– support at the level of state structures, to include the tourism component in the regional comprehensive programs for the socio-economic development of territories.

In order to make full use of the objective competitive advantages of the tourist and recreational complex, it is necessary to concentrate organisational, intellectual and material resources on the following priority strategic directions:

- development of the institutional environment, involving the inclusion of mechanisms to stimulate and coordinate interests, as well as the improvement of the regulatory framework, tax system, and credit policy;
- training of highly qualified personnel in the tourism industry;
- diversification of the tourism business, namely the development of new tourist products and exclusive routes;
- promotion of tourism services and regional tourism products on international markets;
- development of interregional and international cooperation in the field of maritime tourism and recreation;
- creation of tourist and recreational clusters due to the presence of attractive tourist areas of different categories.

Conclusions

Depending on the role of the state in the implementation of cluster policy, it is advisable to use the following approaches:

- functional cluster policy, in which the state promotes cooperation between stakeholders and provides some financial support for the implementation of the project;
- supporting cluster policy, where the function of the state is complemented by the direction and support of investments in the infrastructure of the cluster in order to stimulate its development;
- directive cluster policy, when the supporting function of the state is supplemented by the implementation of special programs aimed at transforming the specialization of the region through the development of clusters;

– interventional cluster policy, when the state, together with its directive function, takes responsibility for the further development of the cluster through the provision of transfers, subsidies, and other instruments of active regulation and the formation of its specialization.

The experience of the EU in terms of supporting clusters is also relevant for other states that seek to stimulate their innovative development.

References

1. A Vision for the European Industry Until 2030 (2019) Internet Final report of the Industry 2030 high level indus-trial roundtable. [Online]Available from: https://op.europa.eu/en/publication-detail/-/publication/339d0a1b-bcab-11e9-9d01-01aa75ed71a1[Accessed 08/10/2022].
2. Bergman E.M., Feser E.J. (1999) Internet Industrial and Regional Clusters: Concepts and Comparative Applications. – Regional Research Institute, WVU. [Online]Available from:http://www.rri.wvu.edu/WebBook/Bergman-Feser/chapter3.htm.[Accessed 08/09/2022].
3. Bergsman J., Greenston P ., Healy R. (1975) A classification of economic activities based on location patterns. Jounal of Urban Economics. Vol.2, no.1. pp. 1–28.
4. Bozhinova M., Hristova V., Ivanova P. (2011) Internet Theoretical and practical aspects of the applicability of the cluster model in tourism .Electronic magazine "Dialog". S. 99–114. [Online]Available from: https://www2.uni-svishtov.bg/dialog_old/2011/INI/23-2009-statia-2011.pdf. [Accessed 22/10/2021].
5. Commission proposal for a Regulation of the European Parliament and of the Council establishing the Programme for single market, competitiveness of enterprises, including small and medium-sized enterprises, and European statistics and repealing Regulations (EU) No 99/2013, (EU) No 1287/2013, (EU) No 254/2014, (EU) No 258/2014, (EU) No 652/2014 and (EU) 2017/826 COM(2018) 441 final of 7.06.2018. [Online]Available from:https://ec.europa.eu/info/index_en. [Accessed 10/11/2020].
6. European cluster collaboration platform. (2022) [Online] Available from: [Online]Available:https://clustercollaboration.eu/content/updated-eu-industrial-strategy [Accessed 02/11/2022].
7. Lavrovsky B.L. (1983) Analysis of the balance of production capacities in the industry of the USSR / ed. N.N. Baryshnikov, K.K. Waltukh; IEOPP SB AS USSR. Novosibirsk: Science. Sib. Department.
8. Lindqvist G., Ketels C., Solvell O. (2013) The Cluster Initiative Greenbook 2.0. Printed by: University of Southern Denmark, Kolding.
9. Panchenko A.I. (1979) Intersectoral complexes and targeted programs for their development. Novosibirsk: Nauka.
10. Porter M. (2003) Competition / M. Porter. M.: Williams Publishing House.
11. Porter M. .E. (2003) Internet. San Diego: Clusters of Innovation Initiative. Cambridge, MA: Monitor Group. – 138 p. [Online]Available from: http://www.isc.hbs.edu/pdf/COI_SanDiego.pdf [Accessed 10/10/2009].
12. Porter, M.E. (1990) The Competitive Advantage of Nations. New York:Free Press.
13. Public-Private Sector Cooperation: Enhancing Tourism Competitiveness (2000). World Tourism Organization Business Council. Madrid: WTO.
14. Regional Clusters in Europe / European Commission, Observatory of European SMEs. (2002). No. 3. Luxembourg: Office for Official Publications of the European Communities, 2002. 64 p.
15. Ripley B. (1977) Modelling spatial patterns (with discussion). Journal of the Royal Statistical Society, Series B. Vol. 39(2). pp. 172–212.
16. Sölvell Ö. (2008). Internet Clusters Balancing Evolutionary and Constructive Forces. [Online] Available from:http://www.cluster-research.org/dldocs/ClustersJan09.pdf [Accessed 11/07/2015].
17. Tsirenshchikov V.S. (2019) Digitalization of the European economy, Modern Europe, No. 3, p. 104–113.