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MODEL OF RECREATIONAL CLUSTER OF SMEs IN VAYOTS DZOR REGION OF THE REPUBLIC OF ARMENIA

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Abstract

The work highlights the differences of the nature of SME clusters, describes the relevance of developing recreational clusters, shows theoretical aspects of SME clustering in Armenia and emphasizes the absence of ongoing initiatives. The proposed model may serve as a basis for further research and creation of an international recreational center in the Republic of Armenia. The suggested model includes the components of triple helix and unites SMEs, state institutions, representatives of public and private sectors that specialize in science, education and finances. The multidimensional model's participants were consolidated in a way that allows them to cooperate and compete.

Keywords: SME clusters; small and medium-sized enterprises; recreational clusters; regional development



INTRODUCTION

SME cluster development is a perspective approach to fostering economic growth in developed and developing countries (Porter, 1996). Managing businesses through the creation and development of clusters enables to increase the employment rate, to popularize a country's regions on local and international markets, to unite firms and their aims. In the contemporary world, when economic, political, social and cultural processes are taking place at an accelerating rate, it is essential to properly identify and develop the most promising economic sectors. Not only does the Armenian government indicate the necessity to support domestic SMEs as a significant task for the country, but it also stresses the importance of SME clustering. Therefore, increases the relevance of selecting industries in which the creation of clusters might leave powerful economic impacts over a long period of time. Although there exist several cluster projects for Armenia, the realization of these initiatives is being postponed due to their high cost.

The aim of this research paper is to identify the background and operating conditions as well as to propose a model of recreational cluster of SMEs for Vayots Dzor region of the Republic of Armenia.

THEORETICAL BACKGROUND

Development of perceptions of the nature of clusters in the world

The earliest prototypes of clusters named "industrial districts" were studied and presented in the scientific works of several distinguished sciences, including Marshall (1920) and Pyke et al. (1990). Later Porter (1990) replaced the idea of industrial districts with the concept of clusters, defining clusters as concentrated groups of interconnected firms, specialized suppliers, service providers, firms from related industries and other companies, such as universities, standardization agencies, trade associations. According to Porter, these companies should compete and cooperate inside a cluster simultaneously. The academician identified four main categories of cluster participants: core businesses (key companies that operate in a specific industry) and support businesses (companies that directly and indirectly support core businesses), soft support businesses (intellectual support from universities, professional associations) and hard support businesses (physical infrastructure). Porter highlighted various factors of cluster formation, bringing them together in his diamond theory. Porter (1998) accentuated: "A cluster is a manifestation of the diamond at work. Proximity - the collocation of companies, customers, and suppliers — amplifies all of the pressures to innovate and upgrade". Nevertheless, the academician mentioned that the significance of competitive determinants could vary depending on the specialization of observing clusters.



In the revolutionary concept of triple helix Etzkowitz and Leydesdorff (2000) presented the idea of increasing the interaction among enterprises, government and centers of science and education. Generally, such cooperation serves as a strong catalyst for an improvement in the work of clusters.

Buciuni and Pisano (2015) mentioned that depending on the specialization of a cluster, the factor of geographical proximity might crucially influence the process of its development. For instance, information transmission inside a fully globalized cluster might cost more than transporting goods from a cluster to its clients. Consequently, based on the study of views on the nature of SME clusters (Ruffoni et al., 2017; Mudambi & Swift, 2012) it can be noted that today the importance of geographical proximity in cluster models has been diminished.

The relevance of creating recreational clusters

Globalization and its repercussions led to the development of global mobility (Bird & Thomlinson, 2016), which undoubtedly reinforced the tourist engagement. Recreational business is considered as one of the most prospective types of business. More and more people are empowered to have rest and dedicate time to their health. Therefore, companies that provide recreational and tourist services unite into special complexes. Kazaryanz et al. (2018) accentuate that these categories of services are interrelated: "Tourist and recreational activity is a sphere of services ranging from the information transmission, first of all in its different and continuously updated manifestations, to the tourist organization activity providing tourist services and selling goods to satisfy people's needs that arise during the journey" (p. 169). Today tourist-recreational zones have become objects of particular attention. In such economic zones clusters are able to boost tourism activity, to develop health resorts and to improve the process of treatment and prevention of diseases of clients (Bagiryan, 2018, p. 232). This trend is witnessed in the USA (lordache, 2010) and in several European countries (Rolínek et al., 2014). It has also been implemented in the North Caucasus (Kuchumov et al., 2019) and in the South Caucasus (Khoshtaria & Chachava, 2017).

Theoretical aspects of SME clustering and regional cluster initiatives in Armenia

Based on an analytical study (Darbinyan, 2005) it was revealed that the economic growth of Armenia is concentrated in a number of small clusters that are based on external investments in the form of grants or soft loans (for instance, the construction sector), on import substitution (food industry and light manufacturing) or on export of reprocessed imported raw materials (jewelry industry and diamond handling). Aganbegyan et al. (2015) improved these ideas and



came to conclusion that "SME clustering is the most appropriate method to strengthen the economy of Armenia and better the investment environment in the country" (p. 49).

The revision of national practice of SME clustering enabled to discover that no clusters have been yet created in the Republic of Armenia. Despite of the existence of several clustering projects concerning tourism clusters (USAID's Armenian Tourism Cluster Strategic Action Plan of 2007; National Competitiveness Foundation of Armenia's Strategic Project of the Southern Corridor of Tourism of Armenia of 2011), the regional initiatives have not been implemented due to their costliness. According to one of these projects, it was planned to create a cluster with a monastery complex in Tatev city with the purpose of developing religious tourism, gastronomic tourism, ecotourism, rural tourism (Sahakyan & Suvaryan, 2018). Nevertheless, the global financial crisis became an obstacle to the implementation of the project due to the lack of investments. A notable step was taken by the Ministry of Territorial Administration and Infrastructure of the Republic of Armenia in cooperation with the "EU for Armenia". As a consequence of joint four-year cooperation, renewable alternative energy sources were adopted in Vayots Dzor region. This will undoubtedly contribute to ecotourism clustering in the region (Suvaryan & Manukyan, 2020).

METHODOLOGY

The research is carried out based on the empirical-analytical methodology. To reveal a strong background for cluster creation, authors reviewed annual reports of the World Bank, the IMF, as well as studied data of the Regional Administration database, the Regional Municipality database and the Statistical Committee of the Republic of Armenia. Authors conducted diamond analysis of Vayots Dzor region and highlighted the strengths and weaknesses of the determinants of competitiveness. The analysis of the best international practices of SME clustering fostered the development of model of recreational cluster of SMEs in Vayots Dzor. Authors stressed particular roles that each core and supporting member of the multidimensional model should play in the cluster. Considering the model as a system of diversified participants that cooperate and compete, authors identified strong and weak aspects of the proposed model.

OPPORTUNITIES FOR RECREATIONAL CLUSTER DEVELOPMENT IN THE REPUBLIC OF ARMENIA

Authors claim that it is appropriate to develop cluster models that are aimed at strengthening the country's regions instead of its capital city (Yerevan). The point is that sustainable regional development is one of the most problematic areas in Armenia. Moreover, it is essential to focus on the creation of clusters in such segments, where core businesses have the greatest



potential. According to Global Competitiveness Report (2019), the Republic of Armenia is ranked 74th out of 141 countries on the criterion of state of cluster development, and this indicator's value has a positive trend of increment.

The Republic of Armenia has great potential for clustering of its SMEs in the field of recreational business. It is essential to outline the following cities as the most perspective ones: Arzni in Kotayk region, Vanadzor in Lori, Dilijan in Tavush region and Jermuk in Vayots Dzor (Figure 1).



Figure 1. The map of Armenia with highlighted regions for recreational SME clustering

Among these regions Vayots Dzor has the strongest capacity, which was revealed as a result of the analysis of various factors that are mentioned below.

The background for recreational cluster development in Vayots Dzor

1. High-class recreational centers

Sanatoriums of Vayots Dzor that mainly correspond to international standards, have extensive experience in provision of high-end services all year round. Recreational services of Vayots Dzor feature specific technologies that are either unavailable in the country of origin of the tourist or available at a higher price (sanatoriums in the USA, Czech Republic, Lithuania, Russian Federation, Georgia). All of these sanatoriums are located in Jermuk, a major city of Vayots Dzor.



2. Rich natural resource potential

There are various picturesque natural monuments in Vayots Dzor, including forests, rivers, highlands, plains, valleys and fields. A 60-meter waterfall of Jermuk city is demanded by the region's visitors. The air is fresh and clean, the region's warm mineral springs are renowned for their healing effect on human health by helping to lower stress level, to treat cardiovascular diseases, unblock the muscular tension and improve digestive processes). Being revealed in the 19th century, such properties of water are used in the course of treatment at local sanatoriums today. The mineral water that is extracted from the earth's interior of Jermuk city, is bottled and sold, bringing high revenues to the region due to the export to other regions of Armenia and abroad.

3. Suitable geographic location

The participants of this cluster are located not far from each other, which facilitates their mobility and does not increase the costs of goods and services in the value chain. Freight is transported by road. Proximity among key participants will foster the engagement of clients in recreation, rest, traveling and entertainment. A popular means of public transport in the region is the funicular railway.

4. A developed sector of tourism

Vayots Dzor is one of the most favorable tourist destinations for local and international visitors, who are given numerous opportunities to choose from a wide range of events, including: visits to churches, fishing, cable car riding, skiing, extreme camping, helicopter tours, rock climbing trips and wine tours. There are various hotels, B&Bs, cafes and restaurants in the region. Apart from that, Vayots Dzor is famous for its spectacular festivals of gata (pastry), ghapama (stuffed pumpkin) and wine. There is being built a wide highway in Vayots Dzor, which will stretch from east to west and will serve as a strategically important road for the country. An air link between Yerevan and Jermuk allows to reach from one city to another within half an hour.

5. Agricultural products of high quality

Vayots Dzor is a region of particular interest to those who prefer organic products. According to the Statistical Committee of the Republic of Armenia, Vayots Dzor's economy is based on agriculture, mainly the production of fruits and vegetables, as well as the cattle breeding. The region is considered as a center of viticulture, where red and white types of wine are produced and consumed on local and international markets.

It is necessary to mention that Vayots Dzor's continental climate fosters the development of agriculture. Natural products of the region are produced of pure raw materials with the help of environmentally friendly technologies.



The growth of interest towards the cluster's services will cause the necessity to increase the volumes of agricultural production. Not only will it be crucial to provide local population with wherewithal, but it also will be essential to satisfy the needs of clients at sanatoriums, restaurants, cafes, hotels and B&Bs. Given the characteristics of climatic conditions and the region's potential in the development of agriculture, it should be concluded that in case of the cluster's accelerated growth there will be a possibility to provide Vayots Dzor's population and its tourists with sufficient natural products.

Authors examined the determinants of competitiveness of Vayots Dzor in order to find out the appropriateness of developing a recreational cluster in the region (Table 1).

	Strengths	Weaknesses
Factor conditions	 + Warm mineral springs + Energy infrastructure of high quality (switch to alternative energy consumption in 2019) + Opportunities for workers to deepen business knowledge 	 Imperfection of irrigation system Weak road infrastructure Unemployment
Related and supporting industries	 + A remarkable increase in the activity of tourism and hospitality sectors within the recent five years + Availability of information portals for clients + Availability of various thematic tours in the region (trips to ancient churches, fishing, cable car rides, extreme hiking, helicopter ride, trips to the mountains, etc.) + Developed wine-making industry and availability of wine routes 	 Weak promotion of the region by local travel companies Difficulties with production and distribution of agricultural products (including the lack of reliable partnerships between clients and suppliers)
Demand conditions	+ Growing interest of tourists to the region (mainly to the warm springs with mineral healing water, as well as thematic festivals)	- Weak client demand of tourists to the quality of recreation services and other services provided in the region
Firm strategy and rivalry	+ Availability of sanatoriums	 Weak rivalry of sanatoriums Absence of strategies for development of Vayots Dzor as a complex that provides healing, recreation and other similar services

Table 1. Porter's Diamond of Vayots Dzor region of the Republic of Armenia

Source: Developed by authors based on the methodology of Porter (1990)

Consequently, numerous SMEs are situated on the territory of Vayots Dzor and its surrounding areas, and these enterprises are specialized in the production of goods and services. These SMEs have a great potential to become a part of a recreational complex. Reaching a positive synergy effect from a cooperation, this cluster's participants will be able to provide clients with a large-scale vacation that includes recreation, tourism, entertainment, science and agriculture.



Authors claim that it is relevant to select Jermuk city as the cluster's core with an aim to develop an international recreational center. All sanatoriums of the region are located in Jermuk, the area of which is rich with warm mineral springs. There are several natural, historic and cultural monuments in the city. Aside from that, Jermuk is the center of air link of Vayots Dzor.

MODEL OF RECREATIONAL CLUSTER OF SMEs IN VAYOTS DZOR

REGION OF ARMENIA

Based on the analysis of cluster forms, authors came to conclusion that the most optimal cluster model for Vayots Dzor should include the components of triple helix, enabling SMEs, state institutions and representatives of science and education to cooperate and expand the region's potential. For Vayots Dzor to become a systemic region, authors suggest a multidimensional cluster model that encompasses participants from several public and private sectors. The following enterprises were chosen as the cluster's core businesses: Sanatoriums of Jermuk city; Hotels and B&Bs; Cafes and restaurants. These members of the cluster provide various services of high quality at low prices (Vayots Dzor Regional Municipality database, 2019). To reach close collaboration of cluster participants, it is appropriate to establish strong cooperation in addition to transparency of actions and exchange of relevant information. It is also essential to develop efficient mechanisms of CRM policy, which will allow to attract and retain clients.

Supporting businesses play a significant role in cluster development and therefore should work actively in order to contribute to the development of core businesses.

1. Tourist services

Information centers are sources that contain detailed information about the region and its tourist destinations. "Visit Jermuk" (http://visitjermuk.am/) is a vivid example of such portals with useful materials. The website was created with the financial support of the Armenian government in the frames of the "Program of Strategic Development of Vayots Dzor Region 2016-2025" in the year of 2019. Nevertheless, the creation of this portal is not sufficient to attract local and international tourists. To reach a wider audience, websites should be at least translated into English and Russian. The advertisement campaign has to accentuate on the universal positioning of participants that represent the cluster.

Travel companies are responsible for the development of such types of tourism that correspond to the cluster's policy, including: recreational tourism, ecotourism, ethnic tourism, rural tourism, adventure tourism, solar therapy treatment, wine tourism and gastronomic tourism. It is crucial for travel companies to create attractive travel packages based on relevant information of the region's peculiarities.



2. Specialists that provide spa-services, physical rehabilitation services, sanatorium and resort services. To stimulate the creation of new workplaces and increase the employment rate, it is of high importance to educate local population instead of searching for foreign specialists.

3. Agriculture and production

The development of Vayots Dzor cluster requires the improvement of the sectors of tourism and agriculture simultaneously. It is essential to solve the problem of weak irrigation system in some of the region's cities as a matter of priority.

Producers of organic products like vegetables, fruits, meat, dairy products should be able to provide the regional population and Vayots Dzor's tourists with all possible amenities. Therefore, the number of these small- and medium-sized enterprises should increase as a consequence of a high demand of the cluster's services. Apart from that, all enterprises should follow international standards (ISO) and regulations for the production and storage of products.

SMEs that participate in thematic events like gastronomic tours and wine tours are responsible for production and sale of agricultural products, as well as for the reception of tourists who visit the rural areas where these SMEs operate. Such farms should pay close attention to their image and welcome the tourists warmly to position themselves as a part of the cluster.

4. Science and education

Representatives of these sectors are able to seriously strengthen clusters. In case of Vayots Dzor it is appropriate to develop the scientific and innovative potential of the region and include the following members as significant cluster participants: Scientific Research Institute of Spa Treatment and Physical Medicine, Center for Ecology and Organic Agriculture of Armenian National Agrarian University, "Armbiotechnology" Scientific and Production Center of the National Academy of Sciences of the Republic of Armenia, Regional Tourism Center of Vayots Dzor. These cluster members are centers of science, innovation and education and specialize in various scientific directions like production of organic food; healthy lifestyle; diet; agriculture; genetic engineering and biotechnology and ecotourism. Cooperation of these participants through joint research analyses will improve the quality of recreational and tourist services and the technologies of agricultural food production.

5. State institutions

These cluster members are of high importance to Armenia, as there is a lack of experience in cluster development in the country. It is essential to integrate the following state institutions as participants of Vayots Dzor cluster model: Ministries of the Republic of Armenia (including the Ministry of Territorial Administration and Infrastructure; the Ministry of Economy; the Ministry of



Education, Science, Culture and Sport; the Ministry of Environment); Local authorities of the Republic of Armenia; State Tourism Committee of the Republic of Armenia and Fund Investment Support Center of Armenia. Cooperation of these participants with other members of the cluster will undoubtedly foster the implementation of cluster strategies.

6. Financial sources (besides local state institutions)

Representatives of this category (banks; credit organizations; the Armenian diaspora; EU for Armenia, UNICEF, USAID-Armenia) provide financial assistance to core businesses through low-cost loans, flexible debt collection procedures and gratuitous payments. "Vayots Dzor Wine Route" website (https://vayotsdzorwineroute.com/) is an example of non-reimbursable assistance of the Armenian diaspora to the region. Not only should Armenia rely on the diaspora in the context of receiving financial help, but it also should explore the possibilities of attracting Armenian entrepreneurs from abroad to develop the economic potential and stimulate business activity in the country. Aside from that, such conditions should be created, when representatives of the Armenian diaspora who studied in the world's best universities share their knowledge and skills with local entrepreneurs and scientists. The concept that was described above is shown schematically in Figure 2.

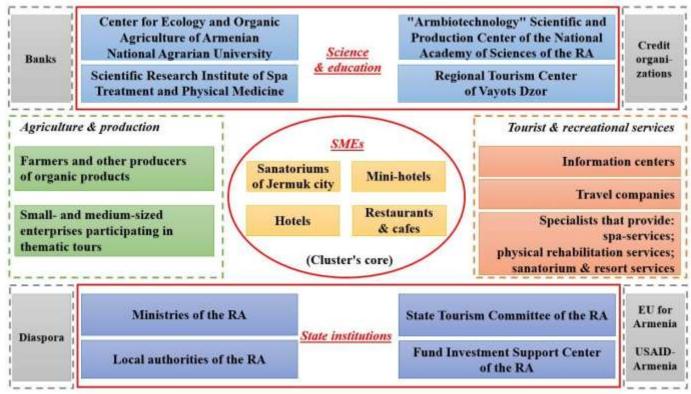


Figure 2. Vayots Dzor cluster model

Source: Developed by authors



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The model includes the components of triple helix: SMEs, state institutions and specialists of science and education. The combination of relationship of these participants with other members of the cluster has great prospects for creation of an international center of recreational services located in Jermuk city.

Strengths and weaknesses of Vayots Dzor cluster model

One of the strongest advantages of the proposed model is that it unveils the imperfections of regional economy and science that were not so notable before. Moreover, the model will foster the development of recreational business, agriculture, tourism, hotel and restaurant business, science and education. As a result of the establishment of strong connections among cluster members, their self-positioning on the market of goods and services will modify. Showing the involvement with a recreational complex, the participants will be able to exchange relevant information, to manage joint projects, to implement personalized approach to cluster's clients and develop customer loyalty. Apart from that, the recreational cluster will increase the employment rate in Vayots Dzor. The proposed cluster initiative is built on a powerful human capacity of Armenia, on a developed sector of tourism and a solid basis of high-class sanatoriums.

What comes to the *weak aspects* of the suggested model, is its high cost. It is significant to solve the problems connected with the imperfection of irrigation system and road infrastructure as well as the concept of creation of sustainable long-term linkages among clients and suppliers. Moreover, it will be necessary to increase the number of cluster members as a consequence of a high demand of its services. The creation of Vayots Dzor cluster will result in conditions when all important decisions that are made towards a cluster participant leave repercussions on other members. This will lead to a need to strike balance between competition and cooperation.

In addition to the difficulties that were mentioned above, it is essential to prepare the cluster to operate in rough and unpredictable conditions such as consequences of floods, earthquakes and other natural disasters, as well as impacts of epidemics like COVID-19.

CONCLUSION AND RECOMMENDATION

To conclude, it should be noted that the Republic of Armenia has a powerful potential to develop SME clusters that specialize in recreational business. Among all Armenian regions, Vayots Dzor that is renowned for its warm mineral springs has the strongest capacity for cluster development. The identified determinants of competitiveness of Vayots Dzor have their strengths and weaknesses. Weak irrigation system and weak road infrastructure are the



region's main obstacles. Nevertheless, the region has such strong advantages as the presence of natural resources, sanatoriums, hotels and B&Bs. Another characteristic of the suggested multidimensional model is that it includes the components of triple helix: business (small- and medium-sized enterprises), government (non-profit government funds and state institutions) and science (educational institutions, R&D centers). Apart from having strengths and weaknesses, the model represents a concept of the systemic development of the region in all key directions. The proposed model can serve as a basis for further research and for development of such cluster in the Republic of Armenia. This will undoubtedly increase the employment rate, strengthen the regional infrastructure, improve the sectors of recreational business, tourism and agriculture. Vayots Dzor cluster model has perspectives to popularize the region as an international recreational center with a core in Jermuk city, where tourists will be able to secure a large-scale vacation.

THE WAY FORWARD

Based on this research, it is essential to highlight further steps of the model's development:

- □ To clearly identify the place, role and tasks of each participant in the formation of the cluster and to solve various optimization problems;
- □ To establish the interconnections among all cluster participants, particularly by implication of quantitative methods;
- □ To develop the cluster's road map, highlighting all key participants;
- To manage and improve the whole cluster.

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