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Klasteri u Vojvodini
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Clustering in Vojvodina (Serbia)

Abstract: Clustering is a request of modern economy to shape itself due to permanently changing external and internal conditions. Transition countries, like Serbia, are in position to act in foreign markets with united offer of products. Governmental support to clustering process is inevitable and such support is the most important in the beginning of market mapping and shaping it into clusters. Government of Vojvodina has recognized the importance of clusters and started to give financial aid and political support to first clusters in Vojvodina in 2007. After 9 years of activities, there are still problems and need for changes and improvements. The paper presents governmental activities and results achieved during this period. The authors discuss weaknesses of the support process and suggest new directions of governmental activities.

Keywords: Clusters, regional competitiveness, governmental support, science in clustering

1. Introduction

As a result of cooperation with University of Novi Sad, Faculty of Technical Sciences, development agencies and public subjects on the territory of Vojvodina region, Government of Vojvodina, i.e. Provincial Secretary for Economics activated Development program of clusters in Vojvodina. As the first task, in partnership with Faculty of Technical Sciences (FTN), the Government has established Center for the development of clusters. During 2008, Government of Vojvodina was a partner in the cross border project Croatia-Serbia APLE.NET and realized some activities with a goal: through networking to economic development. In the years that followed, Government assisted in setting up and promotion of a few clusters like: Cluster of health tourism of Vojvodina, Touristic Danube cluster-Istar 21, Touristic cluster Srem, as well as industrial clusters like: Metal cluster MEMOS, Cluster of plastic industry JATO, and Cluster of fruit producers. The cluster of creative industry of Vojvodina, Vojvodina cluster of transport and logistics and some other clusters from food production sector were established. In 2010, a very important Vojvodina ICT cluster started working. At the beginning of 2011, European commission supported establishment of Vojvodina metal cluster with 800.000 EUR through RSEDP program together with Provincial Secretary which added 15% of cofinancing. In June 2011, Centre for the development of clusters together with FTN organized the first conference about clusters in Vojvodina. During 2011, Provincial Secretary for Economics, for the first time, supported financially 16 clusters with about 60.000 EUR.
In 2014, 15 clusters received support of about 60,000 EUR, and in 2015, 19 clusters received about 130,000 EUR in total. The question is: how efficient is the state aid given to clusters and do we have indicators to measure it?

In this paper the authors present the beginning of development process in Vojvodina, kinds of support given to clusters, the most important clusters and mistakes and problems interfering with more intensive clustering and better results of it.

Structure of business support in Vojvodina

Business infrastructure is underdeveloped and at an early stage of development. The following types of structures are available in the region:

- Business incubators for SMEs (Novi Sad, Subotica, Zrenjanin, and Senta);
- Technology parks (Novi Sad);
- Industrial Parks (Subotica, Apatin, and Sombor);
- Logistics centers (Novi Sad, Subotica-Senta, Odžaci Apatin-Bogojevo-Sombor, Vrbas, Indija-Stara Pazova-Sremska Mitrovica-Ruma, Kikinda, and Zrenjanin-Vrsac).

All structures have been established through the financial support of the Government of AP Vojvodina and EU funds, as the results of projects. These structures have been less than 7 years present and require a lot of support in terms of development, knowledge exchange and increased awareness of their own importance. Financially, they have insufficient resources for sustainable development and therefore future investors will have to implement the indicators by which to measure their achievements, which are not the clearest.

In general, the types of services offered vary depending on the type of infrastructure and include: project management knowledge, renting room, access to utilities, consulting services, promotional services, marketing research services etc. Company's customers can benefit from the services offered (AP Vojvodina, 2014).

In the region, there are about 30 clusters that receive financial support from the Provincial Government (Figure 1).

2. Examples of successful clusters in Vojvodina

Vojvodina ICT cluster

Vojvodina ICT Cluster provides the ability to access the best companies in the sector of information and communication technologies (ICT) in Serbia through a single platform. The cluster brings together companies with about 1,700 experienced professionals. This association enjoys strong community support through institutions in the field of education, regional development and civil society organizations which are also active members of the association. Established at the initiative of companies from the sector in 2010, today this cluster is the strongest in its sector, with companies that have a number of reference codes recognizable by global clients. Cluster offers nearshoring, outsourcing and JV business opportunities with highly professional, reliable and experienced teams. Vojvodina ICT Cluster is a recognized partner in the development and implementation of new ICT products and services with a high potential for profit, as well as in the development of individuals, businesses and regional operations. The mission of the Vojvodina ICT Cluster includes coordination of its own efforts and its partners in order to achieve a strong positive impact on the social and business environment. Cluster serves as a platform for cooperation for its members and provides a portfolio of services, such as building capacity and competitiveness through training at Cluster Academy, building ties with the education system, promotion of innovation, creating new business opportunities, access to new markets and lobbying. The cluster has an important role in creating closer ties within the partnership of: Business, Education and State administration.
Vojvodina Metal Cluster – VMC

Vojvodina Metal Cluster - VMC was created at the initiative of companies of metal sector in Vojvodina. The project "Vojvodina Metal Cluster - VMC" is founded with technical assistance from the European Union, as the regional project for the socio-economic program RDEPR2. University of Novi Sad - Faculty of Technical
Sciences was one of the partners and founders of this cluster. The guarantee for achieving the VMK objectives is provided by the Government of AP Vojvodina, the Serbian Government through the Ministry of Economy and Regional Development, Chamber of Commerce, VIP Fund - Fund for Investment Promotion in Vojvodina and regional centers for standardization and certification. Companies in the metal sector are members of VMK because of a personal interest. By joining, all members are entitled to vote, and they have certain rights and obligations in accordance with the Statute of the cluster. In VMK today there are more than 60 companies as its members.

All of the existing clusters are not active. Figure 2 shows 13 clusters which are active at the moment in Vojvodina.

**Vojvodina cluster of creative industries (VKKI)**

Vojvodina cluster of creative industries (VKKI) was founded in 2010 as a business model to develop creative economy. VKKI will act as a generator of economic improvement of small and medium enterprises in the field of creative industry by documenting the economic impact and the contribution of these enterprises in Vojvodina and Serbia. The second area of operation includes business services for small and medium-sized businesses and events. The cluster offers a business review and other strategic development services. The review means complete diagnostics of business in terms of human resources, marketing, finance and strategy. Checks are carried out by specialists with extensive experience in business management and creative industry. VKKI provides business support operations of all sizes. In cooperation with its partners, the cluster is a central point for creative enterprises. It allows them to access opportunities for business development, information, events and resources relating to: the commercialization and finance, education and training, research and technology and industry knowledge and networks. VKKI is dedicated to supporting the creative potential of Serbian business. Creative industry cluster of Vojvodina is supported by the University of Novi Sad and the Center for competitiveness and cluster development, which as a part of its goal has the task to support the creative industry in Vojvodina. So Creative Industries Cluster of Vojvodina aims to improve networking and innovation in the cultural and creative industries sector in Vojvodina, and to improve the image and profile of creative industries at the regional and international markets. Its mission is to establish a regional framework for the creation of new products and services with high profit potential and to become a regional coordinator of business initiatives and policies of creative industries.
Transport and Logistics Cluster of Vojvodina

Association of Transport and Logistics Cluster of Vojvodina (KTLV) is an organization established for an indefinite period of time to achieve the objectives in the field of transport and logistics. It was formed in 2011 by 28 founders, including companies in the field of transport and logistics, several river ports, large systems such as the "Serbian Railways", local government and supporting institutions in the sphere of education and the international cooperation, technology transfer, innovation and EU projects.

The purpose of establishing a business association of all forms of transport and logistics entities is the introduction of modern technology through the development of intermodal transport technologies, which would create the conditions for rational and cost-effective transport.

Scope: Transport and Logistics, associate entities whose activities are transport (all kinds), logistics, development of intermodal technologies. The headquarters of the Cluster is in Apatin, with an operational office in Novi Sad.

Vision

Transport and logistics industry of Vojvodina should become developed as a unique and promising part of Europe's future global transport and logistics network.

- Compliance with the general development policy of the Republic of Serbia and AP Vojvodina, in the spirit of strategic documents at this level
- Developing and strengthening awareness of the importance of transport and logistics, and in particular the possibility that transport and logistics companies become industry.

Mission

- Development of business networks and partnerships between business and other institutions
- Networking, exchange of experiences and transfer of scientific knowledge in the field of transport and logistics
- Operation of the regional and local level.

Cluster for Ecological Culture and Ecological Energy ECOPANONIA

It is a cluster of green energy use, affirmation and dissemination of knowledge about the availability, benefits and social, environmental and corporate benefits of adequate exploitation of renewable energy sources. It connects members, supporting organizations and other actors at the local, interregional, national and European level. Inspiration and financial support are in national and international institutions and EU funds. It was established in 2011 with headquarters in Novi Sad, the administrative center of Vojvodina, the most developed part of Serbia.

The mission is to assist its members in an organized way and continuously:
- upgrade their technological, financial, commercial and other skills
- learn about successful domestic and international business experience,
- apply environmental standards and business practices,
- increase the level of competitiveness of products/services and business efficiency,
- effectively promote and successfully place products/services,
- develop business capacities and ensure their business sustainability.

The vision is that the operation of the Cluster members, supporting organizations and target actors in the Pannonian Basin and beyond include:
- optimal use of renewable energy sources,
- saving the environment as a common good,
- strengthening of the competitiveness of interregional economy,
- increasing the quality of life in local, national and European community (Grubisic-Nesic, 2016).
3. Conclusion

Clusters have some results but not as accepted. Financial support is maybe not enough, but results should be more visible. It is necessary to group clusters due to the phase of development:

- starting phase;
- development phase;
- maturity phase

and define different classes of support due to the stage of maturity. There are different needs for beginners and the developed. Beginners need premises, equipment, salaries for staff and those that are many years at the market need labs, support in testing, standardization and certification processes, development of new products, knowledge transfer, etc (Kranjac, 2013).

Education and R&D institution must be obliged to be actively involved in clusters.

Due to low national funds, EU funds should be used more, especially those devoted to clusters. Cluster management should be supported to apply for such funds.

The first condition for all supports to each cluster is that it has development strategy for the action plan and realization of action plan must be analysed.

The Republic of Serbia should have Development strategy of clustering with clearly defined indicators of development which should be grouped due to goals (Kranjac).

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