

УДК 05.234

**Tatiana Varcholová**, Dr.h.c. prof. Ing. CSc.**Lenka Dubovická**, Ing. PhD.

University of Central Europe, Skalica, Slovakia

**THE NEW CLUSTER POLITICS FOR CENTRAL EUROPE****Татиана Вархолова**, Dr.h.c. prof. Ing. CSc.**Ленка Дубовицка**, Ing. PhD.

Центрально Европейский университет, г. Скалица, Словакия

**НОВАЯ КЛАСТЕРНАЯ ПОЛИТИКА В ЦЕНТРАЛЬНОЙ ЕВРОПЕ**

*The article is devoted to concepts of clusters which in European countries become an important part of regional, innovation and industrial policies. The focus is on the new cluster policies on the example of the innovation project CluStrat. Unlike traditional cluster concepts of regional innovation programs focused on one industry, aim is to provide a solution for cross-sectional area of emerging industries. The main output of the project is a unified action plan for the creation of development strategies within the cluster policies of Central European countries.*

*Статья посвящена концепциям кластеров, которые в европейских странах становятся важной частью региональной, инновационной и промышленной политики. Акцент делается на новые политики кластеров на примере инновационного проекта CluStrat. В отличие от традиционных кластерных концепций региональных инновационных программ, направленных на одну отрасль, его целью является обеспечить решение для новых много отраслевых областей промышленности. Основным результатом проекта является единый план действий по созданию стратегий развития в рамках кластерных политик в Центральной Европе.*

**Introduction**

Clusters are seen as a result of the increasing impact of economic geography in works of following economists: Michael Porter (The Competitive Advantages of Nations, 1990), Paul Krugman (Geography and Trade, 1991). Business cluster, according to M. Porter, is considered to represent geographic concentration of interconnected businesses, suppliers, and associated institutions to increase the national and global competitiveness of a business. In case of education, science and innovation cluster we should consider enterprises, higher education institutions, municipality and other agencies to accelerate knowledge and innovation transfer within the cluster and outside it. All members of cluster should enhance better cooperation in order to reach higher competitiveness in area and in the international field.

The European Commission sees the cluster as a group of independent companies and associated institutions which, on the one hand, compete, but on the other hand, cooperate, which are geographically concentrated in one or a few nearby regions and specialize in a particular area of business, and use a common or related technology and knowledge. The principle of "clustering" has become a key element of regional, innovation and industrial policies in the European countries. Entrepreneurs, acting within a cluster, are encouraged by other stakeholders such as local and regional authorities, associations of municipalities, local action groups, NGOs, educational and research institutions and others.

Current EU Strategy Europe 2020 establishes a broader framework plan for the creation and development of clusters for strengthening the innovation performance of regional economies and the overall competitiveness of the Member States.

**Cluster's initiatives in the field of education, science and innovation**

The firms need educated employees and academia private funds for its research both primary and secondary (application) mostly focused on innovation. The small and medium firms do not have enough potentially free employees to spend all working hours on innovative research. The scholars have some ideas, but not necessary funds to make found innovations work. Having these features in mind, it is highly important to promote cluster initiatives in the field of education, science and innovation.

According to Cluster Policies White book the cluster could be characterized by seven principal elements: geographical concentration, specialization, actors, competition and cooperation, critical amount, lifecycle and innovations. The geographical concentration means lo-

calization of near-by firms, existence of human capital and education process. The first mentioned represents the hard factor of cluster performance, the two last the soft factors.

Specialization of cluster is given by orientation of firms joined in cluster. It is represented by certain economic activity (could be industry field, or similar fields bordered by NICE classification). This field becomes the joining element of a cluster. As actors of clusters are considered not only firms, but also public authorities, academia, research organizations, financial institutions and other cooperative agencies such as consulting firms. Competitiveness and cooperation combination characterize the relations between actors what represent dynamics and relationship within cluster. The critical amount of actors in a cluster represents the lowest number of cooperating participants to become a community such high to solve crucial issues of a cluster. Lifecycle of the cluster consists of following stages: cooperation between actors, creation of a cluster, rise, maturity and transformation.

Innovation could be seen as any production, technical, organizational and/or commercial change. Innovation should not be confused with invention. In former Czechoslovakia each invention was considered as innovation (Dubovicka, 2008). According to White Book of Innovations in EU which adopted the Schumpeter's definition of innovation it is change in product, or in providing service, marketing change, new product or service, new distribution channel and new assembly of existing product or services. Sometimes it is hard to distinguish if it is total new product or service or just change in sales or organization.

#### **Cooperation between academia and private sector**

Cooperation between research institutions and enterprises in general has a potential of high success but nowadays in Slovakia is not very commonly used. The specialized agency promotes such cooperation but it is not widely expanded. The predispositions for cluster initiative in education, science and innovation are: existing cluster in a field of industry or similar fields and setting connection to research organizations and higher education institutions.

The first stage should be oriented on finding the potential higher successful cluster initiative in common field of study, research and industrial realization. The successful cluster initiative consists of existing infrastructure from supplier to customers and consumers, cooperating companies as well as state supported agencies helping in promoting and supporting cluster activities.

The second stage presents participation of universities on research supported by companies joined in cluster, the universities would make innovation work by its commercial use in companies, cluster would support international transfer of knowledge, people and innovations just to mention some of the benefits of such cluster approach to integration of education, science and innovation. The major advantage is in concentration funds, people, technologies, research potentials and enablers.

The last, third stage is focused on evaluation of the benefits of both-side beneficial contribution and reported to government agencies and public which as we hope will lead into more support and information on cluster initiatives in Slovakia.

As a good example we could present one of the British institute focused in research in the field of biotechnologies which wanted a couple years ago to build 4-storey building with laboratories and cabinets. One of the major global pharmaceuticals firm offered the cooperation in which they would invest all the cost if Institute would build the 5-storey building where the pharmaceuticals firm would have the highest one and only what they wanted in re-pay was to have right to join coffee breaks at lower storey. Why? They wanted to participate in talks and discuss the problems with scholars and students of an institute in order to catch of each idea told in this academic place.

#### **Project CluStrat and participation of Slovakia**

CluStrat is strategic innovation project of program International cooperation of central European countries and is financed by European regional development fund (ERDF). EU contributes it by sum of 3.8 million EUR, duration of projects is October 2011- October 2014.

The aim was to change the view of the operation of clusters and transfer best approach to cluster policies of individual countries and in cooperation with other project partners to ensure the implementation of the project in real life. The consortium brings together 18 organizations from Austria, Germany, Italy, the Czech Republic, Slovakia, Hungary, Poland, and Slovenia. Seven institutions from the Czech Republic, Germany, Poland, Slovenia and Ukraine are associated partners without financial participation. Slovakia was represented by cluster AT + R, Union of clusters Slovakia (UKS) and the National Agency for Development of Small and Medium Enterprises (NADSME). Unlike general framework of regional innovation programs aimed at one industry, CluStrat intention was to provide a solution for the new cross-cutting areas within the context of strategy Europe 2020.

As an example of such a link may be mentioned pilot action under the EU program "Active and Healthy Ageing". This action of the project CluStrat focuses on the so-called Ambient Assisted Living - technology and innovation allowing not only handicapped or elderly people to adapt equipment of occupied space on their individual needs and enabling to remain at home without continuous external care. Participants accepted the proposals of Slovak partner, which is a cluster of automation and robotics AT + R, Košice in terms of handling equipment for handicapped and disabled and communication technology of people who are lonely or want to be monitored. In this field, which has a high rate of dynamics in the world, is needed a joint initiative of more staff development, manufacturing and users of health and social services.

Although the issue of raising labor productivity in Central Europe has become a subject of interest of Slovak participant CluStrat within the project Human Machine through the proposal of a new method of "robot - human". According to the Executive Director of the cluster V. Copa: "Man is not blown out of work. It is a tool that makes monotonous strenuous physical work that one does not need to do. The operator will increase the performance of workplace that he can do other programming tasks. Rapid working cycle executed by the robot allows to double the power shift."

In parallel, the cluster of automation and robotics AT + R, Košice is general coordinator of pilot action Networking for the development of new concepts of Zero Energy Buildings. Its aim is intercluster cooperation and networking of stakeholders in order to design and supply of advanced forms of upgrading and retrofitting projects, demonstration, training and transfer of know-how on new concepts for zero energy buildings using renewable energy. Cluster AT + R, Košice was part of four pilot projects. In each of these projects the stages were carried out on mapping innovation potential, producers and users of new developing fields and technologies. Participants accepted the proposals of activities to facilitate the transfer of know-how and training specialists with the fact that the direct outcomes of projects will mainly be between 2015 and 2017.

### Literature

[1] ANDERSSON, T., SERGER, S. S., SORVIK, J., HANSSON, E. W., (2004): The Cluster Policies Whitebook.

[2] DUBOVICKA, L., (2008): The open strategic innovation. In: Innovations in educational process of high schools: international and national experience. International Scientific Bulletin. XV International scientific practical conference. Uzhgorod, Lira 2008. ISBN 978-966-2195-06-4.

[3] PORTER, M., (1990): The Competitive Advantages of Nations.

[4] KRUGMAN P., (1991): Geography and Trade.

[5] <http://www.clustrat.eu/>

[6] <http://clustrat.eu/consortium/partners/>