

Evolution of Cluster Policy and Formation of Clusters in the Slovak Republic

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Abstract

In the recent period the increasing number of the countries allocate innovative processes, researches, businesses and other market participants to improve service providing or quality of manufactured goods in cluster networks. This procedure takes place not only at regional or national level, but also at international level. Such relation or connection is not an end in itself. This follows also the aim of achieving lower costs by providing information in various ways mutually between the members and the linking talented researchers among each other to exchange their knowledge too. Michael Eugene Porter states that clusters can be defined as the geographically proximate groups of the interconnected companies and the associated institutions in a particular field, which are linked by the commonalities and the complementarities; and from this statement the facts and the ideas presented here get along. This study investigates the role of the clustering process in the Slovak Republic, its history of formation with emphasis on the development of cluster and their contribution for enterprises, associations and organizations of whatever form. It describes the initial conditions desirable to create the group of legal person that can be constituted as cluster. The legal background of clusters in general and the impact of the cluster initiatives on the employment rate are mentioned too. The paper also examines the regional and the national policy of the clusters in the Slovak Republic with focus on the characteristics of the actual working cluster initiatives.

Key words: cluster, comparison, region, cluster policy, Slovakia

JEL Classification: O10, O14, P48, R10

1 Introduction

One of the major forms of cooperation promoting competitiveness of small and medium enterprises is represented by a cluster. The cluster can be defined as a collaboration of the different actors in public, private or government sector in order to increase and improve competitiveness of not only the individual cluster members, but the economic area and the region too (Porter, 2008). The process of clustering involves an innovative policy and an offer, which generates the conditions for the dynamic business climate by. This is crucial to be able to concentrate the activities into the business processes due to the fact that the clusters provide a basis for performance of the external processes connected with company development in the fields of applied research, development and education. Such partnerships represent the effective support mechanism for participating in development of small and medium enterprises and also of

the main holder of the regional development with no respect on the level of the economic development at all.

At the transnational level of the European Union, especially the European Commission, there were processed the several professional scientific papers – the strategic plans, the support policy formulations, memoranda and so on – dealing with the clusters. As an instance, in 2007, the European Cluster Observatory was established as a platform ensuring the analysis of the cluster initiatives in the European Union and the analysis in terms of supporting the clustering processes. Also in 2007, the document *The European Cluster Memorandum* was developed by the High Level Advisory Group on Clusters in order to mobilize support of the cluster initiatives and the cluster policies at the level of the European Union member states and at their regional levels too (Laffitte, Aho, Danneels, Evrard, Meier zu Kocker, Mingasson, Monks, Sandberg, Sandri, Simon and Subira, 2007).

Another important organization at the European level of the clustering processes is The European Cluster Policy Group. It was established in 2008 by the European Commission with the aim to identify challenges for the cluster policy. The main objectives comprise publishing recommendations to improve the construction of the cluster policies in the European Union member countries, evaluating the current international trends of cluster development and their involvement among the European Union member countries, identifying future challenges for cluster policies as the response to the globalisation process, exploring the tools to cancel the obstacles at the international level of the cluster cooperation and analysing the relation between the individual levels of the cluster policies to the financial instruments to support the cluster initiatives. (European Cluster Policy Group).

The purpose of this paper is to describe the history of the clustering formation process in the Slovak Republic. The emphasis is placed on the technology clusters and the clusters of tourism started working and performing in this country. The paper also examines the differences among the cluster policies at the national and the regional level with small comparison to other European countries. Moreover the study illustrates the possible visions, the potential contributions and the future purposes of the established clusters in the Slovak Republic. The base contribution of the paper is also the deep insight into the clustering process at all of the policy levels – mainly at the national and regional levels – and the examination of the impact of the cluster initiatives on the employment rate.

2 Cluster Programmes

The Innovation strategy of the Slovak Republic for years 2007 till 2013 has been the first document, which mentioned the clustering process as an important tool for growth of competition in economy, sustainable development and for innovation strategy mechanisms. It is undisputable that the origin of cluster initiatives was initiated, until the financial support from the European Union programmes was brought to Slovak organizations.

The improvement of innovative environment is one part of the previously mentioned document. The substantial point of this section is development of cluster initiatives, which the conditions for

better collaboration among businesses, universities and research centres go through. This should be done in economy branches that mostly need development in regions in general.

The current situation relating to the Slovak legislation does not recognize the term of cluster. In the Slovak Republic the first cluster initiatives were forced to seek the most appropriate legal form for its existence and the performance within the lines of the applicable legislative norms. The process of clustering of small and medium enterprises was designed by the Innovation strategy of the Slovak republic for years 2007 till 2013 considering the regional innovation strategies, the policies and the other initiatives to be an important tool for the sustainable development and the increasing regional competitiveness and the innovation potential of these businesses. Nevertheless, there was a lack of attention devoted to the clusters and the cluster initiatives as part of the regional economics, although the support of the small and medium enterprises was identified as a priority for all the levels of government since the early ninetieth years of the twentieth century (Duman, Balog, Rehák, Zaušková and Loučanová, 2009).

Determination of the so-called innovative poles of the growth was the basement to specify area to apply the innovation strategy. These poles were chosen according to the actual needs of the individual regions. Because Slovakia has regional government in form of higher territorial units, this division plays the role also in this field. The separate regions, which were taken into a consideration, agreed with the division to higher territorial units. Providing financial support from state and public funds is prioritized according to the above mentioned poles.

The Innovation Strategy of the Slovak Republic for years 2014 till 2020 points out that it is necessary to achieve the environment suitable to create the conditions, which will act as the motivating aspect for the enterprises to increase a number of the activities done in the field of the applied research and the innovation. One possibility of all the potential opportunities is the conception of the favourable conditions for developing the clusters and the active cluster policy. Even though, the submission report for this new innovation strategy document, presumed a new modern approach to the clustering process in the Slovak Republic (Úrad vlády Slovenskej republiky).

2.1 Financial Support for Clusters

The ones of the first programmes aimed at financial support of the cluster initiatives are structural funds of the European Union called the Cross-border Co-operation Programmes and the Operational Programme Increase of Economic Competitiveness. Besides these, Interreg IVC offer assistance for European territorial collaboration and there are also community programmes the Competitiveness and Innovation Framework Programme and the Seventh Research Framework Programme with the very similar focus.

2.2 Agencies Responsible for Applying Cluster Policy

There are three important agencies responsible for applying the cluster policy in the Slovak Republic in general:

- the National Agency for Development of Small and Medium Enterprises – Národná agentúra pre rozvoj malého a stredného podnikania;
- the Slovak Investment and Trade Development Agency – Slovenská agentúra pre rozvoj investícií a obchodu, also known under the name Sario;

- the Slovak Innovation and Energy Agency – Slovenská inovačná a energetická agentúra.

For overall implementing of the cluster policy rules and the appropriate legal norms are in the Slovak Republic is responsible the National Agency for Development of Small and Medium Enterprises in the field of the small and the medium businesses. Successively, the Slovak Investment and Trade Development Agency aims at the increasing employment and the reducing disparities in order to enhance the living conditions of the Slovak inhabitants. And then the Slovak Innovation and Energy Agency, which was set up in 1999, but since 2007 has performed as the policy maker in the field of support for the innovation processes, especially targeting at monitoring and evaluating the innovative activities and the proposing measures to promote them.

Besides all these above mentioned organizations, there is still one, which plays the significant role in promoting the Slovak cluster initiatives. The representatives of the technology clusters and the tourism clusters in the Slovak Republic decided to establish the Union of Slovak Clusters in August 2010. Its aim is to encourage, to unite and to support the shared objectives and the targets in the economic system of the Slovak Republic. The union's goal is to stimulate the economic development and the competitiveness of all the regions through the clustering tools.

3 Clustering Process

The definition of cluster initiative by the words of the Slovak Energy and Innovation Agency is described as follows: it is an organized effort aiming increase in growth and competitiveness of clusters in region, involving clusters of companies, government and/or research community.

Establishment of the cluster initiative in Slovakia is not as easy as it looks like to be at the first sight. For the successful cluster it is necessary to be founded by public organization. This request is caused by the fact that domestic business entities keep little distrustfulness against any other businesses and enterprises. This phase has been stepped over in the foreign countries. The typical public institutions suitable to establish the cluster initiative can be local authority, municipality, higher territorial unit as a form of governmental body, public university, state research centre or other organizations (Šmíd, 2008).

4 Cluster Initiatives

It is common state in Slovakia that run of the cluster initiative is very tightly bounded to the financial means from public resources. The very important point is the cluster initiative's scope has not to be in conflict with the documents ratified by the authorities aimed at the run of the cluster initiatives (Ministerstvo hospodárstva Slovenskej republiky, 2007; Ministerstvo hospodárstva Slovenskej republiky, 2014).

The current significant technology clusters, which properly work in the Slovak Republic, are:

- Automotive Cluster – Automobilový klaster;
- Biterap Cluster – Biterap klaster;
- Cluster AT+R – Klaster AT+R;

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- Electrotechnical Cluster – Elektrotechnický klaster;
 - Energy Cluster – Energetický klaster;
 - First Slovak Engineering Cluster – Prvý slovenský strojársky klaster;
 - Košice IT Valley;
 - Slovak Plastics Cluster – Slovenský plastikársky klaster;
 - Z@ict.

The majority of these technological clusters are situated in Western Slovakia, where is long tradition of engineering industry and electrical industry – the Electrotechnical Cluster, the Energy Cluster and the First Slovak Engineering Cluster. Also there is quite new, but by now well established, automotive industry with the Automotive Cluster. Plastics industry is represented by the Slovak Plastic Cluster. The Biterap Cluster pays an attention to simplifying the administrative bureaucracy and the processes in the public sector. The Z@ict works in the field of innovations in general with support to improve working conditions through the information technology usage, education among the administrative employees in the field of the information and communication technologies and to maintain the creation of the knowledge-based economy. The summary of the most noteworthy technological clusters in the Slovak Republic is supplemented by information technology clusters, where Cluster AT+R and Košice IT Valley belong.

The present clusters with the field of their activities in tourism of the Slovak Republic are:

- Cluster Liptov – Klaster Liptov;
- Cluster of Tourism – Klaster cestovného ruchu;
- Cluster Orava – Klaster Orava;
- Cluster Turiec – Klaster Turiec;
- Tourism Association Balnea Cluster – Združenie cestovného ruchu Balnea Cluster.

The tourism clusters are aimed at the support of tourism, travel, sightseeing and similar activities. Because the Slovak Republic has a lot of places to offer for the exploration sightseeing tours, there are several significant clusters that devote their dedication to show how beautiful the Slovak Republic is. All of them are based in the regions with the majority of such places – it means the regions of Liptov with the Tatras, Orava and Turiec in Central Slovakia.

5 Impact of Clusters on Employment

It is undisputable fact that clustering process in general helps to decrease the unemployment rate value. We can have a look on the figures of people employed in the individual industrial branches according to the region they live. We have divided Slovakia into four regions – the Bratislava Government Region, Western Slovakia, Central Slovakia and Eastern Slovakia. The Region of Western Slovakia involves the Nitra Government Region, the Trenčín Government Region and the Trnava Government Region. The area of Central Slovakia contains the Banská Bystrica Government Region and the Žilina Government Region. And the Eastern Slovakia province comprises the Košice Government Region and the Prešov Government Region. In case of employment in Slovakia the numbers are successive.

Tab. 1 Numbers of employees of the industrial branches according to their residence

industrial branch	region			
	Bratislava Government Region	Western Slovakia	Central Slovakia	Eastern Slovakia
apparel		6531		8004
automotive	12661	15104	7364	
building fixtures, equipment and services		11265	8755	7748
business services	20355			8560
construction	11790	21310	15270	15367
footwear		7932	1658	1204
furniture		6769	5595	
heavy machinery		12181	4695	3805
information technology	7559			
lighting and electrical equipment		14526	1762	2683
metal manufacturing		18665		22263
paper products			5487	
oil and gas	3761			
plastics		9626		
power generation and transmission		4537		
food processing		17362	9220	7714
production technology		10757	9181	
telecommunications	9902	10774		5420
textiles		4623		
transportation and logistics	10770		8844	6735
sum	76798	171962	77831	89503

Source: compiled by the authors based on the provided data (Center for Strategy and Competitiveness, 2011)

As we can see in the Tab. 1 Numbers of employees of the industrial branches according to their residence, from the point of view of the clustered organizations the most inhabitants work in the construction industry – together 63737 workers all over Slovakia. The second most employing industrial branch is the metal manufacturing industry, where 40928 employees have their work positions. The third ranked branch is the automotive industry with 35129 workers, closely followed by the food processing branch on the fourth position, where 34296 workforces concentrate. Regarding the governmental division of Slovak territory, in the Bratislava Government Region the most people work in the sector of the business services with 20355 employees, in Western Slovakia it is the construction industry, which employs 21310 workers, Central Slovakia performs identically to Western Slovakia, but the number of employees gets lower to 15270 people and Eastern Slovakia has the highest number in the field of metal manufacturing, where 22263 inhabitants have found their labour positions.

6 Conclusions

The intention of the work is to bring the process of the formation of the clusters in the Slovak Republic into attention, as one of the fundamental features of performing the external processes linked to the company development. The European Cluster Observatory was established as a platform in 2007 at level of European Union in order to ensure an analysis of the cluster initiatives and an analysis promoting processes related to the clusters.

The paper provides an analysis of the cluster programmes, especially involved in the Innovation Strategy of the Slovak Republic as the first document focusing on the clustering process supporting the growth of competition in economy, sustainable development and innovation strategy mechanisms. Moreover, the work deals with financial support of the cluster and the agencies responsible for applying the cluster policy. There are three important agencies to be mentioned where the National Agency for Development of Small and Medium Enterprises, the Slovak Investment and Trade Development Agency and the Slovak Innovation and Energy Agency belong.

The work also examines the technology clusters and the clusters of tourism performing in the Slovak Republic. The most of technology clusters are situated in Western Slovakia. The tourism clusters support not only tourism, but also travelling and sightseeing. Examples of the regions offering beautiful experiences from sightseeing are Liptov, Orava, Turiec and many others.

The main contribution of the work is the impact of the cluster initiatives on employment. Slovakia is divided into four regions – the Bratislava Government Region, Western Slovakia, Central Slovakia and Eastern Slovakia. The paper provides an analysis of these regions in order to demonstrate the numbers of employees of the industrial branches according to their residence.

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