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## New Challenges of SMEs through Clusters Creation in Slovakia

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### Abstract

Travel industry, it is not an integrated sector in Slovakia with measurable inputs and outputs in the system of national accounting like agriculture, construction industry etc., but it is the conglomerate of products and activities from various areas that mean travel industry is a sector influenced by other areas as regional development, healthcare, culture, education, sport, forestry and environment protection. That is why the Travel industry is not acting on vertical line but horizontal which mean it could include various problems which could be solved only by cooperation. Travel industry clusters are therefore everywhere in the World, Europe and Slovakia, too. In these subjects we could find typical vacation destination as Spain, Italy or Portugal, but very important subjects within clusters we could find also in Germany, Poland, Czech Republic or Slovakia. Clusters are supported by number of policies and initiatives within the EU countries because of their synergy effect and increased productivity of enterprises joined within clusters. To support individual enterprise with potential to create a cluster needs careful identification of their potential and potential of regions for smart specialization connected with cluster. For appropriate cluster identification, we have opportunity to use various methods, quantitative and qualitative, too. We have mainly focused on quantitative methods with the perspective to directly determinate achieved outcomes. Our objective in this paper was to find possibilities of cluster creation and their identification in the area Slovak eight regions. With this aim we have used Location Quotient. Statistical data has been provided from statistic database and they were compared then with the real clusters operating in selected 8 regions within area of Slovakia. Identification of the economic perspectives of travel industry clusters in regions is the precondition of the originality of this paper as the starting point for formation of clusters and cluster initiatives within these individual regions of Slovakia.

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## 1. Theory of Cluster and Cluster Initiatives Philosophy

During the 20th century, there has been done a lot of investigation concerning concentration in the industry and economic performance by plenty of authors (e.g. Weber 1909, Christaller 1933, Lösch 1940, Schumpeter 1942, Hayek 1945, Harris 1954, Nordhaus 1962, Olson 1965, Williamson 1985). Although this topic has been perceived mainly by works of Michael Porter (1998, 2000) which has been focused on the areas of regional and local grouping of enterprises and creation of clusters. Creation of cooperating networks or bigger groups of cooperating SMEs is seen as inevitable element of so called “Network Economy” Zelený & Burget (2013). Small and Medium Enterprises are seen as the driving force of the economic growth in the global point of view, enabling creation of new job positions, disinflation and increase in productivity. For small and medium-sized enterprises (thereinafter SMEs), network entrepreneurship creation is mostly one of many ways to become competitive in comparison to strong and often highly sophisticated partners (Prochazkova, 2014). Common and joined doing known as the “network cooperation” (Smolková & Borovský, 2005; Hemández, 2010) provides plenty of activities that could be done together or shared by many of enterprises like the marketing activity, logistic, distribution activity, etc. The added value of this network doing business is access to extended resources, markets, knowledge and experiences. Network entrepreneurship or doing business could be explained (e.g. Zdražilová., 2004) as the common interconnection of complementary enterprises and societies in which they contribute to the creation of final product where they could cooperate in various activities of its creation (research and development, distribution, etc.) but they remain independent. Except of access to additional resources and abilities on the market, they accelerate knowledge, skills and educations of participants, simplify innovative processes and provide possibilities to use specific economics of scale. Regional concentration of these enterprises is not a must. OECD (Cities and Regions in New Learning Economy.Paris, 2001) explained business network as the series of companies that use joined sources for cooperation within common projects.

The first foundations of the cluster concept could be seen approximately at the end of the 19th century when the English economist Alfred Marshal started to investigate regional concentration within industrial sectors.

OECD (2001) defines clusters as grouping of horizontally or vertically joined enterprises from the neighbourhood areas cooperating with supporting organizations. Cluster Union of Slovakia (2012) and Gajdová (2015) seen a cluster as a gathered joining of self-existent, regionally united, commonly supporting companies and institution which have potential to be competitive within regions of EU. The Expert Groups on Enterprise Clusters and Networks (Ministerstvomohospodárstva a výstavby SR, 2012) accepted the definition by Porter (Porter, 2000) and completed it with the following characteristics. Various authors describe cluster as a unit of subject which are concentrated (e.g. Pavelková et. al, 2009; Strážovská, 2004; Gajdová, 2013). Although the concept of a cluster initiative represents mostly the activity or effort joined with the cluster, it also could be perceived independently from the existence or non-existence of the cluster itself. Cluster initiatives are according to plenty of authors (e.g. Gretzinger & Royer, 2014) many times used instrument of administrative power anywhere in the World. As many authors who do not distinguish terms cluster and a cluster initiative we follow this point of view also in this article.

Enterprise networks could have various form and they could be created with various objectives. Basically they could be structured and formal (they could have also their own legal form) or informal (e.g. group of companies which share own ideas or develop wider form of cooperation). Going from the quantitative analysis, understanding of dynamism of entrepreneurship chain in respect industry it is possible to create a map of cluster. The aim of this map according to Czech Invest, 2005 could by demonstrate and define:

- Important relations among consumers and providers, various sectors in cluster and various sectors in cluster,
- Areas in clusters that could be supported by foreign or home investment,
- Opportunities for fostering of links among consumers and providers of products and services as the outcome of increased cooperation,
- Capacity of clusters for export or providers for new foreign investors,
- Weak and strong spaces of clusters from the point of view of factors, inputs or outputs of cluster which could be obtained from the benchmarking and primary investigation as the statistical analysis,
- Main driving force of the cluster form the competitiveness and innovation increasing point of view.

Life cycle of cluster is frequent object of investigation, e.g. Menzel and Fornahl (2007) or Bergman (2007), many times taken as the analogy of the sector life cycle. White Book describes steps of cluster development as

follows:

- Grouping of companies and other members (cooperation is mostly vital in natural clusters and in case of initiative there is compromise in cooperation and common activities).
- Establishment of cluster substance (embryonal stage, companies realize their ideas, create and develop cluster network. These companies are the hearth of cluster).
- Cluster development (growing cluster attract new companies thanks to attractive region and new opportunities for doing business, relations are developed among all components in cluster).
- Maturity (if the number of members is sufficient it is extended by other elements – cooperation between neighbour clusters or regions and extend its activities).
- Transformation or death of cluster.

Anot Menzel a Fornahl (2007) rozlišujú klastre z hľadiskakvantitatívnej a kvalitatívnejdimenzie.

## 2. Cluster and Cluster Initiative within the tourism regions in Slovakia

Region of Slovakia is divided in 8 regions. According to legislation which should be accepted by them there has to be created only one Regional Tourism Organisation (RTO).Regional level will be the umbrella, organisation that will coordinate and realise processes and marketing of Local Tourism Organisation (LTO) on the appropriate area of its activity. The aim of RTO will not be presentation of the region itself but the individual destinations and activity which are joined by them (e.g. topic – vine production, gastronomy, mining industry). Regions have been created as the outcome of political-administrative division in the past and they are not perceived by visitors as the tourism region in comparison with natural regions (e.g. Liptov, Orava, Turiec).

As the outcome of cooperation on the national level (Slovak Agency for Tourism – SAT) the position of RTO should be also in creation of trends, new incentives and all regional member (RTO) motivation for development activities. Due to fact that regional organisations are the outcome of political-administrative division, our analysis is focused only on the regional tourism organisation that means tourism clusters. For this purposes we consider RTO and TC (tourism clusters) synonyms.

In Slovakia, there is from 2012 registered 32local tourism organisations – clusters. Common year of their existence provide ideal precondition for comparison of these clusters from various point of view. 9 evident LTO are clusters of city type. There are focused mainly on presentation of cultural heritage and historical heritage in cities as Bratislava, Trnava, BanskáŠtiavnica, Nitra a Košice. The rest four -Dudince, Piešťany, Trenčianske Teplice and Senec are joined mainly with recreation, spa and wellness activities.

In the rest 23 regional clusters we are not able expressly determinate activity as it was in previous types although majority of them could be seen as clusters focused on summer of winter tourism (Region of VysokéTatry, SEVERNÝ SPIŠ-PIENINY, Nízke Tatry Juh, Stredné Slovensko, Malá Fatra, Vysoké Tatry - Podhorie, LTOkysuce, REGIÓN LIPTOV, TURISTICKÝ NOVOHRAD A PODPOLANIE, Klastor Orava, LTO TATRY-SPIŠ-PIENINY, SLOVENSKÝ RAJ. In the rest of organisation which has not been mentioned yet we can find mixture of various activities, e.g. LTOZáhorie is providing except spa also vine tradition and tourism, LTO Rajeckádolínais joining spa activity and tourism, LTO „ŠARIŠ“ BARDEJOV spa activities, tourism and culture.

Tab. 1 Cluster/LTO in Slovakia

Clusters/LTO city type	Clusters/LTO regional type
3.KOŠICE – Turizmus (Košice)	1.Region VysokéTatry (StarýSmokovec)
4.Dudince (Dudince)	2.SEVERNÝ SPIŠ – PIENINY(StaráLubovňa)
9.Trenčianske Teplice (Trenčianske Teplice)	5.Nízke TatryJuh (Mýto pod Ďumbierom)
11.Trnava Tourism (Trnava)	6.LTO „ŠARIŠ“ BARDEJOV (Bardejov)
16.Nitranská organizácia cestovného ruchu (Nitra)	7.GRANVIA – SLOVAKIA (Žarnovica)
20.Region Banská Štiavnica (Banská Štiavnica)	8.LTOZáhorie (Smerdák)
22.BratislavaLTO (Bratislava)	10.Region Horné Považie (Považská Bystrica)

25.REZORT PIEŠŤANY (Piešťany)	12.Rajecká dolina (Rajecké Teplice)
31.Region Senec (Senec)	13.Horný Zemplín a Horný Šariš (Humenné)
	14.TURIEC – KREMNIČKO (Martin)
	15.SPIŠ (Spišská Nová Ves)
	17.Zemplín LTO (Michalovce)
	18.Stredné Slovensko (Banská Bystrica)
	19.Malá Fatra (Žilina)
	21.Vysoké Tatry – Podhorie (Veľká Lomnica)
	23. LTO Kysuce (Čadca)
	24. LTO Žitný ostrov – Csallóköz (Veľký Meder)
	26.REGION LIPTOV (Liptovský Mikuláš)
	27.TURISTICKÝ NOVOHRAD A PODPOľANIE (Lučenec)
	28.Klaster Orava (Dolný Kubín)
	29.Region HORNÁ NITRA * BOJNICE (Bojnice)
	30. LTO TATRY – SPIŠ – PIENINY (Kežmarok)
	32.SLOVENSKÝ RAJ (Hrabušice)

Source: Own calculation

Individual clusters from table could be observed also in the map below. Numbers with which are clusters mentioned in the Tab. 1 are in the Fig. 1 regional activity and its area of activity. Within regions there has been created 4 RTO. Tourism of region Bratislava (Turizmus regiónu Bratislava) is joining two LTO (Bratislava LTO and Región Senec). Žilina tourism region is created by 5 LTO: Malá Fatra, Rajecká dolina, Klaster Orava, TURIEC-Kremnicko and REGION LIPTOV. NorthEast of Slovakia is created by 6 LTO: Región Vysoké Tatry, Vysoké Tatry – Podhorie, LTO TATRY – SPIŠ – PIENINY, SEVERNÝ SPIŠ – PIENINY, OOCR „ŠARIŠ“-BARDEJOV and Horný Zemplín and Horný Šariš. Košice region is created by 3 LTO, now: Zemplín LTO, KOŠICE – Turizmus a Spiš.

Key activities of RTO are:

- Management and planning.
- Project and initiatives focused on individual activities and groups.
- Incentives and directives focused on increasing of services quality, development of infrastructure, product and offers within the area of region.
- Thematic marketing,
- Communication campaigns focused on new visitors acquisition (presentation on foreign and country markets)

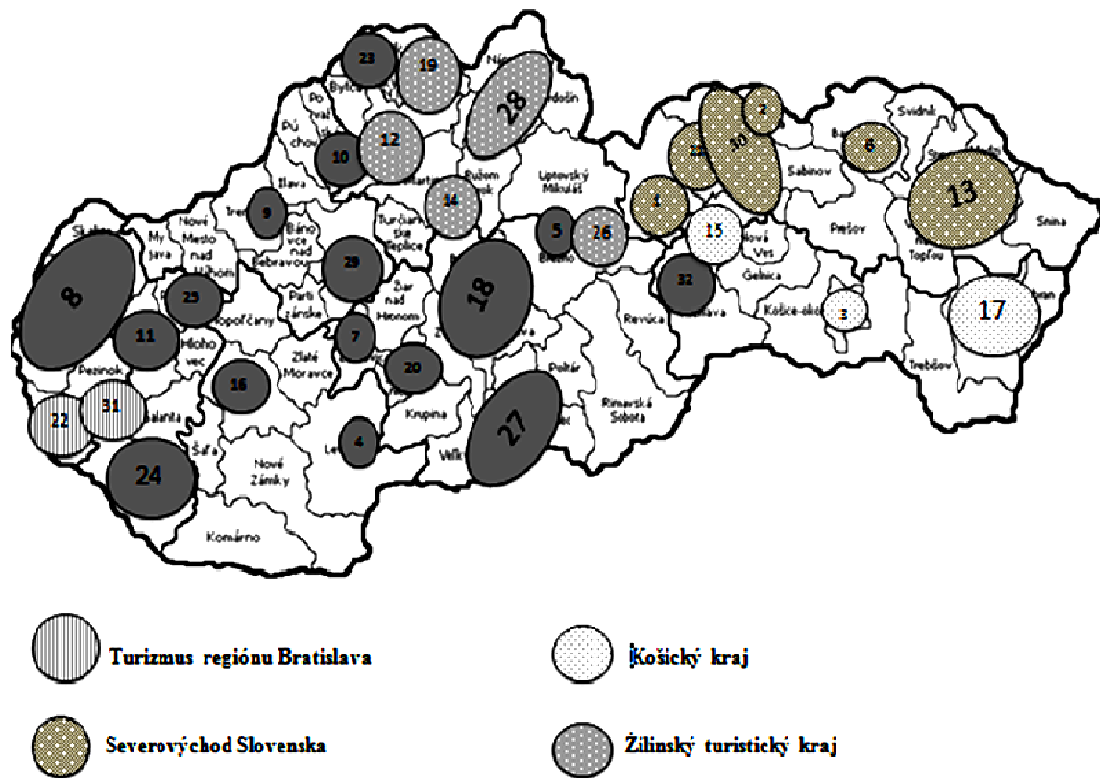


Fig.1. Map of Clusters/LTO Slovakia

Source: Own calculation

Regional activities of cluster could be considered as proportional that mean we can see them in all three main regions of Slovakia (11 Western Slovakia and Bratislava, 11 is in the area of Middle Slovakia and 10 is within the area of East Slovakia). Concerning the 8 regions, we could see that many of them exceed the region, or they are on the area boundaries we can say that majority of them are in Prešov and Žilina region. Table 2 shows number of clusters within individual regions.

Table 2. Clusters/LTO within individual regions

Region	Number of cities	Number of districts	Number of Clusters/LTO	Share
Bratislava	89	4	2	2.00
Trnava	251	7	4	1.75
Trenčín	276	8	3	2.67
Nitra	354	7	2	3.50
Žilina	315	8	6	1.33
Banská Bystrica	516	8	5	1.60
Prešov	665	8	6	1.33
Košice	461	8	4	2.00
Average	365	7	4	2.02

Source: Own calculation

If we count this number carefully we can say that in average the region has 7 districts and average number of LTO within region is 4. That mean on every two districts within Slovakia we can find 1 tourism cluster. This number seems to be so high although Slovakia has strong potential in tourism activity development. It also shows that within various localities are created small, specifically focused clusters that mean clustering is more focused on needs of individual members, not on the regions and consumers.

### 3. Perspectives of Clusters creation within the tourism regions in Slovakia

Many authors propose individual methods for appropriate cluster and cluster initiative identification e.g. (Lindquist & Ketels, 2003; Andresson, 2004; Stejskal, 2011; Pavelková et al., 2013). Quantitative method decision many times depends on the specific decision of evaluator, type of cluster, etc. Methods which are often applied are the Input-Output analysis and the Location Quotient. First of them, The *Input-output Analysis* does not focus on the specific sector of activity and regional concentration. It focuses mainly on the evaluation of connections to other sectors by which it is ensured the link structure of the sector within selected region (Stejskal, 2011). The links among the entry to the inputs and outputs to the sector are qualitatively described, e.g. the production of the sector. The Location Quotient (*LQ*) shows how many times is the share of a sector on the employment in a region higher than the national average (Jensen et al, 1979), see formula (1),

$$LQ = (x/X) / (y/Y) \quad (1)$$

In which the *LQ* is the location quotient of employment within measured and examine region. *x* is the number of employees in this sector in the region we focus on. *X* could be explained as the general number of employees in a examined region. *y* then represents concrete number of employees in this sector in the country we are focusing on. *Y*, at the end, is the general number of employees within country we are focusing on.

In case the *LQ* is greater than 1 it means the region has the concentration higher than the average value. The Location Quotient exceeding the value of 1.2 is consequently perceived as an elementary specialisation in the examined sector. The main disadvantages of the Location Quotient usage is that it provide very general information about the mutual dependency between examined sectors. That is why this instrument is evaluated as not very appropriate method and way of decision making.

Within our regions in Slovakia we have counted Location Quotient for tourism industry. Results we can see in the table below.

Table 3. Location Quotient development in individual regions

	LQ2014	LQ2015	difference
Bratislava	2.19	2.33	0.16
Trnava	0.76	0.72	-0.04
Trenčín	0.74	0.72	-0.02
Nitra	0.90	0.95	0.05
Žilina	0.64	0.86	0.22
Banská Bystrica	0.77	0.80	0.03
Prešov	0.72	0.69	-0.03
Košice	1.00	0.93	-0.07

Source: Own calculation

As the outcomes of our research we can see potential of Bratislava region above standard, which has increased during years. In contrary, Košice region has shown decrease within tourism industry in region. The same trend of development we can see in Trnava, Trenčín and Prešov region. As a positive outcome could be seen

increase of region potential in the tourism activity in Žilina and Banská Bystrica region.

#### 4. Conclusions

Clusters identification and identification of cluster initiatives is very sophisticated and specific process. It is the process in which entrepreneurial subjects in region must be defined and potential of region itself for the potential of cooperation and the cluster creation. The best situation is when cluster or cluster initiative is established spontaneously, as the outcome of entrepreneurial activities which are realised plenty of years within the region. Potential of such regions is evident. Another case is support of clusters creation from state or a region as it is in case of tourism clusters.

Counting of Location Quotient showed naturally which regions have preconditions for tourism clusters creations. According to us artificial interventions, as it is in case of this law existence which enable creation mainly of entrepreneurial subjects could significantly influence identification of clusters through existing methods.

Tourism activity could makes “a miracle” and from this non-perspective destination arise cluster type Las Vegas or Hollywood. In case of other types of cluster there could also play role other factor, e.g. support of state as it is in case of automobile clusters in Slovakia. From this point of view, it is important to evaluate potential of individual regions very carefully.

At the end, this survey is concluded by the comparison of the already existing clusters in the examined areas and the regions in Slovakia. We understand that the real perspective of cluster creation depends not only on the amount of employees within the selected area of activity but also on the number and structure of the companies providing this activity, their willingness to cooperate or perform activities via a cluster, etc. Nevertheless, this study could be a beginning for cluster facilitators’ work, governments on the local or national level and universities or research institutions in their effort to support innovation and development of particular regions. Moreover, in many cases, it is important to create clusters as a connection of various sectors which are able to support and influence each other. This also forms a significant reason for further research in this area.

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