

THE MOTIVATION OF SMALL AND MEDIUM ENTERPRISES TOWARDS CLUSTER COOPERATION FROM THE POINT OF VIEW OF HUMAN RESOURCES

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Abstract

In developed economies, the clusters are considered as an important tool for the development of small and medium-sized enterprises (SMEs) and increasing their competitiveness. The connection of SMEs in this form of network cooperation means for the better access to human resources, knowledge, results of research and innovation and many more. SMEs are important regional stakeholders in the cluster also in Slovakia. More than 40% of cluster stakeholders in Slovakia represents just SMEs. In this context, the main aim of this paper is to evaluate the main reasons that motivate SMEs in Slovakia for connection to clusters from point of view of human resources. We used the results of questionnaire method with a random selection of SMEs from Slovak regions. For evaluation of results, we used descriptive statistics and our hypotheses have been evaluated by means of chi-square method. Cluster cooperation can contribute to the development of SMEs in various ways. One of them is the development of human resources. It is possible to observe these issues from two points of view: from point of view of cluster as a whole and from point of view of individual enterprises (cluster stakeholders). In this paper, we try to provide some insight into this issue.

Key words

Cluster, competitiveness, small and medium-sized enterprises

JEL Classification: L26, O15, D22

Introduction

In recent years, the role of clusters has become increasingly important in both the analysis of urban and regional economies and in public and private economic development initiatives (Raines et al, 2002). Academic and policy discourses stress the advantages of clusters for cities, regions and economies seeking to compete in an increasingly knowledge-driven global economy (Cumbers and MacKinnon, 2006; Piperopoulos, 2012; Kordoš, 2016; Havierniková, Jašková and Krajňáková, 2016). From a microeconomic point of view, clusters are an appropriate tool for increasing the competitiveness of companies (Pavelková and Jirčíková, 2008). Clusters enable affiliates to improve their competitiveness and achieve higher performance. Clustering leads a firm to gain collective efficiency, which could hardly be achieved by an individual company alone (Karlsson, Johansson and Stough, 2005; Saha, Jirčíková and Bialic-Davendra, 2011). Thus, networking and strategic partnerships are an important precondition for business development, especially for small and medium-sized enterprises (SMEs) which are considered to be the economic pillars and the driving force behind employment, innovation Fenyvesi, 2015), and social integration in market economics (Breschi and Malerba, 2005; Barcik and Jakubiec, 2016; Dziwiński, 2016; Zeeshan, 2017). In the non-

financial sector in the EU-28, 99.8% of the companies operated in 2016 were small and medium-sized enterprises. These SMEs employed 93 million people, representing 67% of total employment and 57% of value added in the EU-28 non-financial sector (European Commission [online], 2017a). As well, data for small and medium-sized enterprises in Slovakia indicate that they are also no less important pillar and a stabilizing factor for the economy of the country and its regions. SMEs contribute significantly to the non-financial business economy in Slovakia, which represented 54.4% of total value added and 72.1% of total employment in 2016 (European Commission [online], 2017b). SMEs are important regional stakeholders in the cluster also in Slovakia. SMEs are the most represented category of clusters' members in Slovakia – this category consists of 49 % of all members in clusters (Havierniková, Okreglicka and Lemanska-Majdzik, 2016).

As follows from preliminary results of scientific project VEGA 1/0953/16 The evaluation of clusters' impact measurement on regional development of the Slovak Republic, among SMEs still missing the awareness of cluster cooperation. After an explanation of the principle of cluster cooperation, they could identify the importance that potential cluster cooperation might have for them. The connection of SMEs in this form of cooperation within the network allows achieving higher revenue or cost savings

through shared funding for research and development of new products, providing a skilled workforce, sharing marketing and promotional activities, sharing access to information, building logistics centres and many other activities addressed in a cluster. In this context, the main aim of this paper is to evaluate the main reasons that motivate SMEs in Slovakia for connection to clusters from point of view of human resources.

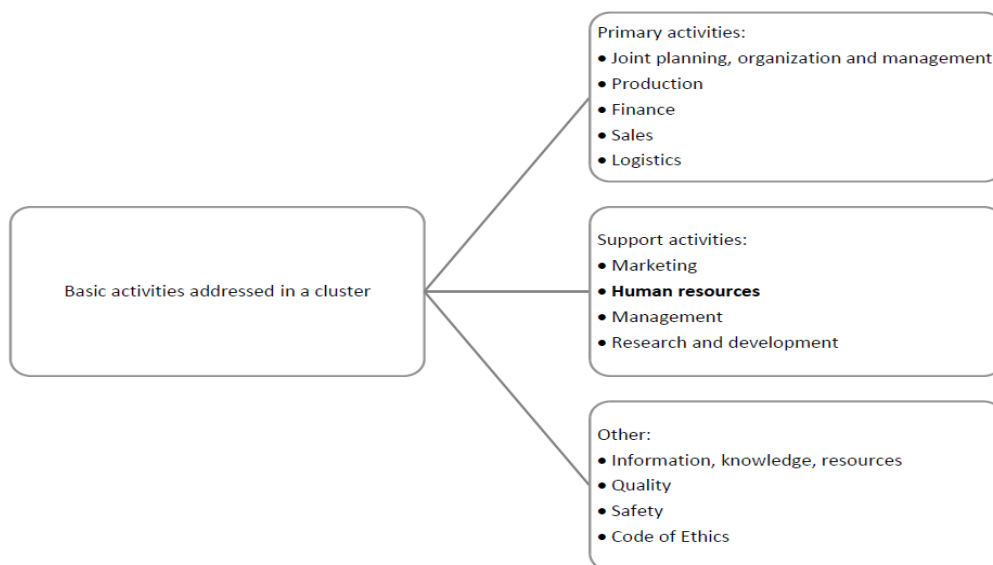
Theoretical Background

As stated by Bergman and Feser (1999), clusters are business-manufacturing companies and non-commercial organizations, for which group membership is an important element of the competitiveness of each member. Clusters bundle customer-supplier relationships or joint technologies or joint customers and distribution channels, or common labour markets and human capital. To understand the motivation of SMEs towards cluster cooperation, it is necessary to identify and study their network of relationships with all entities, including human resources that are the backbone of each organization. See also (Hitka et al. 2017) Crucial elements among the critical factors of an enterprise's success in a market environment are the employees (human resources), who ensure its performance by activating all other resources of the organization (Hitka et al., 2017, Hitka et al. 2018). According to Szerenos (2007), human resources play a significant role in the cluster concept as well as in a knowledge-based economy. In the era of globalization, human resources are viewed as a source of competitive advantage (Delery and Roumpi, 2017, Caha, 2017). Key activities within the cluster include human resource management. People are the most important source in the enterprise as well as in the cluster, so work with them should be done systematically and on a long-term basis. This is primarily about planning and providing qualified staff and experts. Nor should their continuing vocational training be forgotten.

As stated by Pavelková (2007), the human resources area, their availability for companies and skills upgrading, is an important field for cluster cooperation. Cluster cooperation in the human resources area can take the form of joint training and education of employees by organizing courses, joint seminars and conferences, building training centres, etc. The cluster usually provides these activities in cooperation with educational institutions. They can

fund them with their resources or use project funding from different support sources. It is also important to co-operate with a cluster of secondary and higher education institutions in the framework of networking cooperation in formulating requirements for graduates of these schools according to the needs of the practice (the focus of study programs, curriculum modifications, etc.). The presence of strong backgrounds in the form of training capacities for a particular business area can attract investors and capital to the region. As described by Gajdová (2014) in the field of human resources, co-operation can take the form of increasing staff qualifications by organizing joint seminars, conferences, training courses, but also joint training centers. Financing of such activities can be carried out from own resources or can be used by means of projects, etc. According to Šimon and Troblová (2007), one of the advantages of the cluster can be the distribution of costs for the joint organization of seminars, conferences, lectures and workshops between several enterprises. Workshops can be organized as separate events or be part of larger national and international conferences. It is also important to cooperate with educational institutions (especially with secondary vocational schools and tertiary education institutions) in the field of human resources management. The cluster can thus directly select its potential employees, influence, and participate in their education. As stated by Saha (2012) there are several human resource management activities that companies can offer to enhance the levels of their human resources such as personnel administration, training and development, career development, talent management, manpower planning etc. Among them, clusters may organize education of employees in professional courses, regular schooling, joint seminars; conferences aided by various educational institutions or form a joint educational centre.

The cluster provides its members with support in a variety of activities. For a well-functioning cluster, it is essential that collaboration, support and trust of all cluster members are created and exploited in activities that are decisive for the cluster. These activities are an important building block for the competitiveness of individual members and the whole cluster. Based on a wide range of studies on networking and clusters in market economy conditions, basic activities that appear to be important in clusters were defined and divided into the following primary and support activities (see figure 1).

Figure 1: Basic activities addressed in a cluster

Source: Šimon and Troblová (2007, p. 71); own processing.

The cluster, by its very nature, facilitates the emergence of an internationally competitive business. Networking may help SMEs to expand their market in other countries. As Kumar (2012) stated, SMEs owner managers can develop better relationship in the foreign market by participating in international trade fairs and exhibition. To stimulate exports, possibly to support the cluster companies' entry into international markets, the cluster management unit serves as an access to information about foreign firms, markets, and, in particular, their trends, which can affect the intentions of companies positively or negatively. Břusková (2003) stated that the Management Unit allows for the organization of contacts with potential foreign partners, seeks and recommends financial security for export, is linked to specialized agencies and state programs for diversification of export markets for existing exporters and preparation of an export strategy for new exporters. Internationalization also means promoting clusters, companies and their products abroad, finding partners for joint ventures, and promoting joint ventures (Ruzzier and Antoncic, 2007).

The Research Methodology

Clusters contribute to development of SMEs in several ways. Important part of cluster cooperation is also the issues of human resources. The holistic view on this issue is very difficult and there is a gap in research studies that are focused on benefits that influenced from cluster cooperation from the point of view of human resources. In this paper, we tried to

evaluate the selected reasons related with issues of human resources in the context of cluster cooperation that are important for SMEs in case of their potential engagement into clusters.

This paper starts with a literature review in order to highlight the issues of human resources in connection with cluster cooperation. Next part is devoted to the results of questionnaire surveys realized in the frame of project VEGA 1/0953/16 The evaluation of clusters' impact measurement on regional development of the Slovak Republic. Finally, we will offer the implications for future research in the area of human resources in the context of cluster cooperation.

For this paper the hypothesis H1 was stated: For enterprises in the field of tourism, the selected reasons are more beneficial for cluster cooperation from point of view of human resources than for technological enterprises and vice versa. In order to confirm/reject this hypothesis, author used statistical method Gamma correlation coefficient. The gamma coefficient is a measure of the relationship between two ordinal variables. Gamma below zero means a negative or inverse relationship. Gamma, ranges from -1 to +1. -1 and +1 each indicate perfect relationships. No relationship is indicated by 0.

This type of correlation is often used for the evaluation of results within realized questionnaire surveys, see also Okreglicka et al. (2016). The partial results of realized questionnaire surveys are used for confirming/rejecting the given hypothesis. For achieving of main aim of this article, the answers from 760 Slovak SMEs are used. These numbers of

respondents consist of 380 tourism SMEs and 380 technological SMEs.

In the context of SMEs' participation in clusters from the point of view of human resources, the respondents evaluate following benefits influence from their potential participation in clusters:

B1: The increasing of employment.

B2: Common projects in the field of human resources.

B3: The organization of common seminars and conferences.

B4: The common trainings and education of staff.

B5: The cooperation with training agencies.

The survey was directed to enterprises of three size according the number of employees: micro (0-9 employees), small (10 – 49 employees), and medium sized enterprises (50-249 employees). The opinions of respondents about the benefits that influenced from potential cluster cooperation in the context of human resources were evaluated in scale from value of 0 - irrelevant to value of 5 - the most profitable.

The research results and discussion

Table 1. Characteristics of respondents

Sized category of SME	Tourism		Technological	
	number	%	number	%
0-9	191	50,26	142	37,37
10-49	158	41,58	124	32,63
50-249	31	8,16	114	30,00
Total	380	100,00	380	100,00

Source: own research

The percentage of respondents answers are given in table 2. By the highest rating value (5) the respondents rated the reason B1: The increasing of employment (13,68%) in case of technological SMEs. If we take into account also value 4, the important benefit for technological SMEs is also B4: The common trainings and education of staff (23,68%). For tourism SMEs, the highest % of value 5 obtain the

benefits B1: The increasing of employment (11,32%) and B5: The cooperation with training agencies (11,05%), but on the other side these benefits are not so important, because according rating value 0 they obtain highest percentage evaluation (B1 – 18,42% and B5 - 23,68%). From this reason in next part of paper, the distribution of respondents' answers is analyzed.

Table 1. Rating by SMEs' managers/owners answers

Benefit	Rating Scale						Total
	0	1	2	3	4	5	
B1TE	15,79	16,58	18,95	21,58	13,42	13,68	100,00
B2TE	7,37	16,84	21,58	28,42	17,89	7,89	100,00
B3TE	9,74	17,11	23,42	27,37	17,11	5,26	100,00

B4TE	6,32	13,42	17,89	27,11	23,68	11,58	100,00
B5TE	6,84	20,79	18,16	27,89	16,84	9,47	100,00
B1TO	18,42	14,74	16,32	23,42	15,79	11,32	100,00
B2TO	10,53	13,68	21,84	25,79	19,74	8,42	100,00
B3TO	22,89	16,84	18,42	20,53	14,21	7,11	100,00
B4TO	18,16	12,11	16,58	21,58	21,32	10,26	100,00
B5TO	23,68	13,68	16,05	23,42	12,11	11,05	100,00

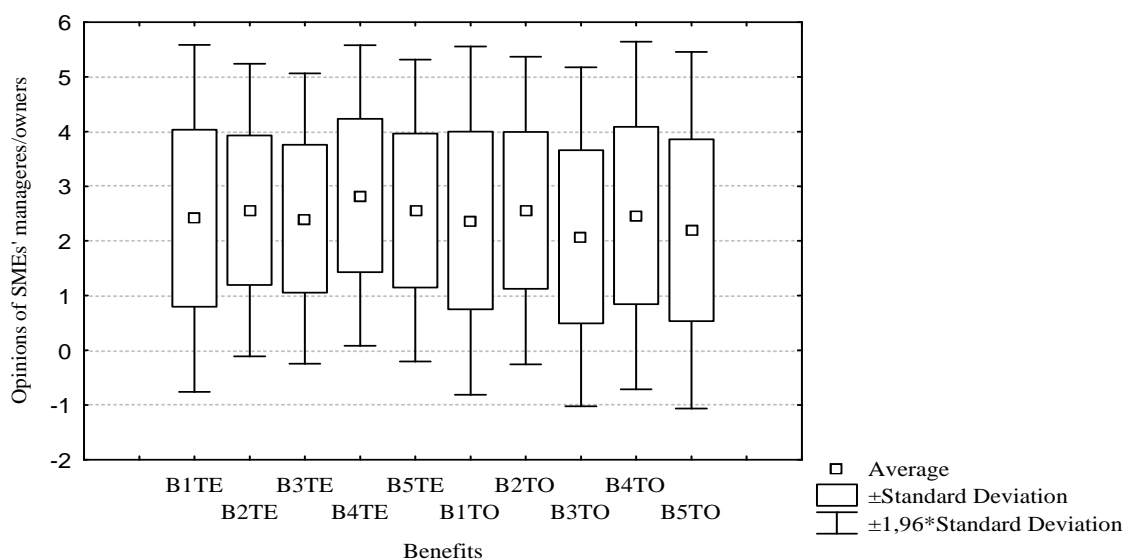
Source: own research.

Notes: B1: The increasing of employment, B2: Common projects in the field of human resources, B3: The organization of common seminars and conferences, B4: The common trainings and education of staff, B5: The cooperation with training agencies. TE – Technological SMEs, TO- Tourism SMEs

The analyses of the distribution of respondent’s answers present Figure 2. We can generally state that the mean mostly under 3 in 5 point scale is not satisfactory results. The respondents due to category of tourism SMEs perceived as the most important benefit that influenced from potential cluster cooperation the benefit B2: Common projects in the field of human resources (2,56±1,43 points), the less

important is benefit B3: The organization of common seminars and conferences (2,08±1,58 points). For respondents from category of technological SMEs perceived as the most important benefit B4: The common trainings and education of staff (2,83±1,40 points) and the less important benefit B3 : The organization of common seminars and conferences (2,41±1,35 points).

Figure 2. The distribution of answers



Source: own calculation, TE – Technological SMEs, TO – Tourism SMEs

In the next step of our research, we diagnosed if there is any correlation between SMEs’ choice of benefits and observed field in which SMEs operate. For this analysis the gamma correlation coefficient was chosen.

We stated null hypothesis at the 0,05 level. Since the obtained value for the gama correlation coefficient

achieve the range of values from -1 to 1, and the p-value >0,05, than the null hypothesis must be accepted and we must conclude that there is not a statistically significant correlation between the two variables. Results are given in the table 2. Results showed that there is no correlation between assessed benefits of tourism and technological SMEs.

Table 3. The results of Gamma correlation coefficient

Compared benefits	Gamma	Z	p – value
B1TE&B1TO	-0,008563	-0,20626	0,836589
B2TE&B2TO	0,073285	1,72216	0,085040
B3TE&B3TO	0,028108	0,66305	0,507298
B4TE&B4TO	0,013145	0,31154	0,755386
B5TE&B5TO	0,069513	1,64475	0,100021

Source: own calculation,

Notes: $p < 0,05$, B1: The increasing of employment, B2: Common projects in the field of human resources, B3: The organization of common seminars and conferences, B4: The common trainings and education of staff, B5: The cooperation with training agencies. TE – Technological SMEs, TO- Tourism SMEs

To determine the significance of a Gamma statistic, a Z-score is calculated. The obtained value for the Z-score is then compared to the critical values of Z to determine if the correlation is statistically significant. The critical value for Z at the 0,05 level is $\pm 1,96$. The obtained value for Z falls within the range defined by -1.96 and +1.96. Therefore, the null hypothesis is accepted and we must conclude that there is no significant relationship between the two variables. In our research we can conclude that there are not differences in perceptions of given benefits from the point of view of business fields of SMEs.

Conclusion

At present, we can find many researches that are focused on various issues of clusters, but the issues of human resources is not elaborated in required level. The issues corresponding with this topic as how can the human resource activities support the SMEs' development, which type of human resource management is appropriate to use in cluster, which type of trainings could contribute to human resource management and many other are not elaborate in

appropriate way. Before the entering into cluster, for managers/owners of SMEs is the most important to know which benefits the cluster cooperation will bring them. Sometimes the relevant information are missing. Cluster cooperation can contribute to the development of SMEs in various ways. One of them is the development of human resources. It is possible to observe these issues from two points of view: from point of view of cluster as a whole and from point of view of individual enterprises (cluster stakeholders). In this paper, we try to provide some insight into this issue. From the results of realized surveys resulting, that from the point of view of SMEs' managers/owners who have some experience or knowledge about the cluster cooperation resulting, that this issue is not so important for them.

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