THE RISKS IN THE CASE OF CLUSTER COOPERATION AND WAYS OF THEIR PREVENTION: AS SEEN BY SMEs ENTREPRENEURS

[a]KATARÍNA HAVIERNIKOVÁ, [b]JOZEF KLUČKA

[a]Alexander Dubček University of Trenčín, Faculty of Social and Economic relations, Študentská 3, 911 50 Trenčín, Slovakia
[b]Unversity of Žilina, Faculty of Security Engineering, Univerzitná 8215/1, 010 26 Žilina, Slovakia

email: [a]katarina.haviernikova@tnuni.sk, [b]jozef.klucka@fbi.uniza.sk

The paper is related to VEGA project, project No. 1/0918/16 dealing with: "Risk management of SMEs in the context of clusters´ involvement activities in the Slovak Republic."

Abstract: This paper contribute to the extension of risk management issues in specific form of doing business in case of small and medium enterprises – clusters. The clustering creates new strategies and brings through a shared approach not only various economic and non-economic benefits, but also various risk factors influenced their activities. There is specific typology of clusters in Slovakia. Within this typology we recognize technological and tourism clusters. The largest group of clusters' stakeholders are small and medium enterprises (SMEs). The main aim of the paper is to evaluate the perception of six risk categories by SMEs that have experience with cluster cooperation. In order to address this analysis in this research we used the results of questionnaire surveys. For evaluation of the differences in perception of risk categories between technological and tourism SMEs we used the Mann Whitney's test. The significant risk categories were determined by Pareto analysis. The ways of risks' prevention were presented in register of risks.

Keywords: cluster, cluster cooperation, cluster typology, small and medium enterprises, risks, risk management.

1 Introduction and Theoretical Background

In today's globalized word, especially in advanced economies, the new paradigm of business based on the cooperation principle is beginning to emerge in regions – clustering. The cluster concept was closer elaborated mainly by M.E. Porter, who defined cluster as a geographically proximate group of interconnected companies and associated institutions in a particular field, linked by commonalities and complementarities. The geographic scope of a cluster can range from a single city or state to a country or even a group of neighboring countries. (Porter, 2000). Clusters represent network groups of various regional stakeholders concentrated in one area, which operate in the particular industry sector. Clusterization as a phenomenon characterizes obvious and structural processes, which will relegate in companies; they can get economic benefits and achieve a business expansion effect. (Navickas & Svazas (2017); Lemańska-Majdzik & Okręglicka, (2015);Razminiene & Tvaronaviciene, (2018)). The existence of clusters proves to be an efficient form of business cooperation in which businesses support each other and improve their own ability to innovate. The clusters are an important factor influencing the regional development of the various countries (Mura & Machová, 2015). Clusters are more and more used from small and medium enterprises as a new opportunity to be a competitive in world economy. According to Svec & Madlenak (2017) there are some concepts, for example phygital concept, for innovative entrepreneurship in clusters.

Various aspects of cluster cooperation were elaborated in the research literature from various points of view: the advantages related to shared costs for infrastructure, the build-up of a skilled labor force, transaction efficiency, and knowledge spillovers leading to firm learning and innovation (Malmberg and Maskell, 2000). Innovations are a basis for clusters possibilities and cluster initiatives. (Fenyvesi, 2015). Another scientist, Zygmunt (2017) write, that the innovation activities are the main reason of innovator countries. Innovation strategies in Slovak and Czech condition are analyzed by Kovaľová et al. (2018); Lorincová (2018) or Žižka et al. (2018). Tallman et al. (2004) mentioned the macrolevel phenomenon – cluster based competitive advantage-by disaggregating it and shifting focus from the cluster and its constituent firms to the character of organizational knowledge that resides within the cluster. The cluster encourages country competitiveness to increase (Korauš, Mazák, Dobrovic, 2018), and growing work productivity and employment allows the creation of new additional value throughout the country. (Mészáros, 2018; Horecký, 2018). Cluster strategic fit model shows that both cluster partners competitiveness and country opportunities can form a synergy, which enhance a country's economic potential. (Navickas & Svazas, 2017). Sforzi (2002) and Becattini (2002) dealt with the area of social relations between cluster participants, according to these economists, the social capital of the cluster has a major impact on the development of the whole cluster. Malmberg et al. (1996) dealt with the concept of clusters in terms of urban agglomeration, which includes companies from different segments located in the same urban area, because companies are making similar or related activities. Many other researchers and economists confirmed the positives, but also the shortcomings (Barkley and Henry, 2001) of clusters. Clusters play important roles in competitiveness and regional development. Forming and development of clusters represents huge potential not only for the region, but also for the whole country performance increase. They represent tool for restructuring of the regional economy, the increase of the economic performance of the region and improvement of its competitiveness. (Masárová and Koišová, 2018)

The opportunities for clustering are growing between business and the neighboring community – stakeholders in the regions. The clustering creates new strategies and brings through a shared approach not only various economic and non-economic benefits, but also various risk factors influenced on their activities. Cluster cooperation and a new productive environment, which clusters represent, underlines the role of risk management. If stakeholders involved in clusters work in the same physical space, various activities are no longer under their own control and their activities are affected by a number of other risks, not only related to their own activities, but also to the activity of the whole cluster. The rules' changing and solving of common projects (Adamisin et al., 2018) within a one group will affect all areas of risk management even in the case of clusters. . According to Zauskova et al. (2013); Tvaronaviciene (2016) or Kordoš (2015), European Union need dynamism in its economy. It is opportunity for an innovation-driven structural changes and create to clusters initiatives and cluster EU policy. The Influence of Clusters on Economic and Regional Development is very important. There are some studies about a comparative analysis of clusters and cluster policies in member states of the European Union (Cheba, 2015).

Long-term success and prosperity of cluster and the creation of sustainable values are not possible without effective risk management. Risk management is a rational approach to the work with risk and uncertainty with the use of instruments and methods of risk steering. Risk management provides data for proactive decision that is also based on systematic assessment of possible threats of an organization. It defines which risks are important (assign risk priorities) and implement strategy for dealing with them. Assessment of risks is linked with quantification of impacts and with definition of an approach to evaluate amount of risk. (Haviernikova, Okreglicka, Klučka., 2016).

Cluster competitiveness most growth them, when exist favorable cluster members. Itself cluster structure is much more progress forward – in the world exist various types clusters, who orient either to benefit aim for business, or to value added creation in scientific research basis. (Navickas et al., 2016) A significant part of the clusters' membership represent small and medium enterprises (SMEs). SMEs operate in the same environment as the large companies, but without the associated benefits such as: capital, access to innovations and results of R&D, access to a wide resource base, access to a qualified workforce, profit less often from economies of scale and many others. Moreover, the highest added value is hidden just in products that are built on

the use of R&D results, high-tech, modern technologies, or practices. (Kordoš, Krajňáková, 2018). On the opposite side, the SMEs are more flexible and adaptable as their larger counterparts. They are more openness towards new ways of operating, their risk taking approach but they are more susceptible to major external powers: the pressure of growing globalization, changing legislation, increasing and wide spreading technologies and innovation. This illustrates that financial and non-financial aspects threaten SMEs' survival. It brings various risks that SMEs must face. Despite this fact, many SMEs do not (or not adequately) apply risk management practices, because they cannot afford to rededicate resources due to their constraints. (Falkner and Hiebl, 2015).

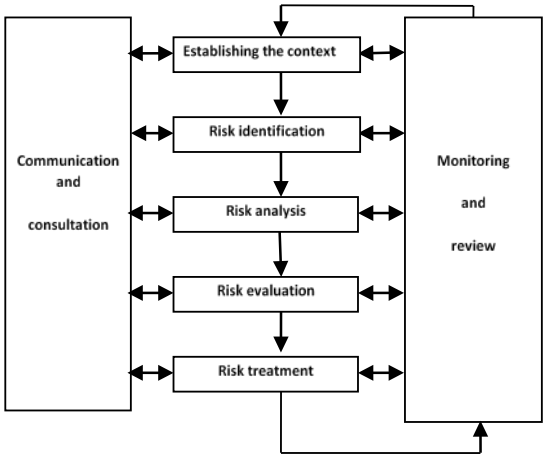
In comparison with large enterprises, the risk management in SMEs in Slovakia is missing. In microenterprises and family businesses, too. (Mura, 2017). The same situation is in clusters. Effective risk management identifies the significant risks that could affect the success or existence of the SMEs. Risks can be identified in internal and external environment of each entrepreneurial subject (SMEs, each clusters' entrepreneurial stakeholders, but also cluster). An entrepreneurial subject is tackled to risks continually and with different intensity. The stakeholders in cluster cooperation are facing the various risks: globalization, loss of reputation, shortening of a product life cycle, new technologies, catastrophic events (natural catastrophes, catastrophes as the impact of man-made activities) and different economic and non-economic risks. The results of the scientific project VEGA No. 1/0918/16 showed that the involvement of SMEs into the cluster can be accompanied by the following risks:

- regional economic problems – clusters are usually organized regionally, in case of regional economic problems, they will be transferred to the cluster and to their cooperating enterprises;
- the government policy - if it was based on cluster support and financial support for cluster-related businesses, and this support was limited/canceled from various reasons; clusters thus lose the benefits and stakeholders the motivation for cooperation;
- industry crisis - this risk can be minimized through the SMEs' involvement into the cluster; enterprises in cluster can respond more flexibly to industry crisis and the synergy of collaboration and transformation can avert the threat of a crisis for an enterprise;
- inability to raise additional capital – the enterprises cooperating in cluster reduce the risks of investors and that's why its connection minimizes the risk associated with the inability to obtain borrowed capital;
- slow innovation – the connection into the cluster brings greater potential to all members in case of the innovation development and strengthens the competitive position of the enterprise and cluster,
- contravention – the dysfunction of partnership also brings risks

All this says about downsizing of entrepreneurial activities and acceleration of those threats existence and operation of an enterprise. The risk management process should be implemented within every managerial decision in an enterprise. Enterprise risk management is a new trend in security and growth of stakeholders' wealth. It is a new integrated approach to management of enterprises risks. Development of enterprise risk management has experienced at advance in all areas and activities of enterprises. (Havierniková, Okreglicka, Klučka, 2016)

The aim of risk management is to identify, analyze, evaluate, solve and monitor risks possibly endangering the company. For managers, the risk management process is one of the most important things which they do in frame of managing the risks. For them it is necessary to know how to apply a systematic risk management process through the putting into action the core five risk management process steps. All risk management processes follow same series of basic steps, although they can be different in dependency of used standard. The elements of the risk management process are summarized in Figure 1.

Figure 1. Risk management process



Source: A Risk Management (2002)

In general, in the entire risk management process, following the identification of risks, which are significant for an investor's objectives, the risks are assessed, which means that the most significant risks, as well as the risks which are less important for the project, are indicated. (Korombel, Tworek, 2011). Stated above should be implemented also in case of clusters. These were the main reasons for contribution to the extension of risk management' context in these type of doing businesses. The main aim of this paper is the evaluation of selected risks that are identified by SMEs in case of cluster cooperation and to recommend the ways of their prevention. Due to the fact, that there is used specific cluster typology in Slovakia, we focused on two types of Slovak SMEs: technological and tourism. Technological SMEs carry out their activities in the following areas: ICT, creative industry, bio-economic focus, agriculture and food, engineering, energy, electrical engineering, construction, automotive, scientific research, and so on. The realized research has limitation namely that respondents' (SMEs) are member of Slovak clusters or have experience with cluster cooperation.

2 Material and Methods

There are more than 20 clusters in Slovak self-governing regions (Bratislava-BA, Trnava-TT, Trenčín-TN, Nitra-NR, Žilina-ZA, Banská Bystrica-BB, Košice-KE and Prešov-PO) divided into two groups according typology of Slovak Innovation and Energy Agency that performs tasks in the area of innovation in which the issues of clustering are also incorporated. This typology was also used in scientific project VEGA. During the duration of scientific project we have identified more than 20 clusters. We have also identified the number of SMEs connected into the clusters. The results are presented in table 1. The environment of the Slovak clusters is very dynamic and clusters that realized activities in 2016 at present are inactive.

Table 1 Slovak clusters and number of SMEs

Region	TE	SME	TO	SME
BA	Danube knowledge cluster	**1**	-	-
	National energetic cluster	**unk.**		
	ABC – Academic Business Cluster	**unk.**		
TT	Automotive cluster Slovakia	**14**	Cluster Smolenice	**unk.**

	Electrotechnical cluster - Western Slovakia	**unk.**		
	Energetic cluster – Western Slovakia	**1**	Cluster of Regional Development - Western Slovakia	**unk.**
	Cluster for support of innovative and green technologies	**unk.**		
TN	Slovak IT Klaster	**8**	Cluster Váh	**unk.**
NR	Slovak plastic cluster	**14**	Association of Tourism – Cluster Topoľčany	**4**
	Bioeconomy Cluster	**6**		
ZA	Z@ict	**7**	Cluster LIPTOV – Association of Tourism	**4**
			Cluster ORAVA	**12**
			Cluster TURIEC – Association of Tourism	**3**
BB	1st Slovak Engineering Cluster	**5**	Cluster of the border castles	**unk.**
KE	Cluster AT + R z. p. o.	**10**	Tourism Cluster Košice	**unk.**
	Cluster RADAR	**2**		
	BITERAP	**7**		
	Košice IT Valley	**19**		
PO	Cluster EKPK	**1**	-	-
	Railway transport cluster	**1**		
Total	**18**	**96**	**9**	**23**

Source: own research, TE-Technological clusters, TO-Tourism clusters, *analysis conducted in 2016-2017, data may currently vary.

Qualitative data for this research were collected through the questionnaire surveys. The relevant population of this research are SMEs with experience in cluster cooperation. The population consists of 87 SMEs. With reference to the typology of Slovak clusters, 72 of 96 respondents belonged to the technological SMEs while 15 of 23 belonged to the tourism SMEs. Respondents were asked to evaluate the selected categories of risks that could occur in the case of cluster cooperation and which are significant from their point of view. A subjective perception of risk was assigned by respondents on Likert scale from 0 – the risk does not apply to the business, 1 – very low level of risk, 2 – low level of risk, 3 middle level of risk, 4 – high level of risk, 5 – very high level of risk.

For this paper authors selected risks categories from the areas mentioned in the part Introduction and which are the most important and negatively affect the entrepreneurial activities of SMEs in case of cluster cooperation:

R1. Macroeconomic problems in regions,
R2. Trends in economic branch,
R3. Financial support of clusters from the government,
R4. Investment,
R5. Innovation,
R6. Partners.

To fulfill the main task of the article, we formulated the following statistical hypotheses:

H0: There are not significant differences between evaluation of risk categories in both groups of respondents (technological and tourism).
H1: There are significant differences between evaluation of risk categories in both groups of respondents (technological and tourism).

To evaluate the statistical hypotheses we utilized the tools of the descriptive statistics (figures and relative frequency).

In order to meet main aim stated, we used empirical research methods (questionnaire), statistical methods (non-parametric Mann-Whitney U test that is appropriate for low research sample), the Pareto analysis, a tool that is used in quality management and statistical software Statistica.

3 Results

First we focused on descriptive statistics. In general the SMEs from tourism area perceived risk categories in different way than from technological area (Figure 2). When SMEs from category of tourism clusters (Figure 3) assessed all risk categories on the similar level – mean around 2,0 in technological SMEs the differences in relevance of the risk categories are visible (mean between 2,03 to almost 3,0).

Figure 2 Descriptive statistics of Technological SMEs

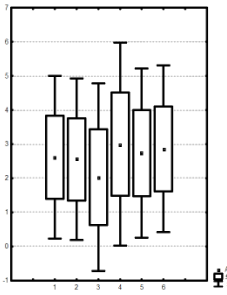
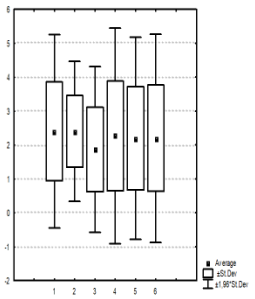


Figure 3 Descriptive statistics of Tourism SMEs



Source: results of own research calculated in program STATISTICA

Following tables show the results of respondents evaluation expressed in % and the value of p - level of the Mann-Whitney U test. In the case where the p - value is less than the level of 0.05, the null hypothesis is rejected, and vice versa.

Table 2: R1 Macroeconomic problems in regions

Likert scale	**Frequency (%)**		**Mann – Whitney U test**
	TE	**TO**	
0	5.6	6.7	p=0.551481
1	13.9	26.7	
2	22.2	20.0	
3	33.3	20.0	
4	22.2	20.0	
5	2.8	6.7	

Source: results of own research calculated in program STATISTICA

This category of risk was perceived by 26,7% of respondents from category of tourism SMEs as a risk with low level and by 33,3% of respondents from category of technological SMEs as a risk with middle level of risk. Only 2,8% of tourism SMEs and 6,7% of technological SMEs perceived this category of risk as a risk with very high level of risk. The results of p –value of Mann-Whitney U test showed, that null hypothesis could not be rejected. It means that there are not differences in the perception of this risk between tourism and technological SMEs.

Table 3: R2 Trends in related economic branch

Likert scale	Frequency (%)		Mann – Whitney U test
	TE	TO	
0	5.6	13.3	p=0.451537
1	12.5	53.3	
2	29.2	20.0	
3	30.6	6.7	
4	18.1	6.7	
5	4.2	13.3	

Source: results of own research calculated in program STATISTICA

In case of evolution the risk related to trends in related economic branch, 53,3% of tourism respondents perceived this risk category as a risk with very low level of risk. On the contrary, 30,6% of technological SMEs perceived this risk as a risk with middle level of risk. If we compare the risk perception of respondents evaluated by value 5 on Likert scale, 13,3% of tourism respondents and only 4,2% of technological respondents evaluated this risk category by this value. The p-value of Mann-Whitney U test confirm null hypothesis. It means, that three are no differences in perception of this risk category between two groups of respondents.

Table 4: R3 Financial support of clusters from the government

Likert scale	Frequency (%)		Mann – Whitney U test
	TE	TO	
0	18.06	13.3	p=0.765878
1	18.06	33.3	
2	25.00	13.3	
3	26.39	33.3	
4	6.94	6.7	
5	5.56	13.3	

Source: results of own research calculated in program STATISTICA

Financial support of government is important factor for existing and functioning of clusters in other economies. In Slovakia, the support is low and clusters rely mainly on own resources. If we evaluate the results of respondents' risk perception it seems, that this risk category is more important for technological than tourism SMEs. However, the level of p-value showed that between perceptions between two groups of respondents are not differences.

Table 5: R4 Investment

Likert scale	Frequency (%)		Mann – Whitney U test
	TE	TO	
0	9.7	20.0	p=0.116995
1	6.9	13.3	
2	15.3	20.0	
3	29.2	20.0	
4	19.4	20.0	
5	19.4	6.7	

Source: results of own research calculated in program STATISTICA

The common investment in clusters is important factor for building competitiveness as well as cluster as well as their stakeholders. For Slovakia is typical the low volume of private investments in research and development and a low level of cooperation of educational institutions with the private sector in research and development. (Fabuš, 2015) If we take into account the evaluation of the respondents on the Likert scale, the value 5 was significant for 19,4% of technological respondents and only 6,7% of tourism respondents. The results of Mann-Whitney test showed, that null hypothesis could not be rejected. It means that there are no differences between respondents' perception.

Individual actors influence the innovative processes and collaboration being necessary for creation and operation of an innovative environment. Collaboration takes place in a number of ways. It is a support for innovative networks and cooperation, provision of knowledge and information for businesses to reduce uncertainty in their economic activities, a support for incentives structure that will ensure the profitability of innovation in long run and so on (Kordoš and Krajňáková,2018). The results of realized questionnaire surveys showed, that the innovation are perceived as a risk with very high level of risk by 20,0% of tourism SMEs and only 6,9% of technological SMEs. The results of Mann-Whitney test showed, that we couldn't observe the differences in perception of respondents.

Table 6: R5 Innovation

Likert scale	Frequency (%)		Mann – Whitney U test
	TE	TO	
0	5.6	20.0	p=0.261155
1	11.1	13.3	
2	22.2	20.0	
3	33.3	20.0	
4	20.8	26.7	
5	6.9	20.0	

Source: results of own research calculated in program STATISTICA

We can observe various relationships and hierarchy of them among partners in cluster. For future competitiveness and activities of clusters the relationships among partners are very important. Around 20% of respondents in both group perceived this risk factor as a risk with high level of risk. The result of Mann-Whitney test showed, that there are not differences among respondents' answers.

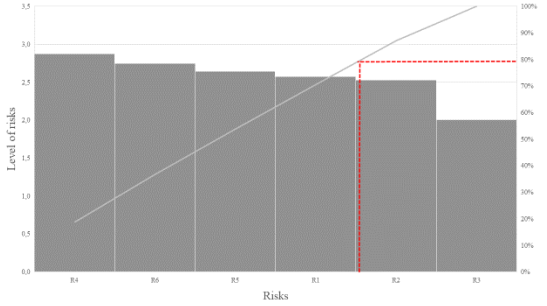
Table 7: R6 Partners

Likert scale	Frequency (%)		Mann – Whitney U test
	TE	TO	
0	4.2	13.3	p=0.113111
1	8.3	26.7	
2	25.0	20.0	
3	31.9	13.3	
4	20.8	20.0	
5	9.7	6.7	

Source: results of own research calculated in program STATISTICA

For risk assessment, we used the tool – Pareto analysis. This technique helps to identify the top 20% of causes that need to be addressed to resolve 80% of the problems. (Erdil and Taçgın).The average values of respondents' answers were used as the baseline data for the Pareto's analysis. With Pareto's analysis, we have identified the most important risk categories for SMEs with cluster's experience that need to be prioritized.

Figure 4: Results of Pareto's analysis



Source: results of own research

Figure 4 showed, that most important risk categories for SMEs are: R4. Investment, R6. Partners, R5. Innovation, R1. Macroeconomic problems in regions.

4 Conclusion

The concept of cluster cooperation is a well-known topic in Slovakia, but the involvement of small and medium-sized enterprises and other regional entities is limited to this form of cooperation. There are several reasons: lack of appropriate legislation, lack of financial support, lack of information and primary negative experiences that have led the business community's mistrust towards clustering, leading stakeholders to risk aversion.

In economic practice of each business entity the various risks occur. For this research we used selected six risk categories of six areas that can affect the activities of SMEs in cluster. The perception of these risk categories by two group of entrepreneurs evaluated in previous part showed, that there are not significant differences in perception of stated risk categories. In this part of paper, authors bring also the risk catalogue that could to contribute to the possibility for SMEs' risks prevention.

Table 8: The risk catalogue

Risk	Causality	Consequence of the risk	Solution
R1	Cyclical economic development	Losses due to the crisis	Focusing on crisis management activities
R2	Lack of interest and loss of customer confidence	Financial loss and loss of competitiveness	Analysis of the economic branch's environment
R3	Lack of cluster legislation and policy	Low interest in clustering and low awareness of cluster cooperation	Common pressure to promote cluster legislation
R4	Inappropriately implemented cluster strategy	Financial loss and loss of competitiveness	Training in the field of investment
R5	Insufficient preparation of innovative projects	Financial loss and loss of competitiveness	Application of the innovation management principles
R6	Partners are not reliable and loyal	Loss of customers and reputation	Determination of contractual terms

Source: own proposal

The results of Pareto's analysis showed that for both groups of Slovak SMEs connected into cluster cooperation the most important risk with which it is necessary to work are: R4. Investment, R6. Partners, R5. Innovation, R1. Macroeconomic problems in regions.

The results of this research present partial evaluation of risk categories and propose possibility for their prevention through the risk catalogue. The implication for following research is to expand the level of analysis of this type of risks.

Literature:

1. *A Risk Management Standard* (2002), Available online: https://www.theirm.org/media/886059/ARMS_2002_IRM.pdf, [01.09.2016].
2. Adamisin P., Kotulic R., Mura L., Kravcakova Vozarova I., Vavrek R. (2018). Managerial approaches of environmental projects: an empirical study. *Polish Journal of Management Studies*, *17* (1), pp. 27-38
3. Barkley, D. L., Henry, M. S. (2001). Advantages and disadvantages of targeting industry clusters. *Clemson, South Carolina: Clemson University Public Service Activities.*
4. Becattini, G. (2002). From Marshall's to the Italian "Industrial districts". A brief critical reconstruction. In *Complexity and industrial clusters* (pp. 83-106). Physica-Verlag HD.
5. Erdil, A., Taçgın, E. (2018). Potential Risks and Their Analysis of the Apparel & Textile Industry in Turkey: A Quality-Oriented Sustainability Approach. *FIBRES & TEXTILES in Eastern Europe*, *26*(6), 132.
6. Fabuš, M. (2015). Current development of business environment in Slovakia and Czech Republic, *Entrepreneurship and Sustainability Issues*, 5(1): 127-137. http://doi.org/10.9770/jesi.2017.5.1(10)
7. Falkner, E. M., & Hiebl, M. R. (2015). Risk management in SMEs: a systematic review of available evidence. *The Journal of Risk Finance*, *16*(2), 122-144.
8. Fenyvesi, É. (2015). Systems of innovations and possibility of their joint. *Acta Oeconomica Universitatis Selye 4* (2), 53 – 63
9. Havierniková, K., Okreglicka, M., Klučka J. (2016) *Theoretical and Methodological Issues of Risk Management in Small and Medium-Sized Enterprises*. Wien/Berlin: Mercur Verlag. pp. 201.
10. Horecký, J. (2018). Operation and action of a trade union (in terms of Czech Republic labour law). *Central European Journal of Labour Law and Personnel Management*, *1* (1), 17 – 27
11. Cheba, K. (2015). The Influence of Clusters on Economic Development. A Comparative analysis of Cluster Policy in the European Union and Japan. *Oeconomia Copernicana*, *6* (3), 73-88
12. Korauš, A., Mazák, M., Dobrovič, J. (2018). Quantitative analysis of the competitiveness of Benelux countries. *Entrepreneurship and Sustainability Issues 5*(4), 1069-1083
13. Kordoš, M. (2015). The role and significance of clusters within the EU industry policy. *Acta Oeconomica Universitatis Selye 4* (1), 53 – 63
14. Kordoš, M., Krajňáková, E. (2018) Significance of innovation in Slovak regions – issues and challenges. *AD ALTA,* Volume 8, Issue 1. 137 - 141
15. Korombel, A., Tworek, P. (2011b) Qualitative risk analysis as a stage of risk management in investment projects: Advantages and disadvantages of selected methods-theoretical approach. *Ad Alta: Journal of Interdisciplinary research.* Vol 1, Issue 2., s. 51 – 54.
16. Kovaľová, M., Hvolková, L., Klement, L., Klementová, V. (2018). Innovation strategies in the Slovak enterprises. *Acta Oeconomica Universitatis Selye 7* (1), 79 – 89
17. Lemańska-Majdzik, A., Okręglicka, M. (2015). Identification of Business Processes in an Enterprise Management. *Procedia Economics and Finance,Vol.27.* In: 22nd International Economic Conference "Economic Prospects in the Context of Growing Global and Regional Interdependencies, 15-16.05.2015, Sibiu, Rumunia; 394-403
18. Lorincová, S. (2018). Human resource and corporate culture: Gender-based differences in the assessment. *Central European Journal of Labour Law and Personnel Management*, *1* (1), pp. 28 – 45
19 Malmberg, A., Maskell, P. (2002). The elusive concept of localization economies: towards a knowledge-based theory of spatial clustering. *Environment and Planning A: Economy and Space*, *34*(3), 429-449.
20. Malmberg, A., Sölvell, Ö., Zander, I. (1996). Spatial clustering, local accumulation of knowledge and firm competitiveness. *Geografiska Annaler: Series B, Human Geography*, *78*(2), 85-97.
21. Masárová, J., Koišová, E. (2017). Identification of the conditions (potential) for the development of potential clusters in the conditions of regions of the Slovak republic. *AD ALTA Volume 07. Issue 02.* 103-107.
22. Mészáros, M. (2018). "Employing" of self-employed persons. Central European Journal of Labour Law and Personnel Management, 1 (1), 46 – 67
23. Mura, L. (2017). Current situation in Family Businesses. *Managerial trends in the development of enterprises in globalization era*, 178-185.
24. Mura, L., Machová, R. (2015). Evaluation of the Innovation Performance of Business Networks. *CERS 2014: 5th Central European Conference in Regional Science, International Conference Proceedings*, 634-642
25. Navickas, V., Svazas, M. (2017). Macroeconomic Dimensions in the Clusterization Processes: Lithuanian Biomass

Cluster Case. *AnnaLikert Scale of the Alexandru Ioan Cuza University-Economics*, *64*(1), 33-44.
26. Navickas, V., Vojtovic, S., Svazas, M. (2016) Clusterization Processes Influence to Competitiveness: Biomass Clusters Case. Proceedings of the 1st International Conference Contemporary Issues in Theory and Practice of Management, CITPM 2016, Czestochowa: Czestochowa University of Technology, 302 – 308.
27. Porter, M. E. *Location, Clusters, and Company Strategy*. In Oxford Handbook of Economic Geography, edited by G. Clark, M. Feldman, and M. Gertler. Oxford: Oxford University Press, 2000. p. 253-274.
28. Razminiene, K., Tvaronaviciene, M. (2018). Detecting the linkages between clusters and circular economy. *Terra economicus 16* (4), 50-65
29. Sforzi, F. (2002). The industrial district and the'new'Italian economic geography. *European Planning Studies*, *10*(4), 439-447.
30. Svec, M., Madlenak, A. (2017). Legal frameworks for the phygital concept. *European Journal of Science and Theology*, *13* (6), 209-217
31. Tallman, S., Jenkins, M., Henry, N., Pinch, S. (2004). Knowledge, clusters, and competitive advantage. *Academy of management review*, *29*(2), 258-271.
32. Tvaronaviciene, M. (2016). Start-ups across the EU: if particular tendencies could be traced. *Entrepreneurship and Sustainability Issues, 3* (3), 290-298
33. Zauskova, A., Bobovnicky, A., Madlenak, A. (2013). How can the state support the innovations to build sustainable competitive advantage of the country. *Serbian Journal of Management 8* (2), 255-267
34. Zygmunt, A. (2017). Innovation activities of Polish firms. Multivariate analysis of the moderate innovator countries. *Oeconomia Copernicana, 8* (4), 505-521
35. Žižka, M., Hovorková Valentová, V., Pelloneová, N., Štichhauerová, E. (2018). The effect of clusters on the innovation performance of enterprises: traditional vs new industries. Entrepreneurship and Sustainability Issues 5(4), 780-794

Primary Paper Section: A

Secondary Paper Section: AE, AH