



## THE RESPONSIBILITY FOR RISK MANAGEMENT IN THE SLOVAK SMEs FROM THE POINT OF VIEW OF THE HUMAN RESOURCES IN THE PERIOD OF QUALITATIVE ECONOMIC CHANGES

Katarina Haviernikova<sup>1</sup>, Janka Betáková<sup>2</sup>

<sup>1</sup>Alexander Dubcek University of Trencin, <sup>2</sup>DTI University

### Abstract

Small and medium-sized enterprises (SMEs) in developed countries represent an important part of their economic environment. They belong to accelerators of economic development in regions and countries. One of the specifications of SMEs is that they allow people to learn to use their own entrepreneurial skills. Thus, the success of SMEs depends on the skills of the person who is responsible for business management in the enterprise. Without skilled and competent managers no activity will be performed effectively. The development and changes in the economic environment, in which SMEs operate, cause the various reversals connected with uncertainty and the resulting risks. A competent person (owner/manager) in SME will need to anticipate these risks and develop appropriate mitigation and strategies for them. The owner/manager of SME should consider the fact, that there could be deviations in the realization process against the planned goal. This deviation presents the risk and the representative of SME should know, how it is possible to manage this risk. It means to reduce its negative impact. The lack of knowledge is a fundamental problem in the failure of most initiatives in the SMEs and the lack of experience can become a major risk to business survival. The goal of owners/managers in SMEs should be to reduce the possible errors and risks in that way that the SME gets into a situation in which it can anticipate changes, and it is able to respond to them and exploit them to their advantage. Each SME is unique and the risk may occur differently in comparison with other SMEs. Risk management and mitigation of risk are important to ensure the security of the company and its continuous development. The risk management in SMEs is perceived as a means of the improvement of SMEs' success in their activities, due to the fact, that in most cases the unpredictable situations represent a serious loss-making exposure for the SMEs business sector which leads to the loss. For those SMEs whose capital base is insufficient, they can have catastrophic consequences in the case of realized activities, and they can lead to financial losses and subsequently to possible bankruptcy. For this reason, risk management is a prerequisite for minimization of the negative effects of unexpected situations. Still, a lot of SMEs rarely carry out process-related activities risk management. It is affected by limited resources (financial, human), which SMEs have, and which process risk management. There is a wide range of studies focused on risk management in SMEs, but only several of them are focused currently on the responsibility for risk management. This paper contributes to the dissemination of knowledge about the responsibility for risk management in SMEs and provides wider analysis in ways of responsibility for it. To reach the main of the paper, questionnaire surveys among 1018 Slovak SMEs were conducted. We compared the responsibility for risk management in SMEs between two groups of SMEs – technological and tourism from the point of view of sized category, and regional of SMEs. For the evaluation of differences and dependencies among three groups of respondents' answers, according to their size category, economic branch in which they operate, and regional location, the Chi-square test was used. The associations among respondents' answers were evaluated through Cramer's V. The results showed the differences in responsibility for risk management among Slovak SMEs. The results of this study may provide implications for subsequent research focused on responsibility for risk management in the wider context.

KEY WORDS: technology based SMEs; tourism SMEs; responsibility; risk management; policy.

### Introduction

There are many studies in the literature, which confirmed the role of SMEs. They form a large group of entrepreneurs, they form the creation of a competitive environment in an economy, they create new opportunities for employment, and they contribute to structural changes in the national and international market by action in the area of innovation activities. In comparison with their larger counterparts, they have certain peculiarities, which are associated mainly with their size. In general, SMEs are flexible in the adaptation of market changes, they can meet the latest trends of society and they can also satisfy various groups of customers. This is affected mainly by the simple organizational structure. On the opposite side, their size is connected also with some disadvantages. SMEs have problems mainly with the financing of their activities and also that due to the size of the company, which is not optimal, they do not achieve adequate labor productivity, and they have lack information about the market and need for management advice. That is why they become an

important factor in cooperation with large companies. In times of crisis, SMEs to increase their chances to succeed in the market, or increase the ability to compete in the market, by this connection they endeavor to eliminate their business risks. The conditions of their development depend on the business environment.

The entrepreneurial activities of SMEs in the last years have been affected by the changes in the global environment that have a significant impact on their successful functioning. These changes inevitably lead towards harmony and responsibility and recently, attention is paid to the companies, which activities are based on the principle of corporate social responsibility (Slapikaitė et al., 2015), which has ties and connections with risk management (Story and Price, 2006). On the one hand, SMEs currently have the opportunity to operate in the common market of the European Union, within which the Union realizes the policies to improve the business environment and provides the legal framework that is necessary to accelerate the structural changes and the competitiveness of European industry in the context

of free international trade conditions. On the opposite side, SMEs thus face wider competition and new trends in using technologies and information, connected with Industry 4.0. Managers and owners of enterprises feel the need to implement the concept of Industry 4.0 into their enterprises. It relates to the most risk sources of human factors (Masar & Hudakova, 2019). In this context, the issue of human resources and their importance in enterprise play a crucial role. Human resources are the cornerstone of the country's development and human capital are inherent factors that influence social development (Jašková, 2019). The dynamic development of the environment in which SMEs operate, cause reversals in the business environment, and they are the causes of uncertainty and the resulting risks. Managers must analyze a firm's environment and the internal characteristics of that firm to adjust its strategies accordingly (Fernández-Olmos & Ramírez-Alesón, 2017). By implementing a structured approach to Enterprise Risk Management (ERM) within SMEs day to day realize operations, prospective benefits such as reducing the overall risks, minimization of probable losses, reduction in cost, organizational alignment to the SME's mission and objectives can be realized (Agrawal, 2016). The implementation of ERM could help the SMEs to survive in the era of globalization. Its techniques are crucial for the sustainable development of SMEs and for the overall process of sustainable entrepreneurship (Peker et al., 2014). Risk and safety management is intuitive and experience-based, and risk identification and assessment could be orchestrated according to a formal risk management protocol, the process will be guided by practical reasoning based on expert, intuitive, and socially situated knowledge drawing on experience. Thus, the essential for risk management is the practical organizational perspective in which the responsibility belongs to the essential aspects for its realization, together with expertise, accountability, trust, coordination, and communication (Boholm, 2010). Entrepreneurs manage their risks and reduce potential losses. However, the implementation of the ERM is difficult, mainly due to the impossibility of generalizing specific procedures (Virglerova et al., 2020).

In general, risk management relates to the risks that come especially from the external environment of the company. But it is also important to deal with risks that arise from the company's internal environment. Due to the fact, that SMEs' success depends not only on knowledge from the external environment but also on the knowledge, that is derived from the internal environment. The system of profound knowledge is an effective management theory, which provides the frame of thinking for leaders who want to transform their enterprise into an effective and profitable business (Malá et al., 2015). Here the question of the importance of the responsibility for risk management in SMEs arises. Due to the fact, that risks that are related to internal resources of the firm such as human resources, capital, etc. are controlled within firms' authority (Kotaskova et al., 2020). Human resources play a crucial role in the entrepreneurial activities of SME toward their sustaining and competitiveness. Regarding internal factors that are

mainly controllable on the hands of managers, it is up to the SMEs how they manage them.

Entrepreneurship is accompanied by a range of diverse risks that differ in the place of the appearance, level of influence, possible consequences, a complex of external and internal factors that influence the intensity of their manifestation (Polozova et al., 2019). Many authors deal with various categories and classifications of risks in dependence of the area of business entity operation. Koišová (2015) defined two criteria for risks' classification: (1) factual aspect of risks, which covers business and financial risks; (2) causes of risks, which covers systematic and non-systematic risks. Belas & Demjan (2009) divide the risks into five basic categories: credit risk, market risk, liquidity risk, operational risk, and business risk. Doing business also involves so-called business risk, which can be characterized as a likelihood of taking a negative direction from reaching identified goals (Fabuš, 2017). Henschel (2006) in his study considers three main categories of risks in SMEs as the most important: market risk, strategic risks, and business process risks. There is an important category of risks in SMEs relates to human resources. By that, it is meant the risks associated with the activities of managers and other employees. The risks, in which the source of their failure is the human factor or the risks that relate to an inappropriate decision, are considered sporadically. Many firms have created the position of chief risk officer, who according to Karanja & Rosso (2017), plays the role and he/she could have one of three managerial roles of interpersonal (leader, liaison), informational (monitor, spokesman), and decisional (entrepreneur, resource allocator), implying that this person is a leader, a strategist, and an enabler.

The application of risk management in SMEs has its own specificities. Risk management in its current form does not deal much with personnel risks, the source of which are people, employees, managers, and owners (Míka, 2017). According to Bugarova and Hudakova (2017) a larger implementation of risk management in entrepreneurship (assessing and managing risks in the human resources, quality, environment, which enables the company to prevent expensive lawsuits, damages of reputation, etc.) could support the safe business and proactive approach in the framework of the socially responsible entrepreneurship. Here comes the importance of responsibility for risk management in the company. As Bruwer and Siwangaza (2016) stated, it is evident that risk management is one of the aspects of a system of internal control and that management is ultimately charged with the responsibility to manage all risks in a business, it is imperative that all businesses should make use of appropriate initiatives to manage risks. The responsibility for risk management is spread across the organizations and it depends on the size category of the enterprise. The responsibility for risk management in SMEs have some specificities in comparison with large enterprises. Naturally, the owner or manager in micro and small SMEs have the highest responsibility for risk management due to the fact, that it is not effective to employ a person, who will be responsible for risk management. Medium-sized enterprises have a larger

number of managers, among which the responsibility is spread. There is a risk manager in the large enterprises, who represents specialist for risk management due to the reason, that these entities carry out their activities in an environment with a high level of risk.

The risks which affected the SME's activities depend on the type and area of the business activity. Each risk carries its own specific characters and SMEs cannot avoid it. Within this paper, we focused on two economic branches in which SMEs operate: technology-based and tourism SMEs. According to Merino et al. (2014), the main characteristic of technological SMEs is the production of highly specialized products that provide them the relatively high competitiveness in a given segment in the market. According to Dahlstrand (2007), these are companies whose development and survival depend on technology. In general, accommodation and catering services are considered to be the tourism sectors. Palátková (2014) extends the services of travel agencies and airlines. Sources of information on business statistics in the tourism sector are provided by the Tourism Satellite Account (TSA), where the tourism sectors include, in addition to those already mentioned, sectors such as passenger transport services, sports, and recreational services, cultural services, travel agencies, rental passenger transport equipment. In practice, both groups of SMEs try to solve problems, reduce their negative consequences, or eliminate the disadvantages that are common for a given form of entrepreneurship and economic branch.

This paper is focused on finding the differences in the area of responsibility for risk management in two types of SMEs based on the example of Slovakia, which work is marked by growing competition not only in the economic complex of the Slovak Republic. The literature sources presents limited examples of empirical evidence on importance of responsibility for risk management from the point of view of human resources. The results of this paper offer a new perspective on this issue.

The rest of the paper is structured as follows. The next part contains the explanation of the methodological approach which was used in the paper. Section 3 then presents the achieved results. Section 4 closes with discussion and conclusion and consist of implication for future research.

### Methodological approach

The object of the research is a sample of SMEs originating from eight self-governing regions (BA-Bratislava, TT-Trnava, TN-Trenčín, NR-Nitra, BB-Banská Bystrica, PO-Prešov, KE-Košice) of the Slovak Republic. The sample size is determined in accordance with Mareš et al. (2015) by random selection. According to Cochran (1977), the general method for determining the required sample size in the case of large populations (more than 50,000) is the method of calculating the minimum number of respondents according to the formula (1).

$$n \geq \frac{z^2 * p * (1 - p)}{e^2} \quad (1)$$

Where: **n** is the requested sample size, **Z** - the **Z** value (e.g. 1.96 for 95% confidence level), **p** - the estimated proportion of an attribute that is present in the population (for this research the level of **p** = 0.05 (50%)), **e** - desired level of precision and **e** = 0.04 (4%).

$$n \geq \frac{1,96^2 * 0,5 * (1 - 0,5)}{0,04^2} = 600$$

Given that 1018 respondents took part in the survey, the condition for meeting the minimum sample of respondents (600) was met and the questionnaire survey should achieve the chosen reliability and accuracy. A total of 487 technology SMEs and 531 tourism SMEs took part in the survey. For the description of the research sample, we used three categories of SMEs: (1) sized category: micro, small and medium-sized enterprises, (2) economic branch: technology-based and tourism SMEs and regional arrangement (eight self-governing regions). The structure of respondents according to the size categorization (Table 1) is processed in accordance with the European Commission Recommendation 2003/361 (European Commission, 2015), according to which the primary criterion is the number of employees (micro-enterprises employ up to 9 persons, small enterprises employ 10-49 persons and medium enterprises employ 50-249 persons). Table 1 presents the structure of respondents according to two observed economic branches. Fig. 1 and Fig. 2 depict the regional structure of respondents.

**Table 1.** The structure of respondents according sized category and economic branch

Sized category of SMEs	Technology-based	Tourism	Total
Micro	174 (35.73%)	278 (52.35%)	452 (44.40%)
Small	163 (34.47%)	214 (40.30%)	377 (37.03%)
Medium	150 (30.80%)	39 (7.34%)	189 (18.57%)
<b>Total</b>	<b>487</b> <b>(47.84%)</b>	<b>531</b> <b>(52.16%)</b>	<b>1018</b>

The structure of respondents according to sized category and economic branch (Table 1) was as follows: 44.40% of microenterprises, 37.03% of small enterprises, and 18.57% of medium-sized enterprises. 47.84% of respondents belonged to technology-based SMEs and 52.16% belonged to tourism SMEs.

In the case of technology-based SMEs (Fig.1), most respondents who participated in the survey (37.58%) were from the Košice region, and the least SMEs (2.67%) from the Prešov region.



Fig. 1. Regional structure of technology-based SMEs

In the case of tourism SMEs (Fig.2), most SMEs (41.43%) who participated in the survey were from the Žilina region and the least (2.26%) from the Banská Bystrica region.

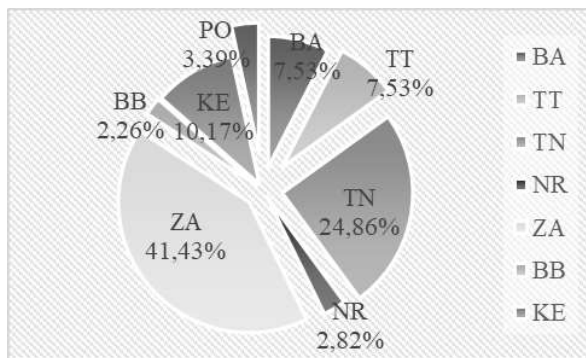


Fig. 2. Regional structure of tourism SMEs

In this paper we set three scientific hypotheses by the method of expert estimation:

H1: The responsibility for risk management depends on the sized category of SME. The responsibility for risk management in more than 40% of SMEs lies in the owner of the enterprise. There is a statistically significant association between the size category of SMEs and the way of responsibility for risk management.

H2: Risk management is more important for technology-based SMEs. At least 50% of technological respondents agree with this statement because they have a concrete person responsible for risk management. There is a statistically significant association between economic branches in which SMEs carry out their activities and the way of responsibility for risk management.

H3: The way of responsibility for risk management depends on the region in which the SMEs carry out their activities.

Statistically significant differences among the stated groups of respondents were investigated by the Chi-square test at a confidence level of  $p=0.05$ . If the calculated  $p$ -value was lower than the confidence level ( $p=0.05$ ) the stated hypothesis was adopted. The levels of association were evaluated through the  $p$ -value of Cramer's V. The level of calculated  $p$ -value higher than 0.5 shows a high association, 0.3-0.5 moderate level of association, 0.1-0.3 low association, and 0.0 to 0.1 shows

little if any association. The calculations were made by the statistical software STATISTICA.

## Results and discussion

The results of the research devoted to responsibility for risk management in the Slovak SMEs are presented in this part of the paper. In the question relates to responsibility for risk management, the respondents could mark one of the six possibilities (see table 2). The research showed that 18.37% of SMEs have not the person responsible for risk management and in 70.83% of SMEs the responsibility lies on SMEs' owners. This was confirmed in more than 30% of micro-enterprises, 20% of small and 10% of medium-sized enterprises. These results support the study of Agrawal (2016), who stated that the primary responsibility lies on the owner-managers who manage the business operations and potential risks. There are the results of the  $p$ -value of Chi-sq. test in table 2. Its calculated value is lower than the confidence level ( $p=0.00$ ) and therefore we can conclude, that the H1 was fully adopted. The association between the size category of SME and the way of responsibility for risk management has only a low level.

Table 2. The responsibility for risk management in SMEs (%)

Responsible person/entity	micro	small	medium	Total
1) We do not have a person responsible for risk management	7,07	6,39	4,91	<b>18,37</b>
2) Owner	34,68	25,93	10,22	<b>70,83</b>
3) Manager	1,47	3,05	1,77	<b>6,29</b>
4) Members of the Board of Directors	0,88	0,88	1,18	<b>2,95</b>
5) Risk manager	0,29	0,69	0,39	<b>1,38</b>
6) Risk management department	0,00	0,10	0,10	<b>0,20</b>
<b>Total</b>	<b>44,40</b>	<b>37,03</b>	<b>18,57</b>	<b>100,00</b>
<b>P-value Chi.Sq.</b>	<b>0.00</b>			
<b>Cramer's V</b>	<b>0.2</b>			

According to the data obtained within the questionnaire survey (Figure 3), 38.40% of technology-based SMEs do not have risk management organizationally assigned. In 47.23% of these SMEs, the owner is responsible for risk management, namely in 47.70% of SMEs in the micro-enterprise category, in 42.94% of SMEs in the small enterprise category, and in 51.33% of SMEs in the medium-sized enterprise category. Only 7.60% of these companies have a risk manager and a separate risk management department was found only in 2 companies. The members of the Board of Directors are responsible for risk management in 4.11% of SMEs and 2.26% of SMEs use external experts.

If we compared the responsibility for risk management according to sized category individually within the category of the economic branch, we could confirm the H1 for technology-based SMEs only partially (Fig.3). Although in 47.23% of these SMEs, the responsibility lies on the owner, the level of the calculated  $p$ -value ( $p=0.36$ ) did not confirm the statistically significant association among three sized categories of SMEs.

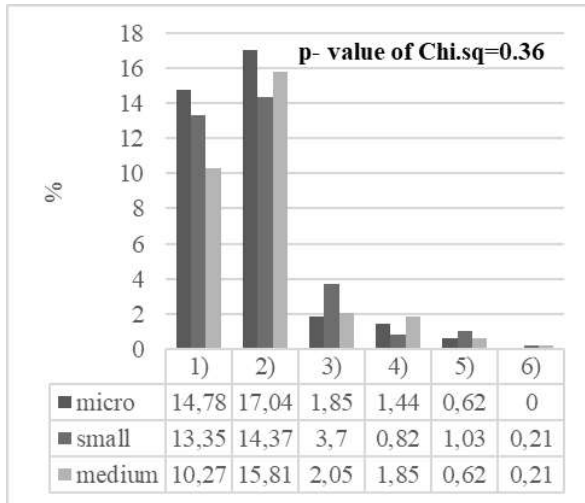


Fig. 3. The responsibility for risk management in technology based SMEs

In the case of tourism SMEs (Fig.4), the responsibility for risk management in 92.47% of these SMEs lies on the owners. Within this category of SMEs, respondents did not mark the first possibility (we do not have a person responsible for risk management) and sixth possibility (we have a risk management department). The result of the calculated p-value for the Chi-square test was lower than the confidence level ( $p=0.00$ ). The results of Cramer's V p-value showed only a low level of association. Due to the stated above, we can conclude, that hypothesis H1 was fully adopted in the case of these SMEs (Fig. 4).

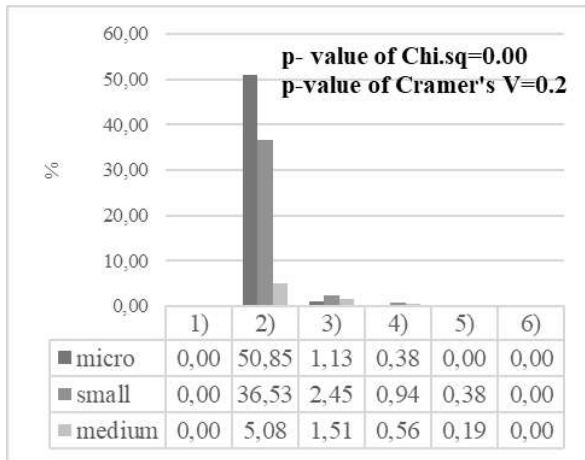


Fig.4. The responsibility for risk management in tourism SMEs

Table 3 shows the responsibility for risk management within observed economic branches and contains the results for the evaluation of the hypothesis H2.

The results of the questionnaire survey showed, that 61.62% of technology-based SMEs have a person or entity, who is responsible for risk management in SME, and in this category, 0.42% of SMEs have established also a department for risk management. Tourism SMEs

did not mark the possibility, that they do not have a person responsible for risk management and there is not a department for risk management in these SMEs. The results of the p-value of the Chi-square test ( $p=0.00$ ) confirmed the statistically significant association in case of responsibility for risk management between technology-based and tourism SMEs. The value of the Cramer's V showed a moderate level of this association.

Table 3. The responsibility for risk management in SMEs within observed economic branches (%)

Responsible person/entity	Technology-based SMEs	Tourism SMEs	Total
1) We do not have a person responsible for risk management	18,37	0,00	18,37
2) Owner	22,59	48,23	70,83
3) Manager	3,63	2,65	6,29
4) Members of the Board of Directors	1,96	0,98	2,95
5) Risk manager	1,08	0,29	1,38
6) Risk management department	0,20	0,00	0,20
<b>Total</b>	<b>47,84</b>	<b>52,16</b>	<b>100,00</b>
<b>P-value Chi.Sq.</b>	<b>0,00</b>		
<b>Cramer's V</b>	<b>0,54</b>		

If we evaluated the responsibility for risk management across the Slovak eight self-governing regions, we could see the differences (Table 4). The calculated p-value of the Chi-square test showed that the association between region and responsibility for risk management in SMEs exists, but the calculated p-value of Cramer's V confirmed only a low level of this association. We can confirm the H3.

Table 4. The responsibility for risk management in SMEs within regions (%)

Resp. person/entity	BA	TT	TN	NR	ZA	BB	KE	PO
1)	1,1	2,2	12,9	0,4	0,9	0,1	0,9	0,0
2)	5,9	5,1	15,6	4,0	27,0	3,1	7,2	3,0
3)	1,0	0,8	1,7	0,1	1,9	0,4	0,5	0,0
4)	0,6	0,1	0,5	0,0	1,4	0,0	0,4	0,0
5)	0,3	0,0	0,3	0,2	0,4	0,1	0,0	0,1
6)	0,1	0,0	0,0	0,0	0,1	0,0	0,0	0,0
<b>Total</b>	<b>8,9</b>	<b>8,2</b>	<b>30,9</b>	<b>4,7</b>	<b>31,6</b>	<b>3,6</b>	<b>8,9</b>	<b>3,1</b>
<b>P-value Chi. Sq.</b>	<b>0,00</b>							
<b>Cram.'s V</b>	<b>0,2</b>							

## Conclusions

Nowadays, in knowledge economy, the key role of each entity plays the multiplication of knowledge capital what requires changes in their management and the use of modern management tools.

Risk management in SMEs have own specifics, which relate to their simple structure and size category. Our research showed that the responsibility for risk management in Slovak SMEs lies in owners (70.83%). These results are comparable with results of Klucka & Gruenbichler (2020) and Abrham & Lžičaj (2018),

according to which, the management, which includes risk management, is the task of the owner or head of unit, not a specialist with assigned competence. In micro and medium-sized enterprises, the responsibility for risk management is concentrated at the level of owner, because it is not efficient to employ a specialized full-time risk manager. In medium-sized enterprises, the responsibility is spread over others positions or department. If we compare the responsibility between SMEs from two observed economic branches, we can conclude, that in tourism SMEs the responsibility is in the hands of the owners. The responsibility for risk management is spread over other positions in technology-based SMEs. The results of this study also confirmed the differences in responsibility for risk management among SMEs within eight self-governing regions.

The conducted research contributes to the understanding of responsibility for risk management in SMEs. Potential limitation of this paper may be a fact that research is focused on technology-based SMEs without their detailed specification and connection with other aspects. Thus the analysis of the extent of responsibility for risk management deeper within corporate social responsibility could become a subject for future research.

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**Katarína Havierniková**, PhD, is an assistant professor at the Faculty of Social and Economic Relations, A. Dubček University of Trenčín, Slovakia. She teaches courses in project management and national economic policy. Her publications focus on the aspects related to the small and medium-sized enterprises, risk management, cluster cooperation. She is a frequent participant in conferences as a presenter of academic papers and session chair. She is participant in scientific research project focused on the qualitative structure of international economic relations under the influence of Industry 4.0 with implications for the EU and Slovak economic policies. Address: Študentská 3, 911 50 Trenčín, Slovakia. Phone: +421 32 7400 433. E-mail [katarina.haviernikova@tuni.sk](mailto:katarina.haviernikova@tuni.sk)

**Janka Betáková**, assoc. prof., Ing. Arch. PhD., is the associated professor of Management at DTI University, Dubnica nad Váhom, Slovakia. Her research interest is focused on management, regional and space management and marketing. She publishes a number of publications, both in domestic and international journals and she is a co-author of scientific monographs. She has participated in several domestic and international scientific projects. ORCID ID: [orcid.org/0000-0002-9317-6317](https://orcid.org/0000-0002-9317-6317). Sládkovičova ul. 533/20, Dubnica nad Váhom, 018 41, Slovakia.