

Significant determinants of the competitive environment for SMEs in the context of financial and credit risks

Jaroslav Belás

*Tomas Bata University in Zlin
Czech Republic
email: belas111@gmail.com*

Gabriela Sopková

*University of Economics Bratislava
Slovak Republic
email: Gabika.sopkova@gmail.com*

Abstract. The aim of the article is to compare significant determinants of the competitive environment for small and medium-sized enterprises in the context of financial and credit risk in Czech Republic and Slovakia. The survey on the quality of business environment was carried out in 2015 through a questionnaire on the sample of 1,141 respondents in Czech Republic. The total number of 438 questionnaires was collected during the research in Slovakia. Based on our own model, we quantified the index of perception of financial and credit risk (IFCR) for Czech Republic and for Slovakia. We compared the approach to risk by gender and education of the businessmen and company's age through Pearson statistics at the significance level of 5%. Our research has shown that business environment in both countries is characterized by relatively low level of competitiveness in the researched area. The value of the resulted index in Czech and Slovak business environments is less than the median interval value. We also determined that the value of IFCR is significantly higher in Slovakia. Our research indicates there are significant differences in the assessment of business environment quality through IFCR in both countries, depending on gender and education of entrepreneurs and depending on company's age. That index in Czech Republic is significantly higher in case of women as compared to men and in Slovakia it is the opposite. We have also found that businessmen with lower level of education have higher IFCR in both countries. Older firms showed better conditions for doing business in both countries because of their higher value of IFCR in both Czech Republic and Slovakia.

Keywords: small and medium-sized enterprises, financial risk, credit risk, gender, education of businessmen, company's age

Jel Classification: L 26, O 16, G 32

Received:
January, 2016
1st Revision:
March, 2016
Accepted:
June, 2016

DOI:
10.14254/2071-
8330.2016/9-2/10

INTRODUCTION

Turbulent changes, which the entire world economy goes through have a major impact on the development of national economies. It is confirmed that an essential part of the progress of each national economy is the increase of country's own competitiveness and thereby promotion of its own "international acceptability and viability". The country that will set the growth of its own competitiveness as its main objective, must unconditionally engage into the process of international distribution of labor. The aim of this involvement is on the one hand the effective use of own comparative advantages and applying them at international markets, on the other hand, by means of imports from another countries to absorb the comparative advantages of other countries, which the country does not dispose itself, but inevitably needs them to secure its economic growth (Baláž, Hamara, Sopková, 2015).

In the last decade it became obvious that the so-called newly acquired comparative advantages began to gain dominance at international markets, and these are, for example: effective implementation of foreign investment and know-how, more sophisticated work organization, better availability of loans to small and medium-sized enterprises, access to external financing of domestic enterprises or to other development resources, and taking advantage of knowledge of the local environment and expanding business partnerships (Baláž, Hamara, Sopková, 2015). In this context Mura et al. (2012) state, that after Slovak accession to the European Union the borders between countries terminated to exist, new great opportunities at the common market appeared but on the other hand, Slovak companies had to cope with higher competitiveness.

Getting involved into international competitiveness is particularly important for smaller countries such as Czech Republic and Slovakia that compensate their lower economic strength with a higher degree of production specialization. In order for these countries to specialize, they have to build a quality business environment. Under the commercial environment the authors of this article take into account, in particular, access to external capital, which is an essential part of development, specialization and therefore it is also a significant factor of international competitiveness.

In the article we evaluate the important area of competitiveness of the national economies of Czech Republic and Slovakia, which is one of preconditions of financial and credit risk in the segment of small and medium-sized businesses (SMEs).

The structure of the article is as follows. In the theoretical part we present the importance of financial and credit risk in the context of business environment and define financial and credit risks. In the next section we present our own theoretical model for measuring the perceived financial risk and credit risk in the economic system. Based on the empirical research of the quality of business environment in Czech Republic and Slovakia, we quantify the Index of perception of financial and credit risk and compare differences in the perception by Czech and Slovak entrepreneurs in relation to gender and education of businessmen (-women) and also in relation to company's age. At the end of this paper we present the main results of our research.

1. THEORETICAL PART

In connection with the analysis of globalization processes as well as the impact of the crisis events, the attention of economic theory turns towards ensuring the international competitiveness of national economies. Analysis of own competitiveness and its comparison with the world's hegemony is an important factor for the survival of each national economy.

Quality business environment creates favourable conditions for the development of SMEs, which represent an important part of the national economic system. Not only economic criteria, but also social, educational, cultural and other factors are playing an important role in this process (Ključnikov et al., 2015, Smekalova et al., 2014). Excessive bureaucracy, administration, and frequent legislative changes belong

among the common factors that discourage people from entering the world of business (Ključnikov and Sobekova, 2016).

There are several ways to measure and assess the competitiveness of countries. Probably the most widely used index of measuring the competitiveness of countries is the Global Competitiveness Index compiled annually by the World Economic Forum (Kordalska and Olczyk, 2016). The business environment is often assessed by Doing Business indicators index, which is annually published by the World Bank. The basic indicators of this index include, for example, conditions for starting a business, protecting investors, paying taxes, resolving insolvency and others (Balcerzak, 2009). An important indicator of the quality of the business environment is the Index of Economic Freedom.

Business risk represents an important part of business activities. Fetisovová et al. (2012) defines such forms of business risks as strategic risk, operational risk, financial risk, sociopolitical risk and reputation risk. According to authors, financial risks are related to the financial markets development and the use of single financial instruments. They have a complex nature and can be classified into the following groups: funding risk, credit risk, liquidity risk, the risk of interest rate changes, currency risk, inflation risk and counterparty default risk. *The characteristics of financial risk are objectivity, uncertainty, comprehensive, and duality* (Shuying and Mei, 2014).

The lack of access to external financing through bank loans is a very important consequence of the financial risk.

According to OECD (2006), there exists the “financing gap” for SMEs. “The term is basically used to describe the situation when a sizeable share of economically significant SMEs cannot obtain financing from the banks, capital markets or other suppliers of finance.” Similar findings are also provided by other resources (International Finance Corporation, 2013; Bain & Company, Inc. and the Institute of International Finance, 2013; Czajkowska, 2015; Sobeková, Sipko, and Solík 2014; Fetisovová et al., 2012; European Association of Craft, Small and Medium-sized Enterprises, 2007).

SMEs owned and managed by women were more credit constrained (Deakins, North, Baldock, and Whittam, 2008, Global Markets Institute, 2014) than the men owned SMEs. In this context Kreiser et al. (2010) state that firms with male managers have more risk taking behavior than any other firms. Similar findings also presented by Ayub et.al. (2013). A very interesting conclusions are presented in the study of Alesina, Lotti, and Mistrulli (2013). According to authors women in Italy pay more for credit than men, although they did not find any evidence that women borrowers are riskier than men. In this context Hernandez-Nicolas, Martín-Ugeso, and Mínguez-Vera (2015) state „that the presence of women, as CEOs or as members of boards of directors, leads to lower debt financing. Their results support the hypothesis that women are more averse to risk, while suggesting that there is little discrimination on the part of suppliers of credit. On the other hand, significant differences in approaches of the SME entrepreneurs to financial risk management in relation to gender and level of education were not identified in the study by Belás et al. (2015).

Higher level of education such as university is significantly related to higher performance of the entrepreneurship when it is calculated with sales or profitability and which is also true for sustainability. (Van der Sluis, and Van Praag, 2008) According to Kato, Okamuro, and Honjo (2015) a graduate entrepreneur can easily find the different sources of capital and by which he can invest in research and development that can increase the innovation of the small business from the specific market.

According to Irwin and Scott (2010), the banks were more comfortable to finance the educated entrepreneurs due to advanced knowledge of the business propositions and more organized loan proposals. The higher education of the entrepreneur is positively related to business growth (Rauch and Rijsdijk, 2013).

The same as in other areas also in assessing the performance of companies in relation to their age there are different opinions. According to Anderson and Eshima (2013) the growth rate is higher for younger SMEs than the older firms. They have also found that regardless of firm EO, if the firm goes older, they have to maintain a lot of routine work, organization procedures, lack of flexibility and decreased market responsiveness and hence these factors will limit their growth rate. On the other hand, for example, Islam et al., (2011) state that older firms are more successful in their performance than the younger ones. In this context North, Baldock, and Ekanem (2010), Deakins, Whittam, and Wyper (2010), Deakins et al., (2008) state that new and early staged SMEs are facing more financing problems from the banks than their more established counterparts. Such factors as better accounting information, firm size and firm age were found to have a positive relationship to the probability of getting a bank loan. Foreign firms have easier access to external finance than local firms (Canton et al., 2013).

2. OBJECTIVES, METHODOLOGY AND DATA

The aim of this study is to compare the major determinants of the external financing of SMEs in the Czech Republic and Slovakia and to quantify index of perceived financial and credit risk (IFCR).

Based on the theoretical analysis of the issues you have defined a theoretical model of perceived financial and credit risk of SMEs. This model can be written as follows:

$$IFCR = \sum_{i=1}^{12} Ki/i \quad (1)$$

where:

IFCR – Index of perception of financial and credit risk of SMEs, belongs to the interval: (-0.25;0,75)

Ki – the value of the impact factor of the individual constructs (this is the proportion of positive responses to the total number of responses);

i – number of constructs that come into the index.

Within measuring the intensity of the financial and credit risk, we defined these statements, which properly characterize the situation in the financial and credit risk areas. The statements and the way they impact on the overall index can be found in Table 1.

Table 1

The formulation of constructs to measure financial and credit risk

No.	The formulation of Opinion	Influence: positive (+) negative (-)
1	2	3
K1.	In the financial market there is enough money to finance SMEs.	(+)
K2.	In the business environment there is an intensive financial risk (poor access to external finance, poor payment discipline, etc.).	(-)
K3.	The importance of financial risk has increased in times of crisis.	(+)
K4.	Entrepreneurs can properly manage financial risks in their companies.	(+)
K5.	Entrepreneurs minimize the negative impact of the financial risk by creating financial reserves.	(+)
K6.	SMEs have complicated access to foreign sources of external financing (financial markets, banks, state loans).	(-)

1	2	3
K7.	Importance of credit risk has increased over the past three years.	(+)
K8.	The Banks accept our needs and try to comply with our wishes.	(+)
K9.	Entrepreneurs from SMEs do not properly know the conditions under which banks provide loans to them.	(+)
K10.	Banks use too tough criteria when granting business loans.	(-)
K11.	Better knowledge of credit conditions would help businessmen to improve access to credit and get better interests.	(+)
K12.	The conditions under which banks provide loans to entrepreneurs from SMEs are transparent.	(+)

IFCR is constructed in such a way that its higher value signalizes better conditions for business in the financial and credit risk area and better business approach to risk management.

Hypotheses:

H1: The business environment in both countries is characterized by a relatively low level of competitiveness in the studied area. IFCR of SMEs in the Czech and Slovak business environment will be less than the median interval of 0.25. There are no statistically significant differences between IFCR in the Czech Republic and Slovakia.

H2: The business environments in both countries have similar characteristics. There are no statistically significant differences between the undertakings in terms of gender and education of the businessmen and age of the company.

To measure the positive effects of the individual questions we have calculated answers strongly agree and agree.

The survey on the quality of the business environment was carried out in the first half of 2015 through a questionnaire on a sample of 1,141 respondents in the Czech Republic. The method of choosing companies was as follows. We randomly selected a total of 1650 companies from the Albertina database. These companies were contacted via email, where the business owners were asked to complete a questionnaire, which was placed on the website: https://docs.google.com/forms/d/1U9coaC5JRL0N2QOOO6Xb8j3mnaZXdSM47Kugt4EDGFo/viewform?usp=send_form. If these companies had not responded to our mail, we addressed them by telephone.

The structure of the respondents was as follows: 75% men, 25% women; 48% of respondents reported that they have secondary education, 34% had the university degree and 18% reported that they have secondary education without graduation; 65% of the total number of companies are microenterprises, 27% are small enterprises and 8% are medium-sized enterprises. 62% of companies' owners stated that the company exists for more than 10 years, 21% of them stated that they operate a maximum of five years and 17% of them reported that the company belongs to an interval of five to ten years of existence. Respondents were representing the following sectors: trade (33%), manufacturing (23%), construction (14%), transport (6%), agriculture (3%), and other services (39%).

The research that was focused on the actual situation in Slovak business environment was carried out in 2016. The questionnaire called Financial Risks of SMEs in Slovakia was distributed online and is available on the link: <https://docs.google.com/forms/d/1Fhob6avbfQq4DcaYG44mxNYyohzqcqZWDICXkUgFbNq4/viewform?c=0&w=1>.

Research data were collected by three specific ways. First of all a random selection of the appropriate companies was made from the free database of Slovak companies available on www.vsetkyfirmy.sk. The selected companies were contacted by our research team by email. In case that the selected company did not reply on the email, it was contacted by phone. The questionnaire was also placed on the specialized economic web-portals, focused on the SMEs. Finally, the sample of companies selected by the team experts

was contacted directly by the researchers. The total number of 438 questionnaires was collected during the research. This number of respondents fulfills the requirements for stochastic selection.

The structure of the respondents was as follows: 70% men, 30% women; 29% of respondents reported that they have secondary education, 65% had the university degree and 6% reported that they have secondary education without graduation; 66% of the total number of companies were microenterprises, 22% were small enterprises and 7% were medium-sized enterprises, and also 7% were large enterprises. 48% of companies' owners stated that the company exists for more than 10 years, 29% of them stated that they operate a maximum of five years and 23% of them reported that the company belongs to an interval of five to ten years of existence. Respondents were representing the following sectors: services (39,74%) trade (22,83%), construction (13,01%), manufacturing (10,05%), agriculture (4,79%), transport (4,11%), culture and media (2,05%), healthcare (1,83%), IT (1,6%).

Statistically significant differences between the designated groups of entrepreneurs were compared through Pearson statistics at significance level of 5%. If the calculated p-value was lower than 5%, we reject the null hypothesis and the alternative hypothesis was adopted. The calculations of p-value Z score were made through the free software available at: <http://www.socscistatistics.com/tests/ztest/Default2.aspx>.

3. THE RESULTS AND SHORT DISCUSSION

The research results are presented in the following tables.

Table 2

Research results: IFCR quantification and Z score of the individual constructs

Constructs	Czech Republic: IF	Slovakia: IF	Z score p-value
K1	0.2673	0.3584	0.0004
K2	-0.7756	-0.8151	0.0873
K3	0.6670	0.7420	0.0040
K4	0.4549	0.5320	0.0060
K5	0.6345	0.5753	0.0300
K6	-0.4075	-0.3288	0.0040
K7	0.2901	0.3539	0.0139
K8	0.4645	0.6164	0
K9	0.6643	0.6621	0.9362
K10	-0.3024	-0.3379	0.1738
K11	0.2848	0.2608	0.3271
K12	0.4505	0.3767	0.0080
Total	2.2419	2.9958	
IFCR	0.1868	0.2497	
Z score			-3.0374
p-value			0.0024

H1 was partially confirmed. The results of our research indicate that the business environment in both countries is characterized by a relatively low level of competitiveness in the studied area. IFCR of SMEs in the Czech and Slovak business environments is less than the median interval of 0.25. IFCR value in the

Czech Republic is 0.1868 and in Slovakia it is 0.2497. The p-value = 0.0024 has confirmed that the difference in IFCR is statistically significant.

We also found that there are significant differences between the Czech and Slovak entrepreneurs in K1, K3-K8 and K12. This means that the views of Czech entrepreneurs in selected attributes of financial and credit risks are different compared to Slovak entrepreneurs. These differences were found by us in the following areas. In our research, the Czech entrepreneurs have negatively evaluated enough money for SMEs, the ability of entrepreneurs to manage financial risks in their companies and the banks' approach to funding their needs. Compared with Slovak businesses the Czech entrepreneurs have positively evaluated the transparency of credit conditions and business approach to creating financial reserves.

In Table 3 there are presented the results that describe the differences between men and women in regards to IFCR quantification.

Table: 3

IFCR Quantification by gender and the Z score in the Czech Republic and Slovakia

Construct	Czech Republic: IF Men/Women	Slovakia: IF Men/Women	Z score: p-value Czech Republic/Slovakia
K1	0.2776/0.2357	0.3672/0.3383	0.1676/0.5619
K2	-0.7840/-0.7500	-0.8262/-0.7495	0.2380/0.3628
K3	0.6713/0.6536	0.7803/0.6541	0.5823/ 0.0054
K4	0.4495/0.4714	0.5311/0.5338	0.5222/0.9601
K5	0.6353/0.6321	0.5803/0.5639	0.9203/0.7490
K6	-0.4146/-0.3857	-0.3180/-0.3534	0.3898/0.4715
K7	0.2973/0.2679	0.3672/0.3233	0.3472/0.3789
K8	0.4785/0.4214	0.6426/0.5564	0.0969/0.0873
K9	0.6492/0.7107	0.6623/0.6617	0.0588/0.9920
K10	-0.3194/-0.2500	-0.3607/-0.2857	0.0278 /0.1285
K11	0.2753/0.3143	0.2361/0.3158	0.2077/0.0801
K12	0.4495/0.4536	0.3607/0.4135	0.9045/0.2937
Total	2.6655/2.775	3.0229/2.9321	
IFCR	0.2221/0.2313	0.2519/0.2443	
Z score	1.3035	1.3519	
p-value	0.1936	0.1770	

In our research, we found that the value of the IFCR in the Czech Republic, which was calculated for men, is lower than the value of IFCR calculated for women (0.2221/0.2313). In Slovakia, the situation is different because the index calculated for men is not higher than for women (0.2519/0.2443).

Z score values confirm that there are no statistically significant differences between entrepreneurs-men and women-entrepreneurs when assessing the financial and credit risk in the Czech Republic and Slovakia. Similarly, we found that in both economies, there are no significant differences in attitudes and opinions of entrepreneurs with regard to their gender (out of 24 calculated p-value, only two were statistically significant at the 5% significance).

In Table 4 there are presented the results that describe the differences between entrepreneurs with higher education and other entrepreneurs.

Table: 4

IFCR quantification by education and Z score in the Czech Republic and Slovakia

Construct	Czech Republic: IF Higher education/Other education	Slovakia: IF Higher education/Other education	Z score: p-value Czech Republic/Slovakia
K1	0.3189/0.2403	0.3754/0.3270	0.0044 /0.3125
K2	-0.7500/-0.7891	-0.8281/-0.7908	0.1336/0.3371
K3	0.6480/0.6769	0.7298/0.7647	0.3222/0.4237
K4	0.4235/0.4713	0.5353/0.5294	0.1236/0.9364
K5	0.6020/0.6515	0.5404/0.6405	0.0989/ 0.0434
K6	-0.4592/-0.3805	-0.3228/-0.3399	0.0102 /0.7188
K7	0.2500/0.3111	0.3579/0.3464	0.0308 /0.8103
K8	0.3878/0.5047	0.6175/0.6144	0.0002 /0.9522
K9	0.6327/0.6809	0.6281/0.7255	0.1010/ 0.0394
K10	-0.3189/-0.2937	-0.3509/-0.3137	0.3789/0.4354
K11	0.2526/0.3017	0.2246/0.3268	0.0801/ 0.0203
K12	0.4209/0.4660	0.3193/0.4837	0.1471/ 0.0007
Total	2.4083/2.8411	2.8265/3.3140	
IFCR	0.2007/0.2368	0.2355/0.2762	
Z score p-value	-2.8144 0.0050	-2.1577 0.0308	

In our research we found that the value of the IFCR in the Czech Republic, which was calculated for the university educated entrepreneurs, is lower than the value of IFCR calculated for businessmen with lower education (0.2007/0.2368). In Slovakia, the situation is the same (0.2519/0.2443).

Values of Z score have confirmed that there are statistically significant differences between defined groups of entrepreneurs in both countries (p-value=0.0050/0.0308). We also found that there are significant differences in the individual constructs. For example, we found out that men significantly more in comparison to women count with lack of money for SMEs (p-value=0.0044).

Table 5 presents the results that describe the differences between older and younger firms.

Table

5 IFCR quantification for older and younger companies and values of Z- score in the Czech Republic and Slovakia.

Construct	Czech Republic: IF 10+/-10-	Slovakia: IF 10+/-10-	Z score: p-value 10+/-10-
1	2	3	4
K1	0.2681/0.2661	0.3460/0.3700	0.9362/0.6031
K2	-0.7901/-0.7523	-0.8768/-0.7577	0.1362/ 0.0013
K3	0.7191/0.5826	0.8341/0.6564	0/0
K4	0.4411/0.4771	0.5261/0.5374	0.2380/0.8103
K5	0.6667/0.5826	0.5972/0.5551	0.0041 /0.3735
K6	-0.4440/-0.3486	-0.3175/-0.3392	0.0015 /0.6312
K7	0.3291/0.2271	0.3791/0.3304	0.0002 /0.2846
K8	0.4695/0.4564	0.7109/0.5286	0.6672/ 8E-05
K9	0.6270/0.7245	0.7014/0.6256	0.0007 /0.0930
K10	-0.3262/-0.2638	-0.3128/-0.3612	0.0257 /0.2846

1	2	3	4
K11	0.2936/0.2706	0.2607/0.2159	0.4009/0.2713
K12	0.4525/0.4472	0.3602/0.3921	0.8650/0.4902
Total	2.7064/2.6698	3.2086/2.7534	
IFCR	0.2255/0.2225	0.2674/0.2295	
Z score	4.0610	3.3398	
p-value	0	0.0008	

In our research we found that the value of the IFCR in the Czech Republic which has been calculated for older firms is higher than for younger firms (0.2255/0.2225). In Slovakia the situation is similar (0.2519/0.2443).

Values of Z score have confirmed that there are statistically significant differences between defined groups of entrepreneurs. For example, older companies in the Czech Republic and Slovakia feel significantly more in their business activities, that the importance of financial risk has increased during the times of crisis (p-value = 0/0). A different assessment of older and younger companies we have found with K2, K5 and K10.

H2 was rejected. We found that there are significant differences in attitudes and evaluations of entrepreneurs by their education and age of the company. Entrepreneurs with a university degree had lower index than the businessmen with a lower kind of education. Older companies in the Czech Republic and Slovakia have reached the highest level of IFCR. We also found that there are differences within the individual constructs.

According to the results of Global Competitiveness Report 2015-2016 Slovakia was placed on the 67 place. The best results the country has reached in the fourth pillar (Health and primary education). On the contrary, the worst was that in the twelfth (innovation) and in the first (institutions) pillars. Unlike Slovakia, the Czech Republic is doing much better as it was placed on the 31th place. In 2015, the country prospered best in the fourth (Health and primary education) and fifth (macroeconomic stability) pillars. On the contrary, its weakest area was the same like Slovakia's - in the first pillar (institutions). We can comprehensively evaluate, that the two countries are mostly restricted in the growth of their competitiveness by their own administrative and legal environment.

In the current evaluation by Doing Business 2016, which assesses the business environment in national economies, Slovakia finished on 29 place, which is 7 positions higher than the Czech Republic (36th place). From the order of the countries it can be concluded that the business environment is doing better in Slovakia, although it lags behind its neighbors - Austria and Poland. This better position in front of the Czech Republic was occupied by Slovakia mainly because of simplifying business establishment in the country and the introduction of an electronic system of filing tax declarations and process of paying taxes itself.

Regarding the index of economic freedom, in 2015 the Czech Republic was one category higher than Slovakia. The Slovak Republic has been categorized as the country with an average economic freedom and finished in 56th place. In contrast, the Czech Republic was placed on the 21th position in the category of high economic freedom, along with such countries as USA, UK and Germany. In connection with the position of Slovakia in this evaluation there are often mentioned such words as corruption in the public sector, debt and lack of labor market flexibility.

The results of our research showed that in the area of perception of financial and credit risk of SMEs, the situation in Slovakia is better than in the Czech Republic. This result differs our research from others aimed to assess the quality of the business environment in both countries.

CONCLUSION

Our research has shown that the business environment in both countries is characterized by a relatively low level of competitiveness in the studied area. The value of created index in the Czech and Slovak business environment is lower than the median interval. We also determined that the value of IFCR is statistically significantly higher in Slovakia, which indicates that there are better conditions for doing business in Slovakia in the financial and credit risk areas and there is a better approach of businessmen to risk management.

The research indicates that there are significant differences in the assessment of the quality of business environment through IFCR in both countries, depending on gender and education of entrepreneurs and depending on the age of the company. That given index in the Czech Republic is significantly higher with women compared to men, and in Slovakia it is the opposite. When comparing the index of entrepreneurs with higher education and other entrepreneurs, we found out that those businessmen with lower level of education achieved higher index in both countries. Older firms showed better conditions for doing business in both countries because of their higher value of index in the Czech Republic and Slovakia.

Our study has some limitations in the field of empirical data, defined methodologies that objectively exist in such forms of scientific research. However, we think it brings some interesting and new scientific information that would be necessary to verify through further scientific researches.

Our future research in this area will be focused on the optimization of parameters of the own defined model for measuring of financial and credit risks of SMEs.

REFERENCES

- Alesina, A. F., Lotti, F., Mistrulli, P. E. (2013). Do Women Pay More for Credit? Evidence from Italy. *Journal of the European Economic Association*, Vol. 11(1): 45-66.
- Anderson, B. S. and Eshima, Y. (2013). The influence of firm age and intangible resources on the relationship between entrepreneurial orientation and firm growth among Japanese SMEs. *Journal of Business Venturing*, Vol. 28, pp. 413-429.
- Ayub, A., Razaq, A., Aslam, M. S., Iftikhar, H. (2013). Gender effects on entrepreneurial orientation and value innovation: evidence from Pakistan. *European Journal of Business and Social Sciences*, Vol. 2(1), pp. 82-90.
- Bain & Company, Inc. and The Institute of International Finance. (2013). *Restoring Financing and Growth to Europe's SMEs*. Available at: http://www.bain.com/Images/REPORT_Restoring_financing_and_growth_to_Europe's_SMEs.pdf
- Baláz, P., Hamara, A., Sopková, G. (2015). *Konkurencieschopnosť a jej význam v národnej ekonomike*. Bratislava: Sprint.
- Balcerzak, A. P. (2009). Effectiveness of the Institutional System Related to the Potential of the Knowledge Based Economy. *Ekonomista*, No. 6, pp. 711-739.
- Belás, J., Ključnikov, A., Vojtovič, S., Sobeková-Májková, M. (2015). Approach of the SME entrepreneurs to financial risk management in relation to gender and level of education. *Economics and Sociology*, Vol. 8, No 4, pp. 32-42.
- Canton, E., Grilo, I., Monteagudo, J., Zwan, P. V. D. (2013). Perceived Credit Constraints in the European Union. *Small Business Economics*, Vol. 41, pp. 710-715.
- Czajkowska, A. (2015). Mezzanine as an Alternative Form of Corporate Financing. *Oeconomia Copernicana*, Vol. 6(1), pp. 99-111.
- Deakins, D., Whittam, G., Wyper, J. (2010). SMEs access to bank finance in Scotland: an analysis of bank manager decision making. *Venture Capital*, Vol. 13(3), pp. 193-209.
- Deakins, D., North, D., Baldock, R., Whittam, G. (2008). *SMEs' Access to Finance: Is there still a debt finance gap?* Belfast: Institute for Small Business & Entrepreneurship.

- European Association of Craft, SMEs. (2007). *Crafts, Trades and SMEs need better access to finance*. Available at: www.ueapme.com/.../041027_SME-finance_final.d
- Fetisovová, E., Hucová, E., Nagy, L., Vlachynský, K. (2012). *Aktuálne problémy financií malých a stredných podnikov*. Bratislava: Ekonom.
- Global Markets Institute. (2014). *Giving credit where it is due How closing the credit gap for women-owned SMEs can drive global growth*. New York: Goldman Sachs International.
- Hernandez-Nicolas, C. M., Martín-Ugese, J. F., Mínguez-Vera, A. (2015). The Influence of Gender on Financial Decisions: Evidence from Small Start-up Firms in Spain. *E+M*, Vol. 18, No. 4, pp. 93-107.
- International Finance Corporation (2013). *Closing the Credit Gap for Formal and Informal Micro, Small, and Medium Enterprises*. World Bank Group: Washington, USA. Available at: <http://www.ifc.org/wps/wcm/connect/4d6e6400416896c09494b79e78015671/Closing+the+Credit+Gap+Report-FinalLatest.pdf?MOD=AJPERES>
- Irwin, D., Scott, J. M. (2010). Barriers faced by SMEs in raising bank finance. *International Journal of Entrepreneurial Behavior and Research*, Vol. 16(9), pp. 245-259.
- Islam, A. M., Khan, M. K., Obaidullah, A. Z. M., Alam, M. S. (2011). Effect of entrepreneur and firm characteristics on the business success of SMEs in Bangladesh. *International Journal of Business and Management*, Vol. 6(3), pp. 289-299.
- Kato, M., Okamuro, H., Honjo, Y. (2015). Does Founder Human Capital Matter for Innovation? Evidence from Japanese Start-ups. *Journal of Small Business Management*, Vol. 53(1), pp. 114-128.
- Ključníkov, A., Sobeková Majková, M. (2016). Impact of Gender in the Perception of Administrative Burdens among Young Entrepreneurs - Evidence from Slovakia. *Journal of Competitiveness*, Vol. 8, Issue 2, pp. 17 – 30.
- Ključníkov, A., Belás, J., Kozubíková, L., Paseková, P. (2016). The Entrepreneurial Perception of SME Business Environment Quality in the Czech Republic. *Journal of Competitiveness*, Vol. 8, Issue 1, pp. 66 – 78.
- Kordalska, A., Olczyk, M. (2016). Global Competitiveness and Economic Growth: A One-Way or Two-Way Relationship? *Equilibrium. Quarterly Journal of Economics and Economic Policy*, Vol. 11(1), pp. 121-142.
- Kreiser, P. M., Marino, L. D., Dickson, P., Weaver, K. M. (2010). Cultural influences on Entrepreneurial orientation: the impact of national culture on risk taking and proactiveness in SMEs. *Entrepreneurship Theory and Practice*, Vol. 34(5), pp. 959-983.
- Mura, L., Buleca, J., Zeleňáková, L., Qineti, A., Kozelová, D. (2012) An analysis of selected aspects of international business in Slovak dairies in the EU framework. *Mliekarstvo*. Vol. 62 (3), pp. 219-226.
- North, D., Baldock, R., Ekanem, I. (2010). Is there a debt finance gap relating to Scottish SMEs? A demand side perspective. *Venture Capital*, Vol. 12(3): 173-192.
- OECD. (2006). *The SME Financing Gap. Theory and Evidence*. Volume I., OECD Publications: Paris.
- Rauch, A., Rijsdijk, S. A., (2013). The Effects of General and Specific Human Capital on long-Term Growth and Failure of Newly Founded Businesses. *Entrepreneurship Theory and Practice*, Vol. 37(4), pp. 923-941.
- Shuying, Z., Mei, Z. (2014). Theory of SMEs financial risk prevention and control. *International Conference on Education, Management and Computing Technology (ICEMCT 2014)*, pp. 514-517. Available at: www.atlantis-press.com/php/downloadpaper.php
- Sméalová, L., Hájek, O., Belás, J., Macháček, J. (2014). Perception of Small and Medium Entrepreneurship in the Czech Republic. *Journal of Competitiveness*, Vol. 6, Issue 4, pp. 41-49.
- Sobeková Majková, M., Solík, J., Šipko, J. (2014) The Analysis of Chosen Business Obstacles and Problems with the Financing of Young Entrepreneurs in Slovakia. *Economics and Sociology*, 7(3), p. 90-103.
- Van der Sluis, J., Van Praag, M. (2008). Education and Entrepreneurship Selection and Performance: A Review of the Empirical Literature. *Journal of Economic Surveys*, Vol. 22(5), pp. 795-841.
<http://www.socscistatistics.com/tests/ztest/Default2.aspx>.