

# EVALUATION OF ENTREPRENEURIAL ENVIRONMENT IN SLOVAKIA: COMPARISON OF SELECTED INITIATIVES

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## **Abstract**

*The aim of this paper is to summarize the evaluation of entrepreneurial environment in Slovakia by the selected most important initiatives and to look for the common patterns they show in assessing its state and development. In particular, the selected initiatives are the World Bank's and IFC's Doing Business report, World Economic Forum's Global Competitiveness Report and Business Environment Index (IPP) by Business Alliance of Slovakia. To reach this aim we looked at the evaluation of entrepreneurial environment in Slovakia by these initiatives in the period from 2006 to 2013 and searched for potential common patterns or differences. To transform the evaluations by different initiatives into a common format and to account for their development over time we created a set of indices, one for each initiative. In our analysis we first visualized the entrepreneurial environment evaluation and its development, and then we executed a correlation analysis to investigate for correlations between the examined initiatives. Our findings show there were significant positive strong correlations in all cases, while the strongest correlation was between Global Competitiveness Report and Business Environment Index. These results suggest that the selected initiatives reflect the state and development of entrepreneurial environment in Slovakia in a similar way, with certain nuances. In this paper we discuss these findings and derive implications for both entrepreneurship research as well as for policy makers and other entrepreneurship practitioners.*

## **1 Introduction**

This paper addresses the question of entrepreneurship environment evaluation by different initiatives, especially in terms of provided common patterns or differences. Both research and policy makers community nowadays need a reliable measure of entrepreneurial environment quality and its development. The existing alternatives have many common characteristics as well as many specific features, mainly regarding the scope of evaluation and methodology. The questions whether, why and in what way they provide similar or different results has recently been a subject of interest of several researchers (Coduras & Autio, 2013; Arslan & Tatlidil, 2012; Verner & Tvrdon,

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2012). Our aim is to contribute to this body of knowledge by implementing this question in the specific context Slovak entrepreneurial environment. Our analysis is based on evaluation of entrepreneurial environment in Slovakia by three most important initiatives, out of which two are global (Doing Business, Global Competitiveness Report) and one is national (Business Environment Index). We aim to provide empirical evidence on how these initiatives reflect the underlying phenomenon, leading to better understanding the potential and limitations of their usage in entrepreneurship research and policy.

The structure of this paper is conventional. In Section 2 we provide the theory overview regarding the entrepreneurial environment, we devote our attention to the role and practice of entrepreneurial environment evaluation in entrepreneurship research and policy as well as to the most important initiatives evaluating entrepreneurial environment in Slovakia. In Section 3 we present the research data and methods used in our paper. Section 4 presents the results of our analysis and Section 5 discusses these results and their implications. Finally, Section 6 concludes.

## **2 Theory overview**

In this section of our paper we briefly overview the theory of entrepreneurial environment with special emphasis on institutional theory. Subsequently we focus on the entrepreneurial environment evaluation in entrepreneurship research and policy in Slovakia, and finally we characterize the most important initiatives evaluating the entrepreneurial environment in our country.

### **2.1 Entrepreneurial environment**

Entrepreneurial environment is a key factor that fundamentally influences the entrepreneurial activity. According to Baumol (1990) and his rules of game concept, its importance lies not only in affecting the quantitative aspect of entrepreneurial activity, but rather in determining its allocation. Baumol in his work introduced and confirmed the hypothesis that “it is the set of rules and not the supply of entrepreneurs or the nature of their objectives that undergoes significant changes from one period to another and helps to dictate the ultimate effect on the economy via the allocation of entrepreneurial resources”. The current understanding of entrepreneurial environment concept increasingly builds on the institutional theory. Institutional theory is traditionally concerned with how individuals, groups or organizations better secure their positions and legitimacy by conforming to the rules of institutional environment (Bruton et al., 2010). It introduces the relatively wide concept of institutions that according to North (1990) represent “the rules of the game in a society or, more formally, are the humanly devised constraints that shape human action”. Institutions can be divided into two main groups: formal and informal institutions (North, 1990).

While informal institutions represent the constraints originated in socially transferred information and are part of the culture, formal institutions represent the formalized rules and entire legal framework shaping the behavior of different society members (Okruhlica, 2013). We talk about institutions only in case of constraints that gained the character of rules or that are considered to be given and obvious. This term therefore includes any form of human created constraint shaping human interaction (Alvarez et al., 2011). In simple words, institutions form behavior and interactions of individuals as well as groups and organizations. Their influence directs the organizational or individual behavior to reach legitimacy and survive in the environment rather than to pursue sole efficiency-seeking focus (Bruton et al., 2010). One of the individual and organizational interactions shaped by institutions is also the entrepreneurial activity. External environment belongs to the key factors affecting actions and behavior of entrepreneurs (Papula & Papulova, 2013). Institutional theory with its comprehensive scope provides the appropriate base to understand the entrepreneurial environment concept. Unlike the approaches with internal emphasis or sole focus on efficiency it also accounts for social forces as motives for organizational action (Barley & Tolbert, 1997), and unlike the approaches considering the culture as the dominant factor (e.g. Hofstede, 1980; Trompenaars & Hampden-Turner in Gal & Janigova, 2010) it broadens the attention to the whole scope of potential influences shaping the entrepreneurial actions (Busenitz et al., 2000). In this place we return to Baumol's rules of game concept and consider the institutions to be those rules affecting entrepreneurship and entrepreneurial activity in the economy.

## **2.2 Evaluation of entrepreneurial environment in Slovakia: research and policy perspective**

Irrespective the national or regional context, the attention to entrepreneurial environment in research and policy is paid in the following contexts: a) measuring the quality and its development, b) identifying the factors affecting the quality, and c) examining the influence of entrepreneurial environment on entrepreneurial dynamics, especially on individual parts of the entrepreneurship process and its components. All these streams can be found in entrepreneurship research. In the first stream, research aims to come up with the best possible measure and tries to understand (like our paper) the differences between different approaches (e.g. Coduras & Autio, 2013; Verner & Tvrdon, 2012). Since environment is a contextual concept by nature, the specific context under which is this issue investigated plays the crucial role. The second stream is closely connected with the first one, with special focus on macro-level drivers of entrepreneurial environment quality (e.g. Coduras & Autio, 2013). Finally, as reviewed by Bosma (2013), the main groups of factors investigated in the third stream of research as potential macro-level determinants of entrepreneurship are demographic and economic effects, informal institutions and formal institutions.

As far as entrepreneurship research in Slovakia is concerned, the attention to entrepreneurial environment has been dominantly paid to measuring its quality and development from various perspectives. According to review by Subertova (2013), the most important systems assessing the quality of entrepreneurial environment in Slovakia that can be used by scholars are the Business Environment Index (IPP) initiative by Business Alliance of Slovakia, the regular evaluation by National Agency for Development of SMEs (NADSME) and initiatives of other organizations (mainly universities) as a part of their own research activities. Another work by Okruhlica (2013) considers Global Competitiveness Report and World Competitiveness Yearbook by International Institute for Management Development to be the most important initiatives, especially in assessing the quality of country's institutional framework, focusing on both formal and informal institutions.

As far as entrepreneurship policy is concerned, evaluation of entrepreneurial environment state and development plays crucial role in policy making practice in Slovakia. Policy makers need to be aware of the state and quality of the environment where entrepreneurial activity is supposed to arise, function and sustain, contributing to sustainable economic growth and employment. While concrete government policies and programs are the sole responsibility of the government and its respective bodies and agencies, initiatives evaluating entrepreneurial environment provide the necessary input information. The usage of entrepreneurial environment evaluation by policy makers in Slovakia offers several examples. Firstly, each year the Government of Slovak Republic discusses the Report on the state of business environment in Slovak Republic with suggestions for its improvement (2013). This report contains four main parts, including the development of business environment, evaluation of business environment, agenda for better regulation checklist of tasks completion to improve the business environment in the country, and conclusions and recommendations. As a proxy for business environment evaluation the report uses the most important international initiatives. The last version of the report presented in April 2013 contained evaluation results by Doing Business report and Global Entrepreneurship Monitor's National Expert Survey (which for the first time replaced formerly used Global Competitiveness Report). Another important initiative is the Report on state of small and medium enterprises in Slovak Republic regularly prepared by National Agency for Development of Small and Medium Enterprises (NADSME). This report is structured into several parts, including the evaluation of entrepreneurial environment for SMEs development, development and state of SMEs, recommendations for entrepreneurial environment and SMEs improvement, and evaluation of SME support programs and activities, including support programs realized by NADSME. The last version of the report analyzing the situation in 2012 has been published recently (NADSME, 2013).

### **2.3 Initiatives evaluating entrepreneurial environment**

As we have already mentioned above, the most important initiatives evaluating the entrepreneurial environment in Slovakia are Doing Business report, Global Competitiveness Report and Business Environment Index (IPP). In this part of our paper we will briefly describe the main characteristics of these studies. Their understanding is an important prerequisite for interpreting our results and understanding the common patterns or differences these initiatives could show when assessing the state and development of entrepreneurial environment in the country.

**Doing Business** report (also referred to as “**DB**”) is an annual report prepared by World Bank group investigating the regulations that enhance and constrain business activity on an economy level since 2003. Its main goal is to provide an objective basis for understanding and improving the regulatory environment for business. It presents a set of internationally comparable quantitative indicators on business regulations and the protection of property rights, and it constructs a ranking of the analyzed economies. The latest 2014 edition (covering the situation in 2013) included 189 economies. As for the scope of the evaluation, Doing Business report covers 11 topics, which are: starting a business, dealing with construction permits, getting electricity, registering property, getting credit, protecting investors, paying taxes, trading across borders, enforcing contracts, resolving insolvency and employing workers. As for the methodology employed, the majority of data comes from readings of laws and regulations in each economy in collaboration with local experts. These purely objective data are then in case of certain indicators (related to complexity and costs of regulatory processes) complemented by data obtained from experts, based on their experience through several rounds of interaction (World Bank, 2013). Doing Business therefore represents to the greatest possible extent an objective assessment of rather specific question of regulatory environment for business.

**Global Competitiveness Report** (also referred to as “**GCR**”) is an annual initiative coordinated by World Economic Forum. Since 2005 it has been based on a Global Competitiveness Index, a comprehensive tool aimed at measuring macroeconomic and microeconomic foundations of national competitiveness, defined as the set of institutions, policies and factors that determine the level of productivity of a country. These components of competitiveness represent a scope of evaluation, and are grouped into 12 so called “pillars of competitiveness”. Namely, these pillars are: institutions, infrastructure, macroeconomic environment, health and primary education, higher education and training, goods market efficiency, labor market efficiency, financial market development, technological readiness, market size, business sophistication and innovation. Regarding the methodology, to measure the involved components World Economic Forum uses objective statistical data together with data obtained from an annual Executive Opinion Survey that captures concepts requiring

more qualitative assessment. The overall index is then calculated as a weighted average of the analyzed components. Besides providing the overall index value and values of its partial components, in case of each country the report also indicates a global rank among all involved countries. The latest Global Competitiveness Report edition included 148 economies (Schwab, 2013). Global Competitiveness Report therefore offers a broad view of country's environment in a wide scope of contexts that is built on combination of objective and expert subjective data.

**Business Environment Index** (hereinafter referred to as “**IPP**”) by Business Alliance of Slovakia is a tool used for monitoring and assessing the quality of entrepreneurial environment in the country since 2001. Regarding the scope of evaluation, IPP covers three main topics: the influence of main components of the legislative and regulatory framework on business (12 items), the influence of other significant external macroeconomic factors on business (11 items), and the influence of companies themselves on quality of business environment (10 items). As for the methodology, IPP data are based on quarterly surveys among entrepreneurs and managers who according to their expert experience assess the actual state of the entrepreneurial environment dimensions covered by IPP. Each item has a particular weight, therefore calculating the overall IPP index as a weighted average of the evaluation of included items. Due to this methodology, IPP enables monitoring the overall state and development of entrepreneurial environment as well as its specific components, based on expert opinions and perceptions from the entrepreneurs and managers perspective.

Based on the above mentioned characteristics and deeper methodology analysis of the selected most important initiatives evaluating entrepreneurial environment in Slovakia we have prepared a summary of their main characteristics in terms of scope and methodology. This summary is presented in Table I on the next page.

As shown in Table I, the initiatives show certain overlaps as well as certain distinctive features in terms of scope of evaluation. Even though different classifications of topics and issues covered make it difficult to provide an unambiguous comparison, our table to the best possible extent attempts to offer a basic overview. As far as methodology is concerned, each initiative would have a different position on an imaginary scale from objectivity to subjectivity of evaluation. For further details we recommend readers to study the BD, GCR and IPP methodologies.

Table I: Comparison of DB, GCR and IPP scope and methodology

<b>Scope of evaluation</b>	<b>DB</b>	<b>GCR</b>	<b>IPP</b>
Legal framework	- starting a business - construction permits - registering property - protecting investors - trading across borders - enforcing contracts - resolving insolvency	- institutions	- influence of main components of the legislative and regulatory framework on business
Informal institutions			
Policies and programs			
Labor market and regulations	- employing workers	- labor market efficiency	
Taxes	- paying taxes		
Financing	- getting credit	- financial market development	- influence of other significant external macroeconomic factors on business
Physical infrastructure	- getting electricity	- infrastructure	
Market characteristics		- goods market efficiency - market size	
Macroeconomic factors		- macroeconomic environment	
Commercial infrastructure		- business sophistication	
Education & training		- health and primary education - higher education & training	
Culture			- influence of companies themselves on quality of business environment
Contribution of companies			
Innovation, R&D		- technological readiness - innovation	
<b>Methodology</b>	<b>DB</b>	<b>GCR</b>	<b>IPP</b>
Subjectivity	Low to medium	Medium	High
Objectivity	High	Medium	None to low

Source: author, created according to DB, GCR and IPP methodologies

Additionally, another important initiative is the Global Entrepreneurship Monitor's **National Expert Survey** (NES). It provides internationally harmonized and comparable comprehensive evaluation of entrepreneurial environment in each country involved in the project, including Slovakia. Global Entrepreneurship Monitor is the

world's largest academic study on entrepreneurship, and NES together with Adult Population Survey (APS) give a complex picture of entrepreneurship and its dynamics on national, regional and global levels. Because the first data collection took place in Slovakia (thanks to Comenius University in Bratislava, Faculty of Management) in 2011, we decided not to include NES in our analysis. However, in the future with longer time series data it will be possible to broaden the scope of comparison also to this important survey.

### **3 Research data and methods**

In the following part of our paper we describe the data and variables used in our analysis, as well as the testing methods employed.

#### **3.1 Data and variables**

We based our analysis on data from three main sources: World Bank's Doing Business reports (editions 2007 to 2014 that present data for years 2006 to 2013), World Economic Forum's Global Competitiveness Reports (editions to 2006-2007 to 2013-2014 that present data for years 2006 to 2013), and Business Environment Index by Business Alliance of Slovakia (index values for Q1 in years 2006 to 2013 were considered). All the reports and datasets were available online.

To capture the evaluation of entrepreneurial environment in Slovakia by different initiatives we had to start with selecting one general measure for each of them. Within this selection we accounted for specifics of particular initiatives while trying to choose the measures that would be most relevantly comparable. Therefore we decided for the following measures: for Doing Business we used the country's relative position, calculated as the rank of Slovakia to total number of countries ratio. In case of Global Competitiveness Report we used the value of the overall Global Competitiveness Index, and in case of Business Environment Index we also used the overall index value. To reflect the development of these evaluations during the examined period and enable their comparison we created a set of indices, one for each initiative. The indices were reflecting the development of evaluation in different years, with 2006 value being the base value 1. These indices represented the variables used in our analyses.

#### **3.2 Analysis and test methods**

To analyze and compare the evaluation of entrepreneurial environment in Slovakia we firstly presented the development of indices values for each initiative over the selected time period and displayed it using a line chart. This descriptive analysis and visualization gave us the initial insight on the nature of analyzed data. Secondly, a correlation analysis was run and correlation matrix was constructed to investigate for correlations between the initiatives. For the correlation analysis we considered only years 2007 to 2013, since 2006 values of all indices were the same. As our data

represent a time-series data by nature, we used Pearson’s correlation analysis (Nanasiova, Kalina & Bohdalova, 2008). For each pair of variables, we tested the null hypothesis that the correlation between the variables equals zero (Kirkpatrick & Brooke, 2012). In other words, our null hypothesis suggests that there is no correlation between evaluations of entrepreneurial environment in Slovakia by different initiatives. After obtaining and analyzing the results we were able to identify the common patterns of entrepreneurial environment evaluation in Slovakia given by analyzed initiatives. For initial data processing and visualization we used MS Excel 2010 application. For correlation analysis a statistical program IBM SPSS v.20 was used.

#### 4 Results

Results of our analysis are presented in several steps below. First, in Table II we present the evaluation of entrepreneurial environment in Slovakia from 2006 to 2013 by Doing Business (DB), Global Competitiveness Report (GCR) and Business Environment Index (IPP). For each of these initiatives the results are presented in their original measures (i.e. rank for DB, index values for GCR and IPP). This first perspective shows the continuous decrease of assessment in case of both GCR and IPP, and oscillating but generally decreasing assessment by DB.

Table II: Entrepreneurial environment in Slovakia, 2006-2013, original measures

	2006	2007	2008	2009	2010	2011	2012	2013
DB (rank/count)	36/175	32/178	36/181	42/183	41/183	48/183	46/185	49/189
GCR (index)	4.54	4.45	4.40	4.31	4.25	4.19	4.14	4.10
IPP (index)	125.40	124.40	120.00	109.50	94.00	90.90	85.10	72.70

Source: DB, GCR and IPP data 2006-2013

As we explained above, to analyze and compare the development of entrepreneurial environment evaluation between the selected initiatives using one common metric we have created a set of indices, one for each initiative. Recalculation of original measures into indices enables not only to compare the direction in evaluations trends but also their intensity. Table III presents values of these indices over the analyzed time period and Figure I visualizes these results. This perspective in general confirms the findings of the previous perspective, but also points out some interesting suggestions. The assessment by GCR shows continuous and gradually slight decrease over the entire analyzed period. On the other hand, development of IPP was, despite indicating continuous drop, too, significantly less homogeneous. While GCR index value moved down to 0.9031 in 2013, rather dramatic falls of IPP index in 2008 to 2010 and 2012 to 2013 resulted into the final IPP index value of 0.5797 only in 2013. The value of DB index showed continuous decrease with slight oscillation in the

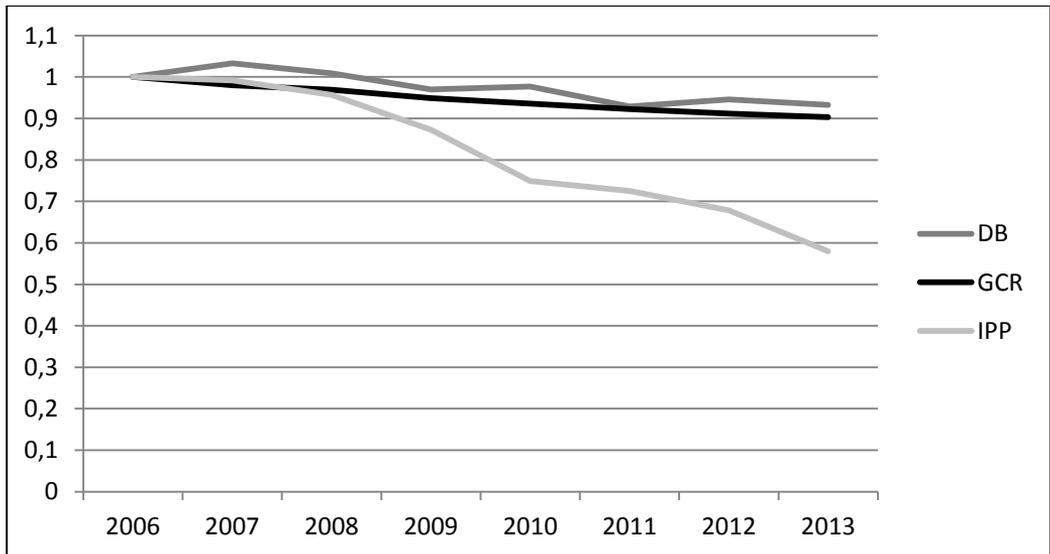
analyzed time period, resulting to index value of 0.9326 in 2013. As it is clearly visible in Table III but in particular in Figure I, the development of entrepreneurial environment assessment by GCR and DB was very similar. To sum up, the results of the second step of our analysis suggest that all three initiatives reported decrease of entrepreneurial environment evaluation, with some differences in slope as well as development of this decrease over the analyzed time period.

Table III: Entrepreneurial environment in Slovakia, 2006-2013, indices (2006=1)

	2006	2007	2008	2009	2010	2011	2012	2013
DB	1.0000	1.0327	1.0086	0.9700	0.9769	0.9288	0.9459	0.9326
GCR	1.0000	0.9802	0.9692	0.9493	0.9361	0.9229	0.9119	0.9031
IPP	1.0000	0.9920	0.9569	0.8732	0.7496	0.7249	0.6786	0.5797

Source: DB, GCR and IPP data 2006-2013, modified by author

Figure I: Entrepreneurial environment in Slovakia, 2006-2013, indices (2006=1)



Source: DB, GCR and IPP data 2006-2013, modified by author

Finally, as a third step of our analysis aiming to compare the selected initiatives evaluating entrepreneurial environment in Slovakia and to look for common patterns we calculated the correlations between 2007 to 2013 time series of indices' values development. The correlation matrix is displayed in Table IV. As the correlation analysis results suggest, there was a significant (at 0.01 or even 0.001 level) and strong

correlation between all three analyzed initiatives. The correlation was strongest between GCR and IPP (.987,  $p=.000$ ), while IPP and DB showed the lowest (but still very strong) correlation among the analyzed initiatives (.902,  $p=.005$ ). In case of all three pairs of initiatives we can reject the null hypothesis. Therefore we can conclude that there is a significant correlation between evaluations of entrepreneurial environment in Slovakia by different analyzed initiatives.

Table IV: Correlation matrix

		DB	GCR	IPP
DB	Pearson Correlation Sig. (2-tailed) N	1.000 . 7		
GCR	Pearson Correlation Sig. (2-tailed) N	.944** .001 7	1.000 . 7	
IPP	Pearson Correlation Sig. (2-tailed) N	.902** .005 7	.987*** .000 7	1.000 . 7

Source: DB, GCR and IPP data 2006-2013, modified by author

## 5 Discussion

Results of our analysis suggest that the evaluations of entrepreneurial environment in Slovakia by the selected most important initiatives show similar pattern. Since the correlation was found to be significant and strong in all three pairs of initiatives, we can conclude that these initiatives reflect their underlying phenomena (i.e. state and development of entrepreneurial environment in Slovakia) in a similar way. However, despite the common pattern there are also certain differences that need to be considered. In our opinion, search of reasons for these differences should focus on two key characteristics of each initiative: 1) scope of evaluation and 2) data collection and evaluation methodology.

Regarding the scope of evaluation, while Doing Business (DB) is particularly focused on issues determining the regulatory environment for business, both Global Competitiveness Report (GCR) and Business Environment Index (IPP) cover the broader scope of environmental factors. The IPP enriches the evaluation of legislative and regulatory framework and significant external macroeconomic factors also by evaluation of companies' own influence on quality of business environment. On the other, the GCR does not cover the perspective assessing the influence of entrepreneurs or companies themselves, but it further enlarges the scope of considered external

factors, including (but not limited to) education and training or innovation. At the first glance, after recognizing the main difference in scope of issues covered, the more intensive slope of evaluation decrease over the analyzed period in case of IPP could be attributed to influence of companies themselves, since IPP is the only initiative covering also this perspective. However, the closer look on partial data (Business Alliance of Slovakia, 2013) shows that items belonging to this perspective are almost the only ones with assessment being improved over time. Therefore it suggests that this perspective is not worsening but rather improving the quite dramatic drop of overall IPP business environment evaluation. These suggestions draw our attention to another key characteristic, which is data collection and evaluation methodology.

Regarding the data collection and evaluation methodology, the three analyzed initiatives would each have a different position on an imaginary scale from objective to subjective approach. First, DB is almost exclusively based on objective evaluation of laws and regulations, and these purely objective inputs are complemented by expert subjective evaluation only in case of certain items where objective approach is not achievable (items related to complexity and costs of regulatory processes). Second, GCR represents a combination of objective statistical data together with subjective data obtained from an annual Executive Opinion Survey (that captures concepts requiring more qualitative assessment). Third, IPP is from the methodology point of view purely subjective (in the least possible pejorative sense of the word), since it is all built around quarterly surveys among entrepreneurs and managers who according to their expert experience assess the actual state of the entrepreneurial environment dimensions. In our opinion, the difference in slope of evaluation decrease shown by our analysis may be attributed to the differences in methodology explained above. We assume that the difference in the intensity of negative trend evaluation by IPP lies in its subjective nature. Managers and entrepreneurs (who are the IPP respondents) might show higher sensitivity to certain issues or changes in external environment, and therefore perceive them with higher intensity than may be recorded by numbers or even perceived by experts (who are more likely to keep their distance and non-aligned expert view). This interpretation is in line with suggestions by Coduras & Autio (2013), who attributed the observed discrepancies between rather objective (GCR) versus more subjective (GEM's NES) evaluation of entrepreneurial environment to effects of experts' feelings reflecting what people can perceive under specific conditions (e.g. crisis, painful reforms or other discontinuities) despite the objective indicators.

As far as limitations of our analysis are concerned, we understand there are two main issues that need to be taken into consideration. First, our analysis included (due to data availability) only a time period of seven consecutive years, in which there was a clear and consistent one-direction (negative) trend of entrepreneurial environment evaluation development. To challenge the robustness of our findings it would be necessary to repeat the analysis with expanded time period, ideally covering both directions of potential changes in entrepreneurial environment quality (both positive

and negative). Second, we understand that our findings reflect the situation of one country and three initiatives (of which one is country-specific). To challenge our findings, we would appreciate if the similar analysis is executed for other countries and possibly also considering other initiatives. For example, a replication of this analysis in case of Slovakia would be beneficial when the GEM's NES time series will expand in the future. Also, the World Competitiveness Yearbook by International Institute for Management Development could be incorporated in such analysis in case the data are available to particular researcher.

The findings of our analysis also bring certain implications for both entrepreneurship research as well as for policy makers and entrepreneurship practitioners. As far as research is concerned, according to our findings researchers who wish to incorporate the concept of entrepreneurial environment in Slovakia to their studies (either as dependent or independent variable) can use a set of measurement instruments offering rather consistent findings. The selection of a particular initiative (or even their combination in order to create a composite indicator) should be therefore based on the nature of the research question, the perspective that researcher wants to prefer or other relevant underlying motive. At the same time, at least according to our findings for the examined period, researchers in Slovakia do not need to be worried that with selecting a particular initiative they will lose some important perspective of the other ones, since the initiatives included in our analysis showed the similar pattern of entrepreneurial environment state and development evaluation. Secondly, concerning the policy makers and entrepreneurship practitioners, the main implication of our results is that the evidence on state of underlying concept covered by all the examined initiatives is consistent. In other words, the state as well as the development trend of overall entrepreneurial environment quality in Slovakia is rather poor and it is further worsening. Policy makers and practitioners whose interest or goal is to improve the entrepreneurial environment in the country should therefore take these results as an important warning signal showing that unfavorable assessments are not due to scope or methodology, but due to unfavorable state and development of the underlying concept of entrepreneurial environment in the real life. To search for reasons and most problematic issues as well as in attempt to investigate the situation in particular areas we recommend using all the analyzed initiatives simultaneously. As we have explained above, each of these initiatives has certain specifics in terms of scope and methodology, which can be useful for identifying specific nuances as well as for ensuring the robustness of the findings and derived outcomes.

## **Conclusion**

This paper examined and discussed the evaluation of entrepreneurial environment in Slovakia by the selected most important initiatives and looked for the common patterns they show in assessing its state and development. Our results suggest

that all the examined initiatives, i.e. Doing Business report, Global Competitiveness Report and Business Environment Index, showed the similar assessment pattern, and the correlation between these assessments was significant and strong during the analyzed period. Therefore our findings suggest that these initiatives reflect the underlying phenomenon of entrepreneurial environment state and its development in a consistent way, with certain specifics. We attribute these specifics to the differences in methodologies, in particular to objective vs. subjective nature of evaluation. Building on our findings we recommend researchers and policy makers to decide for the initiative that fits the best to the nature of their analysis purpose, or to employ more initiatives at the same time to better understand the nuances of different issues and to improve the robustness of the overall entrepreneurial environment evaluation.

## References

- [1] ALVAREZ, C. et al. (2011). Environmental conditions and entrepreneurial activity: a regional comparison in Spain. *Journal of Small Business and Enterprise Development*, 18(1), 120-140.
- [2] BAUMOL, W.J. (1990). Entrepreneurship: Productive, Unproductive and Destructive. *Journal of Political Economy*, 98(5), 893-921.
- [3] BARLEY, S.R., & TOLBERT, P.S. (1997). Institutionalization and Structuration: Studying the Links between Action and Institution. *Organization Studies*, 18(1), 93-117.
- [4] BOSMA, N. (2013). The Global Entrepreneurship Monitor (GEM) and Its Impact on Entrepreneurship Research. *Foundations and Trends in Entrepreneurship*, 9(2), 143-248.
- [5] BRUTON, G.D., AHLSTROM, D., & LI, H. (2010). Institutional Theory and Entrepreneurship: Where Are We Now and Where We Do Need to Move in the Future? *Entrepreneurship Theory and Practice*, 34(3), 421-440.
- [6] BUSENITZ, L.W., GÓMEZ, C., & SPENCER, J.W. (2000). Country Institutional Profiles: Unlocking Entrepreneurial Phenomena. *Academy of Management Journal*, 43(5), 994-1003.
- [7] BUSINESS ALLIANCE OF SLOVAKIA (2013). Business Environment Index [available online]. Bratislava: Business Alliance of Slovakia.
- [8] CODURAS, A. & AUTIO, E. (2013). Comparing subjective and objective indicators to describe the national entrepreneurial context: the Global Entrepreneurship Monitor and the Global Competitiveness Index contributions. *Investigaciones Regionales*, 26, 47-74.
- [9] GAL, P., & JANIGOVA, Z. (2010). Dimenzie narodnej kultury Slovenska. Vyskum podla metodiky F. Trompenaarsa a CH. M. Hampden-Turnera. Organizacia zalozena na vedomostiach v období globalizacie a internacionalizacie. Ruzomberok: Verbum.

- [10] HOFSTEDE, G. (1980). *Culture's Consequencies: International Differences in Work-Related Values*. Newbury Park: Sage Publications.
- [11] KIRKPATRICK, L.A., & BROOKE, C.F. (2012). *A Simple Guide to IBM SPSS Statistics for Versions 18.0 & 19.0*. Belmont, CA: Wadsworth.
- [12] NANASIOVA, O., KALINA, M. & BOHDALOVA, M. (2008). Casove rady a kauzalita. *Forum Statisticum Slovacum*, 4(7), 86-89.
- [13] NATIONAL AGENCY FOR DEVELOPMENT OF SMEs (2013). *Report on state of small and medium enterprises in Slovak Republic*. Bratislava: NADSME.
- [14] NORTH, D.C. (1990). *Institutions, Institutional Change and Economic Performance*. Cambridge: Cambridge University Press.
- [15] OKRUHLICA, F. (2013). *Vlastnicka sprava spolocnosti (Corporate Governance)*. Bratislava: Iura Edition.
- [16] PAPULA, J., & PAPULOVA, E. (2013). *Zaklady manazerskej ekonomiky*. Bratislava: Kartprint
- [17] PILKOVA, A. et al. (2012). *Podnikanie na Slovensku: vysoka aktivita, nizke rozvojove aspiracie*. Bratislava: Univerzita Komenskeho v Bratislave, Fakulta management.
- [18] PILKOVA, A. et al. (2013). *Podnikanie na Slovensku: nadpriemerna podnikatelska aktivita v podpriemernom podnikatelskom prostredi*. Bratislava: Univerzita Komenskeho v Bratislave, Fakulta management.
- [19] RUSSEV, S. & SUBERTOVA, E. (2013). *Manazment projektov v podnikani a informatizacii pri prechode k znalostnemu manazmentu*. Bratislava: Kartprint.
- [20] SCHWAB, K. (2013). *The Global Competitiveness Report 2013-2014*. Geneva: World Economic Forum.
- [21] THE GOVERNMENT OF SLOVAK REPUBLIC (2013). *Report on the state of business environment in Slovak Republic with suggestions for its improvement*. Bratislava: The Government of Slovak Republic.
- [22] THE WORLD BANK (2013). *Doing Business 2014. Understanding Regulations for Small and Medium-Sized Enterprises*. Washington: The World Bank.