Do Entrepreneur’s Creative Abilities Influence Company’s Growth?

Abstract: The main aim of our research was to empirically test how the independent constructs representing the entrepreneur’s creative abilities are connected to the construct of the company’s growth and to develop and empirically test a structural model linking these constructs. We tested two models with structural equation modelling. We compared two structural models, which were made based on the sample of entrepreneurs from Slovenia and USA combined and Serbia. The findings showed that the entrepreneur’s creative abilities are positively related to company’s growth in case of Slovenia and USA combined; in the Serbian context, we did not find connection between the entrepreneur’s creative abilities and the company’s growth. The results of this study can be used both for further research and in practice.

Keywords: company growth, creativity, entrepreneurship, HRM, SEM

JEL Classification: L26, L21, L25, C80

1. Introduction

The study of entrepreneurship in international context has been a topic of great significance in the last two decades (Navarro-García, 2016) together with an increased awareness of importance to research different entrepreneurship related constructs (Jeraj et al., 2015). Entrepreneurship is a dynamic process where individuals create incremental wealth and bear the main risk in terms of providing value to the product or service (Sulistyo, 2016) and it is a social phenomenon as well (Thornton et al., 2011). Entrepreneurship is of the utmost importance for having a healthy and wealthy economy (Saiz-Álvarez et al., 2014).

The entrepreneur is a person who is capable of converting a new idea or invention into a successful business (Schumpeter, 2012). Entrepreneurs are creative at work because they are expected or required to be (Antonio et al., 2014). Creativity is a proactive approach toward the production of novel and useful ideas that address a predicament or opportunity (Bai et al., 2016) and allows entrepreneurs to make the most of opportunities that allow their firms to be more competitive and innovative (Fillis & Rentschler, 2010). Since creativity is a highly complex concept, one approach that has proven effective models creativity as a process (Chen, Chang & Lo, 2015). Entrepreneurs are role models for creativity and they continue to orchestrate opportunities (Albort-Morant & Oghazi, 2016) for novel and unexpected behaviours (Jaussi & Dionne, 2003), which makes them successful (Tee Suan Chin et al., 2012). Entrepreneurs are a driving force (Ismail, 2014) in that they create opportunities (Hjorth & Holt, 2016), which gives them a leading role in economic development worldwide (De Vitta, Mari & Poggesi, 2014).

Our approach builds on the Basadur approach (2004) of creative problem solving and recognizes the entrepreneur’s creativity as a continuous, circular process, beginning with problem finding, followed by problem conceptualization, problem solving, and solution implementation, which is especially present when it comes to entrepreneurs (Baron & Tang, 2011). The creative process is understood as a creative cognitive processing of problems which consists of analysing and articulating the exact nature of the problem to be solved, preparing to solve the problem by gathering information and improving required skills, generating
ideas for solving the problem, testing the chosen solution, and communicating the solution to others (Amabile & Mueller, 2008). Byrge and Tang (2015) even put forward creativity training.

Creativity can be seen as generation of new ideas and innovation as commercialization of new ideas (Harris, 2009; Basadur, 2004), which fosters an entrepreneurial culture (Edwards-Schachter et al., 2015) and therefore we can expect it to lead to the company’s growth. For the purpose of this paper, we use the definition of creativity as a process (Basadur, 2004) that involves continuously finding and solving problems and implementing new solutions. Creativity is an individual’s exceptional knowledge element (Audretsch & Belitski, 2013). Industrial psychology researchers find individual creativity in organizations as one of key elements in unleashing an organization’s creative and innovative potential (Ahlin et al., 2014).

2. Theoretical Review

2.1. Entrepreneur’s Creative Abilities

Creativity is the ability to discover new ideas which are surprising (De Lucia et al., 2016) and involve individual’s spaces in mind, their possible transformations and thinking of something which may not have been thought before (Ritchie, 2012). Individuals who are creative in one area are presumed to be creative in other areas, just as individuals who are highly intelligent perform well in a wide range of cognitive tasks (Silvia et al., 2009).

Entrepreneurship is indissoluble from creativity (Rahman et al., 2015) and has a significant influence on the company’s growth (Dayan et al., 2013). Entrepreneurs are confronted with high uncertainty, which means more ill-defined and ambiguous problems that are characterized by multiple possible goals and multiple ways of solving a problem; also in the function of intermediation (Peng et al., 2014). Creativity involves generation of novel and useful ideas (Sarooghi et al., 2015) and entrepreneurial minds for continuous improvement (Kabukcu, 2015).

A creative problem solver first constructs the problem to be solved, therefore, problem finding (Basadur, 2004) or problem construction or problem definition is the first step in the creative process (Lubart, 2001). The way the problem is constructed has an impact on solution generation (Adelman et al., 1995) and is related to the quality and originality of solutions to real-life problems (Reiter-Palmon et al., 1998). Cognitive processes associated with creativity are central to the generation of creative output (Reiter-Palmon & Illies, 2004). The problem finding activity is intended to enable people to think in innovative ways, since discovered problems are more likely to be solved creatively than presented problems, and problem discovery itself is an important part of creativity.

After problem-finding activities are finished, a diverse and large amount of information has to be gathered and integrated. Problem solving integrates the thinking and behaviour we engage in to obtain the desired outcome we seek (Treffinger et al., 2008). Two main processes are used in the problem solving activity: (1) search and collection of existing concepts and (2) creation of new concepts through the connection and modification of the existing concepts (Reiter-Palmon & Illies, 2004).

The utility of convergent and divergent thinking styles (Ashton-James & Chartrand, 2009) varies with social demands. Convergent thinking facilitates collaboration and coordination (Bahar & Hansell, 2000) while divergent thinking facilitates improvisation and innovation (Nemeth & Goncalo, 2005). Butler and Scherer (1997) found that the largest number of solutions are generated when goals are presented sequentially, one at a time to the problem solver and the highest quality solutions are generated when two conflicting goals are presented simultaneously to the problem solver.

Processes involved in the last phases have gained less attention than processes involved early in the creative cycle (Mumford, 2001). The solution implementation activity involves mainly persuasion and social skills (Reiter-Palmon & Illies, 2004) and is subject to criticism, which involves fear of failure and of the unknown. A creative solution implementation is supported by domain-relevant skills (knowledge and expertise), creativity-relevant skills and task motivation (Amabile, 1997). Elements of the work environment affect individual creativity by influencing expertise, task motivation, and creative skills (Amabile, 1997). Some (Chen et al., 2015) even use the term creative entrepreneurs.
2.2. Company’s Growth

Since Lee (2010) argued that recently the study of the patterns and determinants of the company’s growth has re-emerged as one of the key research topics on firm dynamics in industrial economics (Sleuwaegen & Boiardi, 2014) and management strategy, this paper focused on the relations between the entrepreneur’s creative abilities and the company’s growth. There is also a term growth companies for those companies that generate significant positive flows, which grow faster than the overall economy (Investopedia, 2016) and other companies.

When analysing the company’s growth, a common starting point is to specify a company’s growth model that considers the impact of the size and age of the firm (Cucculelli & Ermini, 2012). The current study extends this area of research with following variables: average annual growth in number of employees in the last three years; average annual growth in sales in the last three years; and growth in market share in the last three years. Companies must achieve sustainable growth (Sidik, 2012).

3. Research Methodology

3.1. Hypotheses

Creativity is a significant determinant of growth in modern economies (Sokol et al., 2015); based on this and on the above stated, we formulated three hypotheses to determine relations between the proposed constructs in the proposed model.

H1: Problem finding activity is positively related to company’s growth.
H2: Problem solving activity is positively related to company’s growth.
H3: Solution implementation activity is positively related to company’s growth.

At the beginning of the next chapter, we present the data gathering process and the sample properties and thereafter continue with the results of the current study, which we later discuss and interpret.

3.2. Research Setting and Participants

In this study, the questionnaire developed by Peljko et al. (2016) was used. For the purpose of this research the questionnaires were made available to entrepreneurs (i.e., founders or owners who participated in the start-up process of their company) from Slovenia, USA, and Serbia. For the Slovenian sample, the questionnaire was composed in the Slovenian language, for the USA sample the questionnaire was composed in English, and for the Serbian sample it was made in the Serbian language. The primary form of the questionnaire was in the English language and translated into Slovenian together with the Serbian sample.

Emails with a link to the questionnaire and a specific token for each respondent were sent to 4,000 entrepreneurs in Slovenia, to 5,000 entrepreneurs in the USA and in Serbia they were handed out personally. Email addresses and addresses were selected randomly from public registers in case of Slovenia and USA; in Serbia they were chosen personally. Prior to completing the questionnaires, entrepreneurs were assured that all answers provided would be kept anonymous. The questionnaire included measures of the entrepreneur’s creative abilities and the company’s growth.

Of 529 questionnaires that were returned all were filled-in fully. At the beginning of the questionnaire entrepreneurs had to mark their gender, age and the country they reside in. The sample consisted of 379 (71.6%) male and 149 (28.1%) female respondents (one person did not state their gender, as it was not possible to provide an answer in that particular question). The average age of the respondents was 46.51 years. Out of 529 respondents, 158 (47.73%) came from Slovenia, 173 (52.27%) from the USA and 198 (37.43%) from Serbia. The entrepreneurs’ level of education is presented in Table 1.
Table 1: Sample structure by level of education

<table>
<thead>
<tr>
<th></th>
<th>Slovenia and USA (combined)</th>
<th>Serbia</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percent</td>
<td>Frequency</td>
</tr>
<tr>
<td>High school</td>
<td>4</td>
<td>1.2</td>
</tr>
<tr>
<td>High school graduate</td>
<td>9</td>
<td>2.7</td>
</tr>
<tr>
<td>College</td>
<td>33</td>
<td>10.0</td>
</tr>
<tr>
<td>Associate’s degree</td>
<td>71</td>
<td>21.5</td>
</tr>
<tr>
<td>Bachelor’s degree</td>
<td>60</td>
<td>18.1</td>
</tr>
<tr>
<td>Master’s degree</td>
<td>59</td>
<td>17.8</td>
</tr>
<tr>
<td>Doctoral degree</td>
<td>33</td>
<td>10.0</td>
</tr>
<tr>
<td>Professional degree</td>
<td>48</td>
<td>14.5</td>
</tr>
<tr>
<td>Other</td>
<td>14</td>
<td>4.2</td>
</tr>
<tr>
<td>Total</td>
<td>331</td>
<td>100.0</td>
</tr>
</tbody>
</table>

In addition, entrepreneurs also had to indicate if they are founders or co-founders (Table 2) of the firm to which the questionnaire had been sent, and if they own such a firm (Table 3).

Table 2: Is the respondent a founder or co-founder of the company to which the questionnaire was sent?

<table>
<thead>
<tr>
<th></th>
<th>Slovenia and USA (combined)</th>
<th>Serbia</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percent</td>
</tr>
<tr>
<td>Yes</td>
<td>231</td>
<td>69.8</td>
</tr>
<tr>
<td>No</td>
<td>100</td>
<td>30.2</td>
</tr>
<tr>
<td>Total</td>
<td>331</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 3: Is the respondent an owner in the company to which the questionnaire was sent?

<table>
<thead>
<tr>
<th></th>
<th>Slovenia and USA (combined)</th>
<th>Serbia</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percent</td>
</tr>
<tr>
<td>Yes</td>
<td>254</td>
<td>76.7</td>
</tr>
<tr>
<td>No</td>
<td>77</td>
<td>23.3</td>
</tr>
<tr>
<td>Total</td>
<td>331</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Further on we present the sample structure in regard to the respondents’ companies by sector (Table 4).

Table 4: Sample structure in regard to the respondents’ companies by sector

<table>
<thead>
<tr>
<th></th>
<th>Slovenia and USA (combined)</th>
<th>Serbia</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percent</td>
</tr>
<tr>
<td>Banking, investment, insurance</td>
<td>29</td>
<td>8.8</td>
</tr>
<tr>
<td>Manufacturing industrial goods</td>
<td>31</td>
<td>9.4</td>
</tr>
<tr>
<td>Retail or wholesale trade</td>
<td>36</td>
<td>10.9</td>
</tr>
<tr>
<td>Construction</td>
<td>38</td>
<td>11.5</td>
</tr>
<tr>
<td>Engineering, research and development</td>
<td>17</td>
<td>5.1</td>
</tr>
<tr>
<td>Transportation or public utilities</td>
<td>9</td>
<td>2.7</td>
</tr>
<tr>
<td>Consumer services</td>
<td>25</td>
<td>7.6</td>
</tr>
<tr>
<td>Mining, extraction, oil</td>
<td>7</td>
<td>2.1</td>
</tr>
<tr>
<td>Tourism</td>
<td>21</td>
<td>6.3</td>
</tr>
<tr>
<td>Manufacturing consumer goods</td>
<td>12</td>
<td>3.6</td>
</tr>
<tr>
<td>Management, consulting &amp; business services</td>
<td>41</td>
<td>12.4</td>
</tr>
<tr>
<td>Other</td>
<td>65</td>
<td>19.6</td>
</tr>
<tr>
<td>Total</td>
<td>331</td>
<td>100.0</td>
</tr>
</tbody>
</table>
4. Results

A combined analysis was performed for Slovenia and USA, because Slovenia and USA are relatively developed countries, with a relatively high GDP, a relatively low unemployment rate, with developed infrastructure, free market, peaceful development over decades, and high added value per employee. We performed the same analysis for Serbia, which is a transition country with a high unemployment rate and is still recovering from war from the past in all aspects of business.

The statistics for the variables included was conducted for both the Slovenian sample and the US sample together along with Serbia and is presented in Table 5. The variables were divided into four researched constructs: problem finding, problem solving, implementing new solutions and company’s growth.

Table 5: Statistics for the variables included in research (Slovenia and USA combined and Serbia)

<table>
<thead>
<tr>
<th>Construct</th>
<th>Slovenia and USA (combined)</th>
<th>Serbia</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Std. Dev.</td>
</tr>
<tr>
<td>Problem finding activity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I can say that I like to “jump” into a new problem, without any previous analysing.</td>
<td>3.31</td>
<td>0.99</td>
</tr>
<tr>
<td>I am very comfortable in circumstances where it is always full of changes.</td>
<td>3.52</td>
<td>0.87</td>
</tr>
<tr>
<td>Problem solving activity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The best solutions come when I am working with others or when we talk about solutions. I solve more tasks. if I work in a team.</td>
<td>3.68</td>
<td>0.94</td>
</tr>
<tr>
<td>Solution implementation activity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>My proposals for the solution of work problems are routinely translated into action.</td>
<td>3.62</td>
<td>0.81</td>
</tr>
<tr>
<td>I like to carry out experiments in practice - in the real world. i.e., the “business world”.</td>
<td>3.74</td>
<td>0.83</td>
</tr>
<tr>
<td>In my work I devote a lot of my time to improving work practices.</td>
<td>3.66</td>
<td>0.87</td>
</tr>
<tr>
<td>Company’s Growth</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average annual growth in the number of employees in the last three years</td>
<td>2.50</td>
<td>1.40</td>
</tr>
<tr>
<td>Average annual growth in sales in the last three years</td>
<td>2.53</td>
<td>1.44</td>
</tr>
<tr>
<td>Growth in market share in the last three years</td>
<td>2.75</td>
<td>1.15</td>
</tr>
</tbody>
</table>

We continue by presenting a method to test two models by applying structural equation modelling. That operation was made by building a model in Lisrel Student Edition 9.20, which is an analytical statistics program. The t-values and standardized solutions of the models are presented in Figure 1 for Slovenia and the USA combined and in Figure 2 for Serbia.
4. Discussion

Our research intended to test the structural relations between the entrepreneur’s creative abilities and the company’s growth from the viewpoint of entrepreneurs from Slovenia and USA combined and Serbia. Our main aim was to test three hypotheses and compare both models. Therefore, we launched the diagrams and presented the course of the research model for Slovenia and USA combined, which tested these relations, t-test values and standardized coefficient values (Figure 1) and we used the same approach for the Serbian model (Figure 2). We used a combination of exploratory and confirmatory methods with the goal to develop a model that would complement the theoretical presumption and fit the data.

The valid indices of the structural model for Slovenia and USA combined (Figure 1) present a good model fit for developed countries (Slovenia and USA), which is indicated by the values of $\chi^2/df = 2.602$ and RMSEA = 0.070, NFI = 0.900, CFI = 0.935, SRMR = 0.0689, GFI = 0.957. Using the defined hypotheses we aimed to test the relations between the constructs in this model; one of the three shows a statistical significance according to the t-test values whereas the whole model shows a statistical significance of $P$-value = 0.00001.
The said indices of the structural model for Serbia (Figure 2) present an adequate model fit for Serbia, which is indicated by the values of $2/df = 1.507$ and RMSEA=0.051, NFI = 0.833, CFI = 0.932, SRMR = 0.0605, GFI = 0.959. With the defined hypotheses we wanted to test the relations between the constructs in this model; none of the three shows a statistical significance according to the t-test values whereas the whole model shows a statistical significance of P-value=0.03889.

As seen in Figure 1, in developed countries (Slovenia and USA), a higher level of entrepreneur’s creative abilities is positively related to the company’s growth, whereas we cannot confirm it with statistical significance regarding the relations between the problem finding activity and the company’s growth (H1) and problem solving activity and company’s growth (H2) and we can confirm with statistical significance the positive relation between the solution implementation activity and the company’s growth (H3); the influence is low to moderate (0.22), positive and statistically significant ($t=1.99$). On the other hand, we cannot confirm any of three hypotheses for the Serbian model.

Conclusion

In a world of business, being creative or having a high level of creativity has become essential for competitive advantage on crowded markets (Bujor & Avasilcai, 2016). Entrepreneurs that are more creative (Bredvold & Skålén, 2016) are also more capable of evaluating solutions and identifying the most creative solutions (Basadur et al., 2000). The company’s growth is what all companies strive for. The entrepreneur’s creative abilities are therefore important determinants of the company growth; as shown, the entrepreneur’s creative abilities lead to the company’s growth (Groza et al., 2016), which is why we must enrich the entrepreneur’s creative processes (Sigala & Chalkiti, 2015). Creativity is simply a requirement in the today’s competitive market (Sönmez, 2013).

The most important findings from the field of entrepreneurship research came from economics, psychology and sociology (Frese & Gielnik, 2014). According to this research, the entrepreneur’s creative abilities are definitely a promising research field which needs to be taken into consideration. The question that comes to mind instantly is how entrepreneurs can implement these results in practice. Combining the different but intertwined constructs gives us better insights into the matter and enables practitioners to further improve their efficiency, effectiveness and their chances for success in the real and tough world of entrepreneurial ventures.

One of the biggest stumbling blocks is financing which is very limited (Djokovic, 2015) and is a consequence of the Yugoslav war. The Government of Serbia, however, offers numerous strategies for providing support and incentive for entrepreneurship (Djokovic, 2015). The barriers that prevent a faster growth of entrepreneurship are (Cerovic & Lipovina-Bozovic, 2012) administrative procedures, work and coordination of inspections, lack of construction land, slow processes of real estate transfer, low level of insurance sector development, labour market inflexibility, the lack of financial assets (Cerovic & Lipovina-Bozovic, 2014) cultural and political aspects which are specific for the Balkan area.

There is an increasing tendency for the government policy to promote entrepreneurship for its apparent economic benefit (O’Connor, 2013; Maric et. al, 2009); development of entrepreneurship can present a possible model for decreasing the unemployment rate (Cudanov et al., 2012). Based on that knowledge, the same effort should be investing into the scientific research related to this field. Entrepreneurship should be presented not only as an alternative but also mainly as the first choice of professional engagement in order to make it more accessible and rewarding.

The limitations of this study need to be taken into consideration before the interpretations of the results can be explored. The whole research was focused mostly on how the entrepreneur’s creative abilities influence the company’s growth, whereas other determinants were not considered. As the mentioned entrepreneur’s creative abilities are not the only determinants of the company’s growth, we can only propose that the entrepreneur’s creative abilities do partly affect the company’s growth whereas there are also other factors involved in the process of success. It also does not mean that creative entrepreneurs succeed with their ideas (Gicheva & Link, 2016).

For further research, we suggest that the effects of the determinants should be omitted or should not be included included in our study. These determinants could be divided into those that influence the company’s growth and those that describe the entrepreneur’s creative abilities such as situational and other attributive determinants.

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