

INTERACTION EFFECTS OF ENTREPRENEURIAL CURIOSITY AND CREATIVITY OF THE ENTREPRENEUR ON COMPANY GROWTH

Žiga Peljko*

GEA College – Faculty of
Entrepreneurship,
Slovenia
ziga.peljko@gmail.com

Jasna Auer Antončič

University of Primorska,
Slovenia
jasna.auer@fm-kp.si

Abstract

In this research, a model including relationships between entrepreneurial curiosity, the creativity of the entrepreneur, the curiosity-creativity interaction term and company growth was conceptually proposed and empirically tested on data from entrepreneurs in three European countries. The purpose of the research was to investigate the connections between the psychological constructs of the entrepreneur and growth of the company. The authors' intention with the research was to ascertain how entrepreneurial openness and creativity of the entrepreneur are connected either individually or together with growth of the company. The aim was to determine whether entrepreneurial curiosity interacts with creativity to positively influence business growth. The models and hypotheses were tested with structural equation modelling. The interaction effects in the structural model were examined in two ways (with both an interaction construct and a new interaction variable). This study adds to what is known about entrepreneurship by providing supporting empirical evidence concerning the relationship between the creativity of the entrepreneur and company growth, and some empirical evidence on the non-existence of relationships between entrepreneurial curiosity and growth and between the curiosity-creativity interaction term and growth. The growth of a company can in some countries be developed based on the creativity of the entrepreneur. Interaction effects may need to be given more emphasis in future research.

Key Words

Entrepreneurial curiosity; creativity; interaction effects; entrepreneur; growth.

*Corresponding Author

INTRODUCTION

Entrepreneurship makes an important contribution to economic development and growth (Carree and Thurik, 2010; Carland et al., 2015; Rietveld et al. 2016), which means job creation, unemployment reduction, and economic development (Audretsch et al., 2001; Thurik, 2003; Audretsch et al., 2006; Georgiou, 2006; Buddelmeyer et al., 2009; Roig-Tierno et al., 2015). Growth in entrepreneurship is studied as an element of company performance (Kiviluoto, 2013).

It makes sense to study entrepreneurs as the main engine of development and growth (e.g., Carland et al., 2002; Jayawarna et al., 2013; Amit et al. 2015). Entrepreneurs have distinct personality traits (Cooper and Dunkelberg, 1987). Still, the authors' literature review showed that researchers have studied certain determinants with an influence on entrepreneurial behaviour, for instance:

- innovativeness (Mueller and Thomas, 2001; Marcati et al., 2008; Tikkamäki et al., 2015);
- creativity (Shalley, 1991; Ward, 2004; DiLiello and Houghton, 2006);
- the Big Five personality factors (extraversion, agreeableness, conscientiousness, neuroticism, openness to experience) (Zhao et al., 2010; Ciavarella et al., 2004; Antončič et al., 2015);
- entrepreneurial curiosity (Jeraj and Antončič, 2013; Jeraj and Marič, 2013; Jeraj 2014a, 2014b);
- entrepreneurial intentions (Krueger et al., 2000; Boyd and Vozikis 1994; Crant 1996);
- optimism (Fraser and Greene 2006; Dushnitsky 2010; Liang and Dunn, 2008); and
- stress (Cardon and Patel, 2015; Jensen, 2012; Baron et al., 2013).

Entrepreneurial success is typically revealed in company growth (Gupta et al., 2013), which may be regarded as a crucial concept in entrepreneurship or even as a synonym for entrepreneurship (Davidsson et al., 2006) and a key element of company performance (Antončič and Hisrich, 2001). Entrepreneurship studies focus on entrepreneurial success as well as the entrepreneur's behavioural patterns or personality traits (Antončič et al., 2015; Duman, 2015; Lussier and Corman, 2015). The personality determinants of firm growth have been studied separately or together in models, while the interactions have mostly been ignored. This research fills this gap by addressing the effect of the interaction of two personality determinants (entrepreneurial curiosity and creativity) on company growth.

The purpose of this research was to investigate the links between the psychological constructs of the entrepreneur and growth of the company. The authors' intention with the research was to establish how entrepreneurial openness and creativity of the entrepreneur are connected individually or together with growth of the company. The aim was to determine whether entrepreneurial curiosity interacts with creativity to positively influence business growth. The primary goal was to fill a gap in the literature concerning the connection of the studied constructs of the entrepreneur with

growth of the company; the aim was to obtain data for a sample of entrepreneurs, analyze it with statistical methods and interpret the results in a relevant way.

THEORY AND HYPOTHESES

Curiosity is represented by the cyclical acquisition of ever more information due to the emergence of ever more knowledge gaps (Harvey et al., 2007) and motivates research behavior with the desire for new information, as aroused by new, complex or ambiguous stimuli (Litman et al., 2005). Entrepreneurial curiosity is a positive emotional-motivational system considered in research into the entrepreneurial framework, learning tasks related to entrepreneurship, and incorporating new experiences in the direction of improving business (Jeraj, 2014b). Entrepreneurial curiosity is stimulated when an entrepreneur is confronted by various stimuli in the environment related to entrepreneurship (Jeraj and Antončič, 2013).

Ulhøi (2005) states that to be successful an entrepreneur must develop a special understanding or possess special information that enables them to discover and develop entrepreneurial opportunities. Peljko et al. (2016) found that entrepreneurial curiosity positively influences innovativeness. Jeraj and Antončič (2013) note that entrepreneurial curiosity impacts the entrepreneur's search for new opportunities and the expansion of the company's business.

On the other side, Ardichvili et al. (2003) contend that developing opportunities requires the entrepreneur to engage in creative work. From this viewpoint, it seems reasonable to assume that both entrepreneurial curiosity and entrepreneurial creativity are necessary for the development of entrepreneurial opportunities, which are a condition for a company's growth. Raine and Pandya (2019) argued that curiosity, creativity and commitment are the key drivers of entrepreneurship success. In a survey of entrepreneurial curiosity, Jeraj et al. (2015) found that entrepreneurial curiosity directly affects a company's growth because entrepreneurial curiosity (and entrepreneurial openness) can affect entrepreneurs in their everyday jobs as well as their company's growth. This leads to the following hypothesis:

H1: Entrepreneurial curiosity has a positive effect on company growth.

Creativity means establishing new ideas and commercializing new ideas in terms of innovation (Basadur, 2004). Creativity is an indicator of genius (Perry-Smith and Mannucci, 2015) and an incentive for an entrepreneurial culture (Edwards-Schachter et al., 2015). Originality, usefulness, flexibility and mobility can be the main criteria for creativity (Stemberger, 2013). The imaginative recombination of elements from the past into new configurations needed in the present means creativity (Torrance, 1988). Activities (mental and physical) that lead to original tangible or intangible useful and desirable outcomes determine creativity (Kampylis et al., 2009). Creativity arises from

the basis of the mutual relationship between the individual and society (Trstenjak, 1981). Creativity is what separates humans from other species (Ko and Butler, 2007). Creativity and entrepreneurship tend to be closely related (Tiwari and Verma, 2020). The focus in this study is on creativity on the individual/entrepreneurial level. Entrepreneurs tend to be creative because creativity is related to the nature of their work (Antonio et al., 2014). The entrepreneurial role demands individual creativity and imagination that lead to the creation of business concepts and products/services and seizing of opportunities (Amabile, 1997; Zhou, 2008; Nisula and Olander, 2020).

Entrepreneurial creativity and opportunity recognition tend to be positively linked to entrepreneurs' career success (Chang and Chen, 2020). Peljko et al. (2017) found a positive relationship between the entrepreneur's creative abilities and growth of the company in a combined sample from Slovenia and the United States of America but not in a sample from Serbia, possibly making it important to re-examine this relationship. Entrepreneurs are constantly faced with uncertainty and encounter questions for which they have no clear answer. New ideas lead to the identification of new and better ways and bring the planned positive results (Zhou and George 2001). A creative entrepreneur thinks of something else despite seeing the same things as everyone else (Krueger and Brazeal, 1994). The authors operationalise the above in the hypothesis:

H2: Entrepreneurial creativity has a positive effect on company growth.

Steinmetz et al. (2011) emphasize that the effects of the interaction between explanatory constructs are an important part of many theories in the social sciences. Studying the interaction effects can shed considerable additional light on the impact of different elements on a company's growth (Antončič, 2002). Perry-Smith and Mannucci (2015) found that great curiosity is the reason for studying different creative individuals and discovering why they have become so successful. Curiosity is important for explaining the connection between personality traits, life experiences and the development of creative abilities, and the results that flow from creativity (Kashdan and Fincham, 2002).

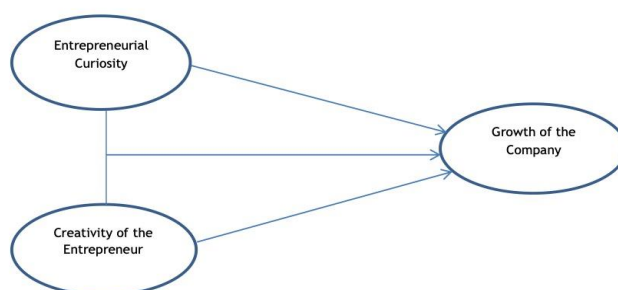
Entrepreneurial curiosity and creativity of the entrepreneur can influence the company's growth, as stated while developing H1 (Entrepreneurial curiosity has a positive effect on company growth) and H2 (Entrepreneurial creativity has a positive effect on company growth). Curiosity may be seen as the guiding vision in the process of creativity (Pusca and Northwood, 2018). If curiosity exists alone without creativity, then no creative process is started or taking place and outcomes do not follow. Curiosity is a self-regulatory mechanism that facilitates intrinsic goal efforts, persistence, personal growth, and creativity in the right circumstances (Kashdan and Fincham, 2002). If creativity is present without curiosity, success might not follow because creativity alone cannot be enough to motivate a person to consistently put in long workdays at the expense of developing work-life balance (Kashdan and Fincham, 2002). The authors expect the two studied

constructs to have a positive impact in their interaction on growth of the company ((++) -> company growth):

H3: Entrepreneurial curiosity in interaction with the entrepreneur's creativity has a positive effect on growth of the company.

The structural model dealt with partially and tested in this study, along with the scope of hypotheses H1, H2 and H3 presented above, are shown in Figure 1.

Figure 1: Model of the interaction curiosity-creativity of the entrepreneur and growth of the company



Source: Own survey.

RESEARCH METHODS

The survey instrument contained the following measures: (1) entrepreneurial curiosity (Jeraj and Antončič, 2013; 16 questions); (2) creativity on the level of an entrepreneur (Puhakka, 2005; 5 questions); (3) growth of the company (Antončič and Hisrich, 2001; Auer Antončič and Antončič, 2011; 3 items on the company level: growth in the number of employees, sales growth, and market share growth). The survey was conducted before the COVID-19 pandemic in the winter and spring months of 2019. The items for company growth referred to the last 3 years (2016-2018).

The sample included usable responses from entrepreneurs of SMEs with up to 250 employees and had 3 samples based on countries (Slovenia, n=359; Serbia, n=154; Latvia, n=338). The authors selected a group of three European post-transition countries because of their relative comparability (similar in transitions from a planned to a market economy and similar in size – smaller countries): (1) Slovenia is the first in this group to have adopted the euro as its payment currency and have held the presidency of the Council of the European Union; Slovenia has a relatively solid economy and well-developed entrepreneurship; (2) Serbia is economically different or less developed than Slovenia yet shares cultural similarities with Slovenia since for decades they were both part of the same country; Serbia suffered a war after its transition to a market economy, the economy has poorer credit

ratings and a higher unemployment rate. (3) Latvia has a greater cultural distance to the first two countries and underwent a peaceful transition to a market economy.

The survey questionnaire was sent to companies (SMEs) with up to 250 employees with a request they be filled out by entrepreneurs (owners and/or founders). The on-line survey of SMEs was found to be sufficiently representative after comparing the size structure of the companies with up to 250 employees in each country between the total population and the sample. The sample companies were generally small (up to 50 employees, up to EUR 4 million in annual sales) and middle-aged (operating in business for between 11 and 50 years in Slovenia and Serbia and between 6 and 20 years in Latvia) from various industries (with services prevailing). The sample entrepreneurs were well represented in terms of gender and age (a slight majority of females in Slovenia and Latvia and males in Serbia; the majority over 40 years of age, younger also well represented). The first sample (Slovenia) was used to develop the model while the second and third samples (Serbia and Latvia) were used to validate the models.

The constructs were analyzed for internal consistency and validity (Cronbach's alpha reliability analysis, and exploratory and confirmatory factor analysis). SPSS and EQS were used to assess the constructs, which showed adequate results. The constructs were first tested using exploratory factor analysis (method: ML, rotation: Oblimin) on the three samples (Slovenia, Serbia, Latvia). Second, the constructs were tested using confirmatory factor analysis (method: ERLS) on the three samples. The confirmatory factor analysis confirmed the results of the exploratory factor analysis. All items had high, positive and significant coefficients. The constructs showed good internal consistency (Cronbach alpha reliability) and good convergence (model goodness-of-fit indices: NFI, RMSEA, CFI).

Four items were retained in the analysis for the entrepreneurial curiosity construct (based on the size of the communalities and factor loadings): (1) I am interested in other entrepreneurs' interests. (2) In my business, I must have information about marketing that is as complete as possible. (3) I simply must know how a certain business system works. (4) I continuously delve into entrepreneurship matters. Four items were retained in the analysis for the creativity of the entrepreneur construct: (1) I am good at modifying normally used ways of doing things. (2) New solutions come to my mind even if they are not especially needed. (3) I invent exceptional and surprising solutions for problems. (4) I have plenty of ideas. All four items were retained for the company growth construct.

The models and hypotheses were tested with structural equation modelling (EQS, method: ERLS). Structural equation modelling was selected as an appropriate analysis method because it has many strengths (Tomarken and Waler, 2005: 34-35): (1) the ability to specify latent variable models that provide separate estimates of the relationships among latent constructs and their manifest indicators (the measurement model) and of the relationships among constructs (the structural model); (2) the availability of measures of global fit that can provide a summary evaluation of even complex models that involve a large number of linear equations; (3) it allows

researchers to directly test the model of interest rather than a straw-man alternative; and (4) an exceedingly broad data-analytic framework that is associated with unique capabilities relative to the statistical procedures traditionally used by clinical scientists. In addition, structural equation modelling is able to develop interaction terms and include them in models (Ping, 1995). The structural equation model included latent constructs of entrepreneurial curiosity, creativity of the entrepreneur and growth of the company, and the curiosity-creativity interaction.

The interaction effects in the structural model were examined in two ways. First, by making an interaction construct determined by the interactions of the combinations of individual elements of both constructs in interaction, in a similar way as Antončič (2002) did, and connecting this interaction construct with the company growth construct. Second, the authors calculated a new interaction variable based on both interacting constructs (++ , + - or - + , and --) and related it in the model with the company growth construct.

EMPIRICAL RESULTS

The hypothesized relationships were first tested in models with the interaction construct with structural equation modelling on the three samples (results shown in Tables 1 and 2). The models were found appropriate in all three countries (model goodness-of-fit indices: NFI: Slovenia 0.83, Serbia 0.67, Latvia 0.99; RMSEA: Slovenia 0.08, Serbia 0.09, Latvia 0.10; CFI: Slovenia 0.87, Serbia 0.78, Latvia 0.99; internal consistency: Cronbach alpha reliability: Slovenia 0.80, Serbia 0.75, Latvia 0.78).

Hypothesis 1 predicted a positive relationship between entrepreneurial curiosity and company growth. The coefficients were close to zero in all three countries and the results are not in support of H1.

Hypothesis 2 predicted a positive relationship between the creativity of the entrepreneur and company growth. Coefficients were found positive and significant (at the 0.10 level) in two countries (standardized coefficients: Slovenia 0.23, Serbia 0.31) and close to zero in the third country (Latvia). The results mostly act in support H2, except for Latvia.

Hypothesis 3 predicted a positive relationship between the interaction (entrepreneurial curiosity x creativity of the entrepreneur) and company growth. Coefficients were found to be non-significant in all three countries (standardized coefficients: Slovenia -0.01, Serbia 0.17, Latvia 0.07). The results do not support H3. Variance explained (R-squared) of growth was found moderate in Slovenia (5%) and in Serbia (9%), and low in Latvia (1%).

Second, the hypothesized relationships were tested in models with the interaction variable with structural equation modelling on the three samples (results shown in Tables 3 and 4). The models were found appropriate in all three countries (model goodness-of-fit indices: NFI: Slovenia 0.97, Serbia 0.92, Latvia 1.00; RMSEA: Slovenia 0.05, Serbia 0.06, Latvia 0.04; CFI:

Slovenia 0.98, Serbia 0.97, Latvia 1.00; internal consistency: Cronbach alpha reliability: Slovenia 0.84, Serbia 0.79, Latvia 0.73).

Table 1: Structural equation modelling results (interaction construct included, standardized coefficients and variance explained)

Sample (n)	EC-GR	CE-GR	ECxCE-GR	EC-ECxCE	CE-ECxCE	R2GR
Slovenia (359)	-0.02	0.23	-0.01	-0.16	-0.38*	0.05
Serbia (154)	-0.05	0.31	0.17	-0.29*	-0.32*	0.09
Latvia (338)	0.07	-0.03	0.07	-0.01	-0.07	0.01

EC-GR: the entrepreneurial curiosity-growth relationship coefficient

CE-GR: the creativity of the entrepreneur-growth relationship coefficient

ECxCE-GR: the entrepreneurial curiosity and creativity of the entrepreneur interaction-growth relationship coefficient

EC-ECxCE: the entrepreneurial curiosity-the entrepreneurial curiosity and creativity of the entrepreneur interaction correlation

CE-ECxCE: the creativity of the entrepreneur-the entrepreneurial curiosity and creativity of the entrepreneur interaction correlation

R2GR: the variance explained (R-squared) of firm growth

* sig.<0.05 (two-sided), · sig.<0.10 (two-sided)

Source: Own survey.

Table 2: Structural equation modelling results (interaction construct included, goodness-of-fit and reliability)

Sample (n)	Chi	df	Sig.	NFI	RMSEA	CFI	Cronbach alpha
Slovenia (359)	1,083.45	321	0.000	0.83	0.08	0.87	0.80
Serbia (154)	744.85	321	0.000	0.67	0.09	0.78	0.75
Latvia (338)	1,358.84	322	0.000	0.99	0.10	0.99	0.78

Source: Own survey.

Hypothesis 1 predicted a positive relationship between entrepreneurial curiosity and company growth. Coefficients were found non-significant in all three countries. The results thus do not support H1.

Hypothesis 2 predicted a positive relationship between the creativity of the entrepreneur and company growth. Coefficients were found positive and significant in Slovenia (standardized coefficient 0.33) and close to zero in Serbia and Latvia. The results provide mixed support for H2 (only supported in Slovenia and not in the validation samples).

Hypothesis 3 predicted a positive relationship between the interaction (entrepreneurial curiosity x creativity of the entrepreneur) and company growth. Coefficients were found non-significant in all three countries (standardized coefficients: Slovenia -0.19, Serbia 0.41, Latvia -0.10). The results do not support H3. Variance explained (R-squared) of growth was found moderate in Slovenia (6%) and in Serbia (10%), and low in Latvia (1%).

Correlations between the independent variables and the interaction term were calculated in the models. In the models with the interaction construct, the correlations were low to moderate (Table 1), while the correlations were high in the models with the interaction variable (Table 3). These results indicate that the interaction construct may be more appropriate than the interaction variable because the interaction construct may be more

independent of the interaction defining variables than the interaction variable.

Table 3: Structural equation modelling results (interaction variable included, standardized coefficients and variance explained)

Sample (n)	EC-GR	CE-GR	ECxCE-GR	EC-ECxCE	CE-ECxCE	R2GR
Slovenia (359)	0.07	0.33*	-0.19	0.75*	0.74*	0.06
Serbia (154)	-0.35	0.06	0.41	0.76*	0.73*	0.10
Latvia (338)	0.13	0.02	-0.10	0.65*	0.62*	0.01

EC-GR: the entrepreneurial curiosity-growth relationship coefficient

CE-GR: the creativity of the entrepreneur-growth relationship coefficient

ECxCE-GR: the entrepreneurial curiosity and creativity of the entrepreneur interaction-growth relationship coefficient

EC-ECxCE: the entrepreneurial curiosity-the entrepreneurial curiosity and creativity of the entrepreneur interaction correlation

CE-ECxCE: the creativity of the entrepreneur-the entrepreneurial curiosity and creativity of the entrepreneur interaction correlation

R2GR: the variance explained (R-squared) of firm growth

* sig.<0.05 (two-sided), · sig.<0.10 (two-sided)

Source: Own survey.

Table 4: Structural equation modelling results (interaction variable included, goodness-of-fit and reliability)

Sample (n)	Chi	df	Sig.	NFI	RMSEA	CFI	Cronbach alpha
Slovenia (359)	96.17	51	0.000	0.97	0.05	0.98	0.84
Serbia (154)	79.38	51	0.007	0.92	0.06	0.97	0.79
Latvia (338)	80.79	52	0.006	1.00	0.04	1.00	0.73

Source: Own survey.

DISCUSSION, CONTRIBUTIONS AND IMPLICATIONS

In this study, the authors found mixed or limited support for the proposed hypotheses. The authors had predicted a positive relationship between entrepreneurial curiosity and company growth and found no significant effects.

First, this finding contradicts Jeraj and Antončič (2013: 432) when stating that »motivated individuals with a relatively high level of entrepreneurial curiosity could be involved in the entrepreneurial process and contribute to the innovativeness and growth of the company«. Perhaps motivation would have to be assessed in order to show the effects on company growth.

Second, in some respects this finding is different and yet similar to the empirical findings of Jeraj et al. 2015, who established that entrepreneurial curiosity was positively related to growth of the company for a sample from the USA and Slovenia, with a low and a statistically significant influence, while the entrepreneurial curiosity-growth relationship was very low and not significant on a sample from Serbia.

Jeraj et al. (2015: 383) offered a rationale for this finding: "Serbia is going through transition and high levels of corruption and monopoly are detected, which are the legacy of the previous period of drastic economic instability.

The Serbian economy has been affected by embargos and wars, and is not as developed as markets in Slovenia and the USA. For this reason, other factors, like political connections, access to sources of capital, social status or social power of an entrepreneur, may influence the growth of the companies in such an environment more than openness and entrepreneurial curiosity". Therefore, certain other factors, like environmental ones, might be more important, or entrepreneurial curiosity might be indirectly related to growth via particular other elements, for example innovativeness.

The authors had predicted a positive relationship between the creativity of the entrepreneur and company growth and found mixed evidence: a positive and significant (0.10 level) relationship in two countries (Slovenia and Serbia) and close to zero in Latvia in the model with the interaction term construct, and a positive and significant (0.05 level) only in Slovenia and not in the validation samples of Serbia and Latvia in the model with the interaction term variable. This result is somewhat similar to the findings of Peljko et al. (2017): the entrepreneur's creative abilities and growth of the company being related in the sample from Slovenia and the USA and not in the sample from Serbia. However, the authors wish to emphasize that in their study the results based on the interaction term construct could prove more relevant than the results based on the interaction term variable because multicollinearity effects might exist while using the interaction term variable since high correlations of the interaction variable with the creativity of the entrepreneur were detected. This allows the authors to conclude that company growth (in Slovenia and Serbia) can benefit from the creativity of the entrepreneur, who possesses plenty of ideas and new solutions and is good at modifying ways of doing things.

The authors had predicted a positive relationship between the interaction term (entrepreneurial curiosity x creativity of the entrepreneur) and company growth and found no significant evidence in support. It may be that the examined interaction term does not matter for company growth, or that some other intermediary variables may need to be included (such as innovation), through which the examined interaction could affect the growth.

The contribution to science made by this study is the conceptually developed and empirically tested model of entrepreneurial curiosity, the creativity of the entrepreneur, with their interaction and the relationships to company growth. This study makes a theoretical contribution by developing the model hypotheses and by indicating through the empirical analysis that the creativity of the entrepreneur may be important for company growth (in two countries) and that entrepreneurial curiosity and the interaction term may be less important. The study empirically contributes by using two variants of the entrepreneurial curiosity-creativity of the entrepreneur interaction terms in models based on data drawn from three countries.

This study holds implications for research and practice. Researchers can to a larger extent use the creativity of the entrepreneur while composing models of company growth. Although this study did not show significant effects of the interaction on company performance, it revealed that the interaction construct may be more appropriate than the interaction variable and thus researchers may like to consider using interaction constructs

instead of interaction variables. Practitioners and policymakers must take into account that the entrepreneur's creativity can be important for company growth. Therefore, education, personal development, and training need to focus more on developing the entrepreneur's creativity through general and specific (entrepreneurship targeted) creativity trainings.

LIMITATIONS AND FUTURE RESEARCH POSSIBILITIES

The main limitations are: (1) A partial model was developed in this study, only two individual-level constructs of the entrepreneur were considered. (2) The use of perceptual measures in the questionnaire. (3) Inferences about causality in the hypotheses were developed based on the literature and not directly verified (cross-sectional data and not longitudinal data). (4) The data were collected in three countries and the results may prove to be more relevant for these countries.

The authors propose some future research avenues: (1) The interaction construct employed in this study could be upgraded and various interaction constructs (based on constructs other than those used in this study) could also be used in future research. (2) The relationships between the constructs entrepreneurial curiosity, creativity of the entrepreneur on the individual level, as well as their interaction construct, and the growth construct (firm level) might be further examined in other countries. (3) In-depth interviews or learned experiences-based research may yield additional insights into relationships between entrepreneurial curiosity and creativity, and their interaction, and their role in company growth.

CONCLUSION

This study has expanded what is known about entrepreneurship by providing supporting empirical evidence on the relationship between the creativity of the entrepreneur and company growth, and some empirical evidence on the non-existence of relationships between entrepreneurial curiosity and growth and between the curiosity-creativity interaction term and growth. The growth of the company in some countries can be developed on the basis of the entrepreneur's creativity. Interaction effects may warrant greater emphasis in future research.

REFERENCES

- Amabile, T. M. (1997). Entrepreneurial creativity through motivational synergy. *The Journal of Creative Behavior*, 31(1), 18–26.
- Amit, R., Ding, Y., Villalonga, B., Zhang, H. (2015). The role of institutional development in the prevalence and performance of entrepreneur and family-controlled firms. *Journal of Corporate Finance*, 31, 284–305.

- Antončič, B. (2002). Notranje podjetništvo: prenova konstrukta in razvoj integrativnega modela [Intrapreneurship: construct refinement and an integrative model development, s slovenskim predgovorom]. Koper: Društvo za akademske in aplikativne raziskave.
- Antončič, B., Bratkovič Kregar, T., Singh, G., DeNoble, A. F. (2015). The big five personality–entrepreneurship relationship: Evidence from Slovenia. *Journal of Small Business Management*, 53(3), 819–841.
- Antončič, B., Hisrich, R. D. (2001). Intrapreneurship: Construct refinement and cross-cultural validation. *Journal of Business Venturing*, 16(5), 495–527.
- Antonio, T., Lanawati, S., Wiriana, T. A., Christina, L. (2014). Correlations creativity, intelligence, personality, and entrepreneurship achievement. *Procedia - Social and Behavioral Sciences*, 115, 251–257.
- Ardichvili, A., Cardozo, R., Ray, S. (2003). A theory of entrepreneurial opportunity identification and development. *Journal of Business venturing*, 18(1), 105–123.
- Audretsch, D. B., Carree, M. A., Thurik, A. R. (2001). Does entrepreneurship reduce unemployment? (No. 01-074/3). Tinbergen Institute Discussion Paper. (No. 01-074/3). Tinbergen Institute Discussion Paper. Amsterdam: Tinbergen Institute.
- Audretsch, D. B., Keilbach, M. C., Lehmann, E. E. (2006). *Entrepreneurship and economic growth*. Oxford: Oxford University Press.
- Auer Antončič, J., Antončič, B. (2011). Employee loyalty and its impact on firm growth. *International Journal of Management and Information Systems*, 15(1), 81–87.
- Baron, R. A., Franklin, R. J., Hmieleski, K. M. (2013). Why Entrepreneurs Often Experience Low, Not High, Levels of Stress The Joint Effects of Selection and Psychological Capital. *Journal of Management*, 42(3), 742–768.
- Basadur, M. (2004). Leading others to think innovatively together: Creative leadership. *The Leadership Quarterly*, 15(1), 103–121.
- Boyd, N. G., Vozikis, G. S. (1994). The influence of self-efficacy on the development of entrepreneurial intentions and actions. *Entrepreneurship theory and practice*, 18(4), 63–63.
- Buddelmeyer, H., Jensen, P. H., Webster, E. (2009). *Innovation and the determinants of company survival*. Oxford: Oxford University Press.
- Cardon, M. S., Patel, P. C. (2015). Is stress worth it? Stress related health and wealth trade-offs for entrepreneurs. *Applied Psychology*, 64(2), 379–420.
- Carland, H., Carland, J. W., Hoy, F. (2002). Who is an entrepreneur? Is a question worth asking. *Entrepreneurship: Critical Perspectives on Business and Management*, 2, 178–185.
- Carland, J. C., Carland, J. W., Stewart, W. H. (2015). Seeing what's not there: The enigma of entrepreneurship. *Journal of Small Business Strategy*, 7(1), 1–20.
- Carree, M. A., Thurik, A. R. (2010). The impact of entrepreneurship on economic growth. In Audretsch, D. B., Acs, Z. J. (Eds.), *Handbook of Entrepreneurship Research*. Berlin, Heidelberg: Springer Verlag, 557–594.
- Chang, Y. Y., Chen, M. H. (2020). Creative entrepreneurs' creativity, opportunity recognition, and career success: Is resource availability a double-edged sword? *European Management Journal*, 38(5), 750–762.
- Ciavarella, M. A., Buchholtz, A. K., Riordan, C. M., Gatewood, R. D., Stokes, G. S. (2004). The Big Five and venture survival: Is there a linkage? *Journal of Business Venturing*, 19(4), 465–483.
- Cooper, A. C., Dunkelberg, W. C. (1987). *Entrepreneurial research: Old questions, new answers and methodological issues*. West Lafayette: Purdue University, Krannert Graduate School of Management.
- Crant, J. M. (1996). The proactive personality scale as a predictor of entrepreneurial intentions. *Journal of small business management*, 34(3), 42.
- Davidsson, P., Delmar, F., Wiklund, J. (2006). Entrepreneurship as growth; growth as entrepreneurship. *Entrepreneurship and the Growth of Firms*, 1(2), 21–38.
- DiLiello, T. C., Houghton, J. D. (2006). Maximizing organizational leadership capacity for the future: Toward a model of self-leadership, innovation and creativity. *Journal of Managerial Psychology*, 21(4), 319–337.
- Duman, L., Bedük, A., Köylüoğlu, A. S., Ay, K. (2015). Entrepreneurship culture at SMEs: A case study in Konya. *Procedia-Social and Behavioral Sciences*, 207, 492–501.
- Dushnitsky, G. (2010). Entrepreneurial optimism in the market for technological inventions. *Organization Science*, 21(1), 150–167.

- Edwards-Schachter, M., García-Granero, A., Sánchez-Barrioluengo, M., Quesada-Pineda, H., Amara, N. (2015). Disentangling competences: Interrelationships on creativity, innovation and entrepreneurship. *Thinking Skills and Creativity*, 16, 27–39.
- Fraser, S., & Greene, F. J. (2006). The effects of experience on entrepreneurial optimism and uncertainty. *Economica*, 73(290), 169–192.
- Georgiou, M. N. (2006). Does entrepreneurship create enough jobs in Europe? A note (No. 0806). *Papers on entrepreneurship, growth and public policy*. Jena: Max-Planck-Institut für Ökonomik.
- Gupta, P. D., Guha, S., Krishnaswami, S. S. (2013). Firm growth and its determinants. *Journal of Innovation and Entrepreneurship*, 2(1), 1–14.
- Harvey, M., Novicevic, M., Leonard, N., Payne, D. (2007). The role of curiosity in global managers' decision-making. *Journal of Leadership and Organizational Studies*, 13(3), 43–58.
- Jayawarna, D., Rouse, J., Kitching, J. (2013). Entrepreneur motivations and life course. *International Small Business Journal*, 31(1), 34–56.
- Jensen, S. M. (2012). Psychological Capital: Key to understanding entrepreneurial stress? *Economics & Business Journal: Inquiries & Perspectives*, 4(1), 44–55.
- Jeraj, M. (2014a). Podjetniška radovednost: razvoj konstrukta, determinante in izidi. [Entrepreneurial Curiosity: Construct Development, Determinants and Outcomes]. *Doktorska Disertacija*. [Doctoral Thesis]. Ljubljana: University of Ljubljana, Faculty of Economics.
- Jeraj, M. (2014b). The relationship between optimism, pre-entrepreneurial curiosity and entrepreneurial curiosity. *Organizacija*, 47(3), 199–209.
- Jeraj, M., Antončič, B. (2013). A Conceptualization of Entrepreneurial Curiosity and Construct Development: a Multi-Country Empirical Validation. *Creativity Research Journal*, 25(4), 426–435.
- Jeraj, M., Marič, M. (2013). Entrepreneurial curiosity—the new construct. In *High potentials, lean organization, internet of things: proceedings of the 32nd International Conference on Organizational Science Development*, 289–298.
- Jeraj, M., Maric, M., Todorovic, I., Cudanov, M., Komazec, S. (2015). The Role of Openness and Entrepreneurial Curiosity in Company's Growth. *Amfiteatru Economic*, 17(38), 371.
- Kampylis, P., Berki, E., Saariluomaa, P. (2009). In-service and prospective teachers' conceptions of creativity. *Thinking Skills and Creativity*, 4(1), 15–29.
- Kashdan, T. B., & Fincham, F. D. (2002). Facilitating creativity by regulating curiosity. *Comment. American Psychologist*, 57(5), 373–374.
- Kiviluoto, N. (2013). Growth as evidence of firm success: myth or reality? *Entrepreneurship & Regional Development*, 25(7-8), 569-586.
- Ko, S., Butler, J. E. (2007). Creativity: A key link to entrepreneurial behavior. *Business Horizons* 50(5): 365–372.
- Krueger, N. F., Brazeal, D. V. (1994). Entrepreneurial potential and potential entrepreneurs. *Entrepreneurship: Theory and Practice*, 18(3): 91–104.
- Krueger, N. F., Reilly, M. D., Carsrud, A. L. (2000). Competing models of entrepreneurial intentions. *Journal of business venturing*, 15(5), 411–432.
- Liang, C. L. K., Dunn, P. (2008). Exploring the myths of optimism and realism in entrepreneurship related to expectations and outcomes. *Journal of Business and Entrepreneurship*, 20(1), 1.
- Litman, J. A., Collins, R. P., Spielberger, C. D. (2005). The nature and measurement of sensory curiosity. *Personality and Individual Differences*, 39(6), 1123–1133.
- Lussier, R. N., Corman, J. (2015). A business success versus failure prediction model for entrepreneurs with 0-10 employees. *Journal of Small Business Strategy*, 7(1), 21–36.
- Marcati, A., Guido, G., Peluso, A. M. (2008). The role of SME entrepreneurs' innovativeness and personality in the adoption of innovations. *Research Policy*, 37(9), 1579–1590.
- Mueller, S. L., Thomas, A. S. (2001). Culture and entrepreneurial potential: A nine country study of locus of control and innovativeness. *Journal of Business Venturing*, 16(1), 51–75.
- Nisula, A.-M., Olander, H. (2020). The role of motivations and self- concepts in university graduate entrepreneurs' creativity and resilience. *Journal of Small Business Management*, Forthcoming.

- Peljko, Ž., Jeraj, M., Săvoiu, G., Marič, M. (2016). An empirical study of the relationship between entrepreneurial curiosity and innovativeness. *Organizacija*, 49(3), 172–182.
- Peljko, Ž., Jordan, G., Jeraj, M., Todorović, I., Marič, M. (2017). Do entrepreneur's creative abilities influence company's growth? *Management*, 22(1), 25–35.
- Perry-Smith, J., Mannucci, P. V. (2015). Chapter 12. In *Social networks, Creativity, and Entrepreneurship*. The Oxford Handbook of Creativity, Innovation, and Entrepreneurship, 205. New York: Oxford University Press.
- Ping, R. A. Jr. (1995). A parsimonious estimating technique for interaction and quadratic latent variables. *Journal of Marketing Research*, 32(August), 336–347.
- Puhakka, V. (2005). *The Role of Intellectual Capital in Opportunity Recognition of Entrepreneurs*. Oulu: University of Oulu, Department of Information Processing Science.
- Pusca, D., Northwood, D. O. (2018). Curiosity, creativity and engineering education. *Global Journal of Engineering Education*, 20(3), 152–158.
- Raine, A. L., Pandya, M. (2019). Three keys to entrepreneurial success: curiosity, creativity, and commitment. *Entrepreneurship Education*, 2(3-4), 189–198.
- Rietveld, C. A., Bailey, H., Hessels, J., Zwan, P. (2016). Health and entrepreneurship in four Caribbean Basin countries. *Economics and Human Biology*, 21, 84–89.
- Roig-Tierno, N., Alcázar, J., Ribeiro-Navarrete, S. (2015). Use of infrastructures to support innovative entrepreneurship and business growth. *Journal of Business Research*, 68(11), 2290–2294.
- Shalley, C. E. (1991). Effects of productivity goals, creativity goals, and personal discretion on individual creativity. *Journal of Applied psychology*, 76(2), 179–185.
- Steinmetz, H., Davidov, E., Schmidt, P. (2011). Three approaches to estimate latent interaction effects: Intention and perceived behavioral control in the theory of planned behavior. *Methodological Innovations*, 6(1), 95–110.
- Štemberger, T. (2013). Stališča bodočih vzgojiteljic do ustvarjalnosti [Views of future preschool teachers on creativity]. *Revija za elementarno izobraževanje*, 6(2/3), 101–113.
- Thurik, R. (2003). Entrepreneurship and Unemployment in the UK. *Scottish Journal of Political Economy*, 50(3), 264–290.
- Tikkamäki, K., Heikkilä, P., Ainasoja, M. (2015). Positive Stress and Reflective Practice Enhancing Innovativeness Among Entrepreneurs. 10th European Conference on Innovation and Entrepreneurship. ECIE 2015 – Genoa, 17.9.-18.9.2015, 699. Genoa: Academic Conferences International Limited.
- Tiwari, P. N., Verma, N. (2020). Creativity and entrepreneurship: Complementing each other to create success stories. *International Journal of Trade & Commerce-IIARTC*, 9(1), 111–120.
- Tomarken, A. J., Waller, N. G. (2005). Structural equation modeling: Strengths, limitations, and misconceptions. *Annual Review of Clinical Psychology*, 1, 31–65.
- Torrance, E. P. (1988). The nature of creativity as manifest in its testing. In Sternberg, R. J. (Ed.), *The Nature of Creativity: Contemporary Psychological Perspectives*, 43–75. New York: Cambridge University Press.
- Trstenjak, A. (1981). *Psihologija ustvarjalnosti [Psychology of Creativity]*. Ljubljana: Slovenska matica.
- Ulhøi, J. P. (2005). The social dimensions of entrepreneurship. *Technovation*, 25(8), 939–946.
- Ward, T. B. (2004). Cognition, creativity, and entrepreneurship. *Journal of Business Venturing*, 19(2), 173–188.
- Zhou, J. (2008). New look at creativity in the entrepreneurial process. *Strategic Entrepreneurship Journal*, 2(1), 1–5.
- Zhou, J. George, J. M. (2001). When job dissatisfaction leads to creativity: Encouraging the expression of voice. *The Academy of Management Journal*, 44(4): 682–696.
- Zhao, H., Seibert, S. E., Lumpkin, G. T. (2010). The relationship of personality to entrepreneurial intentions and performance: A meta-analytic review. *Journal of Management*, 36(2), 381–404.