Routledge
Taylor & Francis Group

Economic Research-Ekonomska Istraživanja

ISSN: 1331-677X (Print) 1848-9664 (Online) Journal homepage: http://www.tandfonline.com/loi/rero20

The influence of intellectual capital on innovativeness and growth in tourism SMEs: empirical evidence from Slovenia and Croatia

Doris Gomezelj Omerzel & Dora Smolčić Jurdana

To cite this article: Doris Gomezelj Omerzel & Dora Smolčić Jurdana (2016) The influence of intellectual capital on innovativeness and growth in tourism SMEs: empirical evidence from Slovenia and Croatia, Economic Research-Ekonomska Istraživanja, 29:1, 1075-1090, DOI: 10.1080/1331677X.2016.1211946

To link to this article: http://dx.doi.org/10.1080/1331677X.2016.1211946

Published online: 22 Dec 2016.

ECONOMIC RESEARCH-EKONOMSKA ISTRAŽIVANJA, 2016
VOL. 29, NO. 1, 1075–1090
http://dx.doi.org/10.1080/1331677X.2016.1211946

Routledge
Taylor & Francis Group

The influence of intellectual capital on innovativeness and growth in tourism SMEs: empirical evidence from Slovenia and Croatia

Doris Gomezelj Omerzel[a] and Dora Smolčić Jurdana[b]

[a]Faculty of Management, University of Primorska, Koper, Slovenia; [b]Faculty of Tourism and Hospitality Management, Opatija, Croatia

ABSTRACT

The innovative capability of an organisation depends on the intellectual capital that it possesses. Our research attempts to examine the influence individual intellectual capital components have on the innovativeness and consequent growth of a company. This article proposes a classification and measurement method of intellectual capital, highlighting the following three components; human capital, organisational capital, and social capital. Our aim is to explain innovation performance and company growth by showing the importance of each intellectual capital dimension on a specific type of innovation (product, process, marketing, and organisational). To this end, a questionnaire survey was performed on 2800 Slovenian and 1700 Croatian small and medium enterprises (SMEs) in the tourism area. A data sample of 359 companies was analysed using SPSS 19 and the EQS 6 statistical programme to employ multivariate data analyses techniques through developed hypotheses.

ARTICLE HISTORY
Received 14 April 2016
Accepted 8 July 2016

KEYWORDS
Tourism; innovativeness; firm growth; intellectual capital

JEL CLASSIFICATIONS
D22; L25; L83

1. Introduction

The ability of a company to perform and grow successfully is influenced by many environmental factors. Intellectual capital is one of the internal environment dimensions of a company and is therefore an important factor in management strategies. It has been agreed that innovation activity can influence the competitiveness and consequently the performance of a company. Within the context of tourism, only a few studies focus on environmental characteristics such as intellectual capital, as being a key factor for innovativeness. Therefore, this study is bridging this gap by analysing the relationship between intellectual capital (including three dimensions according to Subramaniam and Youndt [2005]), innovation and growth. Accordingly, the aim of this study is to answer the following questions: firstly,

CONTACT Doris Gomezelj Omerzel doris.gomezelj@fm-kp.si
The extended abstract of this article was originally presented at The 7th International Scientific Conference 'European Union Future Perspectives: Innovation, Entrepreneurship and Economic Policy', Pula (Croatia), May 21–23, 2015.

what the influence of intellectual capital is on the innovation capabilities of a company, and secondly, what the impact of innovation is on the growth of a company.

In some respects, this study also contributes to literature on the subject. Firstly, unlike the majority of research which is focused on intellectual capital, innovation and growth in the manufacturing sector (Kim & Kumar, 2009; Ling, 2011; Ling & Jaw, 2006; Wu, Lin, & Hsu, 2007), our study specifies this concept in the tourism sector. Our article also presents an answer to the call of Camisón and Monfort-Mir (2012) about the need for quantitative methodology in tourism research that examines factors influencing performance.

In particular, this study hypothesises that intellectual capital dimensions influence innovation, and innovation consequently impacts company growth. By analysing the effects of intellectual capital on innovation and additionally on company growth, this study contributes to the better understanding of how management strategies that develop intellectual capital produce different effects on company performance.

Our article is structured as follows; firstly, a literature review is performed and presented, providing a theoretical background to the study. Within this section a model including the relationships among intellectual capital dimensions, innovation and growth is developed and the hypotheses are also presented. We then continue with the methodology section which includes the description of methods and analyses used in the research, in addition to a report on the analyses results and findings. After limitations and implications for further research, the article closes with a conclusion.

2. Theoretical framework

In the past, researchers in the area of innovation devoted their attention more to manufacturing (Toivonen and Tuominen, 2009; De Vries, 2006; Laperche & Picard, 2013; Triguero & Córcoles, 2013; Sánchez-Sellero, Rosell- Martínez, & García-Vázquez, 2013; ; Cucculelli & Ermini, 2013; Tiron Tudor et al., 2014). As the service sector is becoming important in many developing economies researchers are nowadays increasingly interested in innovation in services (Chang, Linton, & Chen, 2012; Desmarchelier, Djellal, & Gallouj, 2013; Hogan, Soutar, McColl-Kennedy, & Sweeney, 2011; O'Cass and Sok, 2013; Thakur and Hale, 2013). Hipp and Grupp (2005) stressed the influence of human factor in the innovation processes, especially for service business. The service sector is indeed more influenced by employee's knowledge, skills and experience than the manufacturing sector.

In the tourism sector the customer demand is a powerful generator of innovation. Tourism supply side has to continuously adapt to tourist (Weiermair, 2006). We can agree that a new tourist is pretending to be experienced and flexible. This is the reason why tourism companies have to respond efficiently to the new lifestyles and thus support the innovation (Crnogaj, Rebernik, Hojnik, & Gomezelj, 2014). Aiming to remain competitive, tourism firms and also tourism destinations are forced to develop and offer new or renewed services, thus they are obliged to innovate (Scheidegger, 2006;). Innovation in tourism business has been examined by Weiermair, Peters, and Frehse (2005), Orfila-Sintes et al. (2005), Hipp and Grupp (2005) and Pikkemaat and Weiermair (2007). Innovation can be understood as a key tool for achieving competitiveness.

It is agreed that the ability of a company to innovate is dependent on its ability to utilise its knowledge resources. Innovations are tied to knowledge management processes (Madhavan & Grover, 1998). Many authors examined innovation as an outcome of intellectual capital

(Ahuja, 2000; Subramaniam & Venkatraman, 2001). This is why the employees and collective organisational knowledge of a company employee is important (Adamides and Karacapilidis, 2006).

We understand intellectual capital as intangible assets within a company (Stewart, 1991). Edvinsson and Malone (1997) defined intellectual capital as a two-dimensional construct namely human capital and structural capital. Structural capital is additionally divided into organisational and customer capital. Nowadays, customer capital, from a sociological point of view, represents social capital (Subramaniam and Youndt, 2005; Delgado, 2011).

Intellectual capital is one of the resources within the firm that provide additional value to stakeholders (Shakina & Barajas, 2014). For the purpose of their study (Anatolievna, Molodchik, Anatolievna, & Barajas, 2014) divided three traditional intellectual capital components (human, structural and relational capital) and defined six intellectual capital dimensions, namely management capabilities, human resources capabilities, innovation capabilities, internal process capabilities, networking capabilities, and customer loyalty.

Human capital is all the knowledge possessed by employees; it includes their ability to generate knowledge, their individual values and attitudes, experiences and know-how (Subramaniam & Youndt, 2005). Human capital embraces the knowledge, skills and competencies of individuals. This does not only refer to formal education and training but also to experience and practical learning, primarily acquired in the workplace (Schultz, 1971). Many empirical studies (Davidsson & Honig, 2003; Ucbasaran, Westhead, & Wright, 2008) have tried to determine the impact of human capital on business performance, while some researchers investigate also the importance of demographic processes for stock of human capital (Čepar & Bojnec, 2008). The relevance of education, experience and competencies to innovation capacities seems indisputable. The financial performance of a company depends on human capital (Hurwitz, Lines, Montgomery, & Schmidt, 2002). This is why a company should hire capable employees and experienced managers. Only by doing this they are able to develop new products and bring their skills and innovation capabilities to the highest possible level (Rhyne et al., 2002). Only thanks to innovative managers and employees are companies able to increase their market share to become market leaders. Human capital influences teamwork success, and a company with valuable employees can achieve higher innovation performance. Moreover, Dakhli and De Clercq (2004) showed in their study that there is a positive relationship between human capital and innovation.

Organisational capital refers to knowledge which is accumulated and stored in databases, proceedings, patents, licences, trademarks, manuals and organisational structures. It refers to the intellectual asset that remain even after employees have left the company. It does not depend on individuals and is generally explicit (Hormiga et al., 2011; Longo, Mariani, & Mura, 2009). Keeping in mind the description of the knowledge creation process by Nonaka and Takeuchi (1995), organisational capital is the result of a knowledge spiral where implicit knowledge is converted to explicit knowledge on an organisational level. Edvinsson (1997) determined that organisational capital is created when knowledge becomes company property. Organisational capital belongs to the organisation (Longo et al., 2009). Organisational capital includes all the mechanisms and structures for supporting employees' productivity (Edvinsson & Malone, 1997) and performance with the aim to achieve the overall performance of the company (Bontis, 1998). Organisational capital can be traded, reproduced and shared within the company, while specific elements can even be legally protected as patents and trademarks (Roos & Roos, 1997). Organisational capital is

a tool for efficiently performing the process of knowledge transfer, retainability and storage (Cabrita & Bontis, 2008).

Social capital can be defined as knowledge that can be utilised for interactions among individuals, working groups, and their networks of relationships (Nahapiet & Ghoshal, 1998). Zhao, Ritchie, and Echtner (2011) stated that in the area of tourism there are only a few studies dealing with the application of social capital. This is true of regional studies and for the studies of community tourism development. Social capital can influence the performance of stakeholders' participation and additionally has a positive impact on local tourism development (Jones, 2005; Nordin & Westlund, 2009). These researchers define the concept of social capital in different ways. Moreover, in some studies social capital is assumed to be a dependent variable, in others an independent variable. Despite these different assumptions, social capital can be located at all levels; individual, informal social, formal organisational, community, ethnic group and national level (Adler & Kwon, 2002). Nahapiet and Ghoshal (1998) stressed the importance of social relationships. According to them, social networks are closely associated with knowledge flow. Thus, social networks are the source of social interaction and therefore a key factor in gaining sufficient and reliable information. The power of the social capital dimension depends on the quality of networks, i.e., the strengts of ties, the duration of relationship and also the extent of emotional link up. Strong connections also influenced by trust, are important instruments in the process of knowledge transfer, especially tacit knowledge (Inkpen & Tsang, 2005). It is because of the nature of tacit knowledge, and the difficulty to systemise it, that it requires close and repeated interchanges. Therefore, the power and the strength of the relationship arguably influences the knowledge and information transfer and consequently has an impact on innovativeness. Developing strong social capital requires the time and efforts of all network members. The membership of such social networks is composed from the company stakeholders, namely customers, suppliers, and competitors. These organisation stakeholders are strategic partners and often provide the organisation with important and valuable information. In aiming to satisfy the needs of a customer, a company should improve their products and services. Nemec Rudež and Mihalič (2007), in their study of the hotel industry, divided social capital into end-customer relationship capital (relations with end-customers) and non-end-customer relationship capital (relationships with commercial partners in the private sector, and relationships with other partners such as the government, associations and non-governmental organisations). In doing so, they wished to stress the increasing importance of different relationships in the hotel business. Many researchers agree that customer involvement is invaluable in achieving innovation and economic success. Being a member of a social network can be a crucial element in the process of new product/service ideas and product/service development (Gales & Mansour-Cole, 1995). Some studies have also confirmed that customer participation in the early stages of idea generation and innovation is critical to the success of innovation (Gupta & Souder, 1998). This is especially true for service industries, such as tourism-related industries (hotel, tourist agencies, restaurants), where the social capital of managers may be of a great importance. The external networks between these kinds of companies may facilitate collaboration and influence the travelling experience (Ooi et al., 2015). Through the manager's social capital (ties with other manager members of the network), a company may receive or exchange resources (Wincent, Anokhin, & Ortqvist, 2010). This is also an opportunity to learn the best business practices from other companies.

The concept of innovativeness is explaining the degree to which a company is earlier in adopting new ideas than other companies on the market (Avlonitis & Tzokas, 1994). The ability to innovate refers to the adoption or successful implementation of new ideas, processes, or products. But why are some companies more innovative than others? Which determinants explain the more efficient innovative activities of some companies in comparison to others? And moreover, what are the economic consequences of innovative activities?

There have been some recent studies on the sources of innovation. At the present moment, we are aware that the innovation capacity of a company depends heavily on its intellectual capital, including its different dimensions; human capital (experience, skills, and employee development, teamwork), organisational capital (databases, proceedings, patents, licences, trademarks, manuals and organisational structures) and social capital (relationship networks). The importance of these intangible assets and knowledge has been studied by various researchers (Mariz-Pérez et al., 2012; Sumedrea, 2013; Kalkan, Bozkurt, & Armanc, 2014).

Intellectual capital is closely linked to the organisation's innovativeness. In their study Subramaniam and Youndt (2005) found that organisation's intellectual capital influence the capabilities for incremental and radical innovations. They also recognised the complexity of the connection between intellectual capital and innovative capabilities. Al-Dujaili (2012) investigated the impact of intellectual capital dimensions (human, structural, and of customers) to innovation in the companies and confirmed that there is an impact of intellectual capital to organisational innovation. More researchers found that the intellectual capital of an organisation (consisting of its human, social, and organisational capital) is influencing innovation capabilities (Wu & Sivalogathasan, 2013) or innovation performance (Zerenler, Hasiloglu, & Sezgin, 2008; El Telbani, 2013).

These authors focused on the antecedents of innovation, such as the possession of adequate employee and management competencies, attitudes, good relationships within the workforce and with the environment, and adequate organisational technology, etc. Because of globalisation and strong competition in the marketplace, innovation is considered as a necessity for every company. In aiming to retain a competitive advantage and achieve market success, companies need to recognise new opportunities, be creative, and develop new products/services and new market strategies (Tajeddini, 2010). Only by implementing new ideas can companies create value. This statement is valid for all types of innovation such as product/service development, process improvements, marketing and organisational practices. For the purpose of this study, we have adopted the Oslo Manual (2005) classification of innovation that discusses four types of innovation; product innovation (new products and services, major improvements in the functional or user characteristics of existing goods and services), process innovation (major changes in methods, equipment and software), marketing innovation (new sales techniques, new financial methods) and organisational innovation (new organisational methods in commercial practice, workplace organisation or external relations of a company).

Innovation is the key factor influencing competition for a company and also one of the most important factors of sustainable competitive advantage. Innovativeness causes product improvements, increases the added value (Coombs & Bierly, 2006) make higher sales revenues (Ivankovič, Janković, & Peršić, 2010) and thus helps companies to survive. Innovative companies are more efficient and dynamic and consequently more profitable (Mansury & Love, 2008). We agree that innovation depends on knowledge-intensive organisational processes within a company.

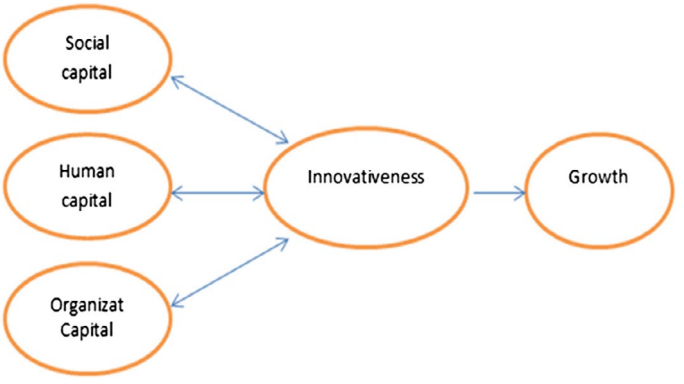

Figure 1. The proposed theoretical model. Source: Authors.

Taking these insights into account, we propose a research model (see Figure 1) combining intellectual capital dimensions, innovativeness and growth.

By employing this model we set up the following hypotheses;

Hypothesis 1. *The social capital is related (statistically significant) to innovativeness.*
Hypothesis 2. *The human capital is related (statistically significant) to innovativeness.*
Hypothesis 3. *The organisational capital is related (statistically significant) to innovativeness.*
Hypothesis 4. *Innovativeness is influencing (statistically significant) the growth of a company.*

3. Methodology

3.1. Measurement of variables

Data was acquired via a structured email survey questionnaire, from companies involved in different activities within the tourism sector. After performing a pilot study and having received no recommendations from the pilot group, we concluded that all questions were clear and comprehensible. We received no recommendations from the pilot group. All constructs were measured with questions adapted from existing scales. All items were measured on a 5-point Likert-type scale where 1 = strongly disagree and 5 = strongly agree. In this study, intellectual capital was measured by three distinct dimensions; social capital (four items; i.e.: [1] our employees are skilled at collaborating with each other to diagnose and solve problems; [2] our employees share information and learn from one another; [3] our employees interact and exchange ideas with people from different areas of the company; and [4] our employees apply knowledge from one area of the company to problems and opportunities that arise in another), human capital (four items; i.e.: [1] our employees are widely considered the best in our industry; [2] our employees are creative and bright; [3] our employees are experts in their particular jobs and functions; and [4] our employees develop new ideas and knowledge), and organisational capital (three items; i.e.: [1] our organisation uses patents and licences as a way to store knowledge; [2] our organisation's culture (stories, rituals) contains valuable ideas, ways of doing business, etc.; and [3] our organisation embeds much of its knowledge and information in structures, systems, and processes). Scales were adapted from the measures developed and tested by Subramaniam

and Youndt (2005). Innovation was measured by four dimensions, namely product/service (5 items; i.e.: [1] We have introduced many new services onto the market; [2] we have introduced many modifications to existing services; [3] our organisation constantly seeks for new services; [4] we have introduced more new services than our competitors; and [5] the new services we introduced have caused significant changes in the industry), process (5 items; i.e.; [1] we frequently update service delivery methods to increase productivity; [2] we frequently incorporate technologies to improve efficiency; [3] we frequently incorporate technologies to improve the quality of our service; [4] we make major investments to incorporate new computer techniques, equipment and/or programmes; and [5] we frequently train our staff in new technologies in this sector), marketing (5 items; i.e.: [1] we are dynamic in developing and using new sales channels; [2] we frequently introduce new techniques or channels for promoting our services; [3] we frequently introduce new methods for pricing our services; [4] our competitors use our marketing methods as a point of reference; and [5] the new marketing methods we have incorporated have been new to the sector), and organisational (four items; i.e.: [1] we frequently introduce organisational changes to improve the division of responsibilities and decision-making; [2] we frequently introduce new methods for managing external relationships with other firms or public institutions; [3] we often introduce new practices in work organisation or firm procedures; and [4] the new organisational methods that we have incorporated have been pioneering in the sector). These scales were already used and empirically tested by Nieves et al. (2014) and Gomezelj Omerzel (2014). The dependent variable Growth was measured by two items (market share and profitability); this scale was already used and empirically tested by Antončič and Hisrich (2001) and Gomezelj Omerzel (2010).

3.2. Sample and data collection

The final version of the questionnaire was sent to managers of the tourism companies in Slovenia and Croatia with anonymity being assured. To ensure the comprehension of questions and comfort of respondents, the questionnaire was written in their native language (either Slovenian or Croatian). Out of 2800 questionnaires, sent by e-mail to Slovenian companies, and 1700 questionnaires, sent by e-mail to Croatian companies. Two-hundred and seventeen completed and usable questionnaires were returned from Slovenia and 142 from Croatia. This was used for the analysis, which is only a preliminary study (as we are still collecting the data).

In Slovenia the majority of companies, 80 or 36.9%, operated in the restaurant industry, followed by companies who provide accommodation with 57 or 26.3% respondents, 28 of them (12.9%) were tourist agencies or tour operators, 18 (8.3%) were from the transport sector, 14 (14.4%) of them from amusement activities, and 17 of them (7.8%) performed other activities in the area of tourism. The majority of companies (70 or 32.3%) were more than 20-years-old, followed by those from 10- to 20-years-old (62 or 28.6%) and by those from 5- to 10-years-old (36 or 16.6%). Other companies were younger than five years. The majority (155 or 71.4%) of companies have less than 10 employees, 46 (21.2%) of them between 11 and 50 employees, 13 of them have more than 51 employees. The majority of the companies (74 or 34.1%) marked that their total sales in the last year at between 200,000 and 1 million EUR, 63 (29%) of them earned less than 50,000 EUR, 45 (20.7%) of them earned between 50,000 and 200,000 EUR, other companies earned more. In Croatia the majority

of companies, 57 (40.1%) operated in the restaurant industry, followed by companies who provide accommodation with 47 or 33.1% respondents, 16 of them (11.3%) were tourist agencies or tour operators, eight (5.6%) were from the transport sector, six (11.3%) of them from amusement activities, and seven of them (4.9%) performed other activities in the area of tourism. The majority (42 or 29.6%) of companies were from five- to 10-years-old, followed by those from 10- to 20-years-old (39 or 27.5%) and then by those that are more than 20-years-old (32 or 22.5%). Other companies were younger than five years. The majority (89 or 62.7%) of companies have less than 10 employees, 31 (21.8%) of them between 11 and 50 employees, 22 of them have more than 51 employees. The majority of the companies (41 or 28.9%) marked that they had earned less than 50,000 EUR, 37 (26.1%) marked their total sales in the last year at between 200,000 and 1 million EUR, 36 (25.4%) of them earned between 50,000 and 200,000 EUR, other companies earned more.

3.3. Data analysis

In the first phase of analysis, we calculated means and standard deviations for Slovenia and Croatia separately. In the rest of the analysis we treated the data from the Slovenian and Croatian sample as one. We calculated Cronbach's alpha reliabilities for all the scales (intellectual capital, innovativeness) and presented them in Tables 1 and 2. As Growth was measured with only two items we did not perform an FA. Instead we formed the variable Growth by calculating the mean of two items, Growth 1 and Growth 2. In order to increase the validity and reliability of the proposed model, both exploratory and confirmatory factor analyses were performed.

The exploratory factor analysis was performed using SPSS 19.0 (a single factor was extracted for each dimension), while for both the confirmatory factor analysis and testing of the proposed H4 hypotheses structural equation modelling (SEM) was performed, using EQS 6 software.

Communalities and factor loadings for all items were above 0.5, thus no item was eliminated for further analysis. The factor loadings for the Human Capital construct are between 0.782 and 0.892, for both the Social capital construct and Organisational capital between 0.846 and 0.925. The KMO values for these three constructs are between 0.737 and 0.834;

Table 1. Intellectual capital.

Var	Mean Slo	SD Slo	Mean Cro	SD Cro	Factor loadings	Total variance explained	Cronbach Alpha Coefficient	KMO and Bartlett's Test
HC1	3.16	1.06	2.99	0.96	.782	73.3%	0.876	0.818
HC2	3.55	0.94	3.69	0.85	.892			Sig = 0.000
HC3	3.59	0.92	3.67	0.93	.874			
HC4	3.35	1.01	3.55	0.97	.874			
SC1	3.69	0.95	3.94	0.85	.846	80.4%	0.916	0.834
SC2	3.78	0.89	3.98	0.84	.925			Sig = 0.000
SC3	3.82	0.90	3.94	0.85	.922			
SC4	3.55	1.11	3.80	0.91	.891			
OC1	2.10	1.12	2.35	1.18	.737	62.5%	0.696	0.652
OC2	3.19	1.12	3.40	1.06	.834			Sig = 0.000
OC3	3.16	1.13	3.40	1.15	.796			

Source: Authors' calculations.

Table 2. Innovativeness.

Variable	Mean Slo	SD Slo	Mean Cro	SD Cro	Factor loadings	Total variance explained	Cronbach Alpha coefficient	KMO and Bartlett's Test
PROD1	2.91	1.15	3.11	1.11	.834	67.9%	0.881	0.849
PROD2	3.39	1.01	3.55	0.90	.836			Sig = 0.000
PROD3	3.63	1.03	3.80	0.92	.839			
PROD4	3.25	1.07	3.46	0.86	.838			
PROD5	2.89	1.11	3.13	1.07	.772			
PROC1	3.42	1.00	3.61	0.97	.727	67.9%	0.881	0.821
PROC2	3.21	1.12	3.44	0.94	.857			Sig = 0.000
PROC3	3.17	1.07	3.48	0.97	.883			
PROC4	3.32	1.11	3.68	0.98	.846			
PROC5	2.95	1.07	3.27	1.03	.798			
MARK1	3.32	1.17	3.63	0.95	.778	62.6%	0.850	0.796
MARK2	3.19	1.15	3.56	0.96	.846			Sig = 0.000
MARK3	3.09	1.05	3.46	0.96	.792			
MARK4	2.99	1.01	3.22	1.01	.792			
MARK5	2.80	1.03	2.86	0.98	.744			
ORG1	2.64	1.10	2.75	1.09	.854	71.9%	0.870	0.802
ORG2	2.55	1.05	2.77	1.03	.895			Sig = 0.000
ORG3	2.48	1.13	2.73	1.01	.809			
ORG4	2.37	1.09	2.69	1.14	.831			

Source: Authors' calculations.

therefore, all values are at acceptable levels. The significance of Bartlett's test for each dimension was 0.000 ($p<0.001$). Factor analysis results signify good discriminant validity, as all the measurement items loaded highly on their own constructs. The reliability of constructs was measured with the Cronbach Alpha coefficient, with values ranging from 0.696 to 0.916. Therefore, all constructs have good reliability. Moreover, the values of total variance explained are from 62.5% to 80.4%.

Communalities and factor loadings for all items were above 0.5, thus no item was eliminated for further analysis. The factor loadings for the Product innovation are between 0.772 and 0.839, for the Process innovation construct between 0.727 and 0.857, for the Marketing innovation construct between 0.744 and 0.846 and for the Organisational innovation between 0.828 and 0.942. The KMO values for the four constructs are between 0.809 and 0.895; therefore, all values are at acceptable levels. The significance of Bartlett's test for each dimension was 0.000 ($p<0.001$). Factor analysis results signify good discriminant validity, as all the measurement items loaded highly on their own constructs. The reliability of constructs was measured with the Cronbach Alpha coefficient, with values ranging from 0.850 to 0.881. Therefore, all constructs have good reliability. Moreover, the values of total variance explained are from 62.6% to 71.9%. The correlations between model constructs are presented in Table 3.

All the constructs included in the proposed model are significantly and positively correlated. The Pearson correlations coefficients are ranging from the lowest 0.266 (between Organisational capital and Growth) to the highest 0.731 (between Human and Social capital). Table 3 shows, that the correlation coefficient (1) between Human Capital and all the Innovation dimensions, between Social capital and all the Innovation dimensions as also between Organisational capital and all the Innovations dimensions are statistically significant. This means that there exists a significant relationship between

Table 3. Pearson correlations

	Human capital	Social capital	Organ capital	Product innov	Process innov	Market innov	Organ Innov	Growth
Human capital	1							
Social capital	.731**	1						
Organisati capital	.520**	.446**	1					
Product innovation	.492**	.500**	.467**	1				
Process innovation	.419**	.454**	.472**	.672**	1			
Marketing innovation	.511**	.446**	.533**	.658**	.678**	1		
Organisat innovation	.399**	.338**	.490**	.598**	.494**	.636**	1	
Growth	.340**	.281**	.266**	.466**	.445**	.479**	.362**	1

Source: Authors' calculations.
**Correlation is significant at the 0.01 level (2-tailed).

Human Capital and Innovation, between Social capital and innovations and between Organisational capital and Innovation. Therefore, the three hypothesis (H1, H2 and H3) are confirmed.

4. Results

Finally, the EQS Multivariate Software version 6.1 was utilised for confirmatory factor analysis and the testing the H4. By performing the structural equation model (see Figure 2), we examine the significance of the relationship among the independent and the dependent factors of the analysed model. Path coefficients indicate the strength of each individual relationship. By interpretation of these path coefficients we can support or reject the hypotheses. Since no non-normality was found in the data, the Elliptical Reweighted Least Square (ERLS) estimation method was used. As recommended by Hair et al. (2006), the fit of the model was assessed with multiple indices: the non-normed fit index (NNFI), the comparative fit index (CFI), and the root mean square error of approximation (RMSEA).

Values of NNFI and CFI are greater than 0.90 and indicate a good model fit (Byrne, 2004). The RMSEA index is less appropriate, but as this index is sensitive to the sample size and model complexity (Hu and Bentler, 1999), it has an acceptable value (0.10) in our case. The strong and positive relationship (0.75, $p < 0.01$) between innovativeness and growth explicitly presents the importance of innovativeness for the growth of a company.

The results support our hypotheses H4.

5. Discussion

A company is represented by a series of different resources. If intellectual capital represents one of the internal intangible resources, we can agree that it is an important element for the innovativeness and consequently for company performance. Based on the studied literature, it was concluded that the ability of a company to perform successfully and to grow is influenced by many environmental factors. Intellectual capital is one of the internal environment dimensions of a company and therefore important in business strategies. It has been agreed, that innovation activity can influence the competitiveness and therefore

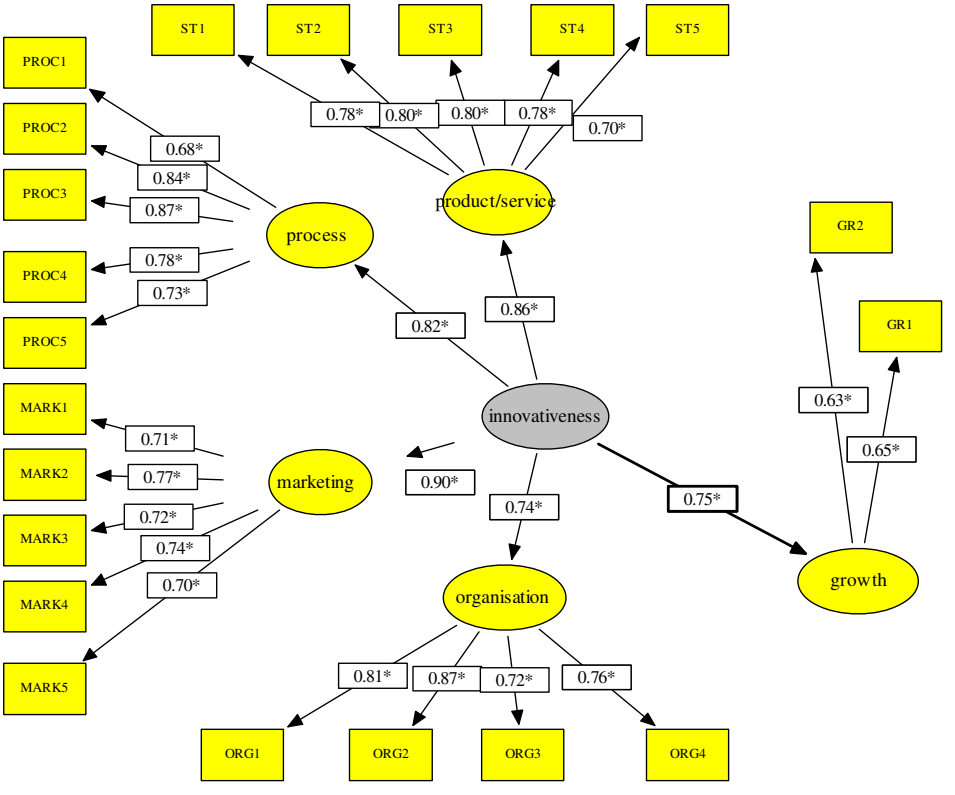

Figure 2. The link between innovativeness and firm growth. Source: Authors' calculations. PROD-Product/service innovation; PROC-Process innovation, MARK-Marketing innovations; ORG-Organisational Innovation, CFI = 0.95; NNFI=0.94; RMSEA=0.10; RMR=0.75.

the performance of a company. In tourism only a few studies focus on environmental characteristics such as intellectual capital, as being a key factor for innovativeness. Moreover, they do not analyse the importance of intellectual capital related variables, as well as fail to mention their influence on company performance. The results of our study indicate that intellectual capital is significantly related to innovativeness and consequently to the growth of tourism companies.

The proposed model, including innovativeness and growth, that was tested in this study, can be seen as relatively robust as the hypothesised relationships were supported. Human capital, social capital and organisational capital are important elements for company innovation activities. The correlation coefficients, that are presented in Table 3 show that there exists a significant relationship between Human Capital and Innovation, between Social capital and innovations and between Organisational capital and Innovation. All the Pearson correlations coefficients between these dimensions are positive and statistically significant, ranging from 0.338 to 0.533. The social capital dimension is positively related to innovativeness (and growth). It means that the more employees are skilled at collaborating with each other, sharing information and interact and exchange ideas, the more the firm will be innovative (and will grow). There is a positive correlation also between human capital and innovativeness (and growth). This means that the more employees are creative, bright, experts and capable to develop new ideas and knowledge, the more the firm is capable

to innovate (and to grow). And finally, the more the firm uses different ways to store the knowledge, contains valuable ways of doing business and embeds much of its knowledge in structures, systems and processes, the more the firm is innovative and is growing.

The results of our study are in accordance with other similar studies. In many studies, innovation has been demonstrated as an outcome of intellectual capital (Ahuja, 2000; Subramaniam & Venkatraman, 2001). Adamides and Karacapilidis (2006) stated that employees and collective organisational knowledge is important. Also the recent studies on the sources of innovation showed that the innovation capacity of a company depends heavily on its intellectual capital, including its different dimensions; human capital (experience, skills, and employee development, teamwork), organisational capital (databases, proceedings, patents, licences, trademarks, manuals and organisational structures) and social capital (networks of relationships). The importance of these dimensions was studied also by Mariz-Pérez et al. (2012), Sumedrea (2013), Kalkan et al. (2014) and others. All these authors agreed that innovation is considered as a necessity for every company. If a company wants to be competitive and achieve market success, it needs to recognise new opportunities, be creative, and innovative (Tajeddini, 2010). Only by implementing innovation can companies create new added value.

This study explored the literature on intellectual capital, innovation and their effect on tourism firm growth. According to the literature, the model and four hypotheses were developed. Our results strongly supported all four hypotheses and we demonstrated that tourism firms' intellectual capital is positively related to innovativeness and also that innovativeness has a positive impact on a firm growth. According to these results we can state that intellectual capital elements affect firms' growth as well.

The results of our study can only be generalised to a certain extent, as only a sample of tourism companies was included in the survey. Future research in diverse industries, preferably including several service sectors for a comparative study, is needed to further generalise the model. Further research is also necessary to validate the questionnaire. Although this study is strong, it also has some limitations that need to be acknowledged. This study is limited to Slovenian and Croatian companies. The factors were studied on data collected by a questionnaire which used mostly subjective measures. Our model probably does not cover all the elements of intellectual capital but it can be considered satisfactory enough, since it still includes a high number of dimensions and elements. Despite the limitations, this study makes important contributions and implications.

6. Conclusion

This article offers a presentation of the research, performed in two neighbouring countries, namely Slovenia and Croatia. The research attempts to examine the correlations between individual intellectual capital and innovativeness as also the influence of innovativeness on the growth of a company. We proposed a classification and measurement method of intellectual capital, highlighting the following three components; human capital, organisational capital, and social capital. Our aim is to explain innovation performance and company growth by showing the importance of each intellectual capital dimension on a specific type of innovation (product, process, marketing, and organisational).

To the authors' knowledge no updated study focusing on the link between intellectual capital, innovation and firm growth in tourism has been published recently. Thus, the

present study represents an attempt to fill this gap. Our article contributes, first, to the understanding of innovativeness in the tourism business. The interest in this subject will continue to grow. The importance of innovativeness for tourism business and tourism industry competitiveness has been recognised by both researchers and practitioners. The tourism sector has specific characteristics, and the human factor is of great importance (Camisón & Monfort-Mir, 2012). For these reasons, tourism innovation is very dependent of intellectual capital of the firm.

Innovativeness, as an output of different company environmental factors, including intellectual capital, and on the other side as an influencing factor for company performance, has recently received a lot of attention from scholars, managers, and governments. However, no relevant studies explore the relationships between organisational capital dimensions, innovativeness and company growth in the tourism industry in Slovenia or Croatia. It explores the relationship between the three dimensions of intellectual capital (i.e., human capital, social capital, and organisational capital), and innovativeness and the impact of innovativeness on company growth.

Acknowledgement

The authors thank Professor Barajas for his comments and suggestions about our first draft article (presented at the 7th International Conference, European Union Future Perspectives, Pula, 21–23/May 2015).

Disclosure statement

No potential conflict of interest was reported by the authors.

References

Adamides, E. D., & Karacapilidis, N. (2006). Information technology support for the knowledge and social process of innovation management. *Technovation, 26*, 50–59.

Adler, P., & Kwon, S. (2002). Social capital: Prospects for a new concept. *Academy of Management Review, 27*, 17–40.

Ahuja, G. (2000). Collaborative networks, structural holes, and innovation: A longitudinal study. *Administrative Science Quarterly, 45*, 425–455.

Al-Dujaili, M. A. A. (2012). Influence of intellectual capital in the organizational innovation. *International Journal of Innovation, Management and Technology, 3*, 128–135.

Anatolievna, M., Molodchik, E., Anatolievna, S., & Barajas, A. (2014). Metrics for the elements of intellectual capital in an economy driven by knowledge. *Journal of Intellectual Capital, 15*, 206–226.

Antončič, B., & Hisrich, R. D. (2001). Intrapreneurship: Construct refinement and cross-cultural validation. *Journal of business venturing, 16*, 495–527.

Avlonitis, G. J., & Tzokas, N. (1994). Assessing the innovativeness of organizations and its antecedents: Project innovstrat. *European Journal of Marketing, 28*, 5–28.

Bontis, N. (1998). Intellectual capital: An exploratory study develops measures and model. *Management Decision, 36*, 63–76.

Byrne, B. M. (2004). Testing for multigroup invariance using AMOS graphics: A road less traveled. *Structural Equation Modeling, 11*, 272–300.

Cabrita, M. R., & Bontis, N. (2008). Intellectual capital and business performance in the Portuguese banking industry. *International Journal of Technology Management, 43*, 212–237.

Camisón, C., & Monfort-Mir, V. M. (2012). Measuring innovation in tourism from the Schumpeterian and the dynamic-capabilities perspectives. *Tourism Management, 33*, 776–789.
Čepar, Ž., & Bojnec, Š. (2008). Population aging and the education market in Slovenia and Croatia. *Eastern European economics, 46*, 68–86.
Chang, Y. C., Linton, J. D., & Chen, M. N. (2012). Service regime: An empirical analysis of innovation patterns in service firms. *Technological Forecasting and Social Change, 79*, 1569–1582.
Coombs, J., & Bierly, P. (2006). Measuring technological capability and performance. *R&D Management, 36*, 421–438.
Crnogaj, K., Rebernik, M., Hojnik, B. B., & Gomezelj, D. (2014). Building a model of researching the sustainable entrepreneurship in the tourism sector. *Kybernetes, 43*, 377–393.
Cucculelli, M., & Ermini, B. (2013). Risk attitude, product innovation, and firm growth. Evidence from Italian manufacturing firms. *Economics Letters, 118*, 275–279.
Dakhli, M., & De Clercq, D. (2004). Human capital, social capital, and innovation: A multi-country study. *Entrepreneurship and Regional Development, 16*, 107–128.
Davidsson, P., & Honig, B. (2003). The role of social and human capital among nascent entrepreneurs. *Journal of Business Venturing, 18*, 301–331.
De Vries, E. J. (2006). Innovation in services in networks of organizations and in the distribution of services. *Research Policy, 35*, 1037–1051.
Delgado, M. (2011). *The Role of Intellectual Capital Assets on the Radicalness of Innovation: Direct and Moderating Effects*. Working Paper 2011/05. University of Madrid, Faculty of Economics.
Desmarchelier, B., Djellal, F., & Gallouj, F. (2013). Environmental policies and eco-innovations by service firms: An agent-based model. *Technological Forecasting and Social Change, 80*, 1395–1408.
Edvinsson, L. (1997). Developing intellectual capital at Skandia. *Long Range Planning, 30*, 366–373.
Edvinsson, L., & Malone, M. (1997). *Intellectual capital: Realizing your company's true value by finding its hidden brainpower*. New York, NY: HarperCollins.
El Telbani, N. (2013). The Relationship between intellectual capital and innovation in Jawwal Company-Gaza. *Jordan Journal of Business Administration, 9*, 619–650.
Gales, L., & Mansour-Cole, D. (1995). User involvement in innovation projects: Toward an information-processing model. *Journal of Engineering and Technology Management, 12*, 77–109.
Gomezelj Omerzel, D. (2010). The impact of knowledge management on SME growth and profitability: A structural equation modelling study. *African journal of business management, 4*, 3417–3432.
Gomezelj Omerzel, D. (2014). Entrepreneurial and customer orientation as predictors of innovativeness in tourism firms. *Academica turistica, 7*, 15–27.
Gupta, A. K., & Souder, W. E. (1998). Key drivers of reduced cycle time. *Research Technology Management, 41*, 38–43.
Hair, J. F., Black, W. Jr., Babin, B., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate data analysis* (6th ed.). New Jersey, NJ: Pearson Prentice Hall.
Hipp, C., & Grupp, H. (2005). Innovation in the service sector: The demand for service-specific innovation measurement concepts and typologies. *Research Policy, 34*, 517–535.
Hogan, S. J., Soutar, G. N., McColl-Kennedy, J. R., & Sweeney, J. C. (2011). Reconceptualizing professional service firm innovation capability: Scale development. *Industrial Marketing Management, 40*, 1264–1273.
Hormiga, E., Batista-Canino, R. M., & Sanchez-Medina, A. (2011). The role of intellectual capital in the success of new ventures. *International Entrepreneurship Management Journal, 7*, 71–92.
Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal, 6*(1), 1–55.
Hurwitz, J., Lines, S., Montgomery, B., & Schmidt, J. (2002). The linkage between management practices, intangibles performance and stock returns. *Journal of Intellectual Capital, 3*, 51–61.
Inkpen, A. C., & Tsang, E. W. K. (2005). Social capital, networks, and knowledge transfer. *Academy of Management Review, 30*, 146–165.
Ivankovič, G., Janković, S., & Peršić, M. (2010). Framework for performance measurement in hospitality industry: Case study Slovenia. *Ekonomska istraživanja, 23*, 12–23.

Jones, S. (2005). Community-based ecotourism – The significance of social capital. *Annals of Tourism Research, 32*, 303–324.
Kalkan, A., Bozkurt, O. Z., & Armanc, M. (2014). The impacts of intellectual capital, innovation and organizational strategy on firm performance. *Procedia - Social and Behavioral Sciences, 150*, 700–707.
Kim, D. Y., & Kumar, V. (2009). A framework for prioritization of intellectual capital indicators in R&D. *Journal of Intellectual Capital, 10*, 277–293.
Laperche, B., & Picard, F. (2013). Environmental constraints, product-service systems development and impacts on innovation management: Learning from manufacturing firms in the French context. *Journal of Cleaner Production, 53*, 118–128.
Ling, Y. H. (2011). The influence of intellectual capital on organizational performance - knowledge management as moderator. *Asia Pacific Journal of Management, 30*, 937–964.
Ling, Y. H. & Jaw, B. S. (2006). The Influence of international human capital on global initiatives and financial performance. *The International Journal of Human Resource Management, 17*, 379–398.
Longo, M., Mariani, M. M., & Mura, M. (2009). The effect of intellectual capital attributes on organizational performance. The case of the Bologna Opera House. *Knowledge Management Research & Practice, 7*, 365–376.
Madhavan, R., & Grover, R. (1998). From embedded knowledge to embodied knowledge: New product development as knowledge management. *Journal of Marketing, 62*(4), 1–12.
Mansury, M. A., & Love, J. H. (2008). Innovation, productivity and growth in US business services: A firm -level analysis. *Technovation, 28*, 52–62.
Mariz-Pérez, R. M., Teijeiro-Alvarez, M. M., & García-Alvarez, M. T. (2012). The relevance of human capital as a driver for innovation. *Cuadernos de economía, 35*, 68–76.
Nahapiet, J., & Ghoshal, S. (1998). Social capital, intellectual capital, and the organizational advantage. *Academy of Management Review, 23*, 242–266.
Nieves, J., Quintana, A., & Osorio, J. (2014). Knowledge-based resources and innovation in the hotel industry. *International Journal of Hospitality Management, 38*, 65–73.
Nonaka, I., & Takeuchi, H. (1995). *The knowledge-creating company: How Japanese companies create the dynamics of innovation*. Oxford: Oxford University Press.
Nordin, S., & Westlund, H. (2009). Social capital and the life cycle model: The transformation of the destination of A°re. *Tourism: An International Interdisciplinary Journal*, 57, 259–284.
O'Cass, A., & Sok, P. (2013). Exploring innovation driven value creation in B2B service firms: The roles of the manager, employees, and customers in value creation. *Journal of Business Research, 66*, 1074–1084.
Ooi, C. A., Hooy, C. W., & Som, A. P. M. (2015). Diversity in human and social capital: Empirical evidence from Asian tourism firms in corporate board composition. *Tourism Management, 48*, 139–153.
Orfila-Sintes, F., Crespi-Cladera, R., & Martinez-Ros, E. (2005). Innovation activity in the hotel industry: Evidence from Balearic Islands. *Tourism Management, 26*, 851–865.
Oslo Manual. (2005), Retrieved from http://www.oecd.org/science/inno/2367580.pdf
Pikkemaat, B., & Peters, M. (2005). Towards the measurement of innovation – A pilot study in the small and medium sized hotel industry. *Journal of Quality Assurance in Hospitality & Tourism, 6*, 89–112.
Pikkemaat, B., & Weiermair, K. (2007). Innovation through cooperation in destinations: First results of an empirical study in Austria. *Anatolia, 18*, 67–83.
Rhyne, L. C., Teagarden, M. B., & Van den Panhuyzen, W. (2002). Technology-based competitive strategies – the relationship of culture dimension to new product innovation. *Journal of High Technology Managemenet Research, 13*, 249–277.
Roos, G. & Roos, J. (1997). Measuring your company's intellectual performance. *Long Range Planning, 30*, 413–426.
Sánchez-Sellero, P., Rosell- Martínez, J., & García-Vázquez, J. M. (2013). Innovation as a driver of absorptive capacity from foreign direct investment in Spanish manufacturing firms. *Procedia - Social and Behavioral Sciences, 75*, 236–245.

Scheidegger, E. (2006). Can state promote innovation in tourism? Should it?. In OECD (Eds.), *Innovation and Growth in Tourism*(pp. 11-15). Paris: OECD.
Schultz, T. W. (1971). *Investment in human capital: The role of education and of research*. New York, NY: The Free Press.
Shakina, E., & Barajas, A. (2014). Value creation through intellectual capital in developed European markets. *Journal of Economic Studies, 41*, 272–291.
Stewart, T. (1991). Brainpower. *Fortune, 123*, 44–50.
Subramaniam, M., & Venkatraman, N. (2001). Determinants of transnational new product development capability: Testing the influence of transferring and deploying tacit overseas knowledge. *Strategic Management Journal, 22*, 359–378.
Subramaniam, M., & Youndt, M. A. (2005). The Influence of intellectual capital on the types of innovative capabilities. *Academy of Management Journal, 48*, 450–463.
Sumedrea, S. (2013). Intellectual capital and firm performance: A dynamic relationship in crisis time. *Procedia Economics and Finance, 6*, 137–144.
Tajeddini, K. (2010). Effect of customer orientation and entrepreneurial orientation on innovativeness: Evidence from the hotel industry in Switzerland. *Tourism Management, 31*, 221–231.
Thakur, R., & Hale, D. (2013). Service innovation: A comparative study of U.S. and Indian service firms. *Journal of Business Research, 66*, 1108–1123.
Tiron Tudor, A., Zaharie, M., & Osoian, C. (2014). Innovation development needs in manufacturing companies. *Procedia Technology, 12*, 505–510.
Toivonen, M., & Tuominen, T. (2009). Emergence of innovations in services. *Service Industries Journal, 29*, 887–902.
Triguero, A., & Córcoles, D. (2013). Understanding innovation: An analysis of persistence for Spanish manufacturing firms. *Research Policy, 42*, 340–352.
Ucbasaran, D., Westhead, P., & Wright, M. (2008). Opportunity identification and pursuit: Does an entrepreneur's human capital matter? *Small Business Economics, 30*, 153–173.
Weiermair, K. (2006). Product improvement or innovation: What is the key to success in tourism?. In OECD (Eds.), *Innovation and Growth in Tourism* (53-67). Paris: OECD.
Weiermair, K, Peters, M., & Frehse, J. (2005). *Innovation in small businesses vs. MNEs*. In Proceedings of the AIEST (Association Internationale d'Experts Scientifiques du Tourisme) 55th Congress, Brainerd, MN, USA: August, 28 – September, 1, 2005.
Wincent, J., Anokhin, S., & Ortqvist, D. (2010). Does network board capital matter? A study of innovative performance in strategic SME networks. *Journal of Business Research, 63*, 265–275.
Wu, S. H., Lin, L. Y., & Hsu, M. Y. (2007). Intellectual capital, dynamic capabilities and innovative performance of organizations. *International Journal of Technology Management, 39*, 279–296.
Wu, X., & Sivalogathasan, V. (2013). Intellectual capital for innovation capability: A conceptual model for innovation. *International Journal of Trade, Economics and Finance, 4*, 139–144.
Zerenler, M., Hasiloglu, S. B., & Sezgin, M. (2008). Intellectual capital and Innovation Performance: Empirical evidence in the Turkish automotive supplier. *Journal of Technology, Management and Innovation, 3*, 31–40.
Zhao, W., Ritchie, J. R. B., & Echtner, C. M. (2011). Social capital and tourism entrepreneurship. *Annals of Tourism Research, 38*, 1570–1593.