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**31 May - 2 June, 2018
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2018

**TOURISM
IN FUNCTION OF DEVELOPMENT
OF THE REPUBLIC OF SERBIA**

Tourism in the Era of Digital Transformation



**THEMATIC
PROCEEDINGS**

I



**UNIVERSITY OF KRAGUJEVAC
FACULTY OF HOTEL MANAGEMENT
AND TOURISM IN VRNJAČKA BANJA**



The Third International Scientific Conference

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DEVELOPMENT OF THE REPUBLIC OF
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Thematic Proceedings

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Tourism in the Era of Digital Transformation

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FOREWORD

The Faculty of Hotel Management and Tourism in Vrnjačka Banja organized the third International Scientific Conference Tourism in function of the development of the Republic of Serbia, Tourism in the Era of Digital Transformation that was held in Vrnjačka Banja from May 31st to June 2nd, 2018. For the purpose of this year's Conference, 84 scientific papers were presented by 157 participants coming from USA, Finland, Italy, Romania, Republic of Macedonia, Bosnia and Herzegovina, Montenegro, Croatia and Serbia.

The Conference is organized in the function of exchanging ideas and experience of the participants coming from Serbia and abroad for the purpose of future tourism development, with the special emphasis given to the impact of modern technologies on tourism and prospects for the development of tourism in Serbia and other countries in the era of digital transformation.

The Thematic Proceedings, as a result of the Conference, are published in two volumes, and will be available to a wider audience, scientifically and practically focused on tourism-related multidisciplinary issues.

Publishing of Thematic Proceedings was financially supported by the Ministry of Education, Science and Technological Development of the Republic of Serbia.

Vrnjačka Banja,
June, 2018

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DIGITAL BRAND EXPERIENCE IN THE CONTEXT OF CULTURAL HERITAGE – A PILOT STUDY

Arja Lemmetyinen¹; Lenita Nieminen²;

Abstract

The aim of this case study is to explore whether, and if so how, digitalization adds value to the perceived brand experience. We interviewed four people for this pilot study, two of them representing the provider side of the brand, the Alvar Aalto cultural route and two representing the prospective visitors to one of the destinations along the route, the Ironworks Village in Kauttua, in Finland, with its two sites, the Terrace House and the Jokisauna. Many of the benefits of the digitalization of the brand were discussed through reflections on the empirical accounts of the informants that included the brand equity dimensions: brand awareness, brand associations, brand quality, loyalty and prospective digital value. A forthcoming study will focus on the digitalization stage of the brand and the perceptions of prospective visitors will be gathered more widely by way of a survey instrument.

Key Words: brand experience, cultural route, digital brand, Alvar Aalto
JEL classification: Z10

Introduction

The aim of this pilot case study is to explore, in the context of cultural heritage, whether and how digitalization adds value to the perceived brand experience. The study presents a route around cultural heritage sites consisting of individual buildings in Finland and globally designed by the world famous Finnish architect, Alvar Aalto, a pioneer of modern architecture and design. Aalto incorporated the principals of user-friendly, functional design in his architecture, which first emerged during the 1920s. The architectural expression of Aalto's buildings was enriched by

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the use of organic forms, natural materials, and an increased freedom in the handling of space. Aalto also designed many town plans. He also began to design furniture in the 1920s and was still very active in the 1960s and 1970s. There is an Alvar Aalto museum in Jyväskylä, the architect's home town.

In 2017, a group of 23 cities in Finland with connections to Aalto started a networking project with the aim of creating an international brand for a new *Alvar Aalto cultural route*. The route has been developed in partnership with the experts of the Alvar Aalto Foundation, tourist guides, and local tourism business operators from each area in Finland. In the future, the network of the route will be extended to include locations in 16 cities outside Finland hosting significant buildings designed by Alvar Aalto. The Alvar Aalto Foundation coordinates the project and has received funding from the Ministry of Education and Culture in Finland for the productization of cultural tourism. A new web service for visitors interested in traveling to sites featuring Aalto's architecture will be launched in May 2018 (visit.alvaraalto.fi). The Aalto Foundation is already using its website to promote the route as a themed tourism product combining architectural attractions connected to Alvar Aalto nationally and internationally in combination with premium travel services:

The site introduces you to a selection of prime examples of Alvar Aalto's architecture and high-quality travel services, forming fascinating Aalto-themed routes around Finland. (alvaraalto.fi)

In today's digitalized world, it is an only natural evolution of a cultural tourism brand like the Alvar Aalto Route to promote its services globally online. However, since most of the sites are not yet presented online, we concentrate in this pilot study on exploring the added digital value more or less as a prediction of the perceived added value. The phenomenon of value perception is discussed here both as a dimension of the classical customer-based brand equity, and in terms of how a digital customer experience can serve as a brand building element.

The joint brand identity of the actors reflecting the cultural heritage of the region

Lemmetyinen (forthcoming) has analyzed two case networks in the context of cultural heritage. Moreover, she focused on how the actors of

the networks perceived the brand identity of the network and how it was linked to the cultural heritage of the region it represented. The analysis of the two case networks shows that there is a connection between how the community is committed to its cultural heritage and the building of the brand identity of the place or region. The joint brand of a region or a destination is a symbolic sign of the cooperation that helps the marketer or the brander to harness single cultural firms together to promote a place brand (Lemmetyinen, 2010). The most essential issue is that the actors of the network are committed to a joint brand and that they share values, stemming for instance from the cultural heritage of the region. One of the two networks Lemmetyinen (forthcoming) investigated in her study is also focused on in this paper. In this specific case network, the Ironworks Village, the commitment was evident at least to some extent, whereas in the other investigated network there were no such signs at the point of the investigation (Lemmetyinen, forthcoming).

The mental structures and processes of the cooperation (see Lemmetyinen, 2010) reflect the joint values of the actors of the network. These, again, are visible in building the brand identity of the network. The brand theorist Schroeder (2009) states, nevertheless, that in order to be able to understand the brand identity of a network, one must research *the culture, the ideology, and the politics* involved in it. The elements of brand identity are as important to the identity of a place as are the better-known concepts of the *strategy* and the *value* in the context of brand building. In the case of the Ironworks Village, the cultural manager had for a long time coordinated the brand building process and this was clearly shown in the mental structure of the cooperation, which was grounded on the joint values of the actors and expressed in the joint *place* brand. When the cooperation has reached this level, the need for external coordination diminishes, and the actors of the network start to be more self-guided. From the viewpoint of the successful cooperation it is essential, however, that the actors feel affinity, which according to the interpretation of Lemmetyinen and Go (2010) reflects the level of the commitment the network-based community is attached to the joint values, the shared vision, and the umbrella brand.

Those people responsible for building a place or a network brand based on cooperative relationships between the actors, have to be aware of not only the traditions of the respective cultural heritage (Lemmetyinen & Go, 2010; Bianchini & Ghilardi, 2007) but also the current socio-economic reality of the place, and also its cultural life and the events

occurring in. This certainly seems to apply in the case of the Ironworks Village, where the cultural manager and the personnel manager together coordinated a wide network of cultural actors. The coordinated cooperation in the network helps the actors involved with it see the benefits of the cooperation, and to recognize and develop their capabilities in managing the network. Among these capabilities there are the brand building of the network or the region, learning together, and value co-creation, as well as managing and orchestrating the network (Lemmetyinen & Go, 2009).

The development of the cultural business and tourism in a manner that has a positive impact on the economy, culture, and environment of a region, demands resources. The coordination of the cooperation in the cultural networks does not benefit tourism alone but encompasses other fields in the creative cultural cluster too (Lemmetyinen, 2015; Lemmetyinen et. al, 2015).

At the basic level of the process of building the brand identity it is important to cement the strategic partnerships between the actors of both public and private sectors, since this is the only way the necessary platforms to be able to evolve. The case of the Ironworks Village has exemplified this fundamental requirement for a long time already. The idea is to bring the actors together in order to form *“a value creating, intentional or strategic network consisting of firms, organizations and facilities – which serve the specific needs and wishes of the customers and consists of actors, who are devoted to the activities and control the resources in cooperation with the other actors of the network”* (Lemmetyinen, 2010, p. 20). Bianchini and Ghilardi (2007), again, call for a more holistic, multidisciplinary, and lateral view on place branding, according to which the administrators responsible for it should invite urban historians, sociologists, anthropologists, political researchers, and psychologists to participate in the brand building process. This shows respect for diversity and an intention to move away from the tight borders of fields and sectors.

The factors improving and extending the digital customer experience

This section leads us to the classic theory of customer-based brand equity, which has been a target of marketing and branding literature for decades. Combining the concept of brand equity with the digital customer or brand experience is not a usual way to research a phenomenon. As we see it,

there is a need to understand customer experience in the context of digital offerings too. The rise of the customer experience to become a topical theme started from the usability and user experience. A natural way of understanding at least the most central customer experiences would be to recognize them and to understand what is happening in them. The significance of these experiences is ever more important from the viewpoint of the brand since the perceived brand is increasingly a result of single customer encounters.

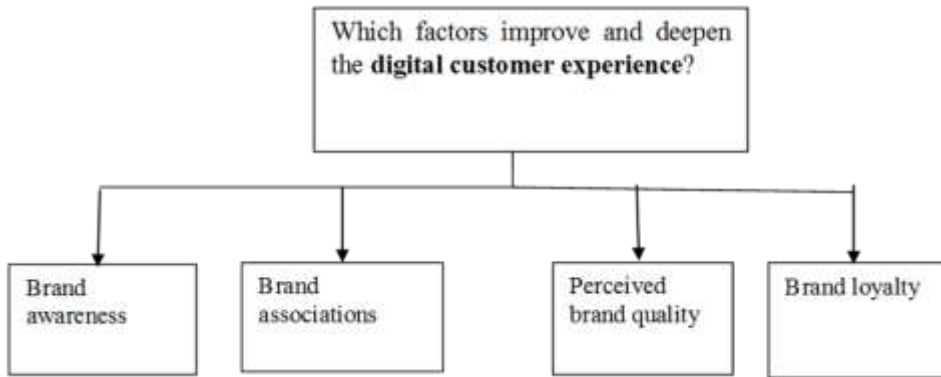
Aaker (1991; 1996) and Aaker and Joachimstahler (2000) state the dimensions of customer-based brand equity to be: brand awareness, brand associations, the quality of the brand, loyalty toward the brand, and the value addition of the brand. In this paper we have modified the last dimension to include the idea of how the digitalization of the brand adds value to it in the eyes of brand owners and visitors.

A known brand is familiar to its users and people tend to like other people, products, and services familiar to them. A well-known brand name communicates its presence. Awareness and consciousness is the key factor in almost all models of brand equity (Aaker, 1991; Kapferer, 1991; Keller, 1993; Agarwal and Rao, 1996; Na, Marshall & Keller, 1999; Rundle-Thiele & Mackay, 2001; Konecnik & Gartner, 2007; Boo et al., 2009; Kladou & Kehagias, 2014; Pike & Bianchi, 2016). Keller (2003, p.76) defines awareness as, “the ability of the customers to recall and acknowledge the brand and to connect its name, logo and symbol to certain associations in their memory.”

Brand associations as a dimension of a particular brand equity distinguish the product from the other products within the product group, or as in this case, a particular cultural route among others, or a way of spending free time and enjoying a cultural experience from any other way of spending leisure time. This makes it easier for the consumer, or the tourist, or the visitor to a route to handle the product or other information on the offering. It creates positive impressions of and feelings for the product; and as well as offering a reason to buy a souvenir or to visit a place, while also providing a platform for the extension of the brand.

The brand equity dimension addressing the quality of the brand in this case consists of the factors that influence how brand quality is perceived by the visitors to the sites. In other words, it examines the benefits for the visitor of the site.

Figure 1: Which factors improve and deepen the digital customer experience?



The brand equity dimension addressing the loyalty to the brand encompasses the factors that influence whether a visitor develops loyalty to the brand and will repeat his or her visit to the site.

The (digital) brand experience of the Alvar Aalto Route

In this section we introduce the Alvar Aalto cultural route that comprises several sites in Finland and abroad. Our specific interest in this research is focused on one of the sites, which is called for the Ironworks Village in Kauttua and is situated in the municipality of Eura (www.eura.fi).

Photo 1: *The Terrace House in Kauttua*



The sites are the Terrace House (1938) which is the best-known building designed by Alvar Aalto in Kauttua and the sauna and laundry building (1944) which is now known as the Jokisauna public sauna and café (Alvar Aalto – Kauttua, industrial and residential area, 2018).

We interviewed four informants, two of them represented the provider side of the brand. The local development manager Tuomas Pohjola described the Ironworks Village in Kauttua in the following words:

“Authentic industrial site and with historical layers: Industrial heritage: Kauttua ironworks, Ahlström paper mill, and the family connection to Alvar Aalto. Current companies: e.g., Jujo Thermal Architecture by Alvar Aalto, e.g., the Terrace House and Jokisauna, Idyllic park surroundings, traditional wooden houses, and Kauttua club mansion associated with the Ahlström family, place for cultural and arts and crafts events.”

We asked Tuomas Pohjola and two potential visitors (we use pseudonyms for anonymity reasons), Dr. Olivia and Dr. David to present their perceptions of the Alvar Aalto brand by filling in Table 1 reproduced below, to gather what they viewed as the connotations of the brand equity dimensions.

The forth informant was the project leader Noora Kiili, who is the network coordinator and producer of the Alvar Aalto Foundation. The development of the digital brand story of the Alvar Aalto Route may be crystallized through her interview. Both authors conducted a telephone interview with Noora Kiili on April 19 2018 with one of the authors making notes. The interview took about 20 minutes, and the authors reflected on the interview together just after it.

In the interview, we first briefly presented a kind of an interview guide to Noora. We wanted to establish how the Alvar Aalto Route has been developed, what kind of a project it is, and how the actors were going to use or utilize digitalization in the marketing of the route. Noora then told us that the project had been running for half a year and was funded by the Ministry of Education and the Alvar Aalto Foundation to the tune of EUR 40 000 and EUR 10 000 respectively. Noora was committed to working two days a week at the project but it was evident that she worked more than that. Noora says that the project is of course her job but it is also her passion. She sees a strong need to design the route and that is why she considers her work to be very rewarding. As she puts it, setting up the route now is “a matter of expediency”.

At the very beginning of her account Noora was keen to address a possible misunderstanding of the Alvar Aalto Route as a way to build a new brand. She emphasized that there was already a strong and established Aalto brand related to architecture which had a great potential for cultural tourism. The productization of the Alvar Aalto cultural route started with a group of Finnish Aalto destinations and towns, Helsinki and Jyväskylä being the best known, which have invested a great deal of

effort into promoting their Aalto sites. There are also some individual Aalto destinations that are already nationally and internationally well known as sites featuring designs by Aalto, such as the Paimio Sanatorium, built high in a pine forest from the late 1920s to early 1930s, and Villa Mairea, a private home designed by the architect Aalto and his wife for their friends Harry and Maire Gullichsen.

Photo 2: *Visitors admiring Alvar and Aino Aalto's interior design at Jokisauna*



The aim of the Aalto network is to increase the knowledge of Aalto in Finland and abroad. Combining resources with tourism, communications, and marketing will serve a new and varied audience with a special interest in architecture and Alvar Aalto's contribution to it. Consequently, the services along the Aalto route will be sold by authorized travel agencies specialized in selling premium package tours.

Photo 3: *Alvar Aalto designed furniture is presented and also for sale at the Terrace House in Kauttua*



Noora described how the essence of designing the Alvar Aalto Route is the fact that its elements already exist. First, there is a strong brand related to Aalto's architecture nationally and internationally. Second, there is a network of about 40 Aalto destinations and towns in Finland and around the world forming a group at the heart of the design of the Aalto cultural route. Noora says that she has been fascinated by the enthusiasm of the actors participating in the project and goes so far as to label them a dream

team: *“The municipalities and the representatives of the tourism resorts and companies are all fully behind this project.”* Third, the team shares a common vision for the Aalto route based on the themes derived from the core of the cultural heritage. These four themes are: light, air, health, and human space, which also inspired Aalto’s architecture visible at the different sites along the Alvar Aalto Route.

Now the aim is to raise the visibility of the other sites by organizing a network under a joint brand and launching a website and platform on which the entire route can be presented.

In all his architectural works, the environment, light, air, and health of the people are of the utmost importance to Alvar Aalto. The sauna and laundry building, Jokisauna for example, is situated on the lush slopes of a river bank. The Jokisauna is promoted on the web site of the foundations following his ideology: *“The routes include a unique riverside sauna designed by Aino and Alvar Aalto in Kauttua village, Eura, where you can enjoy a wild herb bath and hearty homestyle meal, surrounded by art and design classics.”*

Discussion

The informants representing the provider point of view, the project leader of the Alvar Aalto Route project, **Noora** Kiili and the development manager of the municipality of Eura, **Tuomas** Pohjola emphasized the stable and strong Aalto brand as the cornerstone and core of the digital brand awareness, as well. The most visitors at the different sites along the route have to date been enthusiastic architects or architecture students, who have been true admirers of the functional style of Alvar Aalto. Nevertheless, the site of the Ironworks Village, as such has also become famous and the visitors have been *aware of* “the area as an old industrial heritage site with appealing surroundings” as the development manager puts it. Most of the visitors, however have been niche-travelers interested in the art of Aalto. One of the visitors, Dr. **Olivia**, had visited another local site earlier and she, as a resident of Finland, was also aware of the most well-known Alvar Aalto products, the vase and the chair. The second visitor surveyed, Dr. **David** was not *aware* of Aalto’s work beforehand.

Below, the dimensions of the customer-based brand equity as reflected by the perceptions of the four informants are discussed.

Table 1: *Brand Equity Dimensions (BED) and Prospected or Perceived Added Digital (PAD) Brand Value*

Brand equity dimensions	Awareness	Associations	Quality	Loyalty	Prospected Added Digital Brand Value
Route project producer Noora Kiili: the provider point of view (route)	The Alvar Aalto brand is an old and stable brand.	Associates with the chosen themes of light, air, health, and human space.	The existing services only need to be productized. Here are, however, differences in how well the sites are preserved.	The core brand values are enhancing the loyalty of its visitors.	Digitalization is seen as a natural and necessary stage of the evolution not as a goal per se.
Development manager Tuomas Pohjola: the provider point of view (local site)	Limited regional and national general awareness. Niche audiences recognize the architectural attractions related to Alvar Aalto nationally and internationally.	An area with great potential for travel and recreation.	The Aalto experience in Kauttua is concrete and real in authentic environments with Aalto design. Ideal for day visits, business meetings, and seminars and for short vacations.	Easily accessible location, alternative service options, events and the idyllic surroundings create benefits that build especially emotional & attitudinal loyalty	Added Reality app to liven up some design details (= entertainment & wow effect). Virtual Reality or 360-images to allow visiting the attractions from home sofa (for inspiring to visit later)
Dr Olivia, visiting the Alvar Aalto cultural route sites in Eura 26.4.2018	At the first time I have recognized Aalto's design in the vases. Last year I visited Villa Maria in Noormarkku and its light and nature design really impressed me. After listening the	I know that Aalto's design is a symbol of Finland and outside the country, there are legends about it: simplicity, repeating the natural lines and colors. I expected to see	At both visits, I did not expect to see really interesting design objects, since both Normark and Eura are in fact a villages. But looking deeper we find real works of contemporary	I always remember a story and I will visit a site again and not once, in order to show to my friends why I liked that place. I have received good feelings there, so I will want to	It was difficult to find at Website English part. Also English text doesn't have pictures. It would also be nice to have some short videos. Maybe just photos with music.

	story about Vase I realized that brand Aalto is an important part of Finnish culture and history.	something similar to Villa Mairea and receive the same esthetic enjoying.	art: and inside, and outside. It surprised me.	repeat them. Also I will visit site in order to buy things in Aaltos design.	
Dr David, visiting the Alvar Aalto cultural route sites in Eura 26.4.2018	Despite Alvar Aalto having a considerable international reputation, I wasn't aware of his work and sites and am pleased I have now visited them.	It was quite strange to experience how a different style was perfectly blended into the Finnish landscape. This building is different from other local architecture in so many ways and yet is perceived as an integral part of it.	Since Eura is an industrial heritage village, industrial heritage buildings are expected to be marked by the Alvar Aalto touch of pure art and functionality which gives a new dimension to the term industrial heritage building. Different aesthetic experience is most significant benefit that tourist could get by visiting these sites	When it comes to loyalty, it is question-able if I would come again to see the same sites I have visited, however, having had a glimpse of the work of Alvar Aalto, I would certainly be interested to take a trip showcasing g more of his work.	Website related to the route and Alvar Aalto's work would be highly beneficial as it would offer tourists an opportunity to become aware of the brand (its importance and achievements). In addition, there is space for additional digital add- ons directed to both sites, which could provide a glimpse into the time when these buildings were designed and built (Virtual Reality and Augmented Reality)

Despite the fact that David was not familiar with the Alvar Aalto brand, the brand experience offered him an association with something he recognized from his earlier experiences: “by visiting the Terrace House I could find *an association* with Mediterranean architecture.” For Olivia, the Aalto design style is *associated* with Finnish design, repeating the natural lines and colors of the interior. For Tuomas, the area is *associated* with its great potential for travel and recreation, and for Noora the

associations were linked to the themes representing the work of Alvar, Aino, and Elisa Aalto and the themes were chosen to represent the core values of the brand owners, namely light, air, health, and human space.

When asked about the *quality of the brand*, Tuomas brought up the following aspects: “The Ironworks Village area is easy to reach and an open area to visit individually or as groups. Well preserved building mass. Operating restaurant and hotel facilities. Restaurant and service availability and opening times need attention, however.”

Noora also referred to the existing services that only needed to be productized and differentiated from each other. She pointed out, however, that in some areas the buildings designed by Aalto had not been well taken care of. David also mentioned the *quality* of the brand in the works of Alvar Aalto: “The Terrace House and Jokisauna that I visited are of high quality, and offer the tourist an experience that I had not expected, making it more unique and dynamic.” For Olivia, the visit expanded her earlier experience of the quality of the brand and she recognized new products and design which appealed to her.

With regard to *loyalty to the brand*, for Olivia the story of the brand is very important. Her loyalty to the brand is linked to its story. As she put it: “I will visit the site to show my friends why I visited that place, what I saw in reality, and convey the interesting story there, and it will show them why they should visit this place too.” For David, the *loyalty to the brand* in this case, may well manifest at another site of the route. Tuomas, again, sees that the “Easily accessible location, alternative service options, events, and the idyllic surroundings create benefits that build emotional and attitudinal loyalty in particular.” For Noora the core brand values will enhance the loyalty of visitors to the sites.

Finally, when considering the prospective digital value of the brand, the Alvar Aalto Route, the informants saw several opportunities. For Tuomas digitalization represents the following aspects, for example: It would give the visitors more information about how a single site, such as the Kauttua Ironworks Village, is connected to the other route destinations. Digitalization would also offer a potentially clearer story timeline, in that it would make it possible to inform visitors when and in which order Aino and Alvar Aalto designed the features at the destinations. Digitalization could also offer visitors online documentation, such as drawings, plans, and video interviews to support and extend the experience, that is, to

enhance knowledge and learning. Noora viewed the digitalization of the brand as a natural and necessary stage of its evolution, but not as a goal as such: “the web platform should be taken for granted, and the existing core services should be promoted online, but still, for me digitalization in this case is secondary in regard to the brand itself – we are not building a new e-brand, but we are providing the old and strong Aalto brand with e-tourism services.” David sees the value of digitalization in both the use of virtual and augmented realities to extend the brand experience and also suggests that “it is highly desirable to provide mobile apps that would allow tourists to search for further information, and to offer both an educational and an entertaining experience possibly involving storytelling and gamification.” For Olivia, a usable and visually rich web site would offer more added value to the brand experience.

Conclusion

In this pilot study we have discussed whether and how digitalization will add the perceived or prospective added value to the brand experience. Our empirical case was a cultural route of Alvar Aalto sites in Finland and in other countries in Europe. The brand of Alvar Aalto is very strong in Finland and among a niche group of architects and architect students around the world. The digitalization of the route would, however, increase the international awareness of the brand considerably. Digitalization would also increase the options to learn more about the brand and to increase the information associated with the brand. Offering potential visitors an opportunity to visit Alvar Aalto sites along the route in several other European countries would also increase both the quality of the brand and the loyalty toward it. For some visitors, quality would entail more Alvar Aalto designed products whereas some others would be impressed by the aesthetics of the buildings, which seem capable of suiting both southern and northern regions of Europe.

Digitalization would also make it easier to offer extended brand experiences in the form of virtual and augmented reality and as part of gamification and storytelling offerings.

Despite the many options for value-added brand experiences offered by digitalization, the core identity of the brand will remain as it is. The core brand identity of the Alvar Aalto cultural route is composed of the same ideas that were important for the work of Alvar, Aino, and Elisa Aalto, namely the themes of air, light, health, and human space. For many

visitors, the authentic brand experience remains the most important thing. However, few would deny the inevitable benefits digitalization of the brand could offer visitors.

A forthcoming study will focus on the digitalization stage of the Alvar Aalto cultural route brand and the perceptions of the potential visitors will be gathered on a wider international scale via a survey instrument.

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DIGITAL INTANGIBLE CULTURAL HERITAGE AS A TOOL FOR IMPROVEMENT OF SERBIAN CULTURAL TOURISM

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Abstract

Cultural tourism, including both tangible and intangible cultural heritage (ICH), is strongly affected by the current development of information and communication technologies (ICTs) and the concept of sustainability. This paper addresses the question of applying digital ICH as a tool for improvement of cultural tourism competitiveness in the Republic of Serbia (RS) as a candidate country in the EU joining process. Using desktop study objectives and social scientific research methodology, this paper considers the international legal framework for ICH safeguarding, the practice of digitization of European ICH and its application in cultural tourism. It identifies the main stakeholders in RS, their contribution to ICH digitization and the obstacles they face. Following the RS Government development priorities - Digitization and Education – the paper concludes by recommending further research of eTourism for Development, as a strategic use of ICTs by community-based tourism to foster visibility, connectivity, and competitiveness of Serbian cultural tourism.

Key words: intangible cultural heritage, cultural tourism, Serbia, digitization

JEL classification: O33, Z32

Introduction

In contemporary global community, population seeks meaningful leisure time, thus setting tourism industry as an important part of social development in the 21st century. Among numerous predictions, one states that “by 2030, the number is anticipated to reach 1.8 billion, meaning that

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in two decades' time, 5 million people will cross international borders for leisure, business or other purposes such as visiting friends and family every day, besides the four times as many tourists traveling domestically" (WTO, 2011). Consequently, tourism is an agent of cultural, as well as environmental change, including the global level (Cooper & Hall, 2008).

In the 21st century, sustainability revolution is gaining strength. The popularization of responsible tourism helps to minimize tourism's negative impacts on the environment and maximize its positive contributions to local communities. Various organizations (e.g. Center for Responsible Travel – CREST) actively manage travel and destinations in an environmentally and culturally responsible way and design tourism programs and individual trips carefully, in order to provide desired experience, while leaving a positive environmental footprint (CREST, 2017). Due to the increasing awareness of the environment, as well as the social longing for historic and art heritage, cultural tourism has become mainstream. This has been called the democratization of culture (WTO, 2015).

The competitiveness of tourism industry is closely linked to sustainability. United Nations (2015) defined the promotion of inclusive and sustainable economic growth and implementation and devising policies to promote sustainable tourism that creates jobs and promotes local culture and products as some of the targets of Sustainable Development Goals by 2030. The Sustainable Development Strategy for Serbia (Government of the Republic of Serbia, 2008) identifies a need for an action plan for the adaptation of economic sectors to climate change. Therefore, the research that investigates local capability for sustainable development of the RS was extremely important as a tool for monitoring and guide lining for future decisions of policy makers (Radović et al., 2015). The European Commission Communication Agenda for a sustainable and competitive European tourism proposes solutions to the challenges of sustainable tourism. Ensuring that new tourism development is of a scale and type that follow the needs of the local community and environment, a sustainable management can reinforce the long-term economic performance and competitiveness (European Commission, 2007). Consequently, EU tourism policy identified cultural tourism, including both tangible and intangible heritage, as a driver for sustainable social and economic development (Mergos & Patsavos, 2017).

Although recently conceptualized and brought into general attention for safeguarding, intangible cultural heritage (ICH) is also recognized as a resource for cultural tourism. Offering a variety of opportunities for research, safeguarding, and presenting of ICH, the Digital Revolution affects both tourism and ICH. The development of information and communications technology (ICTs) notably contributes to the public understanding of the past and to the evolving social significance of heritage itself.

This paper addresses the question of using digital ICH as a tool for improvement of cultural tourism competitiveness in Republic of Serbia on the regional and European market. Using desktop study objectives and social scientific research methodology, this paper considers the international legal framework for ICH safeguarding, the practice of digitization of European ICH and its usage in cultural tourism. Furthermore, the paper identifies the main stakeholders in ICH digitization on national level in Republic of Serbia and the obstacles they face in this demanding cross-sectoral task. Besides scientific literature, the official publications of the relevant authorities in Serbia and broader international community were examined (EU, NATO, UN, etc.). Finally, the paper emphasizes the good practice examples, following both development priorities of Republic of Serbia – Digitization and Education.

Legal framework for safeguarding ICH

It was a long way for intangible cultural heritage to be legally regulated. While UNESCO (1972) *Convention Concerning the Protection of the World Cultural and Natural Heritage* has been implemented, it was noted that cultural heritage does not only refer to tangible elements, but also to oral traditions and other forms of creation. The first international instrument developed around the intangible aspects of cultural heritage was the UNESCO (1989) *Recommendation on the Safeguarding of Traditional Culture and Folklore*. It was not very productive in practice, since the recommendation only suggests the actions that member states could take, but does not oblige them (Ležaja, 2016). Nevertheless, UNESCO further efforts towards raising awareness and formal acknowledging the ICH resulted in *Proclamation of the Masterpieces of the Oral and Intangible Heritage of Humanity* (2001-2005). Finally, in 2003 The General Conference of the UNESCO adopted the *Convention for the Safeguarding of the Intangible Cultural Heritage*. As one of the

main reasons for safeguarding ICH, it states that ICH is “a factor in bringing human beings closer together and ensuring exchange and understanding among them” (UNESCO, 2003a). In article 2.1 of the Convention is stated:

“The “intangible cultural heritage” means the practices, representations, expressions, knowledge, skills – as well as the instruments, objects, artefacts and cultural spaces associated therewith – that communities, groups and, in some cases, individuals recognize as part of their cultural heritage. This intangible cultural heritage, transmitted from generation to generation, is constantly recreated by communities and groups in response to their environment, their interaction with nature and their history, and provides them with a sense of identity and continuity, thus promoting respect for cultural diversity and human creativity. For the purposes of this Convention, consideration will be given solely to such intangible cultural heritage as is compatible with existing international human rights instruments, as well as with the requirements of mutual respect among communities, groups and individuals, and of sustainable development.”

Here we see that ICH is not strictly limited to spiritual creation, but also includes objects and environment related to the intangible heritage. As an integral part of the cultural human rights, ICH is a reflection of cultural differences and it is essential for both community and individuals. On the national level, it is up to each State Party to identify and protect the ICH (article 11), establish a national inventory of ICH elements in their territory (article 12), and include local community in the ICH management (article 15). UNESCO has a leading role in international promotion of ICH (Ležaja, 2016). In order “to ensure better visibility of the intangible cultural heritage and awareness of its significance, and to encourage dialogue which respects cultural diversity” (UNESCO 2003, article 16) *Representative List of the Intangible Cultural Heritage of Humanity* is established. It is intended to include ICH elements that are significant for a local community or a group of people. So far it includes 470 elements corresponding to 117 countries.

Digitization of European ICH

Digitization of cultural heritage is a focal point for the past several years. ***Charter on the Preservation of Digital Heritage*** (UNESCO, 2003b) points out that “the digital heritage of all regions, countries and

communities should be preserved and made accessible, so as to assure over time representation of all peoples, nations, cultures and languages” (article 9). As a cultural expression of human work, digital heritage creates new legacy and helps the interpretation, communication, and conservation of cultural heritage. Pescarin (2016) writes: “Although the accepted UNESCO definition of Digital Heritage concerns any digital material referred to our heritage that has a value and needs to be preserved (UNESCO, 2003a), Digital Heritage is used today by the scientific community in a wider sense, referring to ICT applications and technological approaches to our cultural and natural heritage, or, better, to the use of digital media in the service of heritage (Cameron & Kenderdine, 2007). Digital Heritage is a domain that comprehends several different research fields and disciplines, from museography to computer graphics, from archaeology to design, from art history to engineering, from archives to statistics, etc. It is therefore a general term, which includes many ICT topics and heritage themes, and in most cases most of nowadays research lays in the overlapping and interconnection among them” (p. 1).

The European Commission (2011) *Recommendation on the digitization and online accessibility of cultural material and digital preservation*, following the Europe 2020 strategy, states that the Digital Agenda for Europe is looking for the benefits of information technologies for economic growth and the life quality of European citizens. The digitization of Europe’s cultural memory includes print, photographs, museum objects, archival documents, sound and audiovisual material, monuments and archaeological sites.

The European Commission has created Europeana, the EU's cultural heritage digital portal www.europeana.eu, to enable the development and accessibility of digital cultural heritage. So far, Europeana offers more than 50 million artworks, artefacts, books, videos and sounds from across Europe. Its overall target is to digitize the entire cultural heritage of Europe by 2025. As the Council of EU’s (2016) *Conclusions on the role of Europeana for the digital access, visibility and use of European cultural heritage* stated, Europeana engages the research and innovation, education, tourism, and creative sectors (p. 11).

The growing usage of ICTs enables a new level of research and safeguarding of ICH. It also reveals unexplored areas that broaden our understanding of both tangible and related intangible heritage (Đorđević 2016). According to *Recommendation on the digitization...* in 2011 only

2 % of content in Europeana was sound or audiovisual material – possible presentations of ICH. It is suggested that increasing the underrepresented content accessible through Europeana will make the site more interesting for the users, and should therefore be encouraged. For example, acoustic heritage includes the archaeology, architecture, music (song, chant, religious practice...) and the soundscape (Đorđević et. al 2017), which recordings are also included in Europeana.

However, Europeana project was criticized as a website that “seems to offer little more functionality than a blog-standard portal”, does not promote common standards, does not provide details on institutional contribution (White, 2011) and also has limited functions considering ICH (Cozzani et al., 2017).

Addressing the risk of irretrievably disappearing and losing certain elements of ICH due to the globalization and intercultural contacts, the EU funded project i-Treasures was created in order to develop an open and extendable platform to provide access to ICH resources for both research and education – transmission of traditional intangible and rare arts from living human treasures to new generations. Its goal is to digitally treasure and improve the accessibility and presentation of ICH, and thus raise public awareness (Cozzani et al., 2017). Although not directly linked to tourism, this project is an example of cross-sectoral cooperation with multiple mutual benefits. In the same innovative manner that i-Treasures attempt to go beyond the encyclopaedic approach and offer a direct involvement of learners, cultural intangible tourism should go beyond watch, hear and taste, and offer a complete tourist experience, sensitive to various tourists’ needs and supported by the essential role of ICTs.

ICH Digitization as a prerequisite for Cultural Tourism

Cultural tourism is one of the fastest growing kinds of tourism in the modern world. Hence, the tourism sector creatively draws upon the fullest range of expressions of culture to provide tourist products and experiences. On the other hand, a major paradigm shift is taking place in the world of heritage – there is less interest in tangible and more in intangible cultural heritage, largely motivated by demand from modern tourists (Kirshenblatt Gimblett, 2006; Smith & Robinson, 2006). Therefore, the content of Europeana web platform has a paramount importance, especially for creative development of stories and narratives in numerous domains: curatorship, education, tourism, genealogy,

university teaching, scholarly research and more. This is confirmed in the Athena Plus project, which included provisions for experimenting with potential uses of Europeana content for storytelling in a variety of settings. Thus, our digital society obtained new tools and environments for culture expression, increasingly encouraged by the development of social networking and mobile applications. Digital storytelling refers to the use of digital tools to tell stories; it is rapidly evolving, fostering innovation and creativity in the area of cultural tourism development (Dierickx et al., 2013).

International conference on Culture for sustainable cities, held in Hangzhou, China 2015, presented the experiences and best practices on how to manage cultural tourism as a driver for urban development (panel 8). It was pointed out that our understanding depends on data that should be gathered systematically on behaviour, attitudes, and cultural tourists' profiles. Simultaneously, the quality of cultural tourism management depends on creativity in defining cultural itineraries. Recognized as a driver for the sustainable urban development, creativity and cultural industries are placed at the core of development plans at the local and international level, through the activities of UNESCO Creative Cities Network (UCCN) that today comprises 180 cities from 72 countries. The Network covers intangible cultural heritage and contemporary culture in seven creative fields: crafts and folk art, design, film, gastronomy, literature, music and media arts. For example, 2008 UNESCO's City of Literature (one of the UCCN's programs) Dublin celebrates the *Bloomsday* as depicted in James Joyce's novel *Ulysses*. Followed by the dressing up in the style of the era, the celebration includes readings, performances, and visits to the places referenced in the book (<http://www.bloomsdayfestival.ie>). The festival is organized by the James Joyce Center and besides well-designed website, it is supported by an online exhibition of a Center's visual history.

The creativity in promoting tourism and heritage sector is also striking in the video response on the Brussels lockdown in November 2015. As a reference to the work of the Belgian well known surrealist artist René Magritte, the Brussels tourist Office's witty promotional YouTube video depicted the images of cats in bowler hats, playing the drums and skateboarding, and locals holding apples over their faces in the city landmarks, as an alternative social media message during terrorist threat. This video has been viewed over 150,000 times.

Cross-sectoral cooperation is emphasized in the WTO study (2012) *Tourism and Intangible Cultural Heritage* as a precondition for this kind of multiple mutual benefits:

“Partnerships between the tourism and the heritage/community sectors can only occur if both sides develop a true appreciation of the other’s interests and values. Tourism interests must develop an awareness of cultural heritage management concepts, ideals and practices, while cultural heritage management stakeholders require an understanding of what tourism is and how it works. Through mutual understanding, both groups can work to build on their shared interest in intangible cultural heritage (p. 8).”

As main opportunities of cross-sectoral cooperation, this study points out (1) the bundling of ICH tourism products (i.e. package of wildlife-based tourism in Africa that includes culture, livelihoods of rural communities), which further on has (2) “a potential to promote young people’s interest in ICH and thus its future continuity” (p. 11). This is an important opportunity, since local elders mostly undertake traditional cultural practices because young people avoid traditional and rural lifestyles.

The need for cross-sectoral cooperation is mutually recognized. The Convention (UNESCO, 2003a) encourages the international cooperation in any manner that would help safeguarding ICH, which also includes tourism. Article 19 states: “Without prejudice to the provisions of their national legislation and customary law and practices, the States Parties recognize that the safeguarding of ICH is of general interest to humanity, and to that end undertake to cooperate at the bilateral, sub regional, regional and international levels.”

In order to facilitate the application of the Convention (UNESCO, 2003a), the *Operational Directives for the implementation of the Convention for the Safeguarding of the Intangible Heritage* were adopted in 2008 (and have been amended every two years). The *Operational Directives...* (2016) have recognized that community centers and associations could have a key role in ICH transmission and informing the general public about its importance of those communities. Thus, they are encouraged to: „(a) be used by communities as cultural spaces in which their ICH is safeguarded through non-formal means; (b) be used as places for transmitting traditional knowledge and skills and thus contribute to intergenerational dialogue; (c) serve as information centers about a

community's ICH" (par. 108). Furthermore, this document has emphasized the links between ICH and both ICTs and tourism, encouraging official institutions (institutes, museums, archives, etc.) „to employ, when appropriate, information and communication technologies to communicate the meaning and value of intangible cultural heritage" (par. 109d) and States Parties to assess "the potential of ICH for sustainable tourism and the impact of tourism on the ICH and sustainable development of the communities, groups and individuals concerned" (par. 187a). Moreover, it has recommended "school trips to natural spaces and places of memory whose existence is necessary for expressing intangible cultural heritage" (par 107i).

Serbian stakeholders' contribution in ICH digitization

Ratifying the *Convention for the Safeguarding of the Intangible Cultural Heritage* (UNESCO, 2003a) in 2010, Republic of Serbia established a national network for ICH safeguarding that includes National Committee for ICH, Commission for the inscription in the ICH National Register, Centre for ICH at the Ethnographic Museum in Belgrade and 7 regional coordinators for ICH safeguarding.

Since the Center for ICH is in charge of the National Register of ICH maintenance, it launched the project "Digitizing the Documentation of the National Register of Intangible Cultural Heritage and the Application of New Information and Communication Technologies in the Protection and Promotion of Intangible Cultural Heritage" to adjust the documentation on ICH to practical needs in digital age, ensure and facilitate the access to ICH to ICH bearers, general public and professionals, and thus contribute to the identification, registration, promotion and safeguarding of national ICH. This project is supported by UNESCO Participation Programme.

National register of ICH in 2017 listed 37 elements: Saint Patron's Day, Prayer – St. George's Day ritual; Belmuž dish; Ritual of making and lighting farmer candles; Making of Pirot hard cheese; Rug-making in Pirot; Filigree craft, Krist Berisha, goldsmith based in Kraljevo; Craft of stonemasonry, Bela Voda; Pazar meat pie prepared in traditional way; Zlakusa pottery; Kosovo-style embroidery; Singing accompanied by gusle; Groktalica singing; Clamor singing; Era-style humor; Kolo dance, three-steps kolo, six-steps kolo; Rumenka kolo dance; Bagpipe playing; Pipe-playing practice; Kaval playing; Slovak naive art painting; Lazarica processions from Sirinička Župa; Wooden flask making in Pilica village;

Vuk's Convocation; Ojkača singing; Urban songs from Vranje; Easter Ritual of Guarding Jesus Christ's Tomb; Pirot-style storytelling; St. George day; Plum brandy; Coppersmith's trade; Rug-making in Stapar; Skill and craft of making kajmak; Cipovka – the skill and craft of making traditional bread in Vojvodina; Žmar making; White fairy; Lighting of St. Peter's lilas.

Figure 1: *Belmužijada, festival of belmuž dish in Svrlijig, Serbia*



Credits: *Dr Sci Bojan Jovanović, Military Medical Academy, Belgrade*

Other national documents also recognize ICH as a development resource. Strategy for Tourism Development of RS 2016-2025 (Ministry of Trade, Tourism and Telecommunication of the Republic of Serbia, 2016) points out ICH as the ongoing trend in tourists' expectations (p. 22) and the diversity of customs and the culture of community life as the main tourist attractions (p. 74). Strategy for Culture Development of RS 2017-2027 (Ministry of Culture and Information of the Republic of Serbia, 2017b) emphasizes the need for interdepartmental cooperation in order to “establish a stronger partnership between administrative and professional cultural heritage protection institutions with other stakeholders that can contribute to its more effective protection, revitalization, and use” (p. 9). As a part of the promotion of cultural heritage for tourism development, this Strategy encourages the accessibility of cultural heritage through digital content (p. 86) and stresses the internationalization as a factor of general development (p. 6). It has set the goal to obtain at least five inscriptions on the UNESCO's *Representative List of the ICH of Humanity* (p. 124). So far, we have two - *Saint Patron's Day* and *Kolo dance, three-steps kolo, six-steps kolo*.

Figure 2: *Traditional craft of stone roof covering in village Maće, documented in the film "Maće plate: stories from a craft workshop" (2012)*



Credits: *Marija Dragišić, Institute for the Protection of Cultural Heritage of Serbia - Belgrade*

National Center for Digitization was established in 2002 with the overall goal to form a consortium of leading domestic cultural and research institutions involved in the digitization of heritage. So far this consortium includes Mathematical institute SASA, Faculty of Mathematics University of Belgrade, National Library, National Museum in Belgrade, Institute of Archaeology, Archives of Serbia, Republic Institute for the Protection of Cultural Monuments-Belgrade and Yugoslav Film Archive. Although National Center for Digitization is focused on the cultural heritage, the cooperation on the systematic digitization of ICH with relevant before mentioned national bodies for ICH safeguarding has not been developed yet. On the other hand, defining

the process of digitization the ***Guidelines for digitization of cultural heritage in the Republic of Serbia*** (Ministry of Culture and Information of the Republic of Serbia, 2017a) considers the standards for audio and video material.

Virtual museums on Serbian ICH include various range of ITCs, from a simple web site of the project *Danube magic touch – virtual museum* to more complex *Nikola Tesla Experience: Virtual Reality Museum* project that requires VR headset and the project *Virtual Museum Mihajlo Pupin* that virtually simulates the space of a museum we are used to in physical reality. Virtual tours of permanent exhibitions of National museums in Kragujevac and Pančevo are also showing a tendency to make our heritage closer to contemporary society. Moreover, documentary movies on our ICH are also used for promotion, e.g. *Maće plate: stories from a craft workshop* (2012).

It is important to highlight that the policy makers' aims are not being matched by institution and financial commitment because the costs of the public money spent on digitization is not so transparently presented. In this process, the position of the local self-management which has deteriorated during the last few years also has to be considered. The state of the least developed municipalities is quite alarming. Although many plans and projects for different improvement programs have been devised, positive results are being achieved rather slowly (Radović, 2012).

Since the Government of the Republic of Serbia emphasized Digitization and Education as the development priorities, it is important here to consider eTourism for Development (eT4D), defined as the strategic use of ICTs by community-based tourism to foster visibility, connectivity, and competitiveness, hence creating local socio economic development (Figure 3). As an emerging interdisciplinary research area, eT4D requires further research by ICTs for development community, both theoretically (on the relation Development Studies – Tourism Studies – ICTs and researching the impact of ICTs for community based tourism) and practically (fostering use of ICTs, enhancing digital literacy, thus enabling peripheries to be accessible electronically by global travelers that are looking for alternative tourism experiences) (Rega & Inversini, 2016).

Figure 1: *eTourism for Development (eT4D) conceptualization*



Source: *The adjusted graphic is based on the one authored by Rega & Inversini, 2016, p.20*

Obstacles in ICH digitization in Serbia

It is necessary to be aware of the rights of local communities to maintain their identities as well as to determine what constitutes ICH and how it should be documented and represented (Blake, 2009). This is important in a multi-ethnic country such as Republic of Serbia. Therefore, we should strive towards participatory approach to heritage (where local community has an active role in identification and valorisation of ICH), proportional representation of different ethnic groups in ICH digitization and National Register of ICH. That way, we will also prevent the potential accusation that the majority ethnic group receives more promotion, folklore is state-sponsored, etc.

Although the Government of Republic of Serbia emphasized Digitization and Education as the development priorities, we are still missing relevant strategic documents, such as the Strategy for cultural heritage and the Strategy for Digitization, as well as the following action plans. However, the first steps are done in digitizing ICH, but the steady pace on the hard work of ICH digitization is not reached. Several Serbian institutions contributed Europeana with digital contents, but ICH digitization requires a systematic approach well thought through and adjusted to national priorities.

The Republic of Serbia has started the work on the identification and valorisation of ICH on the national level by establishing the ICH National Register and Centre for ICH. However, there is no established cross-institutional cooperation between National Center for Digitization and Centre for ICH at the Ethnographic Museum in Belgrade. Thus, the effect of ICH safeguarding efforts on tourism is still weak, due to the lack in cross-sectoral cooperation, which is necessary for reaching the Serbian tourism competitiveness in EU market.

Considering digital ICH and the cross-sectoral cooperation between tourism and heritage/community, the significant obstacle lies in an unequal regional development of ICTs infrastructure. That not only reduces the development of e-contents and services related to tourism, but also prevents the upgrading of skills of local inhabitants in rural areas, keeping them from meeting the needs of contemporary cultural tourism.

In the last decade, Serbian tourism industry faced various challenges and changes. Numerous destinations are recognized at the regional as well as in the European tourist market. A lot of efforts are put into the promotion and ongoing campaign to increase the interest of foreign tourists to visit the most popular tourist destinations in Serbia (Radović & Vojinović, 2017). Digitization of ICH should contribute to bridge the current gap in promotional activities and desired outcome of better positioning of the Serbian cultural tourism on the global market.

Conclusion

Tourism is a main driving force of the global cultural exchange, which provides the experience of the past and present community living – customs, festivities, traditions, etc. This paper shed light on the ICH digitization as a tool for improvement of cultural tourism in the Republic of Serbia, the candidate country in EU joining process.

According to the UNESCO (2003a) *Convention for the Safeguarding of the Intangible Cultural Heritage*, which Republic of Serbia ratified in 2010, it is up to each State Party to identify and protect its ICH, establish ICH national inventory and involve local community in ICH management. Besides having a leading role in ICH promotion, UNESCO also encourages the preservation of digital heritage that represents all peoples, nations, cultures and languages. This is also supported by the Digital Agenda for Europe (European Commission, 2011), which is

looking for the benefits of ICTs for cultural memory. Hence, Europeana has been created as the EU's cultural heritage digital portal that includes both tangible and intangible heritage.

ICH digitization is becoming a prerequisite for cultural tourism as well. It helps avoiding the dominance of stronger cultures and disappearance of local cultural traditions. There are many initiatives for the creative use of ICTs that communicates the meaning and the value of ICH, and its potential for sustainable tourism – Athena Plus project, UNESCO Creative Cities Network, Brussels tourist office videos, etc.

Identifying the stakeholders and questioning their contribution in ICH digitization in the Republic of Serbia, we have pointed out several obstacles in ICH digitization and its application in cultural tourism on the national level:

- (1) Not taking care of proportional representation of ethnic groups in ICH National Register and ICH digitization, which leads to accusations for the promotion of the largest ethnic group and state-sponsored folklore
- (2) Non-existence of relevant strategic documents
- (3) The lack of cross-institutional cooperation on national level
- (4) Unequal regional development of ICT infrastructure.

Having in mind the development priorities of Republic of Serbia – Digitization and Education – we have suggested the further research and application of eT4D as a strategic use of ICTs in tourism, in order to improve and secure the competitiveness of Serbian cultural tourism in the world wide market.

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BRAND MANAGEMENT IN THE FUNCTION OF GLOBAL PROGRESS OF COMPANIES: INVESTIGATION OF THE INNOVATION AND INFORMATION TECHNOLOGY ROLE

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Abstract

This paper aims to undertake an empirical study to investigate the potential contribution of innovation and information technology in order to company achieve better brand performance in the efficient global market. The sample of firms surveyed included 63 Serbian companies from the population of TOP 300 Serbian companies. A research model linking innovation, IT and brand performance is developed and tested. Innovation and IT are considered effective tools for increasing the brand performance. The main result is a very strong positive relationship between innovation, IT and brand performance. It is also argued that brand management directly affects corporate profitability. It is important for a firm to understand relationships between innovation, information technology, brand performance and financial impact in business.

Key words: Brand, Globalisation, Innovation, Information technology, Brand performance

JEL classification: M15, M21, M31.

Introduction

Brand management, especially during last two decades, has become an effective tool for achieving superior results in business operations. Since there is a general trend of globalization, companies are looking for new ways to acquire and maintain their competitive advantage. Companies manage brands aiming to achieve sustainable high value in the global market. An innovation in business processes becomes a powerful tool for

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acquiring competitive advantage of a company. Application of the modern information technology supports the implementation of an innovation. Brand management concept is founded on a continual implementation of the innovation and information technology in the process of brand building. Brand management encourages the development of innovation in business operations, which are carried out with the application of information technology. If a company wants to achieve exceptional brand performance in the market, it is necessary to be able to create a high-quality brand of strong recognition. Application of innovation and information technology enables the building of unique brand features. Brand differentiation creates superior value of a product or a service, which exceeds customer expectations, and which is not offered by any of competitors. Superior value of a brand can be the source of a sustainable advantage of the company and in the long-term, based on innovation and information technology, and strategic brand management can help achieve better financial performances in business operations (Mandarić, 2016).

A literature overview

Globalization and branding strategy

Brand management has become a critical factor of competitiveness for companies as an answer to a dominant influence of globalization on business operations, market liberalization, and removal of trade barriers and intensified competition in the business environment (Sarkar & Singh, 2005). The daily expansion of new brands and their global availability shows great profit potential in this area (Louro & Cunha, 2001). Perceiving the brand as a potential source of competitive advantage, businesses are finding new ways to promote their products and services and create a brand. Evaluation of the brand significantly affects the market value of the company. The growing interest of businessmen from year to year attests to the fact that the brand has become one of the main tools for positioning the company in the market and fight for the loyalty and trust of consumers. (Mandarić & Milovanović, 2016). Strong globalization trend and a company's efforts to retain existing and acquire new consumers in the time of rapid technological changes and innovative achievements, while under pressure of strong competition, imply the creation of new business strategies within the globalization environment.

Globalization includes the whole series of political, economic and social activities based on modern information technology and intensifies different interactions within and between states and businesses. In the economic sense, its basic indicator is a convergence of consumers' needs and requirements in the world market. Globalization, as an economic process, began to take place on the foundation of the new information and telecommunication technology at the end of the 20th and the beginning of the 21st century and enabled connecting the world into a whole. Adjusting business operations to challenges of globalization becomes a precondition for a company to make a connection to the world market. The goal is to connect business partners, consumers and information flows as fast and efficient as possible, regardless of geographical distances.

Globalization of the business operations is the process of gradual elimination of economic borders with simultaneous increase of international trade and transnational interactions. It marked the beginning of the technology and market integration process, which helped individuals, companies and nations to coordinate their activities around the world at lower costs. Globalization made it impossible for domestic economic activities to remain isolated from the activities in the international markets.

Accepting the global orientation of a company represents the highest level of internationalization in international business, with a goal of achieving the global competitiveness. A company generates income based on the potential synergies derived from global business operations, global orientation towards markets and development of an adequate business strategy. Global macroeconomic trends have (in)direct effects on each individual and a company, while business operations have become unimaginable without technological and informational achievements. Globalization phenomenon testifies to growing world interdependence, events in one country become related to events in other countries around the world. Development of information technology and its application in the area of communication is just one of the characteristics of business globalization (Djordjević, 2001).

Internationalization of business and globalization of markets demand development and implementation of new business strategies whose main goal is the global competitiveness and growth of profitability. Aaker and Keller recognize the source of competitive advantage in the branding strategy, only that as prerequisites of successful branding they emphasize

company's business operations in the global market and utilization of the modern technology (Aaker, 2007; Altshuler & Tarnovskaya, 2010). In addition to benefits in the process of brand building, the technology simplifies its distribution and enables global availability.

In the time of globalization and intense competition in the market, more and more companies take on new functions and expand the scope of their business operations. Companies are under pressure to retain existing and acquire new customers, lower the costs, manage the risks and use new technology as the source of competitive advantage. The goal is to achieve long-term global market relevancy. Companies set as their priority in business to connect clients and information flows faster and more efficiently, regardless of geographical distances. Globalization and modern technology have enabled simpler expansion of a large number of brands around the world and a greater diversity of offer. Companies, depending on the market they are focusing on, try to develop specific products and services for the targeted market segment. Kigen believes that in the contemporary economy there are four categories of products: local products, international products, multinational products and global products – created to meet the needs of the global market segment (Milisavljević, 2004).

Globalization has intensified the movement of the capital and investments in the foreign companies, purchase of local companies and their brands, so the brands from the aspect of origin and ownership can be defined through four models: original domestic brand, quasi-domestic brand, acquired local brand and foreign brand. From the company's performance strategy aspect, the term global brand includes (Veljković, 2010):

- The brand which has been developed on the basis of the same strategic principles and which has been positioned in the same way in different markets;
- High level of marketing performance standardization in all markets;
- Possible adjustment of certain marketing mix tools to specific local markets.

According to Levitt, global brand is the one that uses the same marketing strategy in all targeted markets. It is the brand available to consumers in all significant world markets in relatively standardized form. Relevant marketing experts have tried to quantify criteria for the term global brand. A global brand is considered to be the one that is sold in precisely defined number of countries or whose sales outside the domestic market meets the

minimum market share. However, it is important to mention the perceptual criteria that must be met by the global brand, which means that the brand has a strong position in the domestic market and geographically balanced international sale followed by the significant level of recognition around the world.

One of the leading world consulting firms in the area of brand, Interbrand, makes the classification of global brands based on the following criteria (Interbrand):

- Brand can be called global if it goes beyond geographical and cultural differences, if it is widespread throughout the world's economic centres and if it enters the main markets in the future. Quantitatively, it is necessary for a brand to: make at least 30% of income outside the country of origin and not have more than 50% of total income coming from one continent. It is necessary that brand is present on at least three continents and to have broad geographic coverage, in emerging and new markets;
- It is necessary to have adequate and publically available data on financial results of a brand;
- Financial result must be positive, it is understood that investment in brand must be economically justified and that it makes more income than operational and financial costs;
- Brand must have public profile and recognition that goes beyond its own market.

AC Nielsen, a market research company, defines global brands based on (Johansson & Rankainen, 2005; Slotegraaf & Pauwels 2008):

- Cumulative sales within one year, which must be at the level of minimum US\$1 billion;
- Significant presence in the main geographical regions (Latin America, Asia and Pacific, North America, Europe and the Middle East);
- Sales outside the country of origin, which must make at least 5% of the total brand sales.

Numerous attributes make a global brand recognizable and superior in the market. However, the global brand cannot be imagined without innovations and information technology. Superior technologies and the strong brand vision are the enabling factors for building an international (global) brand (Altshuler & Tarnovskaya 2010). Definitions of the global brand point to availability of a brand and ability of global companies and

economies to monitor brand presence and sales through modern technology. The role of innovation and information technology in the process of global brand building is multiple, both in the development stage – brand creation, and in the stages of production, distribution and performance monitoring in the global market.

Innovative and technological achievements in the function of brand management

Enormous strategic opportunities are emerging during the period of increasing globalization, rapid technology changes and newer lifestyles. Innovation has become the major differentiator in the competitive race and innovative companies have learned to sustain themselves over long time spans. Companies like Bayer, GE, IBM, P&G, Siemens, and Unilever, as well as newer companies such as Apple, Google, Intel, Microsoft, and Nokia have also achieved the aim of sustained growth and rewritten the rules of the game through a series of innovation strategies (Bowonder et al., 2010).

In order to build long-term relationships with customers (CRM), special attention should be paid to the concept of creating value for consumers. This concept had been gaining importance in the 90s of the XX century. Modern enterprises in a competitive environment started to realize the importance of creating and delivering value to customers, as a condition for the survival and profitability on the market. (Sekulić & Mandarić, 2017). Technology permeates entire value chain of a company and it is not limited only to the production in the narrow sense. Innovations should have strategic impact on company's operations regardless of the level of technology. Basic instrument for understanding the role of technology in competitive advantage is the value chain. A company is, both set of activities, and set of technologies. Technology is included in every activity which creates value, and that is why technological changes, thanks to the impact they have on virtually every activity in the value chain, can influence competitiveness. On the other side, existence of competition contributes to improvement and increase of production at higher technological level, but also contributes to continual product innovations and product quality improvement (Filipović & Kostić–Stanković, 2007).

Innovation can become a major competitive differentiator delivering benefits in three distinct dimensions (Bowonder et al., 2010):

- Exciting customers through new features, offerings, experiences, and services.
- Leading competitors with innovative responses, including proprietary technologies.
- Expanding, enriching, and diversifying the product portfolio to achieve different growth trajectories.

The world economy has undergone radical change over the last two decades under the strong influence of information technology, new inventions and market globalization. Information and communication technology - ICT has created a new standard in business. Competitiveness of a country depends significantly on ICT index, which, in turn significantly affect the overall Growth Competitiveness Index. Economic growth, and growth of the company is determined by the quality of the development of IC technology (Lovreta et al., 2010). The intensive development of information technology and electronic commerce over the Internet has enabled companies to take a larger geographic area of the market for business procurement, production and sales. Acceptance of new technologies reduced the geographic, social and cultural distance between consumers in different parts of the world.

Marketing, as a very important business function, is focused on consumers, delivery of goods and services to consumers (meeting their needs), but on the other side, it must carry out its activities in a way that complementary with other business activities in order to achieve competitive advantage. Considering the environment, which is characterized by more and more dynamism and uncertainty, in order for companies to remain competitive, they must continually introduce innovations. Innovation is the key determinant of acquiring and maintaining a competitive advantage. Representatives of the Government of the Republic of Serbia view innovation as the key factor of the country's competitiveness. Serbia and countries in the region must have the growth of GDP per capita according to the parity of buying power of additional 2% in order to catch up with the countries of Southeast Europe by 2020. Accomplishing this goal is possible only if Serbia and the countries in the region start creating competitive advantages based on innovations.

Innovation-oriented management monitors and implements the newest technology, tries to create consumers' needs for new products and services, and is constantly searching for new sources of competitiveness.

The level of company's innovation depends, to a great extent, on the competitiveness of a country. Industry sectors and companies that are too protected from the foreign competition are not inclined to innovation (Porter, 2008; Porter et al., 2007). It is useful for the national economy if the state sets high standards for the product quality and functionality. Thus, it encourages the innovation of a company and competitiveness of the domestic economy.

Adoption of progressive technologies is suitable for implementation of strategic goals of a company and for meeting the consumers' needs. It can improve relative competitiveness of a company in the market and increase its profitability, but there are certain limits to the development and application of technological achievements. Globalization and new technological breakthroughs in business operations constantly speed up the tempo of changes, which brings about intensive struggle among the competition (Altshuler & Tarnovskaya, 2010; Fletcher, 2003). On the one hand, competitive struggle contributes to shortening of a life cycle of a product and service. On the other hand, implementation of the brand management, together with the newest technological achievements, enables creating and/or developing of (non) existing brand of a company, with slight costs of modernization, compared to the costs of the new product development, thereby extending the life of existing institutions, products and services. Consumers' needs and demands change faster guided by a diverse offer of the competition and by a multitude of available product information, mainly found on the internet. Competitive advantage, as a response to it, is achieved through new improvements of the marketing package of products and services, which creates a spiral of speeding up the rhythm of new changes. Model of global orientation and strong competition requires a new concept of marketing approach of companies to their business operations, as evidenced by increasing investments in the specialized and consumer-oriented technology. Today, marketing practitioners have the high requirement for information and communication technology (ICT) within their marketing practice (Brady et al., 2008).

Technological progress increases the efficiency of the workforce. However, numerous studies indicate lack of coordination between human and physical resources. Companies neglect the essential role of the human capital in determining the competitive advantages of a company faced with growing influence of new technology. That is why the integration of technological goals with organizational characteristics is necessary in

order to achieve competitive advantage for a company. Diffusion of technological achievements leads to competitive advantage only with accumulation of human capital. Human resources management is an important factor for the total performances improvement (Chen & Hua, 2005).

Competitiveness of a company depends on the application of innovation and modern technology in the process of brand creation. Two development components can contribute to the faster global progress of a company, with limitation that numerous other internal and external factors affect the business process. It should take into account the fact that globalization affects the innovation, especially technological, to have a short life cycle and that character of the competition is daily changing. In the long-term, a company cannot capitalize on the same strategy for many years, but it should adjust its business strategy to the changes and new market requirements.

Baseline assumptions and methodology of empirical research

Based on the analyzed socio-economic trends within business operations, baseline research hypotheses were defined:

Hypothesis 1: Investments in information technology contribute to:

- a. Development of innovations in business operations (H1a)
- b. Achievement of better brand performance in the market (H1b)

Hypothesis 2: Investments in innovation is a positive determinant of brand performance in the market (H2)

In the Republic of Serbia, research studies linking brand management with innovative and technologic performances in business operations have not yet been published. Questionnaires were distributed to addresses of 300 most successful companies in 2010. A total number of returned completed questionnaires was sixty-six (66), which makes the response rate of 22%. Having in mind that out of 66 returned questionnaires, three of them could not be considered valid (they were not fully completed), the final number of questionnaires is 63, which in terms of percentages corresponds to the response rate of 21%. The response rate is adequate and satisfactory, compared to other studies conducted among corporate respondents (Hart, 1987) (see, Wong & Merrilees, 2008). In the Australian researchers' study, the response rate is 18% (Wong &

Merrilees, 2008). German researchers considered the response rate of 14% (Burmam & Zeplin, 2009) proper, and researchers from Korea even had much lower response rate (Lee et al., 2008) in the study which included survey of businesses. Questionnaires were completed by persons in charge of brand management who have both information on brand performance in the market and the data on investments into innovations and information technology.

Baseline foreign research model applied in Australia (Wong & Merrilees, 2008) has been adjusted to the goal of empirical research. The questionnaire included thirteen statements through which latent variables were measured (innovation, information technology and brand performance). The questionnaire that was used had structured questions (statements) in the format of rating-scale, in which the respondent received a number of marked categories that correspond to the range of responses. The seven-level Likert scale was used (from 1 (one) – absolutely disagree to 7 (seven) - absolutely agree). Respondents were asked to express their level of agreement with statements in the questionnaire. Advantages of this format are that the respondents answer to thus formulated questions in a faster and easier manner, there are fewer possibilities for errors to occur due to differences in the way the questions were asked and the answers recorded.

After deciding on the selection of respondents and the structure of the questionnaire, the conditions were met to start distributing questionnaires. The research was conducted by using an e-mail survey. Thanks to the rapid development of internet technology, e-mail surveys have become more and more significant in the modern marketing research. E-mail surveys enable speed in data collection, while their application eliminates any possible influence of interviewers on the attitudes of the respondents. Since the respondents were legal entities (corporate respondents), it was presumed that these clients had computer skills and that they regularly check their electronic mail.

Internal consistency of statements was measured by the value of the Cronbach's alpha coefficient. The Cronbach's alpha is the coefficient showing the usefulness of the scale over which a particular scale is measured. Values of this coefficient range from 0 to 1, where it is considered that values greater than 0.7 indicate adequate reliability and consistency (Chen & Hua, 2005). The Table 1 shows values of the Cronbach's alpha coefficient.

Table 1: *Model variables*

Variables	Cronbach's alpha
Innovation	0.86
Information technology	0.90
Brand performance	0.81

Source: *Authors*

Values of the Cronbach's alpha coefficient for brand orientation, brand performance and financial results are 0.86; 0.90; 0.81, respectively. The obtained values indicate adequate reliability and internal consistency of the manifest variables. The Cronbach's alpha for the whole model is 0.87.

Presentation of results

The data were processed in SPSS (SPSS 17). During the data processing, descriptive and analytical statistics methods were used. The descriptive methods that were used included relative numbers, mean and standard deviation. The correlation and regression methods were used for evaluation of relationships. Table displays of data were suitable for better clarity of results.

Results of the descriptive statistics

Through the application of the descriptive statistical methods in data analysis from 63 companies in the Republic of Serbia, minimum and maximum values, mean values and standard deviations were obtained. Results of the descriptive statistics are shown in Table 2.

Table 2: *Measures of descriptive statistics*

Variables	N	Min	Max	Mean	Std. Deviation
Innovation	63	2.50	7.00	5.88	1.14
Information technology	63	1.00	7.00	5.62	1.29
Brand performance	63	2.60	7.00	5.74	1.12

Source: *Authors*

Based on the data from the table, it can be concluded that the highest mean value is characteristic for innovation (5.88). Less evaluated variables in the model are brand performance (5.74) and information technology (5.62). Generally, the respondents evaluated all three variables in the model with high marks.

Based on the research results, it is evident that companies understand and highly value the significance of innovation and information technology in achieving the planned brand performance in the market. Low values of standard deviations indicate homogeneity of respondents' attitudes regarding all three variables in the model.

Results of correlation and regression analysis

Results of the correlation analysis are shown in Table 3 and, based on the value of the Pearson coefficient, the degree of dependence between variables in the model was determined. The Pearson coefficient shows the degree of dependence between two variables.

Table 3: *Correlations*

Variables	1	2	3
Innovation	1.00		
Information technology	0.729**	1.00	
Brand performance	0.713**	0.635**	1.00

** Correlation is significant at the 0.01 level (2 tailed)

Source: *Authors*

Intercorrelation matrix (Table 3) testifies to significant values of the Pearson coefficient. There is a high level of linear correlation between latent variables of the model. Even if we tighten the criteria and assume that values of the Pearson coefficient mean: 0.2 to 0.4 – weak correlation, 0.4 to 0.6 – moderate correlation, 0.6 to 0.8 – strong correlation, we can conclude that there is extremely strong correlation between innovation, information technology and brand performance in the market.

Tables 4, 5 and 6 show the linear regression results. The effect of the variable information technology on innovation, which is dependent variable, was tested in Table 4. The evaluation used a 95% confidence interval.

Table 4: *Regression analysis results (Dependent variable: innovation)*

Variable	β	t	Significance
Information technology	0.729	8.320	p<0.01

Source: *Authors*

Information technology has statistically significant effect on innovation (coefficient $\beta=0.729$, $t=8.320$, $p<0.01$). The relationship between independent variable (information technology) and dependent variable (innovation) can be described by linearly dependent function, where determination coefficient (R^2) is 0.532. The determination coefficient indicates the percentage of innovation variability described by the variable information technology. The rest is under the influence of other factors.

Table 5: *Regression analysis result (dependent variable: brand performance)*

Variable	β	t	Significance
Information technology	0.635	6.417	$p<0.01$

Source: Authors

The effect of the information technology on the brand performance is analyzed in Table 5. Based on the results of the regression analysis (coefficient $\beta=0.635$, $t=6.417$, $p<0.01$) it can be concluded that there is a significant effect of the independent variable (information technology) on the dependent variable (brand performance). The determination coefficient (R^2) is 0.403, which means that 40.3% of brand performance variability is described by the variable information technology.

Table 6: *Regression analysis result (dependent variable: brand performance)*

Variable	β	t	Significance
Innovation	0.713	7.942	$p<0.01$

Source: Authors

Table 6 shows the results of the regression analysis, where the independent variable is innovation, and dependent variable is brand performance. It can be stated that innovation has a statistically influential factor on brand performance (coefficient $\beta=0.713$, $t=7.942$, $p<0.01$). The determination coefficient is (R^2) 0.508 which means that 50.8% of brand performance variability is described by the innovation.

Concluding remarks

Innovation and information technology are important for the brand development in the global market. Although the creation of a successful

branding strategy is influenced by numerous factors, the importance of innovation and information technology must not be diminished. They contribute to better brand performance in the market and better financial results of a company. Starting with the results of regression analysis, a significant impact of the innovation and information technology on brand performance can be stated and on that basis, the initial research hypotheses can be confirmed (Table 7).

Table 7: *Hypothesis confirmation*

Model hypothesis	Results
H1a. Investments in information technology contribute to the development of innovations in business operations	Confirm Sig. (p<0.01)
H1b. Investments in information technology contribute to the achievement of better brand performance in the market	Confirm Sig. (p<0.01)
H2. Investments in innovation is a positive determinant of brand performance in the market	Confirm Sig. (p<0.01)

Source: *Authors*

The companies trying to achieve competitive advantage are forced, with the minimal possible costs, to develop characteristic competences or to accomplish differentiation thanks to the superior brand value achieved. The source of company competitiveness is in the balanced development of innovation and information technology in the function of creation of intangible (brand) property of high value. This type of property is hard to build and manage, but due to its specific features and, very frequently, uniqueness in the market, it creates a competitive advantage for the company and reaches a large market value.

The results of the sample, consisting of 63 domestic and foreign companies, have shown that there is a statistically significant correlation between innovation, information technology and brand performance in the market. Business development with the use of innovation and technology boosts competitiveness and international activity of companies. Globalization, as the highest phase of the business internationalization, resulted in changes in the approach to the brand management and large investments in brand development. Drucker's statement that innovations and marketing are the keys to the company success and that neglecting one of the factors leads to failure of business,

fully finds its justification in the concept of brand management. Strategic brand management starts its activity by developing brand vision which serves as a base for brand orientation concept (Mandarić, Milovanović, Sekulić, 2013). It is the marketing concept whose integral part are innovation and technology. The synthesis of modern technology and innovative approach to the development of products, services and entire business process provides full recognition and the quality of global brand.

Limitations of the research

Results of the research have several limitations. *First*, the potential subjectivity of respondents when giving answers is the limitation. The attitudes of top management were examined because they maybe gave subjective assessments of the statements in the questionnaire, often overestimating their efforts in understanding and implementation of innovation and information technology.

Second, the results are not representative at the level of all businesses in the country. In the future, it would be useful to include respondents from micro, small, medium and other large companies from the territory of Republic of Serbia in the research.

Third, sending and receiving questionnaires through an electronic mail has its drawbacks. Knowing that the questionnaires may have been filled by persons who are not responsible for the area of brand management or who have overestimated their role in company business operations is a potential limitation of the research results.

Possible directions for future research

It would be useful for the next survey to be conducted on a representative sample at the level of the overall Serbian economy. The sample would include micro, small, medium and big companies. This would create a complete picture of the contribution of innovation and information technology in brand development and brand results. It is possible that future research includes the respondents (companies) that belong to the same sector, perform same or similar activities. It is desirable to conduct research in sectors where there are numerous long-term investments in innovation, information technology and brand creation development (automobile industry, pharmaceutical industry, and the like).

Next research models should include new variables and enable testing of the dependencies between them. It is also necessary to explore other elements of business processes that contribute to better brand performance in the globalized market. A proposed model needs to include representative variables that can be integrated and thus improve knowledge on the contribution of innovation and information technology to the brand management development.

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MODELLING SERVICE QUALITY IN THE HOTEL INDUSTRY

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Abstract

Modern business circumstances, as a result of globalization, deregulation and technological development innovation, have forced companies to focus on improving their service levels and increasing customer satisfaction in order to remain competitive and achieve long-term survival. The first step towards improving services is to measure these services and assess the current level of service delivery. The aim of this paper is to introduce a model for those measures, as well as to explore the gap between customer expectations and perceptions with regard to the level of services that are offered. The perception is that the customer experiences the service provided, which is often vague and cannot be estimated with an exact numerical value. Therefore, the most suitable approaches for solving this problem are tools that provide fuzzy mathematics. In the paper, a fuzzy system is proposed for the evaluation of quality in hotel industry.

Key Words: *service quality, fuzzy mathematics, modelling, hotel industry*
JEL classification: C02, L83, D11, O15

Introduction

The increase of living standard and education level, as well as development of new information and communication technologies, lead to increase of customers' requirements. Modern man pays greater attention to the product/service quality. Such practice is present in all fields of life and work, and certainly in tourism, i.e. hospitality and other tourist services. Tourist organisations are aware of that, therefore they are trying to continually improve and enrich quality of their services in order

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to satisfy increasingly fastidious requirements of their guests. Creation of a business policy of tourist organisations should include active participation of employees and, if possible, service users, and not only their managerial structures. Such approach shall provide greater effects in work, in the interest of service users, organisation and its employees. In addition, this increases trust in the organisation and quality of its services, which is one of the most important assumptions for spreading the circle of potential users of its services. Organisational system functions as an open and a dynamic system by establishing certain relations with its environment and by responding to actual occurrences and requirements from the environment (Kulić, Milošević & Milutinović, 2017: 13).

Results of work and service quality of a tourist organisation are largely under influence of human resources management. System based on old, obsolete, rigid, strict, hierarchically set and unjust rules and principles is not and cannot be efficient and acceptable for employees. Without justice and work satisfaction there is no quality and productive work, which has a negative impact on quality of hospitality and other services in tourism. Managerial structures of an organisation must always be aware of that fact. Among other things, to take care of the treatment of employees and their legitimate requests at workplace, and in connection with work, and the extent to which their reasonable expectations from an organisation are realised and its managerial structures. Their personal, moral and professional integrity must be observed, which unfortunately, is not always the case. Such practice must be changed, in the interest of both an organisation and employees. Thus, that is in the interest of both users of hospitality and other services in tourism.

Quality means something that is good and valuable. Focus of the research was definition of the product quality, while the service quality was in the background and can be said neglected. Services present actions, performances and processes. Increase of the living standard, education and development of new communication technologies causes that service users pay greater attention to the service quality, and also, in the domain of tourist services. On the other hand, in order to improve the service quality, hotels require a precise understanding of needs and expectations of users of hospitality services and differences in users' expectations and perception of service quality. Employees have a big role in defining and predicting tourists' needs, but also in adapting tourist services and the process itself to the needs of tourists. This contributes to development of personalized and long-term relationships with service users, through

implementation of acquired experience and creation of satisfied and loyal users.

The unreliability of all complex systems or processes is mainly caused by the numerous of different activities, presence of sub-systems and interactions between the subsystems and different external or internal impacts, which may be constant or occasional (Kerkez & Gajović, 2016). Defining and measuring of service quality is a complex task. Service quality denotes different things for different people in different situations and time (Gazzoli, Hancer & Kim, 2013). Service users compare their own expectations with perception of received service (Getty & Thompson, 1994). Model SERVQUAL provided a conceptual framework for a corresponding testing and measuring of quality in the service sector. Model proposed by Parasuraman et al. (1988) is based on client's evaluation of service quality, by focusing on the difference between their expectations and perceptions. Authors state five dimensions that can define service quality. These are reliability, security, tangibility, empathy and responsiveness.

Scales used by authors for measuring are different, but the most commonly used ones are the ordinal and the cardinal scale. However, many criticise use of these scales; primarily critiques refer to results - results based on these scales do not necessarily present user's preferences. Human ideas and interpretations are often vague and unspecific, so they cannot be expressed by a precise numerical value. Techniques based on fuzzy mathematics proved to be rather useful in cases of imprecise information in certain processes. On the other hand, the integral approach and connecting of several models and techniques in order to obtain more precise and real results of the concerned research is prominent. Having in mind specific features of hospitality services, which comprise of a set of tangible and intangible factors, as well as technical solutions and skills, the assessment of quality is based on objective and subjective standpoints of service users. This paper shows the option of implementation of an integrated approach, the model Gap, and fuzzy mathematic techniques into a single system for assessment of hospitality services.

Client's concept of the service quality

Client's concept of the service quality was originally proposed in the beginning of eighties. Gronroos (1984) proposed the client's concept of

the service quality as well as the model of perception of the service quality.

Service quality was interpreted as a subjective idea that depended on comparison of clients' expectations of the service quality (i.e. the expected service quality) with their perceptions of the actual service quality (perceived service quality). Factors referring to perception of customers and decisions regarding the service quality, as well as related implications were studied by Parasuraman et al. (1994) and they proposed the service quality gap model. Model included five dimensions: tangibles, reliability, responsiveness, security, and empathy.

A set of certain qualitative criteria can exist for each service. However, many authors (Ghobadian et al., 1994, Johnston & Michel, 2008, Grönroos, 2004) tried to define a set of criteria/parameters that would include all types of services. Most commonly considered criteria in literature were:

1. Tangibles – includes presence of tangible, physical elements through a service capacity, physical condition of buildings and environment, appearance of staff and state of equipment, communication materials. Includes the following criteria: modern equipment;

- visual aspect of ambient elements,
- appearance of employees,
- visual attractiveness,
- materials connected to the service.

2. Customization – refers to readiness and ability to adjust services in order to satisfy clients' needs.

3. Access – easy access and making a contact.

4. Communication – informing clients on services in the language they can understand, but also the ability to understand clients in a certain language.

5. Security (assurance) – this criterion has gained significance recently, and refers to freedom from danger, risk and doubt. It includes the following criteria:

- physical security,
- financial security, making tourists feel secure when performing transactions,
- trust, ability of employees to inspire confidence of tourists,
- courtesy of employees,
- employees have knowledge that enables them to answer tourists' questions.

6. Understanding/knowing the customer – refers to paying of individual attention to clients, i.e. an attempt to understand client's specific needs and requests. Important criterion is recognition of a regular client.

7. Reliability, ability to provide services, i.e. promised service in time, precisely and reliably. It includes the following criteria:

- provision of a promised service,
- reliability in solving clients' problems,
- provision of a corresponding service during the first visit and later on, provision of a service at a promised time, and
- insisting on the *error-free policy*.

8. Courtesy, pleasant treatment, respect and politeness by employees toward clients.

9. Competence – employees should possess required skills, knowledge and information for an efficient provision of services.

10. Credibility, the extent of trust and confidence in service. Name and reputation and personality traits of employees from the first line of services contribute to the credibility.

11. Responsiveness – ability to efficiently deal with clients' complaints, readiness to assist and provide a fast service. It includes the following criteria:

- informing the guests of time when the requested service will be provided,
- speed of service provision,
- readiness to assist the guest at any time, and
- readiness of employees to respond to guests' requests.

12. Cost – price of the service. Price has a strong influence on the strategic positioning of providers. These are competitive criteria and often price and quality can be deemed as special characteristics. Price of the service has an economic and psychological meaning for a client and is a part of management of expectations and perceptions of clients. Connection between the service price and the client's satisfaction is reflected in fulfilment of economic and psychological significance of the price. Economic meaning for a client is reflected in the client's cost for a service in order to use such service, and if the price is acceptable taking into account the client's income. Psychological meaning of a service is reflected in the value that service has for a client. Client sees the price as the indicator of the service quality, i.e. it tells the client what he/she can expect from a service in terms of relation between quality and cost of a service. Client's sensitivity to the service price varies with clients.

13. Empathy – refers to provision of an individualized service through noticing and taking into account special requests from clients and observation of clients as individuals, including the approach, communication and understanding of users. It includes the following criteria:

- paying attention to tourists as individuals;
- paying personal attention;
- working hours of an organization in tourism;
- focus of employees on tourists' interests;
- understanding of specific needs of tourists/guests by employees.

Clients select certain products and services on the basis of a long-term satisfaction from such products or services. Client's satisfaction with a certain product or a service depends on the fact how such product or service has fulfilled the client's expectations. Quality of a product or a service and the client's satisfaction are two interconnected values. Significance of quality differs depending on the client, and the service quality is exclusively a subjective category. Connection between attributes of quality and clients' satisfaction is asymmetric and non-linear.

Specificities of the client's concept of service quality in the hotel industry

Factors that further complicate the task to define, deliver and measure the service quality include attributes such as imprecise standards, short distribution channels, and intense exchange of information between employees and customers and fluctuating demand, which are identified particularly in the hotel industry (Akbaba, 2006).

Growth of competitiveness implicates the need but also the capability to define the service quality in hotel industry, as well as identification of quality dimensions and its significance for clients. That means understanding the clients' perception, since the perceived quality is the main determinant that affects satisfaction of clients, therefore, it is necessary to study and identify criteria, according to which clients assess the service and attributes they deem the most important ones.

Nature of services makes measuring and maintaining of the quality difficult (Harris & Harrington, 2000) primarily due to the interaction between clients and providers. Therefore, an important quality indicator can be defined from the client's perspective, because they are created at

the same time with the process of production, delivery and use of the services, so that most researches are focused on the question: How is service quality assessed by clients and how can this quality be measured? (Edvardsson, 2005; Akbaba, 2006).

Literature recognises several models (scales) for measuring of service quality and clients' satisfaction, however, they are often too generalised and hard to implement in the hotel industry (Gržinić, 2007).

Properties of quality that are most commonly observed in the hotel industry are tangibility, reliability, responsiveness, empathy and security. A hotel service set like this, which presents a sum of effects of what is offered, used and received in the provider's facility, is subject to objective and subjective evaluations. Tangibility and reliability are possible to view in advance, unlike other properties that are manifested during provision of a service, i.e. after a service has been provided.

Service quality models

In their paper Parasuramm et al defined the model of five gaps in order to identify shortages in the quality. Initial point is the identification, i.e. the difference between expectations of service users - ES (expected service) and perceived service - PS (the actual service) provided at different stages of service delivery

Expectations of service users are standards to which a received service is contrasted, and are often defined in relation to what clients believe is going to happen. In the perfect system, expectations and perceptions should be at the same level. Expected service is in the function of oral communication, personal needs and previous experience, and often the element of the external communication is added.

SERVQUAL (service quality gap model) is a method based on 5 Gaps. Ever since its development, SERVQUAL is used in numerous services, including traffic, telecommunications, healthcare and medicine, enterprises, financial organisations, tourism, university education and other. Objective of the model is identification of gaps between users and actual service provided, as well as closing the gap and improving the customer service. If:

$ES < PS$ result is the service surprise

$ES \square PS$ satisfactory quality

$ES > PS$ quality is unacceptable.

Gaps are defined as follows Parasuraman, Zeithaml & Berry, 1985; Grönroos, 2004):

Gap 1 or the knowledge gap - a difference between consumer expectations and management of perceptions of consumers' expectations. Not knowing what the consumers expect is the main reason why the provider does not offer services according to the consumers' needs. This gap is possible to reduce or close by researching the market in order to gather information on the needs, wishes and expectations of guests.

Gap 2 or the gap in standards – a difference between management perceptions of consumer expectations and service quality specifications. It refers to difficulties during conversion of the hotel guests' requests in the actual hotel offer. It is often deemed that the guests' requests are not reasonable and real.

Gap 3 or the delivery gap – a difference in delivery, a discrepancy between service quality specifications and the service actually delivered. It occurs in interaction between employees and guests, i.e. when the management understands consumers' requests but the service is not provided in accordance with those requests. Gap can be reduced by adequate human resources management.

Gap 4 or the communication gap – a discrepancy between service delivery and what is communicated about the service to consumers. Increase of this gap is under influence of a difference between the promised and delivered service.

Gap 5 (service quality) is in the function of the first four gaps.

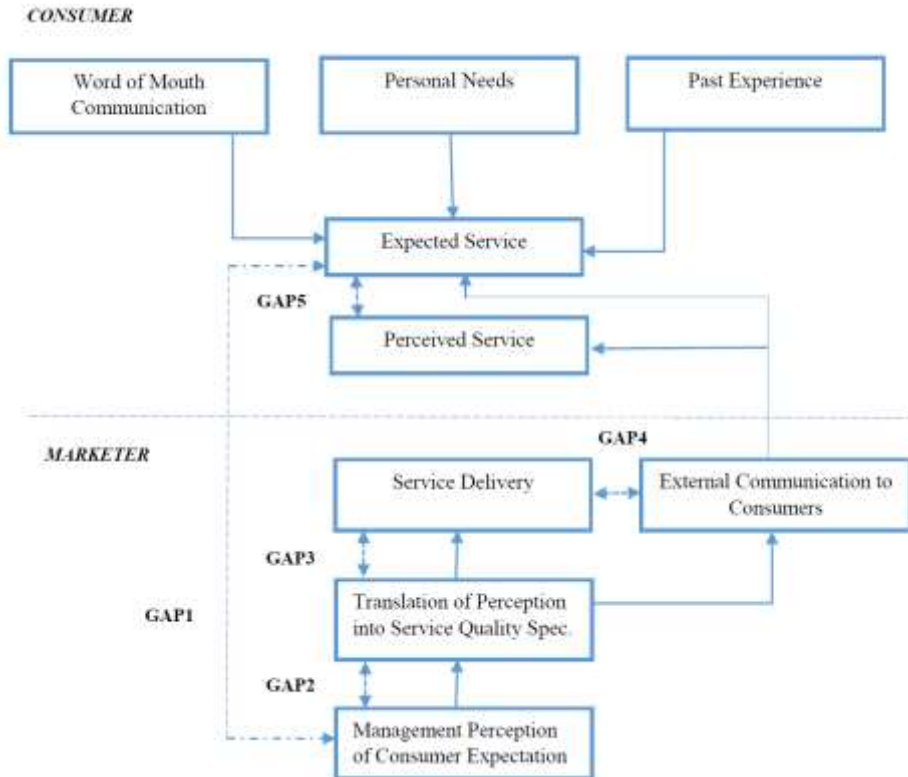
$$Gap\ 5 = f\ (Gap\ 1,\ Gap\ 2,\ Gap\ 3,\ Gap\ 4)$$

It presents a difference between consumers' expectations and perceptions and its value depends on the magnitude and direction of the gap between the expected service and the perceived service. Expected quality is what a guest believes he/she will get at the hotel, that the perceived quality presents what the guest believes he/she got.

SERVQUAL model served as the basis for development of other models for measuring quality of tourist services such as SERVPERF (Cronin & Taylor, 1994), LODGSERV (Knutson et al., 1991), LQI (Getty & Getty, 2003), HISTOQUAL (Frochot & Hughes, 2000) and other. However, proposed scales are insufficient to seize the assessment of service quality in the tourism industry (Albacete-Sáez, 2007; Buttle, 1996; Frochot & Hughes, 2000; Mei et al., 1999; Nadiri & Hussain, 2005).

Figure 1 shows a service quality gap model.

Figure 1: *Gap model*



Source: Parasuraman A, Zeithaml V, Berry L. (1985). A conceptual model of service quality and its implications for future research. *Journal of Marketing*, Vol. 49, No.4, p. 44.

An increasingly present opinion in the scholarly literature is that quality of services is a multidimensional and a multi-criteria problem, and that individual models cannot provide the most accurate evaluation of quality of hotel services.

Development and implementation of the model

Fuzzy systems and fuzzy technology are a mathematical approach based on which certain imprecise information can be mathematically modelled. Nature of human behaviour is to reason based on evidence, which presents the basis for making corresponding decisions and achievement of objectives. However, uncertainties and vagueness are the most common

reasons for errors in evaluation of characteristics and values of certain occurrences, because clear and accurate information on the environment is not often available. The theory of fuzzy sets and fuzzy logic enables the use of subjective assessments expressed by vague terms, relations and statements to describe problems, the choice of alternatives for decision, formulation of vague descriptions using fuzzy variables, and the presentation of outputs using linguistic concepts and relations or in the form of clear quantitative recommendations. (Gajović, Kerkez & Kočović, 2017). Soft computing techniques are group of unique methodologies, often complement to each other, and provide flexible information processing capabilities to solve real-life problems (Kerkez et al., 2018). Fuzzy mathematics can provide a corresponding alternative to the exact mathematical modelling of various dynamic systems that are highly vague or too complex to be expressed in simple and clear mathematical formulae.

Preliminary

In the basic type of a fuzzy set, the membership function has values in interval $[0, 1]$. If X is an arbitrary, nonempty set, fuzzy set A with values in interval $[0, 1]$ defined on X characterised by function $\mu_A : X \rightarrow [0, 1]$, i.e. the ordered pair (X, μ_A) is called a fuzzy set. Function μ_A is called the membership function of the fuzzy set A . Value $\mu_A(x)$ is interpreted as the degree of membership of an element x to the set A .

It is desirable to define operations with fuzzy sets so that there are more good features in crisp sets and their operations, which is valid for fuzzy sets. Fuzzy arithmetic is based on attributes that each fuzzy set, and thus a fuzzy number, can be completely and uniquely presented by using the α -cut of that set and that the α -cut of a fuzzy number is a closed interval of real numbers for all $\alpha \in [0, 1]$.

If $*$ denotes any of the four standard arithmetic operations, analogue operations can be defined even with closed intervals, then $[a, b] * [d, e] = \{f * g \mid a \leq f \leq b, d \leq g \leq e\}$ except in division, which is not defined if $0 \in [d, e]$. Basic arithmetic operations with fuzzy numbers are defined by the α -cut. Most commonly used fuzzy numbers are triangular fuzzy numbers and some operation are shown on figure 2.

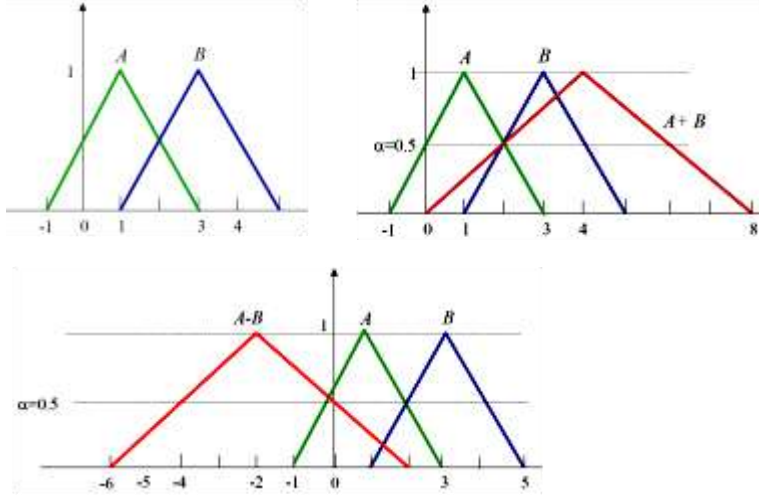
Often used and in many implementations deemed a default is the function of a distance between the point and the set.

For arbitrary two final sets $A = \{a_1, a_2, \dots, a_k\} \subseteq R^n$ and $B = \{b_1, b_2, \dots, b_m\} \subseteq R^n$ is with

$$d_E(A, B) = \sqrt{\frac{1}{m} \sum_{j=1}^m d_E^2(b_j, A)} \quad (1)$$

where $d_E(b_j, A)$ is the Euclidean distance between the point and the set.

Figure 2: Arithmetic operations with triangular fuzzy numbers



Aggregation operators combine several fuzzy sets in the described manner thus creating one set. All known means are aggregation operators. Axiomatic of aggregation operators in literature is not uniformly adopted, so various authors in their definitions state more or less conditions that a function should meet in order to be an aggregation operator.

A function $A: [0,1]^n \rightarrow [0,1]$ is called the aggregation operator on $[0,1]$ if it meets the conditions:

[Ag1] $A(0, \dots, 0) = 0 \wedge A(1, \dots, 1) = 1$, boundary condition.

[Ag2] $a_i \leq b_i \Rightarrow A(a_1, \dots, a_n) \leq A(b_1, \dots, b_n)$, function A is monotonically non-decreasing for all components.

In addition, the function A can have the following desirable properties.

[Ag3] Function A is continuous.

[Ag4] Function A is symmetric for all components, each tuple $(a_1, a_2, \dots, a_n) \in [0,1]^n$, and for each permutation p of a set $\{1, \dots, n\}$ is valid

$$A(a_1, a_2, \dots, a_n) = A(a_{p1}, a_{p2}, \dots, a_{pn})$$

[Ag5] Function A is idempotent, i.e. for each $n \geq 2$ and for each tuple $(a_1, a_2, \dots, a_n) \in [0,1]^n$ is valid $A(a_1, a_2, \dots, a_n) = a$.

Implementation of the model

For the purpose of this work authors used data from literature (Akbaba, 2006). Linguistic variables from the questionnaire (very low, low, moderate, high, and very high) correspond respectively to values from 1 to 5. Based on results of the SERQUAL model from the stated paper, the fuzzy aggregation operator was used to aggregate the evaluation of each attribute of the questionnaire using equation

$$A = (a_1, b_1, c_1) = (A_1 \oplus A_2 \oplus \dots \oplus A_n) \otimes (1/n) \quad (2)$$

and after transformation

$$A = \left\{ \frac{\sum_{i=1}^n a_1^{(i)}, \sum_{i=1}^n b_1^{(i)}, \sum_{i=1}^n c_1^{(i)}}{n} \right\} \quad (3)$$

Linguistic variable with a value 5 (very high) is assigned with A^+ , and variable with a value 1 (very low) is assigned with A^- in order to calculate the rating of the alternatives according to equations:

$$A^+ = \left\{ \left(\max V_{ij} \mid j \in J \right), \left(\min V_{ij} \mid j \in J^* \right), i = 1, 2, \dots, m \right\} \quad (4)$$

$$A^- = \left\{ \left(\min V_{ij} \mid j \in J \right), \left(\max V_{ij} \mid j \in J^* \right), i = 1, 2, \dots, m \right\}$$

After determination of values A^+ and A^- for all criteria, by using the formula (1) and Chen (2000) the Euclidean distance in a fuzzy environment can be calculated according to the formula

$$d^+ (M_{ij}, A_j^+) = \sqrt{\frac{1}{3} \left[(a_1^+ - a_1)^2 + (a_2^+ - a_2)^2 + (a_3^+ - a_3)^2 \right]} \quad (5)$$

$$d^- (M_{ij}, A_j^-) = \sqrt{\frac{1}{3} \left[(a_1^- - a_1)^2 + (a_2^- - a_2)^2 + (a_3^- - a_3)^2 \right]}$$

During the process of quantitative analysis, linguistic variables are converted into triangular fuzzy numbers, as shown in Table 2, after which fuzzy gaps are calculated.

Table 1: *Fuzzy perception and expectation*

Factors	Fuzzy perception	Fuzzy expectation	Fuzzy Gap
Tangibles	(3.79,4.51,4.94)	(3.99,4.49,4.52)	(-0.73,0.02,0.95)
Security	(3.84,4.56,4.95)	(3.84,4.52,4.95)	(-1.11,0.04,1.11)
Reliability	(3.65,4.41,4.88)	(3.76,4.53,4.92)	(-1.30,-0.12,1.12)
Empathy	(3.33,4.21,4.47)	(3.55,4.31,4.68)	(-1.35,-0.10,0.92)
Access	(3.73,4.44,4.86)	(3.73,4.48,4.96)	(-1.24,-0.04,1.13)

The difference between perceptions and expectations (SQ) represents service quality (Table 2). When SQ is negative, there is a service quality gap. Conversely, when SQ is positive, customer's expectations are greater than their perceptions.

Table 2: Result of the system-service quality

Factors	Perception	Expectation	Service quality
Tangibles	4.50	4.49	0.01
Security	4.56	4.52	0.04
Access	4.43	4.48	-0.05
Reliability	4.39	4.50	-0.11
Empathy	4.19	4.34	-0.15

The greatest expectations are connected with security (4.52). Security presents a very important dimension of the service quality by contributing to creation of an adequate image of the hotel in the guests' minds. Professional behaviour in critical situations and the positive attitude when dealing with guests' complaints boost the relation of trust and security. Security is perceived as a dimension with which the respondents are most satisfied (4.56).

The lowest satisfaction with the received service was recorded in the sector of empathy (4.19). With tangibles, the smallest difference was between the expected and perceived, while with empathy this difference is the greatest. It should be stressed that all expectations of guests are high.

Conclusion

This research identified five service quality attributes that represent the evaluative criteria customers use to assess service quality of the business hotels named as tangibles, security, reliability, access and empathy. The results indicated that the most important factor in predicting business travellers' overall service quality evaluation was security, and tangibles have emerged as the best predictor of overall service quality. Also, the results showed that in most cases the expectation was above perception (negative gaps).

Proposed model can assist providers to pay greater attention to areas with bigger differences between expectations and perception of quality of provided services, thus improving their services and adjusting already established procedures. Particularly important for service companies is to monitor the quality in meeting the needs and expectations of its customers, which creates a competitive advantage.

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TRANSFORMATION OF THE HOTEL PRODUCT IN THE DIGITAL AGE

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Abstract

The paper deals with the definition and perception of the basic features of the hotel product. It starts from its complexity, heterogeneity and intangible nature. The digital age necessarily imposes the transformation of the hotel product by using smart technologies that change its material elements. The paper points to examples of digitalization of some components of the hotel product. It is shown that digitization inevitably diminishes the need for the direct contact between hotel staff and guests. In this context, we want to answer the question of whether the hotel product will partially lose the service dimension that implies the exchange of emotions among people. In conclusion, the importance of finding an optimal relationship between individualization and digitization of the hotel product is emphasized.

Key Words: hotel product, transformation, digitalization, individualization, service

JEL classification: L83.

Introduction

There is a small number of papers that discuss the theory of hospitality, and therefore the hotel product. To be able to seriously devote ourselves to the transformation of the hotel product in the digital age, we need to understand the basic features of its creation and implementation.

A narrow definition of hospitality is based on the concept of the service and its basic features. Different authors have discussed definitions of the service. Some of them insist on the communication between the service provider and the service user (Linington, 1983). The point of interaction

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between the supplier and the recipient of the service is a service access point. When we talk about services, we talk about activities and processes, not objects (Solomon, 1985). It is emphasized that the service impact is important, not material things (Lovelock, 1991). The service can generally be defined as an application of specialized competence (knowledge and skills), which is expressed through actions, processes and performance, from which the user obtains certain benefits (Vargo & Lusch, 2004). The basic features of the service, according to the available literature sources (Berry et al. /1993/, Gronroos /1994/, Beaven & Scotti /1990/, Gummesson /1995/) are: intangibility, heterogeneity, the inseparability of manufacturing and consumption, a relative inability of standardization, perishability. The perishability of services is associated with the current dimension of their provision, that is, the inability to compile an inventory and store them.

These features are the starting point for further development of the topic of this paper, which aims to highlight the essential features and specificities of the hotel product and determine directions of its transformation in the digital age. In this sense, theoretical approach to hospitality, according to which the development of hospitality is the function of the following elements: natural resources (NR), human resources (HR), economic (E), socio-cultural (SC), politico-legal factors (PL), technology (T) and hospitality behavior (HB). It is also pointed out that the essence of the hospitality industry consists of the following dimensions: space-time, behavioral and physical (Brotherton, 2006).

The accommodation service is a fundamental service in the hotel industry. It derives from the travel and stay outside of one's residence. All other services in hotel management are related to the accommodation service, regardless of whether they are associated with food and drinks or not. The accommodation service is the starting point for an explanation of the essence of the hotel product. This paper insists on considering the basic features of the hotel product, differences in relation to the industrial product, a comprehensive approach in the context of consideration of the total hotel product and the developmental step towards the transformation imposed by digitization.

The concept and structure of the hotel product

The consideration of the theoretical specification of the tourism product precedes its definition. A tourism product is defined as a set of activities,

services and benefits that form the whole of a tourist experience (Saraniemi & Kylanden, 2011). This set consists of five components (the attractiveness of destinations, destination facilities, accessibility, image and price). From the point of view of marketing, (Kotler, 1984) as a product (and, therefore, also tourist) is designated everything that is offered on the market that can meet specific needs. Further theoretical considerations have led to more sophisticated models, such as the access to the generic tourism product (Smith, 1994), which consists of five basic components: physical elements, services, hospitality, freedom of choice, and involvement (the level of user participation in the consumption process). Bearing in mind the above five components, in promoting the tourism product, we should particularly be prudent to deal with its tangible elements (Xu, 2010).

Based on the definition of the key components of the tourism product, the essential features of the hotel product are determined. The hotel product is a complex of mutually conditioned and related services that are provided in hotel management. A necessary condition for the implementation of services with a strong interpersonal dimension is the specific spatial environment with purposefully designed and produced elements of arrangement and equipment. Hotel management, with its functioning and providing different services to satisfy the needs of guests, creates a very specific product. The consideration of the hotel product highlights the complexity of its structure. Five key components that determine the hotel product can be specified. Those are (Medlik, 1980):

1. location,
conditions and amenities of material nature,
services – the style and method of their provision,
price and
image.

The location determines the relationship of the hotel product to the attractive attributes of space. The attractive attributes of space are key motivation factors in visiting a certain territory, i.e. in staying at a hospitality facility. The construction features of the facility, i.e. the dimensions and the layout of rooms in which the process of the creation and implementation of the hotel product takes place, influence the selection of devices and equipment, their technical performance and design. Services are nonmaterial components of the hotel product, whose content is determined by the conditions and amenities of the material nature. Material components determine the potential for the provision of

services and their possible scope, range and content. However, the style and manner of the service is mainly characterized by the human factor, the personnel employed in the hotel industry, as well as service users, whose operational role in the formation of the hotel product has significantly increased (Hemmington, 2007). The price of the hotel product is the result of its previous components, including developments in the market, the demand for hotel management services. The image is a manner of experiencing the hotel product in the perception of consumers. Whether the image of the hotel product will be positive or negative depends on customer satisfaction, i.e. the degree of conformity between the expected and actually experienced in the consumption of basic and additional services of the hotel management.

Another theoretical approach takes the experience as the starting point of the understanding of the tourism product (Middleton, 1988). The tourism product is treated as a unique experience that is formed on the basis of the user experience (Health & Wall, 1992). These theoretical approaches are the basis for the definition of the hotel product, which is essentially a partial tourism product (Koutoulas, 2004).

Hospitality creates a product that should meet the previously identified needs of potential users. In hospitality facilities, a process of different experiences, which corresponds to the process of providing appropriate services, takes place. The possibility to adjust the hotel product to the wishes and needs of potential users depends on the flexibility of its basic structure. The purpose of this adjustment is to achieve positive experiences in the process of consuming adequate hotel services and products. Business operations in tourism and hospitality are based on the cost-effectiveness of the experience (Pine & Gilmore, 1999). The logic of service domination (S-D Logic) offers new opportunities in the field of customer relationship management (Shaw et al, 2011).

A definition of the hotel product

The starting point for defining a total hotel product is its structure consisting of five levels (Kotler, 1984, *ibid.*):

1. Core benefit,
2. Generic product,
3. Expected product,
4. Augmented product,
5. Potential product.

The first and second levels of the hotel product are combined, given that the core or the generic product is reduced to the satisfaction of existential needs (Jovic, 2002). The core benefit of the product at this level is the provision of accommodation and food. The next level is the expected product, shaped by the expectations of customers and determined by their consumer behavior. The augmented product includes additional benefits, in terms of certain discounts, extended duration of certain services, and the like. The augmented product serves to gain a competitive advantage in the market. The potential of the hotel product implies all augmentations and transformations that can be expected in the future.

Bearing in mind the above listed developmental stages, the hotel product is seen as a chain of services created in order to meet the many and varied needs of guests, primarily resulting from a temporary stay outside of their residence. The chain of these services takes place in a certain area, in a business environment that is spatially, technologically and process defined. The complexity of the hotel product is reflected in a number of qualities that compose its structure (Kosar, Lj. & Raseta, 2005). Bearing all this in mind, we arrive at the following definition of the hotel product: the hotel product is a complex of mutually conditioned and associated material and nonmaterial elements that are created at a particular location, and the use of which is conditioned by the presence of consumers. This is a set of tangible amenities and resources in a given physical environment, based on which, the complex of services aimed at meeting the needs of customers is implemented (Kosar, Lj., 2008).

The performance of the hotel product

The act of the guest's arrival implies the emergence of the hotel product. The emergence of the hotel product exhibits the principle of the simultaneity of "production and consumption" (Capar & Kotabe, 2003). It is the spatial and temporal unification of services provided by hoteliers and their consumption by the guest. The simultaneity of production and consumption, i.e. the spatial and temporal unification of the emergence of services and their use, involves direct contact and direct interpersonal communication between the hotel and the guest. Finally, on the basis of an authentic experience, i.e. his or her own experience, the guest makes an assessment of the quality of the hotel product. The guest's assessment should be the most suitable in conditions where hotel marketing and management are based on the human dimension, where man - the consumer, the customer, the service user, in hotel management - the

guest, is in the foreground, but at the same time, the employees, who are in direct contact with the guest while doing their work. In the above context, the view that only satisfied personnel can make the guests satisfied is affirmed. Accordingly, the concept of impression management, which contains a critical review of the behavior of service providers, is developed (Grandey et al., 2005).

The hotel product is the foundation of the tourism industry and reflects its essential features. This is primarily reflected in the fact that it is implemented in an attractive area that is the starting point of travel.

Without the presence of the guest, everything remains at the level of the potential product. As a result, it is clear that only some material components as elements of the potential hotel product can be stored, and that predetermined, organizational service forms, such as bed and breakfast, half board or full board, which guarantee the certainty of the creation of the hotel product, whose core can be upgraded by physical and organizational and personnel components, can be resold. However, authentic combinations of all potential components and their transformation into real components of the hotel product will ultimately be shaped by guests, with their presence, their wishes, needs and requirements, i.e. the services that gravitate to them.

The implementation of the hotel product meets guests' numerous needs. The manner in which these needs are fulfilled (physical environment, comfort, coziness, interior design, style, service delivery, professionalism, behavior and physical appearance of the personnel) conditions the level of customer satisfaction and their subjective cognition of quality. Options for providing additional services are aimed at encouraging the needs of hotel guests for these services (entertainment, leisure, sports and recreation, rehabilitation, education, shopping, services provided by hairdressers, beauticians, massage therapists, etc.).

However, the hotel product is not exhausted by the implementation of hospitality components. The originality of its implementation is dictated by the individual needs of users, who, from a range of choices, choose those services that are in line with their needs. Every guest, therefore, creates his/her own product, and experiences its quality in his/her own, unique way. This process is, in fact, the process of finalization of the hotel product that lasts as long as the guest's stay in the facility.

The hotel product should also meet the psychological needs of users. It is necessary to show the guests that they are expected and welcome. Attention and respect should be paid to the guests, respecting their natural and cultural diversity (Azmi et al., 2012). The personalized access to services meets the psychological needs of guests.

The implementation of the hotel product

The implementation of the hotel product is a process. This means that it lasts as long as the guest's stay in the hotel. To explain the specifics of the implementation of the hotel product, we use the term *guest cycle* (Bardi, 2003). The guest cycle is a package of activities that are directly related to the guest's consumer behavior, starting from their facility selection. This is a set of interactions between the guest and the hotelier, which can be divided into four stages: the stage that precedes the arrival of the guest at the hotel, the arrival stage, the stage of the facility content use, and the departure stage. During the first stage, the guest collects information about the facility, its location, accommodation options, room arrangement, other content, prices. Communication with the hotel personnel helps the guest to decide, to make a reservation, and to enable the implementation of other stages of the guest cycle. In the arrival stage, the guest checks in, is given a key (card), and is accommodated. The next stage is the stage of use, i.e. stay in a hotel, during which the guest expresses his/her consumer behavior. In this stage, all the specificities of the implementation of the hotel product come to the fore. The guest consumes its hospitality components several times a day. At the same time, the guest assumes the role of the creator of authentic combinations of services that he/she will use. Thus, during this key stage of the guest cycle, the guest processually defines the final version of the hotel product and forms a specific chain of services. The last stage of the guest cycle is a departure, during which the activities related to checking out, paying the bills and leaving the facility take place.

Lifestyle and consumer behavior in the digital age

We live in the second half of the second decade of the 21st century. We are surrounded by a variety of products of modern technology that mark our lifestyle and our consumer behavior. Today's life certainly cannot be imagined without the Internet. According to the latest, 2017 data, today 3.8 billion people in the world use the Internet. The number of social media users is 2.8 billion. Mobile networks are used by 4.9 billion people

in the world. Over the last five years (2012 to 2017), the number of mobile subscribers has annually been increasing by 20% on average. The number of users who use social networks on mobile devices is 2.6 billion (Kunic, 2017). According to the same source, the number of users who shop on the Internet is 1.6 billion. This number has annually been increasing by 9% (in the period from 2012 to 2017) on average. The global scope of Internet users, social media users and mobile device users is not evenly distributed by statistical macro-regions. The largest number of them are in Europe - 79.6% of the total population, and the smallest number of them are in Africa - 21.8%. Young people (population between 15 and 24) comprise nearly 1/4 of the total number of Internet users in the world (23.4%). The largest share of young people in relation to the total number of Internet users by statistical micro-regions was registered in Africa (37.3%) and the smallest in Europe (13.8%). This means that the young population, with their acceptance of ICT, will contribute to the reduction of the gap in this field between the developed and developing countries (ITU, 2017).

According to the available data, the percentage of households in Serbia that owned a computer was 65.8%, while 64.7% had an internet connection. Approximately 4.94 million people in Serbia used the mobile phone (Republički zavod za statistiku, 2016).

The presented data illustrate the world we live in and contribute to the real picture of the modern consumer lifestyle. It is completely dependent on the Internet, social networks and mobile phones, and life cannot be imagined without these aids. These consumers are also tourism consumers, i.e. hotel guests nowadays. In order to adjust to their needs, hotel companies are forced to change, i.e. to accept and implement innovative technologies in business. In other words, the application of these technologies is primarily focused on the user. On the other hand, hoteliers also see a path to competitiveness and successful business in the application of innovative technology, which enables them greater savings and a more favorable ratio between income and expenses (Kosar, Lj., 2016).

The digital transformation of the potential hotel product

Recent research shows that digital economy is strongly manifested in tourism (Hojeghan & Esfaghareh, 2011). The same applies to the hotel industry. Digitization provides an opportunity for the integration of the

consumer into the hospitality process (Montargot, 2016). Electronic communication significantly facilitates the monitoring of user experience in all stages of the consumption cycle. The real, on-site experience is preceded by the experience of the so-called preparatory stage of the consumer cycle. These experiences are of great importance for the creation of the real user experience in direct contact with the travel destination, i.e. the hotel facility (Kosar, Lj., et al., 2017).

As already noted, the term *potential product* refers to the spatial, technical and technological, organizational and personnel components of the hotel product in the stage that precedes the guest's arrival. In this stage, there is a significant digital transformation, primarily in the presentation of possible material and service benefits of the hotel product. Competition in the hotel industry is strong and it is becoming increasingly difficult for potential consumers to select services that they want to use. Their selection is facilitated by numerous innovations available in the digital age. They contribute to the fact that users are becoming better informed about the potential product in the preconsumption stage.

Hotels' e-WOM websites are a social medium that enables and stimulates high levels of interaction among users (Leung et al., 2012). E-WOM websites are more influential compared to traditional "word-of-mouth" promotion (Kosar, Lj. et al., 2014). "Facebook" and other social networks significantly determine consumer behavior. In addition to websites and e-mail addresses, hotels access social networks through their platforms. Also, hotels can motivate their customers with original content on social networks. This is evident in the example of the hotel chain "Ramada," which put an interesting quiz on their website in order to enable users to find out what hotel brand suits their personality. This project has increased the number of visits of "Ramada" website by 300% (Withiam, 2011).

On "TripAdvisor" website, users give positive or negative reviews of the service quality. They assess the specific aspects of the quality of hotel services within the following categories: "Value," "Location," "Sleep quality," "Rooms," "Cleanliness" and "Service." Unlike a general review of the service quality that is required, the user does not have to provide individual ratings within these offered categories. Users can also leave comments.

Thanks to these features, potential guests can gain several types of quality rating information by reading a hotel profile on “TripAdvisor.” The service quality rated by the website users is immediately evident (“Traveler Ratings”). Potential users of the hotel service can choose to read only comments left by people within a certain category of guests (business trip, family trip, etc.).

Virtual reality is today widely recognized as a credible technology with the revolutionary potential that has primarily come to the fore in the entertainment sector due to its interactivity and user involvement (Chesher, 2003). There is no doubt that it has increasingly been used in tourism and hospitality. Accordingly, another form of transformation of the potential hotel product under the influence of digitization is associated with virtual reality. Its influence is evident in the user experience domain, as well. Virtual reality as a new medium can create an expected user experience of augmented value. In promotional terms, there is a revolutionary step that nearly discredits the classical theory of indirect presentation of tourism and hotel products. Virtual reality enables an illusion of physical presence in the tourist destination, i.e. in the hotel building, thanks to a variety of ultra-new technological tools. Some of the most popular are “Google Now,” “Google Flights,” “Google Hotel Ads,” “Book on Google” and “Google’s Destination Search Experience.”

Virtual tour guides, which enables visits to museums and other cultural and historical attractions, as well as hotels, are created. All these products are suitable to be used on smart mobile devices. Individualization in creating user experiences is enabled by the so-called “Street View” technology. By installing special moving cameras, interactive tourist maps “GoogleMaps” are being upgraded, so potential tourists can choose on their smart mobile devices the town and street, along which they will virtually walk (Stojkovic, 2014).

Interactivity provided by using virtual reality reinforces the user experience in the preconsumption stage of tourism and hotel products, which contributes to strengthening the desire to travel and take action. The application of virtual reality simulates the experience of the hotel space - the location, access and entrance, reception lobby, hotel rooms, restaurants. Therefore, this is a possibility of “trying out” the spatial and material components of the hotel product, i.e. a virtual walk through the hotel. Such an experience in the preconsumption stage transforms sometimes unrealistic expectations of potential guests, which contributes

to a higher degree of harmonization between the expected and the perceived quality. The application of virtual reality improves the awareness of guests, and a more realistic opinion of the facility is formed, which can have a positive influence on increasing the number of hotel bookings.

Electronic marketing and the reservation of services in the hotel

In the field of marketing and selling hotel products, major changes have occurred thanks to the Internet. Today, emarketing goes beyond traditional methods and techniques of functioning. By designing their own web pages, various information about hotels becomes directly available to potential users (Andrlic, 2007). E-marketing is nowadays commonplace in business. However, in the context of increasing efficiency, it has been improved both on the B2B (“business-to-business”) level and on the B2C (“business-to-consumer”) level. In this regard, content marketing is being developed. This form of electronic marketing requires optimizing search techniques (Search Engine Optimization - SEO): high-speed access, navigation interaction, easy access and combinations of different contents in order to create the desired presentation of the brand (Koiso-Kanttila, 2004). When the content is updated regularly, the updated information enhances the effects of all components of the marketing mix.

The benefits of content marketing in the field of tourism and hospitality are reflected in the fact that it is much less expensive and more efficient than traditional marketing. However, e-mail marketing remains topical, particularly in conditions when the internet speed and its availability via smart mobile devices are increasing. Using this type of marketing involves a database composed of e-mail addresses of potential users (Dobraca, 2011).

Today marketing activities that precede the sale, and the reservation of hotel services, which basically means the sale, are unimaginable without online technology. Consumers are increasingly booking accommodation services on their own via the Internet, avoiding traditional intermediaries. This is evidenced by the rapid expansion of global electronic booking networks. These networks include independent hotels, but also corporate hotel chains, which have their own online booking systems, but they want to expand distribution channels of their services.

The best-known online provider of hotel services is “Booking.com B.V.” founded in 1996. Although the headquarters of this company is in Amsterdam, there is a developed network of offices and customer services around the world, in 43 languages. “Hotels.com” is among the leading hotel providers of this kind. It was founded in 1991 under the name “Hotel Reservations Network” (HRN), with the idea of opening a free phone line in the United States and providing reservations of hotel services. Today it operates as part of a global online provider of tourism services “Expedia.” In 2002, it changed its name to “Hotels.com,” providing hotel reservations via the Internet (Kosar & Bradic, 2014). Within “Expedia,” the hotel metasearch engine “Trivago,” based in Dusseldorf, Germany, was founded in 2005. “Trivago” is a website specially designed for hotel price comparisons and has extensive search options. The prices that are shown come from numerous hotels and booking websites. When users chose a hotel via “Trivago,” the reservation is completed via the hotel website, which is linked to “Trivago” (Kosar, 2016, *ibid.*).

Due to an enormous influence of mobile technology on everyday life, electronic reservation networks and global hotel search engines are developing applications for mobile devices. Mobile telephony, thanks to its smart phone devices, plays an important role in booking hotel services. This is confirmed by the results of a global survey “The Hotels.com Travel Mobile Tracker,” covering 9,200 travelers in more than 30 countries, published in mid-2016. It was found that 42% of people book a hotel via a mobile device. This percentage rises to 53% when it comes to respondents under 30 years of age. Thanks to mobile phones, 42% of travelers book a hotel on the day of travel, and even 14% do so at the airport right before the departure.

The digital transformation of the hotel product in the consumer stage

The consumer stage of hotel product begins when the guest arrives. Then the check-in activities are performed. These activities consist of three related processes – welcome, acceptance and accommodation. It is believed that these processes are highly personalized. However, the digital transformation of the hotel product is achieved during the registration of the guest’s check in and check out with “self-check-in” and “self-check-out” devices. New progress in this regard has been made by the world's leading hotel chain “Marriott International,” which provides “check-in” and “check-out” services via mobile devices. Paying bills can

also be done via mobile devices, whose achievements are indeed enormous.

The automation of the latest generation, the so-called software automation, creates intelligent environment in the hotel. Intelligent environment selects its actions based on the user's goals, not only on the current sensor data (Banjanin, 2009).

Today we can talk about intelligent hotel rooms, whose equipment is operated from a single center. The basic parameters of an intelligent hotel room include:

- entry and exit monitoring from the room (via contactless cards - transponders), information about the presence of the guest in the room and unauthorized entry into the room;
- the “Do not disturb” and call the maid features;
- heating and cooling management according to room occupancy (based on connectivity with hotel software);
- indoor lighting management;
- flood detection and water valve control;
- management of shutters and awnings;
- control of doors and windows, and optionally automatic deactivation of air-conditioning;
- integration of the SOS alarm into the system;
- monitoring of maids’ work;
- the use of a single card, with which the guest can open the main door, hotel safe, parking, pay other services in the hotel (based on its connection with the hotel management software);
- disabling external phone numbers dialing when the guest is not in the room (Musulin, 2015).

Conclusion

Information and communication technology (ICT) has introduced a revolution in the hotel business. This revolution is driven by the behavior of consumers, that is, by their lifestyle that prioritizes continuous Internet access and other benefits arising from it. The largest changes were made in marketing and hotel service reservations, primarily as a result of the use of smart mobile devices, to which hotel reservation systems, online travel agencies, social networks and hotel search engines adapt through special applications. E-WOM has become a key factor in choosing a

hotel, primarily because of the easy availability of other guests' opinions on the service quality of a particular facility.

The speed and efficiency that can be achieved when booking a hotel remain a quality imperative in all the stages of the guest cycle, where a wireless Internet connection in the rooms and all other areas of the hotel is primarily implied. Safety and security of guests are provided by innovative systems for locking and unlocking the doors of hotel rooms, hotel safes, communication with the reception desk and hotel housekeeping. Robot-staffed hotels are no longer the future.

Smart technologies will continue to find an increasing application in the design and further transformation of the hotel product. Partial robotization in hospitality will leave, however, more space for personalization of contact between the personnel and guests. So, although inevitable, visible and increasingly distinct, the digital transformation of the hotel product will still remain limited in scope. The intangible essence, direct human contact and the exchange of emotions between the hotel and the guest cannot be replaced with anything.

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THE ONLINE PRESENTATION ANALYSIS OF THE SERBIAN HOTEL OFFER

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Abstract

With regard to the impact of the hotel Internet presentation on the creation of potential consumers' attitudes in the pre-consumption stage, this paper aims to identify the ways in which the hotels in Serbia are presented on their own internet portals. The research data show that 91% of the 347 analysed hotels in Serbia have a functional internet portal. Also, the set of additional analytical instruments was applied in order to identify the links towards hotel profiles on social media, the offer of hotel virtual tours and interactive chat boxes with the reservations departments, the translation accuracy of the portal contents into various foreign languages as well as the correlation between the foreign language translations in accord with the source of the tourist demand. Hotels are then grouped according to the category, location and affiliation to a hotel chain, with a view to ascertaining and analysing the statistically significant differences relating to the factors under examination.

Key Words: hotel product quality, online hotel reviews, booking, perceptions

JEL classification: L83, M30.

Introduction

The number of active internet users worldwide is constantly increasing. According to the data issued by the International Telecommunication Union (2018), the number of the internet users has risen from one billion users in 2005 to 3.6 billion users in 2017. Practically, the half of the overall world's population makes up active internet users. A rapid growth

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of technology and internet expansion have changed the way in which hotel guests learn about the hotel services as well the way of booking them. Online reservation sources are becoming a more prominent sales channel. Bui et al. (2014) state that 57% of the total hotel sales are done via online sources. It should be emphasized that online sales include various channels, not only the direct sales over the hotel website. As an indication of participation of direct online reservations we can use the data which suggest that, taking into account top 50 markets in 2015, some 59.7% of online reservations were made through direct channels (Marvel, 2016). It makes us infer that the hotels operating in the most developed markets provide between $\frac{1}{4}$ and $\frac{1}{5}$ of the total reservation value over websites/e-mails alongside with the powerful growth of various internet intermediaries.

Li et al. (2015) state that in the existing market conditions one cannot or should not ask the question whether the hotel should have its own website, because it is regarded as an absolute must. Apart from answering the question whether all the Serbian hotels have their own website and whether between different hotel groups there are statistically significant differences, this paper is aimed at the content analysis of the Serbian hotels' websites with a view to ascertaining internet adoption and use of e-commerce by the Serbian hotels.

The first hotel analysis of hotel website content was carried out by Murphy et al. (1996). They analysed 32 separate features on 36 websites of different hotel chains. Then, they grouped these features into 4 different categories „promotion and marketing“, „service and information“, „interactivity and technology“, and „management“. Based on the research data, they concluded that management functions were the rarest used ones, whereas, at the same time, the service and information functions were the most used ones.

Chung and Law (2003) conducted a study which was aimed at the model development which would provide a quantitative evaluation of hotel website performances in terms of the websites' information richness assessment. The first stage of the study included the development of a conceptual framework for hotel website performance assessment consisting of five different dimensions: „facilities information“, „customer contact information“, „reservations information“, „surrounding area information“, and „management of website“. Then, using a questionnaire, they offered the hotel managers to assess the importance of

those dimensions which served as the basis for the construction of the overall performance indicator.

Baloglu and Pekcan (2006) analysed „interactivity“, „navigation“, and „functionality and marketing practices on the Internet“ of Turkish 4-star and 5-star hotel websites and, based on the conducted investigation, they inferred that „that the hotels in Turkey are not utilizing the Internet to its full potential and effectively e-marketing their hotels regardless of the hotel type” (p.171) and proposed a series of possibilities for the improvement of their interactivity and functionality.

Musante et al. (2009) did research directed at investigating the contents and effectiveness of different category hotel websites. The websites were investigated in the light of 27 content items. They conclude that there are statistically significant differences in terms of the contents and effectiveness of different category hotel websites.

Diaz and Koutra (2013) analysed the hotel chains' websites regarding six features: „informativeness“, „usability“, „credibility“, „inspiration“, „involvement“ and „reciprocity“. They grouped the hotel chains into luxury, midscale and economy segments. Their research findings indicated that there were statistically significant differences in five out of six observed features between the examined groups, resulting in the better results being recorded for the websites of the luxury hotel chain segment. The only exception is recorded for the feature of „usability“, which had a better result being recorded for the websites of the economy hotels segment.

Escobar-Rodriguez and Carvajal-Trujillo (2013) conducted an analysis of the Spanish hotel chains' websites which they divided into groups in relation to their size aimed at analysing and comparing website strategies. Their findings showed that Spanish hotel chains' websites are largely oriented towards consumers, and almost never towards the investors. The significant positive relationship between the size of the Spanish hotel chain and the connection of the website with hotel profiles on the social media platforms was identified.

Salavati and Hashim (2015) investigated the Iranian hotels' website contents focusing on 48 different features grouped into 6 categories: “hotel information”, “product information”, “non-product information”, “payment”, “customer relationship management” and “reservation”. The

hotels were grouped according to the category. Statistically significant difference between the websites of different category hotels is recorded only for the category of “product information” with the highest category hotels demonstrating better performances than other hotels. Using the obtained findings, they concluded that Iranian hotels were still in the initial stage of internet adoption and the use of e-commerce. Consequently, only 8% of the Iranian hotels had its own website, and none of them had an option for the real-time online reservation. Also, only half of the overall number of the Iranian hotels’ websites offered the multilingual option.

Besides the afore-mentioned studies, other studies which are aimed at assessing the hotel websites can be introduced (e.g. Wan, 2002; Schegg et al., 2002; Gan et al., 2007; Schmidt et al., 2008; Lee & Morrison, 2010; Ting et al., 2013; Akincilar & Dagdeviren, 2014).

Research methodology

The research, which is an integral part of this paper, was conducted in January 2018. The initial step of the research was the identification of categorised hotels in Belgrade. The database containing this information was taken from the internet portal of the Ministry of Trade, Tourism and Telecommunications. In the next stage of the research, by the use of the name and location of the categorised hotels, each of these was directed an enquiry via Google web search engine in order to ascertain if the hotel had a functional web portal. An enquiry was sent to the total of 347 hotels. The next step included a contents analysis of the individual hotel internet portals and each of the tested in the following terms:

- If the hotel website has chat box which provides users with direct and explicit communication with the hotel reservations service;
- If the hotel website offers possible virtual tours to users;
- If there is a website form through which it’s possible to make hotel service reservation;
- If there are links to the hotel’s social media profiles;
- If there is an adequate translation of the contents into foreign languages.

With a view to identifying and analysing statistical differences between websites of different hotel groups, they are divided according to the following criteria: a) their category; b) macro location of the hotels into

the city/town hotels, mountain hotels, spa resort hotels and other hotels; c) affiliation/non-affiliation to the hotel chain.

Results and discussion

One of the most significant and the most available internet channels is certainly the hotel's own website. The hotel's own website provides hoteliers with the utter control of the contents by which the hotel is represented as well as the construction of the direct channel of the hotel's services sale and the avoidance of commission pay-out to various third party online intermediaries. The October 2017 research shows that 50% of third-party online intermediaries' users before the reservation-making via those intermediary portals also visit the hotel website and for as many as 85% of them, the price is the determinant for the selection of the specific hotel service reservation channel (<https://www.hospitalitynet.org/opinion/4084884.html>). It means that consumers, after they have found and got interested in the certain hotel's offer on the portal of many internet intermediaries, tend to look for the hotel's website in order to gather sufficient information and compare the price.

The research data show that 91.07% of the categorised hotels in Serbia have an internet website. Since we live in an era of the highly computerised society, it is hard to grasp the fact that as much as 8.93% of the hotels in Serbia does not have their own website. The results of the Pearson's chi-squared test - $\chi^2=19.638$, $p<0.05$ prove the existence of statistically significant differences between the different categories of hotels in relation to the existence of the hotel's own website. One should also bear in mind that the notion of the statistically significant difference means the difference which, regardless of its size, is not incidental.

Table 1: *The participation of the hotels with a functional website all over Serbia - according to the category*

Category	Number of Hotels	Number of Hotels Having a Website	Participation
5*	9	9	100%
4*	120	118	98.33%
3*	134	121	90.29%
2*	71	58	81.69%
1*	13	10	76.92%

Source: *Author's Own Research*

Based on the data presented in Table 1, one can draw a conclusion that all the hotels of the highest category have a website as well as that the participation of the hotel having a website decreases from one category to another. It is alarming that almost a quarter of the one-star hotels and a fifth of two-star hotels do not have their own website at all.

Hotels are then divided into groups with regard to their macro location and are grouped into mountain, spa and city hotels. The results of Pearson's chi-squared test - $\chi^2=0.129$, $p=0.988$ do not show that there are statistically significant differences between these groups. Statistically significant differences are not perceived either between the hotel groups operating as part of international hotel chains and independent hotels, - $\chi^2=1.114$, $p=0.291$.

A virtual tour of the hotel allows consumers to form as real expectations as possible and improve the guest awareness of the hotel at the pre-consumption stage (Kosar et al., 2017). Lee and Oh (2007) conducted research in which they proved that the existence of the hotel virtual tour on the hotel's website creates psychological relief and influences the reduction in the degree of travel anxiety. The same findings were also reached by Ahn et al. (2013) who investigated a broader context of VR (virtual reality) functions on hotel websites on the degree reduction of travel anxiety.

Besides the advantages provided by the hotel virtual tour function, this research shows that this option is offered only by 25 of the hotels in Serbia, that is 7.2% of the overall number. The stated data show that Serbian hoteliers have not sufficiently recognised the potential benefits from a virtual tour function on the hotel's own website. At a first glance, it might seem that there are statistically significant differences between sites of different category hotels, with regard to virtual tour function. As a result, between the websites of hotels of the highest and lowest category, the virtual tour offer is not perceived per hotel, while the scope of it in other categories ranges from 7% to 9%. Still, the results of chi-squared test - $\chi^2=2.450$, $p=0.654$ imply an opposite conclusion. The same conclusion can be drawn if the hotels are grouped in terms of their macro location - $\chi^2=0.686$, $p=0.876$ and affiliation to hotel chains - $\chi^2=0.882$, $p=0.348$.

Hotel web portals can provide users with a chat box, that is live chat service with sales/reservations staff of the hotel. The chat box is usually

automatically started if the hotel website is visited. A potential guest can in real time get the necessary information and make a direct reservation of the hotel service. These platforms usually offer a possibility of file sharing which allows conversation participants to share different files without the use of an e-mail or any other web platform. Since the hotel reservations/sales department is not available 24/7, with chat box being active round the clock, the majority of chat boxes provides users with an opportunity to leave a message which will be at a short notice responded by the hotel reservations/sales staff. Also, since the communication and hotel reservation creation could include the sensitive data exchange (eg. credit card number), it is crucial for these platforms to have a guaranteed secure data transfer. By investigating the price and offer of the software solutions providing live chat, one can conclude that the very price of the software should not be a limiting factor for the implementation of this solution practically. The price is frequently formed on a monthly/yearly level with regard to the number of accounts (reservations agents). The software solution prices range from the cheapest (10 dollars per month) to a lot pricier solutions (<http://socialcompare.com/en/comparison/compare-live-chat-support-software-help>). It is clear that apart from the best software meant for live chat hotels have to provide staff whose job description will include a prompt response to the requests made via this communication channel, since it the users will expect their enquiry dealt with as soon as possible. The recruitment of such associates could pay off provided the hotel's internet portal is highly visited. It is not realistic to expect that Serbian hotels could profit from hiring additional staff who will be in charge of this communication channel, but it seems plausible that the existing staff (especially the front office staff) can be trained to use this potentially profitable communication channel. There are also efforts to use the artificial intelligence to communicate with potential guests via the chat box application instead of the hotel staff. It results in a chatbot which includes „a program which simulates an intelligent conversation with webpage visitors, dedicated to hotels“(Lasek & Jessa, 2013, p.146).

The results of this research show that only 12 hotels in Serbia (3.46%) have a reservations chat box on their portal. The results of Pearson's chi-squared tests make us conclude that there is no statistically significant difference relating to the feature between hotels belonging to different categories - $\chi^2=6.624$, $p=0.157$. The difference is excluded also if hotels are grouped based on their macro location - $\chi^2=2.562$, $p=0.464$, as well as in terms of their membership to a hotel chain - $\chi^2=0.407$, $p=0.524$.

One of the basic features of the hotel website is being the direct channel of hotel services sales. The solutions on the website in this regard are completely different. Certain portals only offer an e-mail address by which a potential guest can send a reservation request. However, this implies that the guest will be precise about listing all the elements which a hotel reservation typically contains. Therefore, Samčević (2012) states that the reservation is valid if it contains information such as: the guest's identity, the arrival time, room type booked, the method of account settlement and the identity of the request sender. Regular hotel guests, including various intermediaries in the tourism market, will know which information is necessary to include in the reservation request, but the question arises in terms of all the interested guests. This is why certain hotel portals include a pre-defined form in the hotel service reservation link, which makes the guest complete the certain data and leave the contact e-mail address. This information is transformed into an e-mail message by the programme code, which is sent to a pre-determined e-mail address of the reservations department. However, it is questionable if the potential guest can be, at the moment of the request dispatching, guaranteed the available capacity during the requested period. Thus, a number of hotel sites provide additional functionality which allows guests to in real time check the availability of a certain type of accommodation unit during the required period. The basis which provides such functionality is a high-quality property management system. The highest level of functionality is the one which, apart from the insight into capacity availability, provides an opportunity to, in real time and completely online, make a hotel service reservation and get the instantaneous hotel booking confirmation.

Based on the research results, one may conclude that out of 316 hotels that have a website 231 (73.10%) provide some of the previously introduced possibilities for sending a reservation request or making an online reservation. It is alarming that such a possibility is not recorded on as many as 85 websites (26.90%). It is important to note that several portals feature a reservations link, but following that link a user only reaches online travel agency (OTA) Booking.com. This seems unreasonable for several reasons. Booking.com is certainly one of the largest OTAs which charge its services with a relatively high price. The existence of the hotel offer on the Booking.com portal increases visibility and sales, which is an indisputable fact. However, it remains unclear why some hotel companies direct the potential guests who have invested some time and effort in finding their own website towards making a reservation

via an OTA, thus increasing their own expenses. Creating a simple online form for dispatching reservation enquiries requires no additional investment at all, but may result in the cost reduction of the commission that a hotel pays to an OTA.

The results of Pearson's chi-squared tests make us infer that based on the feature of presence/absence of possibility of reservation request dispatch there is a statistically significant difference if the hotels are observed in terms of their category ($\chi^2=24.120$, $p<0.05$) and the membership to a hotel chain ($\chi^2=4.242$, $p<0.05$), whereas at the same time it is not related to the type of the tourist destination in which the hotel is situated ($\chi^2=3.706$, $p=0.295$).

Table 2: *The possibility for booking hotel services via hotel's own website in Serbia*

	Hotel category				
	5*	4*	3*	2*	1*
BOOKING POSSIBILITY	100%	83.90%	70.49%	51.72%	70%
	Membership to an International Hotel Chain				
	Part of a Chain		Not Part of a Chain		
BOOKING POSSIBILITY	100%		71.90%		

Source: *Author's Own Research*

The data presented in Table 2 indicate that an online enquiry/reservation option is significantly more frequent with the higher category hotels in comparison to the mid and lower category ones. The hotels operating as part of chains integrate their offer in central reservation systems of the corporation they are part of, so they are expected to have a reservation option via the hotel's website.

If we analyse more closely the web portals of such 231 hotels which provide some form of enquiry or reservation, the following structure is obtained:

- 120 (51.95%) sites offer only the possibility for dispatching reservation requests;
- 19 (8.22%) sites offer the checking of capacity availability in real time which precedes the reservation request dispatch;
- 92 (39.83%) sites offer complete functionality which provides hotel service online reservation.

The higher category hotels prevail among hotels which on their web portals provide complete functionality regarding hotel service reservation. A total of 88.89% of sites of 5-star hotels provide such functionality, 46.61% of sites of 4-star hotels, 19.83% of sites of 3-star hotels, 6.90% of sites of 2-star hotels and 10% of sites of 1-star hotels. It is evident that with regard to the observed feature 5-star hotels are absolute leaders which on almost all their sites provide the possibility of online hotel service reservation in real time. Indeed, the results of Pearson's chi-squared test ($\chi^2=53.776$, $p<0.05$) confirm that there is a statistically significant difference between the hotels of different category regarding this feature. A statistically significant difference is also perceived between the hotel group operating as part of international hotel chains and other hotels - $\chi^2=27.749$, $p<0.05$. Such findings are not surprising since international hotel chains, as a rule, have a developed central reservation system.

Given the impact of the social media on the hotel company business performance (Baka, 2016; Ladhari & Michaud, 2015; Taylor et al., 2015; Cantalops & Salvi, 2014; Kim et al., 2015) it is important to determine the degree to which the Serbian hoteliers have recognised the social media importance in the modern market. The research included the identification of the links toward hotel profiles on different social media on hotel websites for every individual hotel in Serbia. This research did not focus on the contents analysis representing hotels on social media, but it was concentrated on answering the question concerning the social media platforms being preferred by the Serbian hoteliers.

By analysing all the hotel websites it can be inferred that Facebook is by far the most popular social media platform with the Serbian hoteliers- 60.81% of the Serbian hotels have their own page on this social media platform. Instagram comes second with 27.38% of the hotels, then Twitter – 24.78%, Youtube – 16.43%, Google+ 13.54%, LinkedIn – 6.63%, Pinterest – 3.75% and Foursquare – 1.44%. If we compare these data to the results obtained in the research carried out by Mašić and Kosar (2016), certain changes are noticeable. Namely, Facebook was also the popular social media platform then, but with a significantly larger participation – 77.3%. Twitter was the second with the participation of 27.2%, Instagram was third with 18.7%. It is clear that over the last 2 years Facebook has lost its popularity with the Serbian hoteliers, and simultaneously a rapid growth of Instagram's popularity has been recorded. Facebook is still expected to be the most popular social media

platform with the hoteliers for several reasons. According to Statista.com (<https://www.statista.com/statistics/272014/global-social-networks-ranked-by-number-of-users/>) Facebook has the most active users, around 2.17 billion, which is considerably higher than Instagram – 800 million or Twitter – 330 million. Simultaneously, unlike its competitors, Facebook offered hoteliers with additional functionality and provided its users with the possibility of sending a hotel reservation request directly from the hotel Facebook page. For every hotel website, the number of different social media profiles towards which there are links has been ascertained. The results of Kruskal-Wallis test - $\chi^2(4) = 69.528$, $p < 0.05$ indicates that there are statistically significant differences between the hotels of different categories with regard to this feature.

Table 3: *The average number of website links toward hotel profiles on different social media – according to the hotel category*

Category	Number of Links
1*	0.90
2*	1.02
3*	1.27
4*	2.33
5*	3.89

Source: *Author's Own Research*

As the data presented in Table 3 and Table 4 point out, higher category hotels have a considerably higher proclivity for using social media in comparison to the lower category hotels. Consequently, the highest category hotels' web pages have links toward 3.89 hotel profiles on different social media on average, whereas the lowest category hotels have a significantly lower average – 0.9.

Table 4: *Serbian hotels' profiles on different social media – according to the hotel category*

	Facebook	Instagram	Twitter	Youtube	Pinterest	Google+	LinkedIn	Foursquare
1*	46.2%	0%	15.4%	0%	0%	7.7%	0%	0%
2*	42.3%	8.5%	7%	12.7%	2.8%	8.5%	1.4%	0%
3*	54.5%	17.1%	16.4%	9%	1.5%	14.2%	1.5%	0.8%
4*	77.5%	48.3%	42.5%	25%	6.8%	16.7%	14.2%	2.5%
5*	100%	88.9%	66.7%	66.7%	11.1%	11.1%	33.3%	11.1%

Source: *Author's Own Research*

The results of Kruskal-Wallis tests show that there are no statistically significant differences between the hotels' proclivity for using the social media if they are grouped based on their macro location - $\chi^2(3) = 5.553$, $p=0.136$, or the membership to an international hotel chain - $\chi^2(1) = 2.050$, $p=0.152$.

The number of tourists visiting the Republic of Serbia is constantly increasing. According to the official data of the Serbian Statistics Office published in the Hospitality and Tourism Statistics (2018), last year the Republic of Serbia was visited by 1,497,173 foreign tourists, which is by around 16.8% higher than the previous year. It is for that reason important for the hotels' websites contents to be translated into foreign languages, that is, to make it understandable for foreign tourists. The minimal requirement in this regard would be a contents translation into the English language, which has de facto become the global language (Crystal, 2003).

The research shows that only 70.32% of hotel web portals in Serbia have the translated contents in English. The results of Pearson's chi-squared tests point out that there are still statistically significant differences in relation to the analysed feature if we group hotels according to their category - $\chi^2=36.065$, $p<0.05$, as well as if we group them according to the membership to an international hotel chain- $\chi^2=4.795$, $p<0.05$. At the same time, if we group hotels according to their macro location, and subsume them under spa, mountain and city hotels, no statistically significant difference is recorded - $\chi^2=3.050$, $p=0.384$.

Table 5: *The participation of websites whose contents are translated into the English language*

	Hotel Category				
	5*	4*	3*	2*	1*
Translated into English	100%	86.67%	65.67%	49.30%	64.54%
	Membership to an International Hotel Chain				
	Part of a Chain		Part of a Chain		
Translated into English	100%		69.35%		

Source: *Author's Own Research*

By analysing the results presented in Table 5 it can be concluded that, not surprisingly, web portals of all the hotels affiliated with international hotel chains have the contents translated into English. Also, it is observed that higher category hotels, as a rule, significantly more frequently

provide the website contents translation into English in relation to mid and lower category hotels.

These data are particularly interesting if they are cross-referenced with the data on tourists' arrivals and nights by type of accommodation (Statistical Yearbook of Serbia, 2017). Namely, according to these data, as much as 57.31% of the total arrivals of the foreign tourists is linked to 3-star, 2-star and 1-star hotels, whose web portal in significant numbers do not have the contents translation into English.

Apart from English, the hotel companies' web portals are also translated into other languages. For each of the individual web portals, the number of foreign languages translation has been determined. The results of Kruskal-Wallis test - $\chi^2(4) = 35.986$, $p < 0.05$ indicate that there are statistically significant differences between the hotels of different categories with regard to the observed feature. Not surprisingly, the higher categories hotels' web contents are translated into a greater number of languages. Consequently, the 5-star hotels' website contents are on average translated into 3 languages, whereas such average for 1-star hotels is below 1. Also, a significant difference is perceived between the hotels operating as a part of an international hotel chain, and independent hotels - $\chi^2(1) = 12.556$, $p < 0.05$. The websites of the hotels operating as a part of an international hotel chain are on average translated into 6 languages, whereas such average for independent hotels is below 1. Simultaneously, if we group hotels according to their macro location, no statistically significant differences for the observed feature are recorded – $\chi^2(3) = 1.444$, $p = 0.695$.

One might as well expect the web portal contents to be translated into the languages spoken by the potential guests. Based on the official statistical data on tourists' arrivals and nights by country of origin (Statistical Yearbook of Serbia, 2018), foreign guests visiting Serbia are grouped according to their mother tongues. So, for example, the guests from Brazil and Portugal on the one hand, or Germany and Austria on the other are subsumed under the same group. Consequently, the number of guests belonging to the same language group has been determined. On the other hand, the number of portals translated into different foreign languages has been determined. The analysis excluded the English language as a global language and the tourists who speak English as their mother tongue. Spearman's rank-order correlation was run to determine the relationship

between the number of guests from individual language groups and the number of web portals which have the contents translated into the analysed languages. The obtained result is $r_s=0.284$, $p=0.270$, and as p-value is greater than 0.05, it indicates that the correlation coefficient is not statistically significant, that is, there is unconvincing evidence about the significance of the association between the variables. In other words, it cannot be claimed that participation of the translation into the adequate foreign languages is in accord with the sources of foreign tourist demand.

Conclusions and implications

This study contributes to a better knowledge of Serbian hotels' web portal functionality. Its results show that Serbian hoteliers are still in the Internet adoption process, despite the fact that most Serbian hotels have a functional website. According to the obtained data, it can be inferred that having a website is linked to the hotel category, thus, higher category hotels more frequently have functional websites in relation to lower category hotels. Still, the very fact that a hotel has its own website does not speak volumes of the website quality and functionality.

Based on the conducted content analysis of the Serbian hotels' websites, significant differences between different hotel groups with regard to the observed features can be perceived. Differences between hotel groups are not confirmed only for the analysed features of „virtual tour“ and „chat box“ regardless of the hotel grouping criterion. When all other features are taken into account, significantly better performances of the higher category hotels' websites are recorded, which is in line with the previous research (e.g. Chung & Law, 2003; Musante et al., 2009; Diaz & Koutra, 2013; Salavati & Hashim, 2015). As a matter of fact, it is recorded that the functionality of the hotel websites increases in accord with the increase of the hotel category.

The research has shown that hotel macro location in relation to the tourist destination type is not a factor influencing the contents and functionality of the hotel websites. The obtained data provided no conclusion as to whether the recorded differences between hotel websites located in cities, spa resort or mountain resort centers represent something more than incidental differences.

The websites of the hotels operating as part of international hotel chains have recorded better results in comparison to independent hotels'

websites with regard to the following features – „multilingual option“ and „online reservation possibility“ – which has been expected since they have developed central reservation systems and business operations in a large number of countries.

The obtained results indicate that Serbian hoteliers do not take full advantage of all the possibilities provided by a good hotel website, that is, there is a lot of room for the improvement of the content-placement and functionality of the Serbian hotels' websites. Certain solutions do not require considerable investments. The interconnection between the hotel websites and hotels' profiles on the social media is not an expensive solution at all, and simultaneously provides an efficient communication channel with potential consumers. Mašić and Konjikušić (2017) state that in February 2017, 255 hotels in Serbia offered their services via Booking.com portal. The appearances on such a portal, by all means, contribute to the hotel's online visibility, but, at the same time, it is related to high costs. A smaller number of such hotels suggest on their own websites that potential guests should make a reservation via Booking.com portal. Why should they encourage the potential guests to make a reservation via an intermediary? The construction of an online form on their own website which can enable the dispatch of reservation requests would make a significant improvement, practically requiring no substantial investment, and would impact on the cost reduction in terms of lower commissions which would be paid to online intermediaries. The improvement of online reservation process functionality on the hotel's website to the level of complete automatisisation, on the other hand, requires substantial adaptations and investments, but it is certainly an option to be taken into account, especially in the light of the high costs of online intermediaries' services. Also, the following question could be raised: Is it really so expensive to provide a high-quality translation of website contents, which will result in the linguistically-adequate representation of the hotel product? Are the costs so high that they justify the use of multi-lingual automated translation systems such as Google Translate, resulting in an endless series of translation mistakes? It is essential to bring to the fore once more the fact that the hotels' own website represents the hotel in the Internet arena with some 3.6 billion users.

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FACTORS AFFECTING ONLINE BOOKING INTENTION AND BEHAVIOR: THE CASE OF AIRBNB

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Abstract

In a modern environment characterized by a high level of digitization where information technologies are available to a large number of users, the way of travel planning changes its shape. Namely, users increasingly take over the role that agencies once had; they use online platforms not only for information but for booking both accommodation and other travel activities. In this context, peer-to-peer (P2P) platforms have become particularly popular in recent years. One of the most popular and fast-growing platforms is Airbnb, founded in 2008 with the idea to enable owners to offer their unoccupied houses or rooms for short-term rental. The aim of this paper is threefold: first, to explore the determinants of online booking intention and behavior, then to explore the motivation of respondents to select Airbnb platform, and finally, to determine the respondents' preferences towards attributes of Airbnb properties.

Key Words: *peer-to-peer, Airbnb, accommodation, motives, preferences*
JEL classification: Z300

Introduction

The increasing digitization and the development of internet-based technologies have a strong impact on all aspects of the both global and local economy (Langovic & Pazun, 2016). Advances in digital technologies have led to the emergence of new business models, mostly collaborative, that potentially challenge the status quo of many industries (Täuscher, 2017). Namely, companies' resources and capabilities have become more modular, connectable, and conveniently shareable (El Sawy

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& Pereira, 2013). In this context, a growing number of business models in tourism based on sharing and collaborative practices between individuals has been observed. These innovative businesses emerge from interactive Internet technologies and one of the most popular forms of sharing economy in tourism are peer-to-peer (P2P) accommodation services, provided by Web 2.0 platforms such as Airbnb, Housetrip, or 9Flats.com (Souza, Kastenholz, & Barbosa, 2017). According to Rimer (2017), P2P accommodation rental could change travel behavior.

Airbnb is a San Francisco-based start-up company founded in 2008 by Joe Gebbia, Brian Chesky and Nathan Blecharczyk. It is an on-line P2P accommodation renting platform catering to hosts and travelers. Hosts use Airbnb to promote their underused space (an entire home, private room or shared room) and rent it out to others, while travelers use the site to book and stay at another person's house. Airbnb acts as a third party between hosts and travelers, and charges fees to both parties (Nguyen, 2016). Airbnb is growing and currently operates in about 65,000 cities across 191 countries and currently offers 4 million listings – more listings than the top five hotel chains combined have rooms (Hartmans, 2017). Various differences were observed between Airbnb travelers and those who were staying in traditional accommodation, taking into consideration the length of stay, local spending and level of use. Namely, Airbnb guests are likely to visit and spend money in the accommodation's neighborhood, as frequently the accommodations are located outside the tourist core of destinations. As a result, Airbnb guests are closer to 'real life' of destinations by direct contact with local residents, being immersed in authentic local experiences (Guttentag et al., 2017). Moreover, Airbnb platform create income for the local community and assists the growth of economy (Tussyadiah & Pesonen, 2016).

According to Edelman and Geradin (2015), Airbnb was initially considered to represent a danger to the affordability and safety of the local population. Secondly, government agencies and hotels also treat Airbnb as a threat for the hospitality businesses and traditional tourism, such as lower- priced hotels, because Airbnb hosts do not have to follow the standards set by hotels. According to Guttentag (2015), much Airbnb rental activity is actually illegal and there are claims Airbnb is avoiding its full tax obligations. Namely, a host on Airbnb website acts as an accommodation provider without permission or official registration, so safety standard of private accommodation is not guaranteed or inspected like in hotels or hostels. In addition, because Airbnb renting currently

occurs largely in the informal sector, guests can generally avoid paying the taxes that are typically charged in the traditional accommodation sector.

Airbnb services as low-end offers are mostly suitable for young travelers who are familiar with technological devices, use social networks, love to explore new things and prefer inexpensive housing. However, the use of online services has long been associated with privacy threats – sharing personal data and information online renders Internet users vulnerable to both accidental and intentional harm caused by other users (Lutz et al., 2017). Surveys have shown that despite reported online privacy concerns, users extensively use online services and share personal information online. This apparent divergence between attitudes and behavior is known as a privacy paradox (Savić & Kuzmanović, 2017).

A large number of both hosts and travelers from Serbia joined the Airbnb platform and this number is constantly on the rise. The largest offer of accommodation is in the capital Belgrade, then in Novi Sad, followed by the mountains Zlatibor and Kopaonik. Most accommodations offer the type of entire home, then in a private room, and a negligible number in shared rooms. According to Airbnb, there are over 75000 reviews for accommodation in Serbia, while the average rating is 4.5 out of 5.

The aim of this paper is multifaceted. Firstly, the determinants of booking intention and behavior in P2P accommodation platforms will be explored. Through the empirical research, the motivation of respondents to select Airbnb platform will be investigated, as well as their preferences towards features both of Airbnb service and properties.

Literature review

The academic literature on Airbnb concept remains limited, and the phenomenon of Airbnb, in general, is being examined within the context of “sharing economy” or “collaborative economy”. Recent researches address variety of the issues: Some studies focused on the hosts' motivation and performance (Li, Moreno, & Zhang, 2015; Mittendorf & Ostermann, 2017), legal issues (Lee, 2016), Airbnb's branding strategies (Yannopoulou, Moufahim, Bian, 2013), while others investigated the impact of Airbnb on the hotel industry (Fang, Ye, & Law, 2015; Neeser, 2015; Zervas, Proserpio, & Byers, 2017). A few studies also explored the consumer view of the Airbnb experiences and the motivational factors

that influence their choice (Nguyen, 2016; Mittendorf & Ostermann, 2017).

Nguyen (2016) explored and identified customer perceived value inside the sharing economy in the case of Airbnb. The results indicate that the sharing economy offers customers alternative choices with easier consumption methods at a lower cost, as well as a unique, personal and socially-integrated experience. Moreover, the author finds out that although consumers are aware of the potential costs and risks, they still prefer using the sharing economy because of its flexibility and uniqueness. Mittendorf and Ostermann (2017) investigated how social motives, trust, and perceived risk of private and business customers, influence the hosts' intention to accept a booking request of respective type of customer on Airbnb. Specifically, authors evaluated whether social motives influence the hosts' intentions to accept a business customer and to accept a private customer differently. They found the effect of trust as a positive and perceived risk as a negative direct antecedent of the host' intention to accept customers on Airbnb. According to Tussyadiah (2016), satisfaction and return intention represent important factors for commercial sharing services such as Airbnb, who are linked to P2P accommodation.

As in other sectors, there is a risk in tourism, and preferences of tourists change depending on the risk perception of specific destinations (Katić, Kuzmanović, & Makajić-Nikolić, 2017). Liang, Choi and Joppe (2018) researched consumer repurchase intention, perceived value, and perceived risk into the realm of the P2P economy, specifically in the context of Airbnb. They showed that perceived risk negatively impacts Airbnb consumers' perceived value and repurchase intention while perceived value positively enhances their repurchase intention. In addition, they found that the price sensitivity no reducing customers' perceived risk but can improve their perceived value and positively influences them to repurchase the Airbnb products. Perceived authenticity was found to have a significant effect in reducing Airbnb consumers' perceived risk and positively influencing their perceived value.

Motivation to use Airbnb

Lamb (2011) examined the motivations behind CouchSurfing and Airbnb hosts and guests, focusing on their desire for authentic interpersonal experiences. He found that Airbnb guests were primarily attracted to the

service by their desire for such experiences, while financial savings played a small role in their decisions. Household amenities and space have additionally been acknowledged in several studies and actually were the two top motivations found by Quinby and Gasdia (2014). Guttentag (2015) categorized Airbnb as a disruptive innovation. He found that low cost is the main draw for people participating in Airbnb. According to this author, the experiential appeal also represents a significant characteristic to be considered in the decision of using Airbnb because of the fact that consumers tend to search for authentic experiences where they feel like travellers and not tourists (Rimer, 2017). According to Möhlmann (2015), the decision of using Airbnb is based on factors such as: economic considerations, familiarity, utility or the trustworthiness of the host about photos, reviews and, finally, the price policy. Hamari et al. (2016) discovered other elements such as sustainability, enjoyment, and economic benefits.

Tussyadiah (2015) surveyed drivers and deterrents of the use of P2P accommodation rental service from the customers' perspective. The author finds out that the motivations that drive the use this type of accommodation include the societal aspects of sustainability and community, as well as economic benefits as most significant driver. On the other hand, factors that deter the use of P2P accommodation rental services include lack of trust, lack of efficacy with regards to technology, and lack of economic benefits. In a similar study, Tussyadiah and Pesonen (2016) examined motivations to use P2P accommodation rental service among American and Finnish users. The authors used 12 motivation statements rooted in the collaborative consumption literature, and an exploratory factor analysis revealed two factors – Social Appeal and Economic Appeal – plus several items (including location convenience and search efficiency) that did not load onto either factor (Guttentag et al., 2017).

Stors and Kagermeier (2015) focused at the motivations and expectations of the Airbnb guests, taking Berlin as a case study. They found that, as expected, the monetary dimension plays an important role when it comes to choosing share economy accommodation. However, the survey revealed that other dimensions are at least as important. In addition to practical reasons, the key motivation factors are aspects related to authenticity in sense of social interaction between guests and hosts, the location of the flats/rooms within the city (in residential quarters), and personal contact. Mody, Suess, and Lehto (2017) conducted the study to

compare and contrast customers' experiences of hotels and Airbnb. The authors considered eight dimensions of the experience economy: entertainment, education, escapism, esthetics, serendipity, localness, communities, and personalization. They found that Airbnb appears to be leveraging these eight dimensions to a greater extent than the hotel industry, while two of the top three areas in which Airbnb outperforms hotels are communities and localness.

Effects on the tourism industry

Nowak et al. (2015), surveyed U.S. and European travelers in order to gauge Airbnb's potential threat to hotels and online travel agencies. The respondents who had used Airbnb within the previous year were asked about the factors that led them to use Airbnb, and 55% indicated "cheaper price," 35% indicated "location," 31% indicated "authentic experience," 25% indicated "own kitchen," 24% indicated "uniqueness of unit," 23% indicated "easy to use app/site," and 17% indicated "large party accommodation." (Guttentag, 2016). Yrigoy (2016) argues that the emergence of Airbnb is triggering a wave of tourism led-gentrification which is rooted in a substitution of the residential rental by a tourism rental market. The impact of Airbnb on traditional accommodations and hotel revenues has also been studied in many studies. According to some authors, Airbnb is expected to drive hotel rates and revenues down as the additional supply will affect the distribution of the market power (Oskam & Boswijk, 2016).

Zervas et al. (2017) examined the relation between changes in the volume of Airbnb listings and hotel revenues in Texas. He estimated a 13 percent loss of room revenue for Austin and a 0.35 percent decrease in the monthly hotel room revenue for every 10 percent increase in Airbnb listings for Texas in general. The authors also found that the impacts were greater at independent and hotels without business facilities. Neeser (2015) replicated Zervas's approach to examine Airbnb's impacts in Norway, Sweden, and Finland. He found that Airbnb appeared to negatively impact hotels' average daily rates, but did not impact revenue per available room, leading him to surmise that hotels were reducing rates in an effort to maintain occupancy levels.

Oskam and Boswijk (2016) analyzed potential further development of Airbnb in the next five years and the impact this developments will have on tourism, on hotels and on city destinations. According to them,

compared to hotels, Airbnb hosts offer competitive pricing because in the case of private residences fixed costs as rent and electricity are already covered, the fact that Airbnb revenue is usually an additional income, and because stays are usually not taxed.

Measurement Instrument

In January and February of 2018, an online survey was conducted in Serbia to determine factors affecting respondents choose Airbnb platform, their experiences and satisfaction.

Sample

Since Airbnb is relatively new platform, used by only a relatively small part of the population, both worldwide and in Serbia, the sample for this study (guests who have ever used Airbnb) is hard-to-reach. Therefore, we decided to base our research on a sample of travelers in general or those who participate in organizing and planning trips, not just Airbnb users. In this way, it is possible to determine the percentage of respondents who have not used or heard about Airbnb so far, and how many of them are currently not planning to use Airbnb in the future and what the reasons are. For that purpose, a multiple-frame sampling online non-random approach was used to recruit an adequate number of respondents for the analyses. The majority of the respondents were recruited via travel blogs or social network Facebook, which proved to be effective in recruiting respondents from hard-to-reach populations (Vukić & Kuzmanović, 2017). The online social network produced a high-quality data that was also cost-effective. Part of the data was collected through the snowball sampling method. We asked the respondents to share survey link on their Facebook and ask their friends and friends-of-friends if they are interested in participating in the research.

Survey design

The research was conducted as an online questionnaire. It consisted of five sections, based on short open-ended questions, multiple choice or 5-point Likert scale. Section A comprised the socio-demographic questions regarding gender, age, level of education, employment status, and household income level. In addition, it contains self-assessment questions related to fluency in English, respondents' risk preferences, preferences toward adventure, as well as preferences toward social aspect of

travelling. These questions were used to describe the sample in order to establish a mutual relationship with their motives.

Section B contained questions regarding original communication channel creating awareness of Airbnb, most recent Airbnb use, trip characteristics (when, how long, on which occasion etc.), and respondents' overall satisfaction on 5-point Likert scale. Respondents' intentions to recommend Airbnb to others and to use the service again were used to measure a loyalty index score. Those respondents who do not plan to use Airbnb ever, were asked to state the reasons.

Questions related to factors affecting choose Airbnb belong to the part C of the questionnaire. Agreement with 12 different potential motivation factors, organized in 6 different dimensions, was measured using the 5-point Likert scale (1 = strongly disagree to 5 = strongly agree). These factors are derived both from existing literature (Guttentag, 2016) and through pre-research. The first factor, Price, has been identified in the existing Airbnb literature as a key comparative advantage of Airbnb relative to other accommodation options. Five items relating to functional attributes were included, based on existing Airbnb research and alternative accommodation research. These items related to location suitability, access to household amenities, access to a large amount of space, the homely feel of the accommodation, and the opportunity to receive useful information and tips from one's host. Four items were included regarding the desire for unique and authentic local experiences. One item referred generally to the opportunity for an authentic local experience. This dimension also included one item relating to interaction with the host or other locals, and one item relating to the accommodation's location i.e. staying in a non-touristy area and one related to the opportunity to do something new and different. Two items related to the philosophy of the sharing economy were included, with one referring generally to Airbnb's philosophy, and one referring to accommodation expenditure going directly to locals.

Section D contains questions relating to comparative performance expectations. Namely, to better understand Airbnb's strengths and potential weaknesses related to a hypothetical nearby hostel, budget, a mid-range, and upscale hotel, respondents had to assess the expected performance along various attributes. The following attributes have been selected: cleanliness, comfort, security, ease of booking and price. Previous research has shown that location and price represent a

comparative advantage of Airbnb accommodation, while comfort, safety and cleanliness may be a potential weaknesses in relation to certain hotels. All of these assessments were measured with the 5-point Likert scale.

Section E was focused on the key criteria when one choosing a particular accommodation on Airbnb. The task was to rank the eight offered factors from the one that is most significant to the least significant one. Attributes such as price, location, amenities, house rules and the like, as well as photos of the host, were included.

Results

Sample characteristics

In total 214 respondents completed the survey. The sample mainly consisted of women (59.6%). The overall sample average age is 28.02 (SD = 8.27), while the respondents are between 18 and 55 years old. The majority of them completed high school (45.73%) or gained one of the university degrees, and they are either students (47.66%), or employed (46.73%). 87% perceived their household financial status as at least “average”. More detailed statistics regarding demographic data is shown in Table 1.

Table 1: *Demographic data*

Demographic	Category	Percent
Gender		
	Male	40.4%
	Female	59.6%
Age		
	18-22	34.58%
	23-28	33.64%
	29-34	9.35%
	35-40	12.15%
	>40	10.28%
Level of education		
	High school	45.73%
	Undergraduate	24.30%
	Master degree	22.43%
	PhD degree	6.54%

Employment status		
	Students (university)	47.66%
	Unemployed	5.60%
	Employed	46.73%
Household income		
	Well below average	0.93%
	Below average	12.15%
	Average	41.12%
	Above Average	42.99%
	Well above average	2.80%

Most respondents consider themselves to be tourists when traveling (60.75%), 32.71% of them is declared as a traveler, and only 4.67% as perceived themselves as backpackers. Two respondents choose option “other”. Even 21.5% of respondents did not hear about Airbnb and are not aware of the services provided by this accommodation platform. The highest percentage of respondents become aware of Airbnb through word-of-mouth (30.81%), online word-of-mouth (10.28%), Airbnb advertising (8.41%) and mass media (7.48%), while 20.56% of respondents do not remember how they first heard about Airbnb.

Airbnb usage experience

Of all respondents who are aware of the existence of Airbnb, almost 40% have already used and plan to continue using Airbnb, and 46.5% non-users will use it in the future. Respondents who do not plan to use Airbnb at all (14%), as the main reasons for that indicate mistrust and uncertainty. The two respondents even cited ideological reasons as an obstacle to use Airbnb.

Only 2.80% of the respondents have so far been Airbnb's host, but none of them has used Airbnb as a guest until now, although everyone states that they are planning to use it in the future. Almost 50% of current Airbnb users are considering to offer their accommodation and being a host.

As can be seen from Table 2, respondents perceived themselves as a very fluent in English, stating that the social aspects of travel are very important for them. Although they consider themselves to be adventurers

to a large extent, they are somewhat less willing to take the risk when organizing trips.

Table 2: *Self-assessment results*

	Current users	Potential users	Non users	Not aware	Average rate
Fluency in English	4.24	4.08	4.00	3.61	4.00
Significance of social aspect of traveling	4.18	4.08	4.08	3.39	3.93
Considering himself/herself as an adventurous type	3.91	3.17	4.00	3.87	3.85
Readiness to take the risk when organizing a trip	3.70	2.92	3.31	3.30	3.38

However, there is a difference between the groups of the respondents depending on their awareness and the usage of Airbnb (see Table 2). Current Airbnb users say they are very fluent in English (rate 4.24 of 5). The social aspect of traveling is more important for respondents in this segment than for other segments (4.18) and they are most likely to take a risk when organizing a trip (3.91). The lowest risk-seeking are those respondents who are aware of the existence of Airbnb, but do not want to use it. At the same time, these respondents evaluate themselves as adventurers to a lesser degree than other segments. They mostly estimate the household income below the average.

Respondents who are not aware of Airbnb consider their English fluency to be considerably lower than other respondents (3.61) and the social aspect of travel is least important for them (3.39). Almost all in this segment are students. Although they evaluate themselves as adventurers, above mentioned characteristics may partially represent the barrier to using the online platforms such as Airbnb.

The first choice of accommodation of most of respondents (on a private trip, according financial possibilities) is mid-range hotel (33.64%) followed by Airbnb (26.17%), hostel (14.95%), and Bed&Bearthfast (10.28%). Only 8.41% of respondents listed the budget hotel as the first choice of accommodation, 2.80% listed the upscale hotel, and 1.87% CouchSurfing. Table 3 shows the first choice of accommodation within certain groups of respondents. Most of the respondents who already had

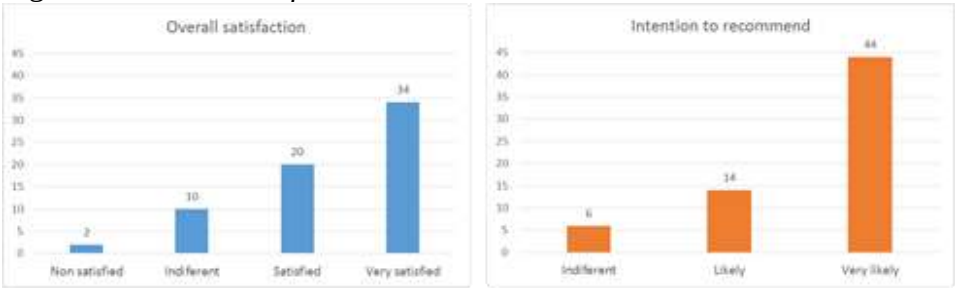
experience with Airbnb, referred to as their first choice, while the other respondents prefer a mid-category hotel or hostel.

Table 3: *First choice of accommodation*

	Current users	Potential users	Non users	Not aware	Sample
Airbnb	19.63%	0.00%	6.54%	0.00%	26.17%
Bed & Breakfast	1.87%	0.93%	3.74%	3.74%	10.28%
Couch Surfing	1.87%	0.00%	0.00%	0.00%	1.87%
Hostel	0.93%	2.80%	7.48%	3.74%	14.95%
Budget hotel	1.87%	1.87%	1.87%	2.80%	8.41%
Mid-range hotel	2.80%	5.61%	14.02%	11.21%	33.64%
Upscale hotel	1.87%	0.00%	0.93%	0.00%	2.80%
Other	0.00%	0.00%	1.87%	0.00%	1.87%
Total	30.84%	11.21%	36.45%	21.50%	100.00%

For their most recent Airbnb stay, 63.64% respondents had been traveling for leisure and 21.21% for business; 69.70% were staying in an entire home and 27.27% in private room; 54.55% were staying for between two and four nights (in average 5.51 nights), and 39.39% were staying with a friends. Finally, 63.64% had used Airbnb no more than three times, and 75.85% are used it in the past year.

Figure 1: *Overall satisfaction with Airbnb and intention to recommend it*



As can be observed on Figure 1, overall satisfaction is very high, as 82% of the respondents indicated that they were either very satisfied or satisfied with their most recent Airbnb stay. Likewise, agreement with the “Intention to recommend” was also very high, with over 90% of the

respondents indicating they were very likely or likely to recommend Airbnb to a friend, family member, or colleague.

Motivation factors

Descriptive statistics for each of motivation items can be found in Table 4. As can be seen, respondents on average agreed with nearly all of the proposed motivations (with 3.1 as the lowest average score on the scale up to 5). On average, respondents agreed most strongly with the attribute ‘suitable location’, followed by ‘Airbnb philosophy’. They also exhibited a fairly high level of agreement with the ‘low cost’ and other two functional attributes (‘large amount of space’ and ‘useful info/tips from host’). Furthermore, respondents indicated moderate levels of agreement with the motives ‘To interact with host, locals’ and ‘for the access to household amenities’. Finally, respondents stated some agreement with the motives ‘for the homely feel’ and ‘to do something new and different’, and minimal agreement with the motives ‘money to locals’ and ‘non-touristy neighborhood’.

Table 4: *Motivations to choose Airbnb*

<i>Dimension (Motivation)</i>	Users	Non-users	Avg.	S.D.
<i>Price</i>				
For its comparatively low cost	3.53	3.55	3.54	1.19
<i>Functional attributes</i>				
For the access to household amenities	3.32	3.16	3.24	1.33
For the large amount of space	3.80	3.26	3.51	1.19
To receive useful local information and tips from my host	3.24	3.76	3.53	1.24
For the homely feel	3.20	3.05	3.12	1.30
For the suitable location	4.16	3.86	4.00	1.11
<i>Unique and local authenticity</i>				
To have an authentic local experience	2.90	3.11	3.02	1.29
To stay in a non-touristy neighborhood	3.16	2.89	3.01	1.30
To do something new and different	2.77	3.38	3.10	1.25
To interact with host, locals	2.94	3.49	3.24	1.35
<i>Sharing economy philosophy</i>				
I prefer the philosophy of Airbnb	3.58	3.73	3.66	1.06
I wanted the money I spent to go to locals	2.66	3.32	3.01	1.32

However, there is a difference between the respondents who are already Airbnb users and those who plan to be in the future. Namely, Airbnb users agreed more strongly with the Functional attributes dimension (except with ‘useful info/tips from host’) than non-users. Also, they are more motivated by possibility to stay in a non-touristy neighborhood than non-users. On the other hand, non-users are mostly motivated with the dimensions Unique and local authenticity and Sharing economy philosophy.

Respondents’ preferences for accommodation attributes

The results of ranking eight Airbnb accommodation attributes in terms of their significance for respondents when choosing a specific place to stay are given in the Table 5. The first-ranked attribute is the location of the property, followed by the price and overall rate (numbers of stars). Cancellation policy and host’s photo proved to be the least important criteria when choosing a particular property.

Table 5: *Attributes overall rank and frequency in top three ranked*

Attribute	Overall rank	Frequency as a first-ranked	Frequency as a second-ranked	Frequency as a third-ranked
Location	1	70	34	8
Price	2	40	42	26
Overall rate	3	14	16	28
Number of reviews	4	4	12	22
Amenities	5	6	24	24
House rules	6	2	4	18
Cancellation policy	7	0	4	10
Host photography	8	2	2	2

Comparative performance expectations

As can be observed in Table 6, respondents had very different performance expectations regarding Airbnb and other accommodation types. Moreover, there is also a significant difference in expectations between current users and non-users of Airbnb i.e. the non-users’ expectations are lower and this may be the result of their inexperience.

Airbnb users expected Airbnb to outperform all other accommodation categories in terms of easier bookings.

Table 6: *Comparative performance expectations*

	Airbnb	Hostel	Budget hotel	Mid-range hotel	Upscale hotel
Cleanliness					
users	4.12	2.88	3.00	4.03	4.64
non-users	3.81	2.94	3.17	4.11	4.75
Comfort					
users	4.12	2.21	2.58	3.55	4.36
non-users	3.83	2.53	2.83	3.75	4.58
Security					
users	3.82	2.82	3.27	4.00	4.52
non-users	3.75	2.61	3.03	3.83	4.39
Ease of booking					
users	4.48	4.03	4.03	4.06	4.06
non-users	3.86	3.61	3.56	3.97	4.06
Price					
users	4.30	4.42	3.85	3.42	2.79
non-users	4.03	4.14	3.58	3.03	2.53

In general, respondents expected Airbnb to significantly outperform budget hotels for all attributes as well as hostels for all but one (price) attribute. Comparing with mid-range hotels, respondents expected Airbnb to significantly outperform them with regards to Airbnb's supposed strength (price) and two supposed hotel strengths (cleanliness and comfort). On the other hand, respondents expected Airbnb to underperform mid-range hotels concerning security. Finally, respondents expected Airbnb to underperform upscale hotels with regards to all attribute except price (as was expected).

Conclusion

This paper provides a significant insight into the motives and preferences of respondents in Serbia related to the use of the online accommodation platform Airbnb. To our best knowledge, this is the first empirical study to address this issues in Serbia.

The results show that the number of users of this platform in Serbia (both as guests and hosts) will grow in the future. Namely, the current users

showed a high level of loyalty and repurchase intentions, while the non-users are specially motivated by the factors related to unique and local authenticity experience and possibility to interact with locals, beside the price. Nevertheless, barriers have been identified for use Airbnb by a certain portion of the population, and that are uncertainty and lack of trust, besides to the level of English fluency. The comparative advantage of Airbnb relative to hostel and hotel accommodations has been also empirically investigated. It has been shown that the main competitive advantage in addition to the price is the comfort that is considered in literature to be the strength of the hotels.

The findings of the study have important theoretical as well as practical implications for the various stakeholders in the tourism industry, including policy makers. Namely, the literature related to the both motives and obstacles for using the P2P accommodation platforms has been enriched. Furthermore, the research findings can be of benefit to Airbnb itself in order to improve their service, but also to those who are considering to be hosts in the future. The results of the study indicate that hotels are confronted with growing competition in the form of P2P platforms primarily due to its price, location and comfort. Hotel management can use these findings to upgrade its own competitive advantages but also to strive to keep up with market trends and meet customer needs better. Given the importance of tourism for the development of the entire regions and the state itself, and bearing in mind that the survey results show a significant growth of interests in P2P accommodation, our results have significant implications for policy makers also. Namely, community revenues rely in part on tax receipts from well-regulated hotel industry. With demand shifting away from these traditional form of accommodation, regulation and taxation of P2P platforms becomes more challenging.

Future research should be directed towards post hoc segmentation, based on the respondents' preferences. A tool that could be useful for that purpose is conjoint analysis (Kuzmanović, 2006). The method was originally developed to measure consumer preferences, but proved to be very useful and applicable in many other areas including tourism and hospitality industry (Vukic, Kuzmanovic, & Kostic-Stankovic, 2015).

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TREND OF POSITIONING TOURIST OFFERS IN THE DIGITAL ERA

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Abstract

The era of digital transformation is no longer our future, but our present. We are currently living what we could not even imagine two decades ago. Tourism is one of the key sectors of our economy, with enormous unused potential, which has been pointed out for a long time. In what way does digital transformation influence the creation of tourist offers in the world, as opposed to our country?

Key Words: *tourist offer, Facebook, Instagram, digital platform, digital transformation*

JEL classification: *M31, O35, Z32*

Introduction

Tourist offer in Serbia is taken into consideration in the context of attracting users that find Serbia to be a domicile country for finding tourist arrangements and/or visiting tourist destinations in the country, and as others, for finding tourist arrangements and/or visiting abroad and we partially consider the tourist accommodation offer in Serbia that would be targeted to foreigners.

We will research this topic through several basic segments. First, we will deal with how social networks, like Facebook and Instagram, influence the creation of tourist offers. Which market segments are covered by social networks and can they have the desired effect in Serbia, how much do these channels influence the creation of tourist offers and attracting tourists, in our country as well as abroad?

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Then, we will consider and research how to trade social influence today. That is, we will research the advent of influencers. How do celebrities use their popularity and social influence in terms of promoting a tourist agency and/or destination? How much is this type of advertising present with us and how does it influence end users?

Current trends in tourism industry

Some said that describing travel and tourism as a serious industry is an oxymoron to many people (Becker, 2013). According to UNWTO Tourism Highlights, 2017 Edition, international tourist arrivals have increased from 25 million globally in 1950 to 278 million in 1980, 674 million in 2000, and 1,235 million in 2016; international tourism receipts earned by destinations worldwide have surged from US\$ 2 billion in 1950 to US\$ 104 billion in 1980, US\$ 495 billion in 2000, and US\$ 1,220 billion in 2016 (UNWTO, 2018). According to this report, international tourism represents 7% of the world's exports in goods and services, which means tourism grew faster than world trade for the past few years. UNWTO concluded that tourism is one of the largest and fastest-growing economic sectors in the world (UNWTO, 2018), and we may notice that number of arrivals and increase in turnover amounts justify their conclusion.

Currently, tourism is also the leading producer of new jobs worldwide (Cook&Hsu, 2017). Some predictions are that by 2025 there will be around 350 million jobs in tourism industry. Over the past decades tourism has also shown enormous resilience to all ups and downs in other fields of economy and no matter what is going on, this industry is constantly growing.

What are the factors that influence such an increase? Can we bring in the direct connection the growth in the tourism industry with the digital transformation in economy in general and transformation of our everyday life? I am sure that one of the key factors for such huge increase in the tourism industry is in there. What largely influenced the growth of tourism industry was also cheap transportation, which was unthinkable 30 years ago. Also, tourism industry, for which we said that in the last decades has taken on global dimensions, and the concept of massiveness are considered a key attribute of the tourist market (Bejatović&Ristić, 2016). But, how do digital platforms influence an offer made to a tourist in Serbia?

Tourism trend in Serbia

Since 2010, the number of tourists in Serbia is constantly increasing. This increase can definitely be attributed to the relative stabilization of political relations with neighboring countries.

Table 1: *Arrivals in Serbia(domestic and foreign) since 2007-2017*

Year	Arrivals	Domestic	Foreign
2007	2,306,558	1,610,513	696,045
2008	2,266,166	1,619,672	646,494
2009	2,021,166	1,375,865	645,301
2010	2,000,597	1,317,916	682,681
2011	2,068,610	1,304,443	764,167
2012	2,079,643	1,269,676	809,967
2013	2,192,435	1,270,667	921,768
2014	2,194,268	1,165,536	1,028,732
2015	2,437,165	1,304,944	1,132,221
2016	2,753,591	1,472,165	1,281,426
2017	3,085,866	1,588,693	1,497,173

Source: www.stat.gov.rs/WebSite/repository/documents/00/02/75/66/ut10012018.pdf

Table 2: *Arrivals in Serbia (domestic and foreign) in 2017*

	Total	Domestic	Foreign
Republic of Serbia	3,085,866	1,588,693	1,497,173
Belgrade	994,062	158,281	835,791
Novi Sad	178,955	66,153	112,802
Resorts	519,151	429,065	90,086
Mountains	556,213	454,384	101,829
Other tourist destination	705,966	409,811	296,155
Other places	131,519	71,009	60,510

Source: www.stat.gov.rs/WebSite/repository/documents/00/02/75/66/ut10012018.pdf

Table 3: *Overnights in Serbia (domestic and foreign) in 2017*

	Total	Domestic	Foreign
Republic of Serbia	8,325,144	5,150,017	3,175,127
Belgrade	1,997,236	305,419	1,691,817
Novi Sad	340,036	108,696	231,340
Resorts	2,227,945	1,956,656	271,289
Mountains	2,078,690	1,757,336	321,354
Other tourist destination	1,380,257	839,749	540,508
Other places	300,980	182,161	118,819

Source: www.stat.gov.rs/WebSite/repository/documents/00/02/75/66/ut10012018.pdf

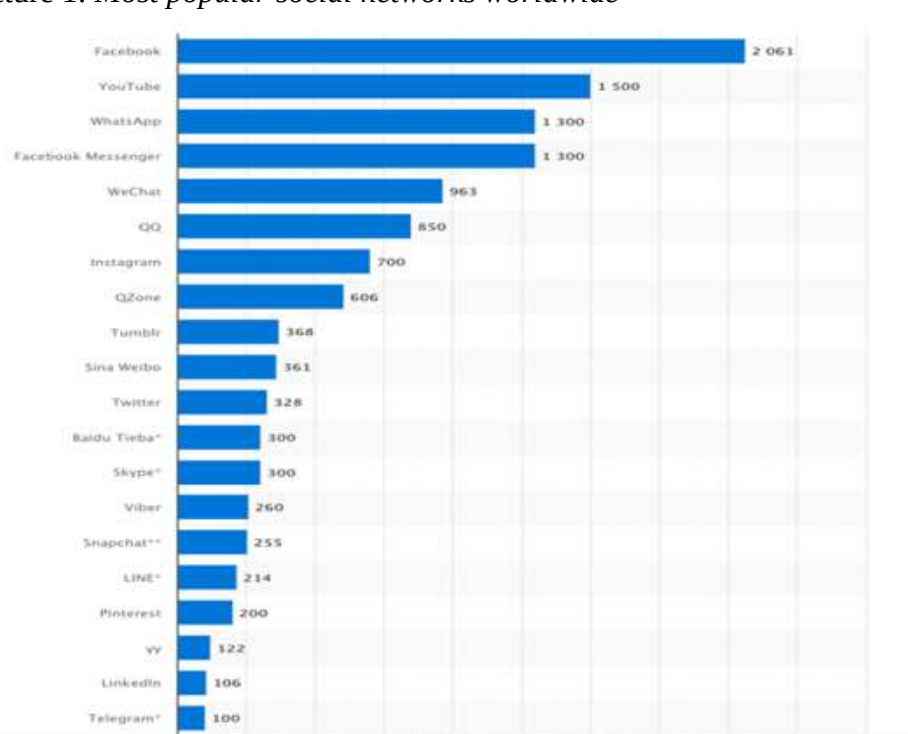
Judging by the tables above, we can see that the largest number of foreign tourists visit Belgrade and Novi Sad, while domestic tourists are most interested in spas and mountains. The total number of overnight stays in Belgrade is in the third place, while the number of overnight stays in spa accommodations is in the first, and the number of overnight stays on the mountains is in third position. Serbia is still a far more appealing tourist destination to those who live in it, than to foreign tourists. However, foreigners are more interested in our largest cities. Novi Sad has definitely positioned itself as an attractive destination to younger populace from neighboring countries and the EU, mostly because of EXIT. Belgrade as Serbian capital attracts many tourists for its employment opportunities, but for sports events as well, and Belgrade has become a synonym for nightlife to young people from neighboring countries and the EU. Of course, this is not an insignificant source of annual income, but the potential for further development of tourism in Serbia is immeasurably greater than the numbers we currently see.

Could the reason be that we have not adequately presented these destinations in Serbia and whether we have sufficient capacities along with the question whether our spa and mountain resorts fulfill the conditions that foreign tourists require? So, if someone wanted to find an accommodation via Airbnb in Belgrade or Novi Sad, they would find several hundred offers, whereas for Kopaonik (for multiple selected terms we have never acquired more than 30 offered accommodation units), Zlatibor (where we only acquired one offer) or Vrnjačka Banja (little over 20 offer accommodation units) that number is reduced tenfold. The question remains how could a foreign tourist even inquire about accommodation in spas and mountains of Serbia?

Social network Facebook

The Internet and social networks connect us. Facebook homepage states the following: “Founded in 2004, Facebook’s mission is to give people the power to build community and bring the world closer together. People use Facebook to stay connected with friends and family, to discover what’s going on in the world, and to share and express what matters to them.” According to currently available data that can be found on the aforementioned homepage, Facebook had more than two billion active monthly users on 31 December 2017.

Picture 1: *Most popular social networks worldwide*



Source: <https://www.smartinsights.com/social-media-marketing/social-media-strategy/new-global-social-media-research/>

We are all aware that Facebook is no longer used for private purposes, but also for business. Bearing in mind that Facebook still has the largest number of users compared to all other social networks, this is a channel that must not be disregarded when researching tourist offers.

Table 4: *Tourist agencies with no of followers on FB and their official business turnover in 2015 and 2016 in 000 RSD*

	Travel agency	FB followers	Turnover in 2015 in 000 RSD	Turnover in 2016 in 000 RSD
1	Fly Fly Travel	303,675	1,107,658	1,715,790
2	Jungle Travel	215,421	10,989	9,865
3	Manga Travel	195,158	5,870	3,891
4	Rapsody travel	180,566	30,223	34,261
5	Oktopod travel	159,446	75,163	107,426
6	Olympic travel	130,123	27,332	41,293
7	SAB travel	114,748	25,609	153,363

8	Terra travel	61,050	128,259	221,000
9	Argus Tours	57,702	192,722	155,830
10	Viva Travel	56,118	0	3,935
11	Party travel	48,948	4,856	6,161
12	Omniturs	42,716	52,226	77,473
13	Eurojet	41,341	38,517	42,588
14	Karavan Travel	35,188	24,527	22,925
15	Arena travel	34,948	1,440	2,072
16	Travelland	29,753	120,316	70,510
17	Supernova travel	29,268	24,875	22,985
18	Lui travel	28,375	272,674	264,733
19	Eta turs	26,676	3,209	6,593
20	Big Blue	24,409	236,328	209,077

Source: *Research conducted by us*

In the table above, we have presented top 20 tourist agencies (tourist agencies whose name on their Facebook page matches their actual name) sorted by their number of Facebook followers. In the columns next to the numbers of followers, we have provided information on the amount of income that those agencies achieved in 2015 and 2016. We made this comparison so that we could see if we could connect success in business income with the number of followers on Facebook pages of those agencies. Besides FlyFly travel, we observe that the following three tourist agencies according to the number of followers are not among those with the highest business income. A Facebook follower, a page like or a post do not necessarily correspond to the scope of business and business income. Social networks can sometimes give us an unreal image about the importance of a brand, so we should be extremely careful when making decisions based only on that criterion. Ultimately, we all know that the increase in the number of followers can be fabricated, and thus, artificially creates an image of a very successful Facebook page. In the upper table we can see, as we have observed on dozens of Facebook pages of domestic tourist agencies during writing this paper, that practically every agency has a Facebook profile, which tells us that they are very much aware of the necessity to be present on social networks, at least for creating brand awareness. The number of followers or likes is definitely not a reflection of a company's business success. Simply, agencies like “Jungle Tribe” or “Manga Travel” offer far destinations that are interesting to follow to many, even if they cannot afford them (at least not any time soon). For the purposes of this paper, we have devised a poll

and sent it to some of the largest tourist agencies, but they were unwilling (apart from one agency) to share information on the extent the social networks directly influence their tourist offers, and ultimately, their sales, and how they select which destination to advertise on a given social network.

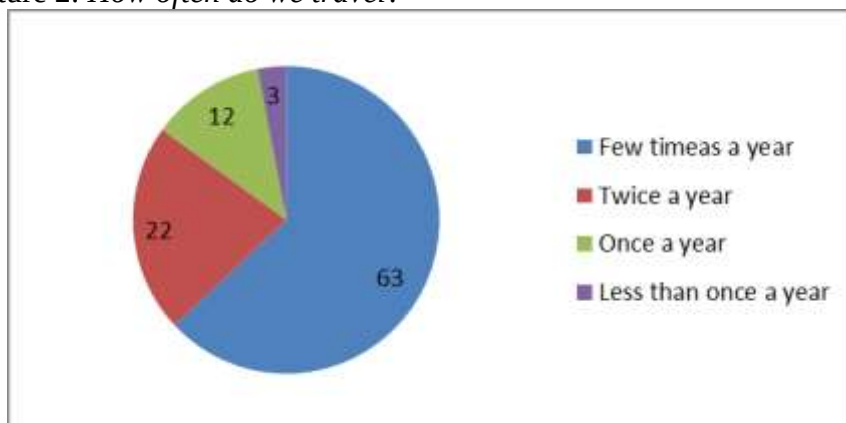
How do we choose tourist destinations in Serbia and abroad?

For the purposes of this paper, we have created a poll to find out how people in Serbia select a destination in Serbia and/or abroad. Examinees answered questions in an online poll or via telephone. The research is concentrated on studying the creation of tourist offers for people whose domicile country is Serbia and the way they decide where to travel as well as via which channel they choose destination and accommodation. In this work, we will only present information that we have acquired via the online poll, because we were interested in the influence of digital platforms on the final decision during selection of tourist destination and accommodation.

There are certain differences in replies, depending on whether the examinees were asked via telephone or online, mostly in that, on average, every third person contacted via telephone stated that they travel more than once a year, and then in replies to other questions as well (many more examinees that were contacted via telephone stated that they still need to go directly to an agency, despite advertisements in some of the media or on social networks).

During the creation of the poll, we considered population to be 1,588,693 (i.e. the total number of domestic tourists in 2017), reliability level of 95%, and sample size of 153 examinees. Examinees are adults aged 18-65. The poll was available until we acquired answers from 153 examinees, where 97% of them travel at least once a year. We wanted to examine the extent of influence of digital platforms on those that use the Internet and social networks on a daily basis, and for that reason, we only show here the information that was acquired via online poll.

Picture 2: *How often do we travel?*

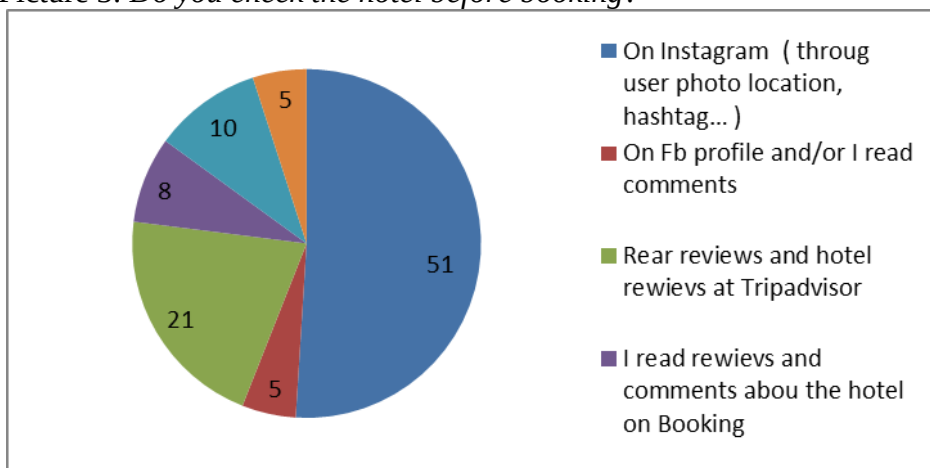


Source: *Research conducted by us*

The examinees usually reach tourist destinations in Serbia via recommendation through a friend, in 46.9% of cases, while 38.1% find the information on the internet by themselves, 10.2% of the examinees find information on Faacebook or Instagram, and only 4.2% of them via tourist agencies (telephone call or an email to a tourist agency). Examinees find accommodation for a tourist destination by themselves online in 61.2% of the cases, 32% via recommendation from a friend, 4.8% via tourist agency, and only in 2% via Facebook and Instagram. We can deduce from the acquired data that most domestic tourists rely the most on a recommendation from a friend, i.e. on the experience of someone who has already visited the location, or the selected accommodation. They also believe that there is no need to pay brokerage fee for travel organization in Serbia if they can do it themselves significantly cheaper and adapt the whole travel to their own wishes and needs.

When asked how they decide which destination to visit abroad, 55.1% examinees responded that they do the research themselves on the Internet, 27.9% examinees rely on recommendation from a friend, 8.8% via tourist agency, 6% saw the advertisement on Facebook or Instagram, 1.2% saw the advertisement (TV/radio/press), 1% heard that a celebrity promoted the destination and 0% via someone's blog. A total of 75.5% examinees find their accommodation themselves via the Internet and do the price comparison, 13.6% via tourist agency, 6% via recommendation, 3% stay at a friend or a relative and 1.9% via Facebook or Instagram advertisement.

Picture 3: *Do you check the hotel before booking?*



Source : *Research conducted by us*

The upper chart shows us that only 5% of the examinees do not have the habit of checking the accommodation before booking, while 95% of them do a background check of the hotel, i.e. they want to see the other visitors' grades and the comments they have on the hotel. Examinees do not use Facebook and Instagram, but they use digital platforms, i.e. websites like Booking and Tripadvisor for hotel check in 72% of the cases.

Even the population that uses the Internet and has Facebook and Instagram profiles tend to trust their friends and acquaintances or "independent" digital platforms like Booking and Tripadvisor more than Facebook pages of tourist agencies. So, it is not surprising that the largest tourist agencies in Serbia do not have the largest number of followers. What largely influences the creation of tourist offers in Serbia is the method of payment. If the arrangement is paid in instalments or via a credit card, it is necessary to go down to the agency personally, which is largely detrimental for digital business, because at some point we have to go somewhere personally, and not accomplish everything online.

Use of Instagram in creating worldwide tourist offers

Considering we are talking about the era of digital transformation, special attention should be given to social networks. Facebook (already mentioned), Twitter, Airbnb, Trip Advisor and Booking are important, but what "sells" in an age when the millennials are dictating the market needs is Instagram.

Instagram was established as a leader when it comes to setting trends because, whether we admit it or not, the founders of Instagram were able to see “through” the mountain. Nobody officially gave them the title, nor had they made any such claims for themselves, but as Iron Lady Margaret Thatcher once said: “...If you have to tell people you are [a lady], you aren’t”. Similar can be said about leadership, if you have to point out that you are a leader, you are not a leader (Inic & Bugarcic, 2014). Now we arrive at the question, what separates Instagram as a platform from others?

Within the last few years, Instagram became a new channel of advertisement which allowed users to be “visible” outside their own standard niches. If we were to look how it all seemed a few years ago, and how it seems now, we would notice that the rules have changed drastically and that it is getting increasingly more difficult to achieve visibility without “watering” a new garden. Change of algorithms has brought about the change of the dynamics of publishing content and product placement itself. Until recently, it was possible to achieve a certain result if you had quality content complemented by, firstly a good photograph, and then text, but with the change of algorithm, all that goes by the board. We have reached a moment when paid content on Instagram will replace blogs and other similar platforms.

Every day, a new influencer appears that dictates the market needs and changes the game. One thing needs to be clear, all those people that place content in such a way have started to live off the Instagram and have replaced “regular” daily jobs by maintaining the image they have created on this social network. As we have previously stated, for certain individuals, the numbers on Instagram play a serious role. With the growth and development of Instagram in the era of digital transformation we have reached the stage when end users spend more time refreshing Instagram content than in front of the TV. Instagram influencers have practically become walking billboards for certain brands, because they can attract a greater number of followers that way.

But the question remains, how can we use Instagram in creating tourist offers?

If we were to visit Instagram profiles of certain influencers, it would appear that they do nothing but travel and take photographs. Their lives appear perfect, the travelling, luxurious hotels, lots of laughs, fun etc. All

that we can see is the success that appears like it was created overnight, but the truth is different. Millennials, as a generation that is taking over, are not interested anymore in taking a 10-day vacation to certain tourist destinations. They do not care how warm the water is or how many stars the hotel has, unless it looks excellent on the photographs. We are talking about the era of digital transformation where destinations like Cuba, Bali, Thailand, Cinque Terre, Amalfi, Cappadocia etc. have reached an amazing breakthrough because they look sufficiently photogenic and completely available. Until the last few months a trip to Paris implied taking a photograph at the Eiffel Tower, but now the focus is on the carousel that anyone rarely paid any attention to. You have not been to Istanbul unless you took a photograph of the seagulls, the Bazaar or tea. Castro and Che Guevara have been replaced by selfies from Cadillacs and smiling grannies that hold cigars.

One of the examples that we will state is a famous couple that travel and charge their Instagram posts. Jack Morris and his girlfriend Lauren Bullen have become an Instagram sensation. The young couple has almost three million followers on Instagram. Even though they have separate profiles on the social network, together they publish paid content under the alias “Do you travel”. As soon as they started publishing photographs together, brands have started to contact them more often, because offers by tourist companies and most brands that participate in tourist offers are focused mainly on couples, bearing in mind that they are end users. Morris said in an interview that one time a single photograph on Instagram earned him 9.000 dollars, while his girlfriend earned 7.500 dollars for a single photograph. The smallest amount they will accept to endorse a content is no less than 3.000 dollars.

Since we have stated one the examples of individuals followed by millions and who influence product placement and promoting, we will consider some companies that have acknowledged the importance of Instagram in developing tourist destinations and how it can be used to create new offers.

Interpark is the largest online tourist agency from South Korea. They offer solutions for all tourists from booking the lowest price of a flight to hotels all over the world. They wanted to use short videos to attract a large number of users on Instagram. In order to use all the potential that Instagram offers, they made theme videos that represent every destination. Since they have a business profile on Instagram, they were

able to target a certain group of people that want to place content. When the campaign was over four weeks later, they had 7.800 purchases, which was six times greater than the target, 15.000 website visits (2.2 times greater than target) and investment that paid off 540 times the money that was invested in the advertisement.

Their conclusion was that Instagram provides an inspiration to a great number of people to record and publish important moments from their travels and to connect in such a way. The strategy of selecting Instagram as a platform for advertisement proved to be an excellent move and a great step forward for all that love to travel.

Airbnb

Airbnb began in 2007 when roommates Brian Chesky and Joe Gebbia started AirBed & Breakfast on the living room floor of their San Francisco apartment. In 2011, the company started its overseas expansion, opening its first international office in Hamburg, Germany. Airbnb, which generates its revenue through service fees to hosts and guests, was valued at 31 billion U.S. dollars in May 2017 (<https://www.statista.com/topics/2273/airbnb/>, 2018). Airbnb is present in 191 countries in 65.000 cities. Another company that realized the importance of Instagram as advertisement platform is Airbnb. Airbnb as an online market enables people to rent or charter short term accommodation, including renting apartments, houses, hostel beds or hotel rooms. The company itself acts only as a mediator and takes commission fees from guests and hosts for every reservation (*Sangeet, 2014*). Airbnb will be the largest hotel company in the world without having a single asset. Aware of the potential that Instagram offers, they have decided to use Instagram Story option so more users could see what their company has to offer. In cooperation with Starcom Worldwide marketing agency and by using various technologies, they created special videos limited to only 15 seconds (maximum video length of Instagram Story cannot be longer than 15 seconds). All videos showed what hosts that you would visit had to offer. Airbnb then targeted its Stories to a broad audience of men and women aged 25–44 living in the US. Engaging with this new format proved successful for the Airbnb team. Not only did it realize a 13-point lift in ad recall, but more people selected Airbnb as the platform that enables travelers to book experiences (Instagram, 2017).

Using Instagram in Serbia

Since we showed how individuals and a couple of companies operate in the rest of the world, we will show a domestic tourist organization whose management and marketing teams have realized the potential of social networks. Tourist agency Big Blue is currently a company that superbly manages social network content considering that social networks mostly follow existing offers. They at this point only increase the appeal of a destination considering that very few people from Serbia individually go to locations by themselves that are not included in the offer. With help from social networks, tourist destinations like Cuba, Thailand, and later Zanzibar have become more popular in Serbia. The number of likes and reach globally provide input to tourist workers to enlarge their offer, include new accommodation units and add trips at the destination itself. When asked whether “activation” of bloggers and influencers has the desired effect in Serbia and how much does their engagement influence the enlargement of business, based on research by Big Blue, we have concluded that influencer engagement in tourism has, more or less, the same effect as influencer engagement in any other branch. Effects depend on “action” organizers and good selection of influencers. It is important to know the affinities of those people and then adapt the destination. When you send young, active and urban people to a jeep safari in Hurghada, then you get the desired reaction. Beauty bloggers, females that pay special attention to their appearance will definitely enjoy spa content, hammams, massages and treatments of good hotel complexes. There are numerous examples; one should only know where to look. As for the parameters that determine the process of selection, checking and engagement of certain influencers in the agency, their order is not predetermined. Sometimes the starting point is the destination, then certain interesting influencer travelers are analyzed, and sometimes individual profiles are the starting point, and destinations are planned according to them. In terms of content placement on Instagram, influencers are only recommended to use a certain hashtag, while the content can be whatever they want, i.e. what they consider to be relevant. In such a way, one group can represent the most diverse aspects of a destination, because ones will find the beach to be interesting, others the trips, the third ones will like the food. It is important to make an honest comment about activity/landscape/general impression, because only then will it all make sense.

Table 5: *Tourist agencies sorted by the number followers*

	Travel agency	FB followers	Instagram followers
1	Fly Fly Travel	303,675	17,800
2	Jungle Travel	215,421	31,200
3	Manga Travel	195,158	13,400
4	Rapsody travel	180,566	/
5	Oktopod travel	159,446	22,900
6	Olympic travel	130,123	8,851
7	SAB travel	114,748	843
8	Terra travel	61,050	401
9	Argus Tours	57,702	1,553
10	Viva Travel	56,118	5,274
11	Party travel	48,948	/
12	Omniturs	42,716	/
13	Eurojet	41,341	2,688
14	Karavan Travel	35,188	337
15	Arena travel	34,948	421
16	Travelland	29,753	6,058
17	Supernova travel	29,268	12,300
18	Lui travel	28,375	1,679
19	Eta turs	26,676	1,275
20	Big Blue	24,409	7,818

Source: *Research conducted by us*

In the table above, we have provided top 20 tourist agencies sorted by the number of Facebook followers and in the next column we have shown the number of Instagram followers of those agencies. We can definitely conclude that, at this moment, in Serbia, the number of Facebook followers is immeasurably larger, and that domestic tourist agencies give absolute advantage to Facebook, and not Instagram. This is naturally connected with the fact that Instagram is the social network of the younger generation, which in Serbia rarely has money for travel, whereas members of the “intermediate” generation mostly use Facebook, and they are in working capacity, employed and in possession of sufficient amount of money that can be spent on travelling.

Influencers

Bearing in mind that we are focusing on new marketing approaches and an era of social networks because we are slowly getting a new motto, what was not published will be treated like it never happened, we have to

take into consideration a new endeavor which will either prove to be an absolute fiasco, or a genius idea. A village in Switzerland near St. Moritz recently prohibited tourists to publish photographs during their visit. Inhabitants of the village consider it to be so beautiful, that it would cause depression among those that are unable to visit it. In addition, a 5 EUR fine was introduced for those that still decide to disregard the new measure and publish photographs from the village of Bergun on social networks. Of course, the world incessantly speaks about the new law, the Tourist organization of the village removed all photographs from every account on social networks that they had. And what does that grant them? Those that never heard of that place will want to visit it, people will be prepared to pay the symbolic fines for publishing photographs, because they would be the new “rebels” that will position themselves in the society on account of their photographs of the “forbidden” place. Besides the group that will want to take photographs of the village “whatever the cost”, the destination itself will become more interesting for all that want “digital detox” as well. Either way we analyze this endeavor, we can only conclude that this measure will be a motivation for many other locations, because how do you lead someone to do such thing? Just introduce the magic word “Prohibited” and you have the best marketing that not only does not require paying, but the money flows into your budget with lightning speed.

Besides the fact that many companies are technically prepared for social networks, the managers' readiness to accept new modes of business should also be questioned in order to achieve success. How can that affect individuals that place good Instagram content and are not recognized by companies? Quality content and a real number of followers on social networks are not enough for most brands. They only want numbers. That usually functions in the following way. Large number of followers leads to new sponsorships and partnerships with brands, tourist agencies or marketing agencies. Certain numbers of influencers do not have a real number of followers on social networks at all. Some buy them while others “engage” Instagram bots and randomly amass a certain number of followers and likes. That leads us to the question to what extent that is actually profitable for certain tourist agencies and how much can those influencers actually affect the development of tourist offers and enlargement of agencies' business by targeting new users of their services? The next question is whether to place content for content's sake, or content for likes' sake, because what is the point of a large number of followers that certain influencers have if they only have it “on paper”, i.e.

only to brag about to friends and family? How will we influence some new changes if the content will be placed via Instagram bots that will only like photographs for greater number of likes instead of targeting real end users? Most accounts on Instagram that are connected to certain brands will constantly spam us with contents that do not interest us. At some point, the question will be asked whether we should actually buy a product because we will ultimately have influencers that endorse everything from soup to nuts without actually believing in products that they advertise. As a negative example of using influencers we can state the Fyre music festival fiasco that was presented as Coachella on Bahamas. The alleged festival was advertised by Elsa Hosk, Emily Ratajkowski, Bella Hadid, Lais Ribeiro, Gizele Oliveira and Rose Bertram (Ruiz, 2018). The tickets were sold, Instagram did its part, the Festival was presented as a new location of that season where visitors will be able to enjoy large white tents placed on pristine white sand surrounded by turquoise blue sea while listening to music being played by phenomenal performers. What actually happened? The only things that were actually there were the sand and the sea. Visitors were greeted by ordinary tents, there was no music, and food was comprised of a sandwich and a bottle of water. Soon, panic ensued and festival that received the biggest endorsement on Instagram was ruined by those same end users via Instagram. The organizer of the festival was declared guilty on various charges on March 9th.

Conclusion

Even though social networks are a double-edged sword, the reality is that they hold the future and great potential for business. Innovations are the most important drivers in contemporary economies and much of the efforts policy makers and many stakeholders aim to support innovation (Zakić et al., 2017). Uber Technologies Inc is an American company that enables users to use transportation services by users that own their private cars and are on the Uber network, instead of using official taxi service. Uber is “just” a software tool, they do not officially own a single car, but they will be the largest taxi company in the world (Goode, 2011). Airbnb will be the largest hotel company in the world without having a single asset in its property. Based on the presented information in this work, we can deduce that social networks influence the creation of tourist offers in Serbia, but at this point, they are not essential for end users. Most agencies use social networks more with the intention of creating brand awareness or directly targeting users to a certain destination, i.e. tourist

offer. But if we are to follow world trends, and we surely will, future tourist offer will increasingly turn to using Instagram for promoting tourist offers, because soon the millennials will be the majority of working capacity niche, with the desire and ability to travel. On the other hand, the potential of Serbia in terms of tourism development is enormous, and tourist offer should be presented more intensely on digital platforms, because that is not only one of the options, but an absolute prerequisite to position Serbia as an international tourist destination. Only then will potential foreign tourists have the possibility of finding an accommodation online on Kopanik, Zlatibor, Vrnjačka Banja, Stara Planina, or in any other mountain or spa in Serbia, not only in Belgrade or Novi Sad. Again, we emphasize that there is nothing wrong with this trend where foreigners are interested in our larger cities, but the potential is enormous, Serbia has sufficient beautiful destinations that would foreigners find interesting, we should only find a way and present them adequately. For us who live in Serbia, it is acceptable to find accommodation with a recommendation from a friend, but what about those who have no friends here? The subject that we should definitely bear in mind is that we require a highly responsible tourism in Serbia, sustainable tourism that has the smallest impact on the environment and local culture, and which at the same time contributes to the opening of new workplaces, creates economic benefits and conserves local ecosystem (Bejatović&Ristić, 2016). From what was previously stated, the main goal of work is to direct attention to the potential that the use of social networks had for achieving goals through a clearly defined vision and mission of managements of tourist agencies, cities, tourist associations and similar institutions that may be related to creating a tourist offer of a destination.

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SOCIAL MEDIA AS A TOOL FOR THE PROMOTION OF A TOURIST DESTINATION

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Abstract

Even since the advent of the digital Web 2.0, various researchers have carried out multiple quantitative and qualitative research to understand the ongoing changing of the role of social media and their application in tourism and tourism marketing. It was discussed that the elements of social media will play a major role in the tourism marketing mix in the years to come.

Given that the use of social media continues to grow and develop, a better understanding of the role of social media in the decisions and choices of tourists when visiting a specific tourist destination should be directed towards them, and at the same time they should be approached in a way that the tourist destination can promote its tourism products and services.

Key Words: *promotion, tourism, destination, social media*

JEL classification: *Z3, Z30, Z32*

Introduction

Over the years, the tourists always had the security into leaning on the power of the marketing tool “word of mouth”. This tool has been their friend and family that had inspired and helped them into the planning of their travels and was often led by travel guides, magazines and travel agencies (Mukherjee & Nagabhushanam, 2016).

Still, today with the presence of the digital mediums, the word “word of mouth” had broadened the limits of the selected group through the whole world. The Internet has allowed the tourist facilities to publish more detailed information about their services, including videos (Angelkova

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Petkova-Ristova et al, 2017). Social media is now a part of the digital technology that now is connecting the tourists with their opinions and recommendations with millions of people, including their friends on the social media, and common travelers with similar opinion who they never actually met.

Tourism destinations have taken the advantage of this incredible technology by increasing their promotions of destinations and products in the social media for the sole purpose and its mass. Certain tourism organizations such as Yelp TripAdvisor, Trip Hobo, Travel Triangle and many others provide detailed information on any type of accommodation to small boutiques, restaurants, wholesalers to the destination itself. With more than 200 million reviews and posts, posted until today on TripAdvisor, and more than 800 million Facebook users, where the average user spends at least two hours each day on Facebook (McLeod, 2017), publish and regularly update images and videos from a certain tourist destination, we see the social media as a dominant tool in the tourism scenario.

Tourism and social media

Social media has a major impact on all the spheres of our lives. We often rely on social networks to find out new tourist destinations and plan our trips. We share our travel experiences and special moments, our opinions about hotels, restaurants, airlines or rental services. By expressing our opinion, we affect the decisions of our peers in planning their future trips.

With this, we are confirming that social media play a major role in tourism, especially in the decision-making process and by creating marketing campaigns and communicating with consumers. Therefore, the impact of social media in tourism industry has been greatly magnified to push the mobilization of tourists to consider the information in social media as their reference for travelling (Fananti & Suyadnya, 2015). Due to growth in the trend, many travel companies are incorporating social media applications into their marketing strategy (Parsons, 2017). Also, the tourism is particularly dependent on the verbal message – such as opinions, recommendations and comments on social platforms like Facebook, LinkedIn and Twitter, which in fact allow its users to share suggestions and tips (Kazak, 2016).

We should see the social media as an extended “word of mouth” ad taken to a next level. Because, social media plays a major role in disrupting traditional business models and is allowing creators of content to connect directly with their audience (Madondo, 2016). The attractions, hotels, transportation, restaurants in the destination can use the social media as a personalized form of advertising. The use of the social media can help them to enhance the buzz and create credibility at a low or no cost at all.

It cannot be denied that social media platforms are a powerful tool and their impact on tourism will increase. Not accepting and appropriating their ever-growing influence on the tourism industry and continuing to use already consumed marketing methods will lead to a negative impact on the business.

The most commonly used social media platforms for tourism marketing are: Facebook, YouTube, Twitter, Google, Google Street View, Instagram, Flickr, Tencent, Weibo, Sina Weibo, Foursquare, Yelp, Android applications and Smartphone applications (Mukherjee & Nagabhushanam, 2016).

Social media as a tool for tourism marketing

One of the basic functions of the marketing is expressed through its influences on shaping images, concept, image among buyers, respectively consumers, about the destination itself (Dimitrov & Angelkova, Petkova, 2014). Therefore, social media as a concept consists of: various forums, blogs, chats, emails, company websites, photos, videos, social networking sites and other online platforms. They can be interpreted as a way to experiment with the new opportunities that can help to improve and create new forms of customer value, which is very important when it comes to attracting new customers (Kuric, 2016). The Internet is changing, from a world of information into a world of influence, and its elements are social media that are already beginning to revolutionize the state of marketing, advertising and promotions.

What makes social media an attractive and useful tool in every area of our lives, including tourism? The Internet has become a medium, created for communication, but sponsored by consumers. It is now the first source of media for consumers at work and a second source of media at home. Consumers are constantly demanding more control over the media content they need, including the current access to information and setting

up concessional types of ads, such as radio, magazines, and so on. Other, many types of social media provide consumers with unlimited opportunities for their information, by offering them a search into their base, which will eventually influence the buying decision. Social media is recognized by consumers as a true source of information about products or services aside from old commercial communications based on the classic elements of the promotional mix. Destinations marketers can use social media before the travel (to inspire, inform, engage), during the travel (to facilitate at destination) and after the holiday (to remember, share and engage) (Popesku, 2014).

Promotion of the tourist destination through the social media

Social media is an online application tool that allows the user to earn money and collaborate online. People with a common interest can gather to share their thoughts, comments and opinions. Social media enables companies to advertise and promote their products with better opportunities. The advertiser can create his own website, with interesting content and doesn't have to pay a huge amount of money for publication and distribution (Hasan, 2015).

Thus, with the promotion through social media, we've already confirmed the influence on the decision to purchase products and services, or in the case of destination marketing, to choose the particular destination. The importance of social media promotion lies in having high potential to generate different benefits: increase interest in the destination, show the benefits of a particular destination, differentiate the destination, create a picture of the destination, and can also motivate tourists to stay longer at the destination.

With this, today's travel companies are increasingly active through social media, especially international ones. Social networks are one of the fastest and most effective ways to communicate and spread the information with a large group (Hasan, 2015).

Speaking about social media and their benefits in promoting the tourist destination, in 2009, a Colorado social media campaign was called "Snow at a Glance" in order to raise awareness of Colorado as a winter sports destination. The campaign was aimed at selecting three people who never experienced snow through a contest. Potential participants were asked to submit a one-minute video at www.snowatsight.com and explain why

they should receive the award. Participants were supposed to use their social media such as Facebook and Twitter to spread the word about their entry, and also to write about their experiences, to photograph and share videos on YouTube, Facebook, Twitter and Flickr. The award included experience in the Colorado winter season from January to March, 2010: skiing, snowboarding, skiing, nightlife activities and spa. The media coverage of the campaign was worth 2.9 million dollars for advertising, but it generated 300 million people by impressions of the media and creating an impression of Colorado as a winter destination.

Visit Japan 2010 has a Facebook page that gathers all the information about travel that you ever need if you decide to travel to Japan. The look is clean and the information is well organized. Their Facebook feedback is showing that their visitors check the page first, and later Google. The page is regularly updated, and it offers a question box and the chance to post your experience of the page while in Japan (Chong, 2010).

Another example is New Zealand who has a YouTube channel that beside the great videos, it helps the tourists to plan their holidays through a slogan. The channel gives you information about New Zealand, how to get to there, where to stay and eat, and many more (Chong, 2010).

What we can confirm is that with the promotion through social media, the tourist destination remains a competitor in the market.

More satisfied tourists from the tourist destinations with the use of the social media

It is vital that tourist destinations keep their tourists well - informed in order to create value for the tourist. Social media supports this logic of value by allowing travel companies to have a personal relationship with the needs and offerings that are being developed (Ranjha, 2010). With that, travel companies aim to listen to the wishes of the tourists and design it offers according to the needs of consumers as well as to inform tourists about their latest offers.

Social media provides a realistic picture of the tourist destination by eliminating the dramatically created image. The traditional media can build a highly desired value by combining exotic and luxury experience in a tourist destination. This would obviously lead to exclusion when the desired experiences were compared with the already experienced

attributes in the destination, and therefore would result in a feeling of low satisfaction. On the other hand, individuals in social media receive information from the experiences and advice of other individuals who develop their desired value based on reality. When the desired value of the tourist is similar or greater than the value obtained, then the tourist will have a high sense of satisfaction in entirety.

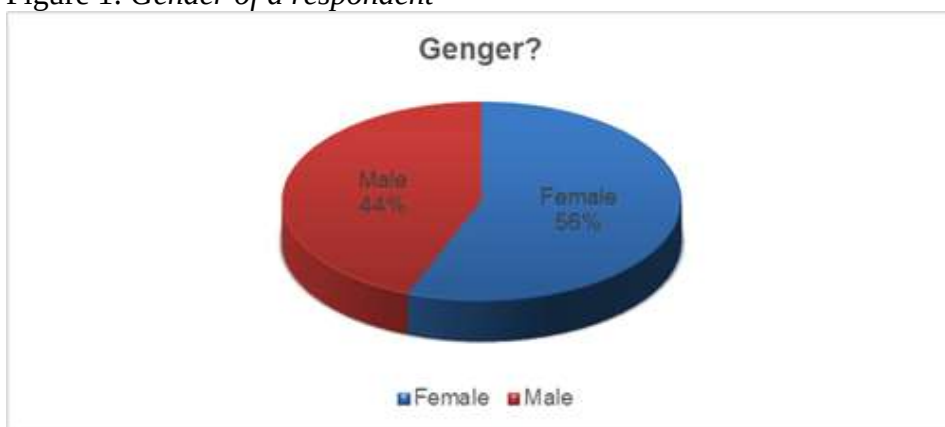
Methodology and research framework

By discussing and analyzing this subject by authors at the classes Tourist Destination on the Faculty of Tourism and Business Logistics in Gevgelija, a survey was conducted on students in order to determine the influence of social media in the Millennials in the choice of a tourist destination.

The survey was conducted online and it was sent to their students' emails accounts. A total of 100 students from the Faculty of Tourism and Business Logistics in Gevgelija participate in the survey.

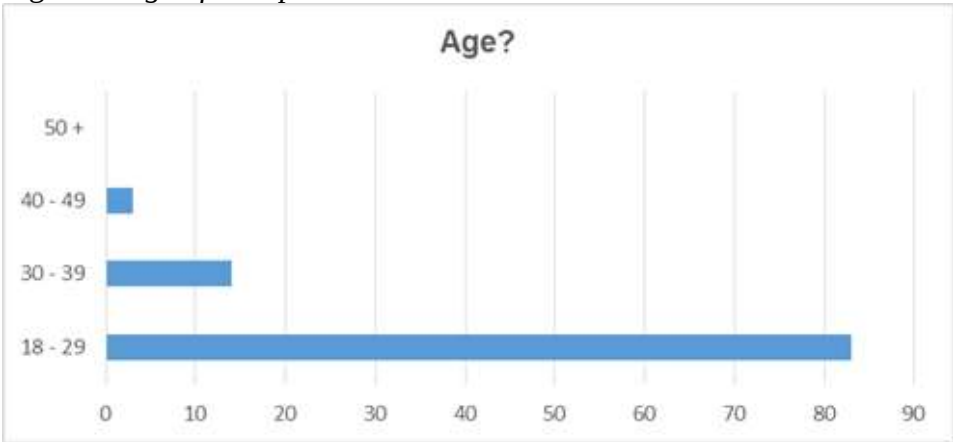
Processing and analysis of the statistical data

Figure 1: *Gender of a respondent*



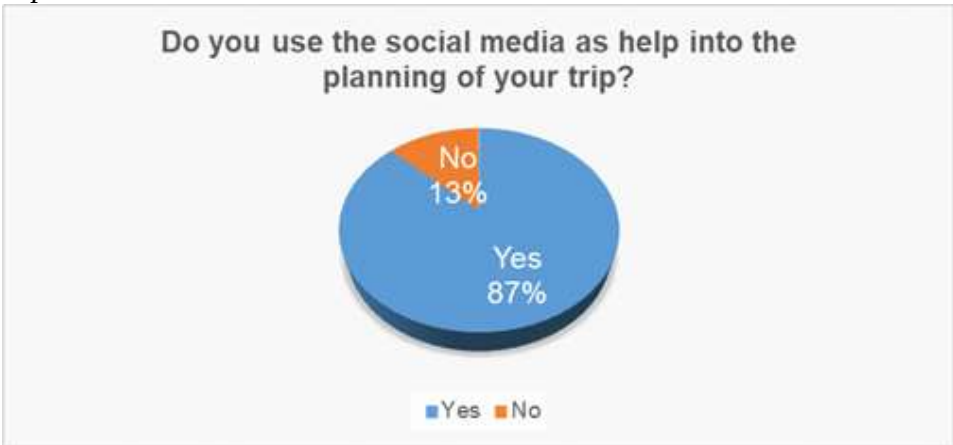
A total of 100 students from the Faculty of Tourism and Business Logistics participated in the survey, out of which 56 examinees were female, and 44 were male.

Figure 2: *Age of a respondent*



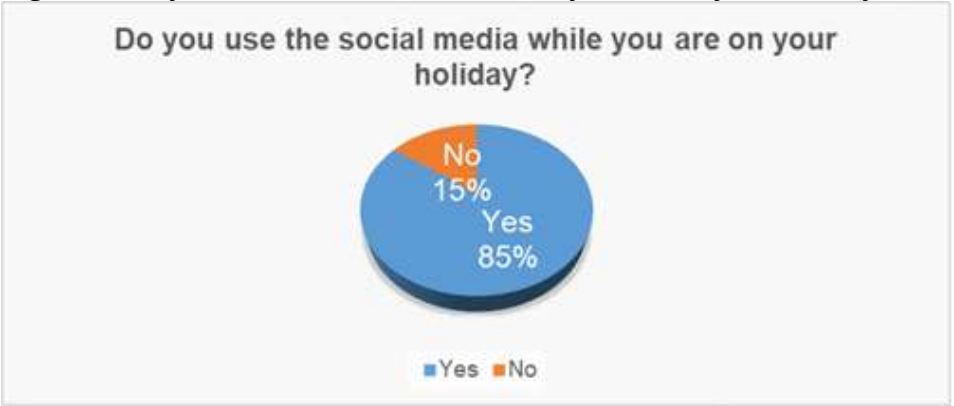
In the survey, the majority of students who participated were aged 18-29 years (83 examinees), the participation of the respondents from 30 to 39 years was (14 examinees) and respondents from 40 to 49 years (3 examinees) were observed. The respondents from 50+ were not interviewed.

Figure 3: *Do you use the social media as help into the planning of your trip?*



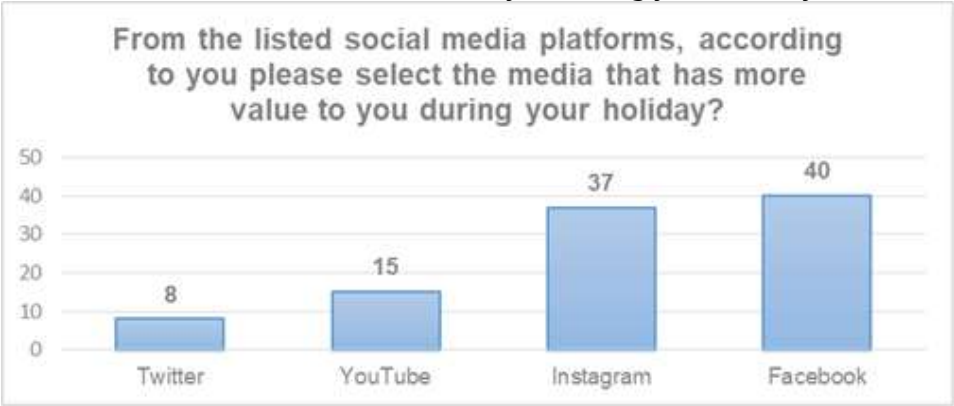
A total of 87 students at the Faculty of Tourism and Business Logistics, responded that they use the social media as a tool for planning their journey, compared to only 13 of them who answered that they do not use social media as a help in planning a tourist travel.

Figure 4: *Do you use the social media while you are on your holiday?*



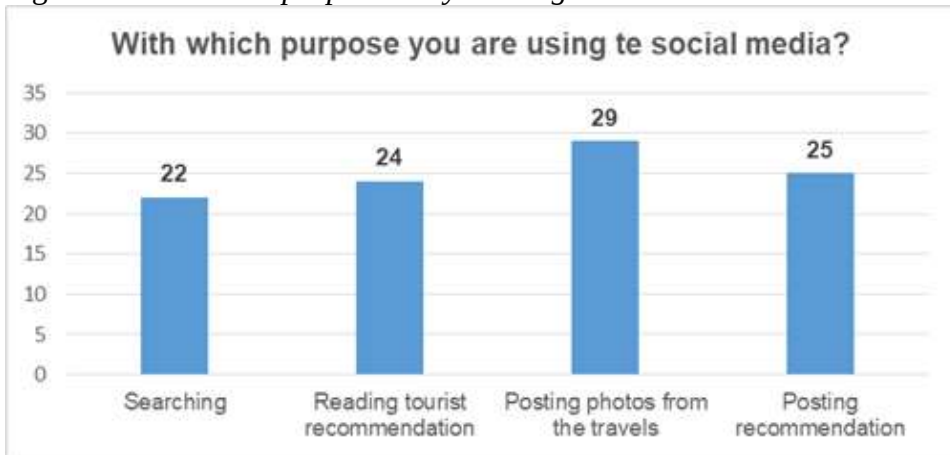
Apart from the use of social media into planning their holiday, the next question was asked whether students use social media during the holiday itself. Out of a total of 87 examinees who use social media in planning, 85 of them are using social media during the holiday itself. That is, 3 respondents answered that they initially use them during the planning, but during the holiday they do not prefer to use them. Thus, a total of 15 responses were recorded from examinees who do not use social media during the holiday at all.

Figure 5: *From the listed social media platforms, according to you please select the media that has more value to you during your holiday?*



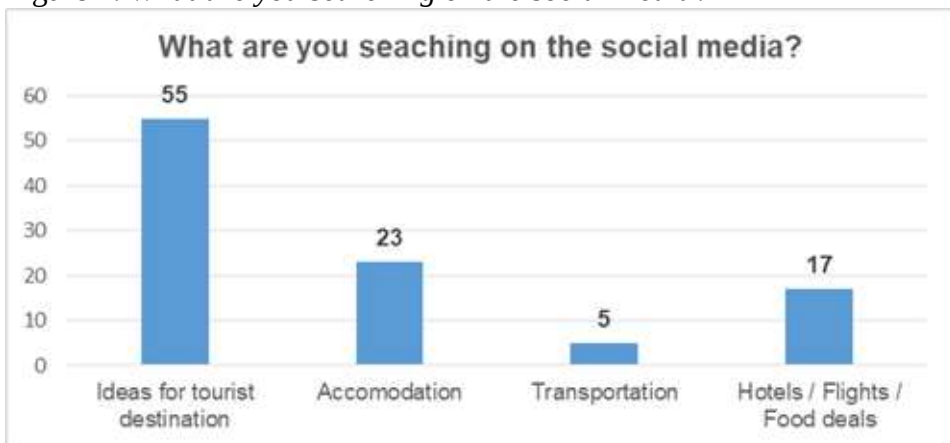
Facebook (40 examinees) and Instagram (37 examinees) are the most used social media platforms among students at the Faculty of Tourism and Business Logistics into the planning of their holiday. A lower rate of use among students noted platforms like YouTube (15 examinees) and Twitter (8 examinees).

Figure 6: *With which purpose are you using the social media?*



By this question, we can conclude that all of the above is important to the students. Posting photos from the travels (29 examinees) is the most used activity by the students while they are online, followed by the posting of recommendations (25 examinees) and reading tourist recommendations (24 examinees) and the least used activity is searching information (22 examinees).

Figure 7: *What are you seaching on the social media?*



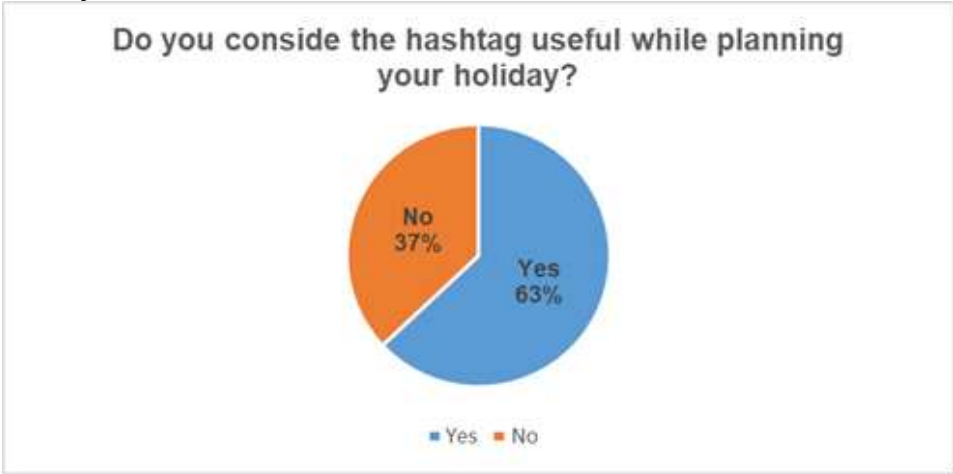
The idea of a tourist destination (55 examinees) is most sought after by students from the Faculty of Tourism and Business Logistics in the use of social media, followed by the search for accommodation (23 examinees) and hotels / flights / food deals (17 examinees). The students answered that the least search data is for transport choices (5 examinees).

Figure 8: *Do photos of the tourist destination, encourage you to travel?*



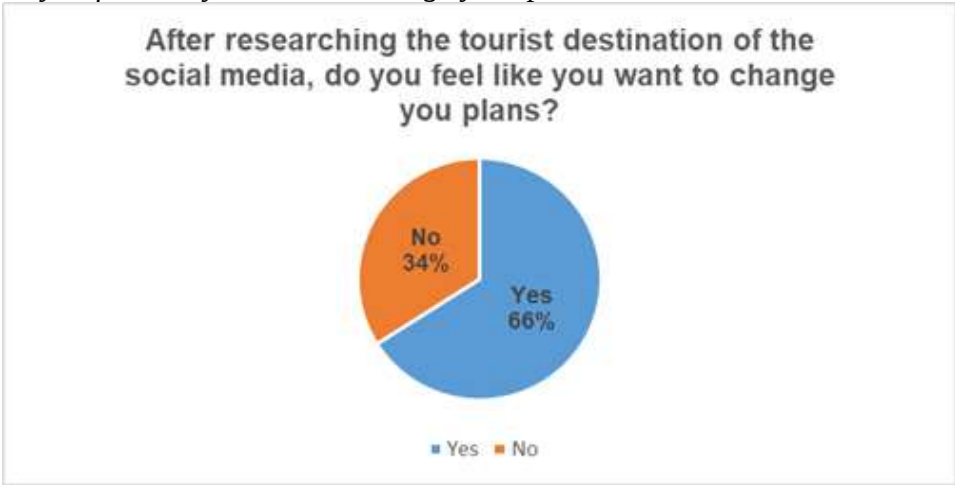
A unanimous answer from all students (100 examinees) that the photos from a particular tourist destination encourage them to visit it.

Figure 9: *Do you consider the hashtag useful while planning your holiday?*



The hashtag from 63 examinees is used in the process of selecting a tourist destination, while for 37 examinees it has no value.

Figure 10: *After researching the tourist destination of the social media, do you feel like you want to change your plans?*



66 examinees answered that after searching the tourist destination of social media, they are going to change their plans, while for another 34 examinees the search for a destination on social media has no effect after in the change of travel plans.

Figure 11: *For which things do you usually change your mind?*



Only the students, who responded affirmatively to the previous question, also answered this question. In particular, 66 students with the search for the destination of social media often change their plans when it comes to activities (20 examinees), then the choice of the destination (17

examinees), the choice of restaurant (12 examinees) and hotels / accommodation / deals for food (9 examinees). Only 3 examinees answered that after searching for a tourist destination on social networks, they decided to change the choice of air companies.

Figure 12: Choose the form of advertising that you trust the most

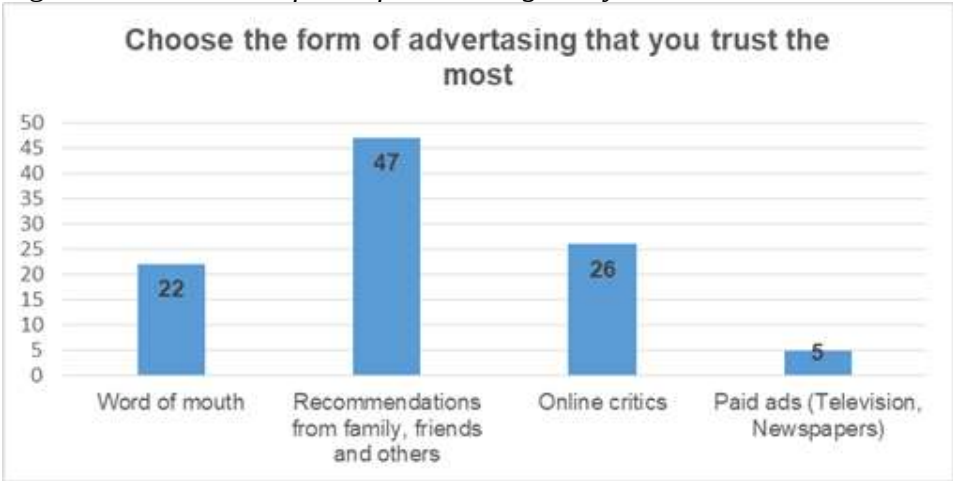
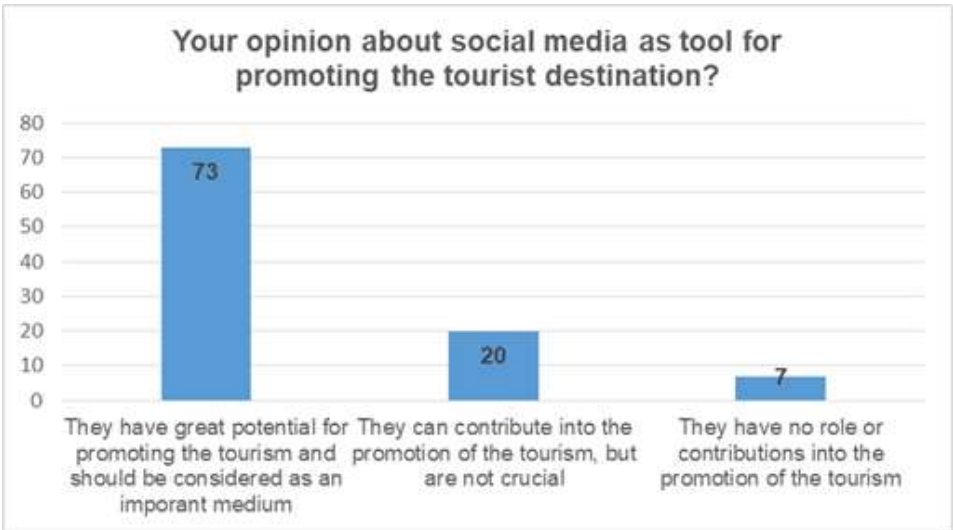


Figure 13: Your opinion about social media as a tool for promoting the tourist destination?



By choosing the form of advertising, according to importance, the students responded that the recommendations of their family, friends, colleagues, etc. (47 examinees) are most important to them, 26 examinees

believe the online critics, while 22 examinees believe in "word of mouth" and only 5 examinees believe in paid ads.

More than 50% of the students responded (73 examinees) believe in the potential of social media and the importance of them as a medium in tourism. 20 examinees answered that they believe in their contribution to the promotion of tourist destinations, but that they are not crucial and 7 examinees answered that social media, according to them do not have an important role or contribution to the promotion of the tourist destination.

Findings and discussion of research results

It is clear to us that in a very short time, the social media has grown into one of the most exploited media in the need for planning a tourist trip (Petrevska, 2014). Its successful dominance is thanks to the support of tourism organizations and companies that have embraced it as the dominant market for the transfer of tourist information to all travelers and tourists.

Since the advent of technology and social media, the planning for the holidays has become is very different than it used to be. The tourists no longer rely on guidebooks compiled by "experts" with out-of-date information or even paper maps to navigate their latest destination. Instead of that, nowadays the tourists have the privilege of enormous and constant access to information across the web in the form of TripAdvisor, Trip Hobo, Travel Triangle reviews and travelers' Pinterest or Instagram photos depicting their latest vacation. This real-time access to relevant tips and, often, crowd-sourced information, has ultimately changed the way travelers approach planning a holidays – from inspiration to booking. Because of this significance, a survey was conducted that explains and shows how much influence the social media have when choosing a tourist destination and planning a trip.

The surveyed were students at the Faculty of Tourism and Business Logistics in Gevgelija, where the survey was sent through the student's email, and although as a target group where the Millennials, the survey also interviewed adult students. A total of 100 students answered the survey. The Millennials recorded the most responses, 83 examinees, but also there were 14 students from the age of 30 to 39 and 3 students from the of 40 to 49. 87% of the students use social media as an auxiliary tool for planning a tourist trip, and 85% use them again during the trip to the

tourist destination. Facebook and Instagram are the most used social platforms, mostly for posting pictures of the tourist destination and travel, but also as a help for choosing a tourist destination. A positive answer was received from all students, that a couple of pictures posted online from the tourist destination on one of the social media are enough to encourage them to visit it. But, that 66% of them when searching for a tourist destination on social networks, later decide to change their plans, which most often refers to the activities at the destination itself or even the place to visit. However, when it comes to choosing a tourist destination, students have their faith in their family, friends, colleagues, etc. The last form of advertising that they believe are paid advertisements. 73 students responded that they consider social media as an important element in promoting the tourist destination, while 20 students emphasized their importance in promoting the destination, but stated that the decision was not decisive. Only 7 students stressed that social media have no share in them and in general in promoting the tourist destination.

The survey gives us insights that the Millennials really rely on social media in choosing a tourist destination, and that the tourism destination should enable even more involved elements available on social platforms (hotels, restaurants, rent-a-car companies, tourist agencies) that will be easy to search by millennials - tourists just through the hashtag. Even encourage the use of a branded hashtag, where experiences can increasingly get more prestige over items. The Millennials are aiming more towards a desirable experience over a desirable item. Meaning, while posting and sharing photos and videos online, to capitalize this, the destination should encourage them by using a branded hashtag.

The very elements of the tourist destination should know that today, for a tourist, it is enough with a single click to reduce the reputation of the destination. With the constant posting of images, videos, reviews the attractiveness of the destination will increase, but also, it will inspire the tourists among themselves during the trip. With real time photos of the attended events, the tourists will get inspired to attend too, even if they have not planned their trip before.

Although the students responded that they still have greater faith in recommending a tourist destination than their family and friends, this does not mean that it should be viewed negatively on social media. It is this recommendation from a family, friends or colleagues that may be valid because they have posted a photo or video from a visit to the

destination. This induces that the elements in the tourist destination should insist on tourists to post pictures, announcements, videos, etc. while visiting the destination via hashtag and location.

Conclusion

The use of the Internet and other information communication technologies has led to a new era of tourism industry. Social media, as one of the most powerful networking tools, are nowadays integrated into the social and economic life of any individual. And that is why the tourists, no longer decide on a destination, research what to do or where to stay, and then purchase the required tickets. Instead, their path to travel, both purchase and experience, has become nonlinear. They decided to turn to their friends, coworkers, and influencers within the expanding social media world to find the travel and vacation inspiration, and even deals to support their newly discovered destination.

Tourist destinations should use the social media before the travel (to inspire, inform, engage), during the travel (to facilitate at destination) and after the holiday (to remember, share and engage). Non-acceptance of the use of social media in the promotion of the tourist destination will cause a decrease in their competitive advantage. Because so far, that the importance of promoting the symbolic aspects of the destination rather than solely promoting the functional attributes such as price and weather; the tourist destination need to consider the anticipated social media buzz travel will create and harness the force behind these symbolic images to influence visitation to the destination.

But what is the cost of using social media, which are now one of the most popular media than any other? The answer is simple. Social networks are free. Today, everyone is present on social media and around 80% of the world's population uses a different kind of social platform. Of course, for increasing business in a particular tourist destination, but also in general, various paid promotions can be used, but are far cheaper and more accessible to everyone than other media. Social media is one of the easiest forms for promotion. Because someone (a potential tourist) can easily neglect your paid ad for the particular tourist destination, but a social media ad and a link of recommendations, reviews, and comments can easily make the individuals follow their friend's footsteps, and choose to experience this incredible adventure. With this availability, and the role of

a hashtag, it's much easier for hotels, restaurants to find loyal guests, and reward them accordingly.

What I believe that is the key answer to how social media can boost the promotion of tourism promotion of the destination itself is the larger target group. The tourist destination of social media is available for promotion 24 hours per day, and every user who observes on social media is a potential tourist.

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CURRENT STRATEGIC TREATMENT IN ICT APPLICATION WITHIN THE TOURIST OFFER PROMOTION

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Abstract

ICT has played a very important role in the development of tourist offer, i.e. tourism supply and tourism demand in recent years. Through continuous development and implementation in modern business, ICT has given a completely new dimension to the process of linking tourism supply and tourism demand in the market. This paper focuses on the analysis of the aspects of current strategic treatment of ICT application within the tourist offer promotion. The method of theoretical content analysis with the basic methods of concretisation and specialisation, normative method, as well as analytical-deductive method of data analysis has been applied. In addition to the analysis of ICT sector application treatment in the Tourism Development Strategy of the Republic of Serbia for the period 2016-2025, the essential elements of the Digital Agenda for Serbia, i.e. strategic documents that define it, have been analysed as well.

Key Words: *ICT, tourism, tourist offer, Tourism Development Strategy, Digital Agenda for Serbia*

JEL classification: *K24, O31, Z32.*

Introduction

There are numerous definitions of tourism, as well as various determinations of the basic characteristics of this economic activity, its role and importance for both the individual and the society as a whole. It is undeniable, however, that tourism gradually went from an optional, mainly non-existential need shown mostly by the members of certain social classes and turned into an inevitable and extremely important need

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of a modern man, in fact necessary for high-quality, efficient fulfilment of primary existential needs and wants. In short, tourism has grown from the privilege of the rich to the need of all social classes, regardless of any indicators of financial, educational, social and other circumstances.

Thanks to the globalisation and its effects both globally and locally, bearing in mind particularly the effects in the field of finance, employment, technology, transport and communications, tourism experienced great expansion in the second half of XX and the beginning of XXI century (Matijašević-Obradović, 2017, p. 22). As stated by Stanić and Vujić (2016), "as a branch of economy, tourism makes up 10% of the global GDP. What indicates that tourism is the driving force of the global economy is also the data showing that tourism represents 30% of global export of services and 6% of total export of goods and services, and as the global export category it is behind oil, chemical and food industries" (p. 14). Thanks to the preserved nature, clean air, favourable climate, rich flora and fauna, and a large number of cultural and historical monuments, Serbia has significant advantages and numerous opportunities for continuous development of tourism, especially in the field of rural tourism. Namely, as Cvijanović et al. (2017) state, significant potentials for the development of tourism in Serbia are related exactly to the rural areas (p. 872). Furthermore, Ristić et al. (2016) point out that tourism is generally considered important for the economic, social and functional structure of rural areas, but is also seen as a key factor in revitalisation and diversification of the rural economy (pp. 665-666). The fact that tourism has great influence on the development of rural areas is also highlighted by Ćirić et al. (2014, p. 26). Thus, the expansive development of tourism has influenced many positive effects in different domains of national economies, as well as worldwide. By incorporating the principle of sustainability, tourism has, through its primary concept, encompassed four essential aspects of sustainable development: environmental, social, cultural and economic (Počuča et al., 2017). On the other hand, tourism requires new management approaches, new resources, as well as continuous innovations.

Information and Communication Technologies (ICT), and in the first place the Internet as the most important and most represented global communication network, have become very significant in the field of tourism supply and demand development in recent years. When mentioning ICT, and especially the Internet, the first thought relates to a series of positive effects that the expansive development of the

technological aspect of contemporary society has brought with it (Matijašević-Obradović, Kovačević, 2016). In that regard, Ivanović et al., (2016) state that "modern ICTs promote the process of linking tourist supply and tourist demand on the market, thus giving a completely new dimension to the distribution of package tour arrangements and providing companies which deal with tourism an opportunity to use new innovative and useful tools to enhance their presence in the global tourism market" (p. 146).

Having in mind the views expressed in the current Tourism Development Strategy of the Republic of Serbia for the period 2016-2025 (Official Gazette of the RS no. 98/16), about the fact that in the strategic works so far, the advantages and benefits of ICT, Internet, social networks and platforms for promotion of the tourist offer in the Republic of Serbia, as well as the platforms for development of new SMEs and their services, have not been used sufficiently, it is important to consider the aspects of the current strategic treatment of ICT domain application within the promotion of tourist offer, and in the tourism industry in general.

Literature review

Some foreign authors very often define tourism as target, planned and motivated behaviour, where the expectations of the person travelling play the most important role in making the decision to travel. Therefore, it is highlighted that the needs, attitudes and motives of tourists are of crucial importance (Wall & Mathison, 2006, p. 45). Tourism is also a kind of link between urban environments and non-urbanised areas, characterised by a variety of natural, socio-economic, cultural and other important elements. On analysing tourism, Jovićić (2000) states that tourism is an activity that valorises those elements of space that are for a number of other activities rather marginal, so that only tourism can valorise the sandy, gravelly and rocky shores of seas, lakes and rivers, viewpoints, hillsides covered in snow, swamps, some climate elements, caves and pits, relict and endemic specimens of flora and fauna, sunset and picturesque landscape, or necropolises, tombstones, archaeological sites, frescoes, etc (p. 17).

Theory often cites numerous positive effects of tourism in different areas. Bošković (2008), for instance, states that the positive effects of tourism are particularly evident in the area of realisation of domestic product, national income, its territorial reallocation, in tourism economy activities, balance of payments, employment of the population, etc (p. 123). In that

context, Stanić and Vujić (2016) state that in the beginning, economic theories used to study tourism predominantly from the aspect of economic effects of tourism turnover on the sectors of hospitality, transportation and tour operator and travel agency activities. However, later research on tourism pointed to its not less significant influence on other economic and social activities as well, i.e. on the entire economic development. Tourism plays a key role in local economic development (Rogerson & Rogerson, 2014; Karampela, Kizos and Spilanis, 2016, p. 161). Tourism can be primarily viewed as an economic branch that simultaneously promotes economic growth and equality, as it involves the use of local inputs - local goods, as well as engagement of local workforce (Mansury and Hara, 2007, p. 213). In less developed regions, local community may have very significant economic and social benefits from tourism (Zhenhua, 2003, pp. 465-466), and the development of this economic branch can be an important milestone for further development at the local level. From the foregoing, it may be concluded that tourism is recognised, not only as a consequence of economic development, but also as a factor of economic development (Stanić and Vujić, 2016, p. 14). Also, having in mind that tourism is a sort of space user, and its specificity lying in the fact that it is not an irreversible consumer of natural elements (Jovičić, 2000), while respecting the principles of sustainability in the field of tourism development, it comes to the refinement of numerous natural and cultural sites.

If we look at the situation in the world, in terms of representation and development of tourism as an economic activity, it can be said that tourism represents one of the five export categories in 83% of all countries in the world and the main source of foreign exchange earnings in almost 38% of the countries. Hence, tourism plays one of the main roles in the economy of many countries, as a source of employment and a way of fighting poverty (Stefanović and Azemović, 2012, p. 39). Taking into account the global trends happening in the tourism market, as well as the tendency to increase the importance of tourism as leisure and recreation (although these three terms cannot essentially, in a broader sense, be equalised, but can only interactively complement each other), and the phenomenon of constant profiling of new motives and attributing greater importance to certain values of tourist offers on the market, it is necessary to point out the need to constantly innovate and continuously develop all the aspects of tourism supply and tourism as an economic branch in general. In that regard, the wide representation of ICT segment

application in tourism has become a necessity and inevitability in modern society.

As stated by Ivanović et al. (2016), "in the tourism industry, more and more services provided to tourists are based on the use of the Internet as the main communication channel. Tourism is based on information, and the Internet is the means (channel) which transfers and exchanges the information in the best and the fastest way" (p. 146).

Looking at the wider context of ICT application, there is almost no area in which ICT, computers and computer networks have not found their application in modern living and working conditions. In today's working and business conditions, ICT application is of key importance. Simple and fast communication, almost instantaneous transmission of large amounts of data over long distances, easy publishing and updating of electronic documents and their continuous global availability, digital delivery of goods and services, and countless other benefits have been enabled. According to Stojanović and Regodić (2016), technological progress and the increasing use of ICT have influenced the change in economic and business environment. Namely, traditional forms of business have taken on new forms, while a significant part of business operations is certainly done on the Internet. In this way, productivity as well as the competitive position in the market has been undoubtedly increased (p. 105). In accordance with the foregoing, Devetaković et al. (2009) state that the reasons for the key role of ICT in all vital spheres of modern society should be sought in the rapid advancement and expansion of ICT, whose influence has been changing the very foundations of industrial society.

The Internet has entirely changed the way of doing business, geographical boundaries, language barriers and currency restrictions. Simple and fast communication, transmission of large amounts of data over long distances, easy publishing and updating of documents and their continuous availability, digital delivery of goods and services, creation of virtual organisations have all been enabled (Ivanović et al., 2016, p. 146). According to Jović and Radovanović (2017), "the basic feature of modern ICT is that the full effects of their application cannot be achieved by mere introduction of individual components (e.g. computers), nor can one aim at business computerisation of only individual business entities in tourism. Substantial changes in the activities of the tourism industry have occurred only with the introduction of a unique information and

communication system accepted by all of those participating in the provision of tourist services" (p. 6).

ICT certainly has a strong impact on the competitiveness of economic activities in general. In the field of tourism, by determining the creation of new tourism products according to the criteria of quality and personalised services, ICT also significantly influence the competitiveness of the tourist offer providers (Egger & Buhalis, 2008, p. 327), and as Ivanović et al. (2016) state, "many companies whose activity is tourism are forced today to do reengineering of their business processes in order to use modern ICT and their advantages, to be able to survive, work and compete in the modern market, improve their business, enhance productivity, reduce costs, while on the other hand, the companies using them are in the period of great opportunities" (p. 154).

There are multiple advantages of using ICT in tourism. Jović and Radovanović (2017) highlight the following ones: cost reduction; market increase; intensive marketing; possibility of continuous interactive communication with potential clients and partners, etc (p. 6). In this segment, it is important to mention now a completely default manner of presenting all necessary and relevant information related to tourist offer, as well as the specific competitive advantages of the providers thereof. It is about the official websites. Namely, when timely updated, with content fully completed with all relevant information, in line with the needs and requirements of potential visitors, as well as revised and easy to navigate, websites of tourist offer providers are a key source of information and the basis of all promotional activities in the field of tourist offer promotion. As stated by Mihajlović (2013), research has proven that scarce content, as well as website design may lead to a loss of 50% of possible sales of tourist services, creation of negative impressions on potential customers as well as a loss of up to 40% of website visitors.

Apart from the wide spectrum of impacts on the change in tourism industry structure, ICT development has influenced changes in consumer perception by strengthening the interactions between consumer-tourist destination, consumer-tourist companies and between consumers themselves (Miličević et al., 2013). Namely, the basic advantages of ICT application in the field of tourism do not bring benefits only to tourist offer providers (through a range of information and communication applications and capabilities, such as computerised booking systems or distribution systems), but also offer numerous benefits to the users of

tourist services, i.e. tourism demand holders. In short, potential users of tourist services in modern conditions of ICT sector application in the field of tourism often explore the destinations independently, coming to relevant information, booking and/or purchasing services and, in that whole process, making themselves completely independent from the provision of required information or services by travel agencies.

It is interesting to mention that a significant point in the field of tourist supply improvement (e.g. travel agencies, carriers, and especially hotels), is actually the feedback of tourism supply users, which can be again best provided online by accessing the official web page of the tourist offer provider, which again points to the inevitable benefits of ICT segment application. In this way, the quality of services provided by the tourist offer providers can be influenced, while transparent attitudes and opinions on services provided are an important motivation factor in the field of quality improvement of the offer. In addition to this, it is also significant to mention the interactive relationship of the consumers themselves in the domain of information exchange about certain tourist sites, contents of tourist offers, quality of tourist services provided, etc. The exchange of information on the consumer-consumer level is done primarily through accessible online social communities (e.g. forums, services, social networks, etc.), which again points to the fact that the ICT sector application is the backbone of modern tourism development.

Given the importance of ICT application in the field of tourism, it is important to consider the aspects of the current strategic treatment of ICT domain application within the promotion of tourist offers, and in the tourism industry in general.

Methodology and data sources used

The paper analyses the aspects of strategic treatment of ICT domain application within the tourist offer promotion and in tourism in general, and applies primarily the method of theoretical content analysis with the basic methods of concretisation and specialisation, the normative method, as well as the analytical-deductive method of data analysis.

In addition to the treatment analysis of ICT sector application in tourism, defined in the Tourism Development Strategy of the Republic of Serbia for the period 2016-2025, the essential elements of the umbrella document for the digitalisation process in Serbia - Digital Agenda for

Serbia, i.e. priorities and legal aspects of strategic documents that define it - Information Society Development Strategy until 2020 (Official Gazette of the RS, no. 51/2010) and E-Communication Development Strategy in Serbia between 2010 and 2020 (Official Gazette of the RS, no. 68/2010) will also be analysed.

**Treatment of ICT sector application in tourism within
the Tourism Development Strategy of the Republic of Serbia
for the period 2016-2025**

Article 7 of the Law on Tourism ("Official Gazette of the RS", no. 36/2009, 88/2010, 99/2011 - state law, 93/2012 and 84/2015) stipulates that the Tourism Development Strategy, adopted for the period of at least five years, determines long-term tourism planning and development goals in accordance with the overall economic, social, environmental and cultural-historic development. The goals of the current Tourism Development Strategy of the Republic of Serbia for the period 2016-2025 (hereinafter: Tourism Development Strategy) are the sustainable economic, environmental and social development of tourism in the Republic of Serbia; strengthening of competitiveness of the tourism industry and its related activities in local and international markets; increase in direct and total participation of tourism sector in GDP of the Republic of Serbia, as well as increase in direct and total number of employees in the tourism sector and its participation in the structure of the total number of employees in the Republic of Serbia; improvement of the overall image of the Republic of Serbia in the region, Europe and the world (p. 2).

In the current course of realisation of the previous Tourism Development Strategy of the Republic of Serbia for the period 2006-2015 ("Official Gazette of the RS", no. 91/06), there has not been a sufficient use of the EU pre-accession funds as well as the opportunities and benefits of ICT, Internet, social networks and platforms for promotion of the tourist offer of the Republic of Serbia, as well as platforms for development of new SMEs and their services (p. 6).

The treatment of ICT application in tourism in the current Tourism Development Strategy is defined by the view that the structure of tourists is very much divided nowadays and that the success of marketing in tourism lies in the ability to understand trends and satisfy all market niches. In that respect, three groups of new trends are observed: 1) new

trends in promotion and booking methods; 2) new types of accommodation; 3) modern reasons for travelling on the global tourism market (p. 20). ICT application in tourism includes primarily the new trends in promotion and booking methods. Tourism Development Strategy in the field of new promotion and booking methods of tourist offers entirely supports the introduction of innovative content in the placement and organisation of tourist offer providers, in line with modern ICT approaches. Tourism Development Strategy expresses its commitment with a very detailed description of characteristic opportunities that the ICT sector brings with it in the field of tourism, as well as detailed description of the benefits achieved by the application of modern technologies in this field. Namely, according to the Tourism Development Strategy:

1. "New communication and promotion tools have been developed in the area of promotion and booking, which are based on e-marketing technology for communication with consumers and greatly increase the efficiency of marketing activities. Digital channels are the core of communication strategy in efficient marketing. Today destinations and companies reach consumers directly through a number of common digital platforms.
2. Sharing economy and virtual cross-sectoral platform for providing information, as well as communication between consumers as per "peer to peer" model, is becoming a feature of the new situation in the tourism business. It is also necessary for e-marketing technology for communication with consumers to be accessible for people with disabilities, as well as for the facilities and other content promoted to be accessible and be labelled as accessible with so-called pictograms.
3. Online distribution network, smartphones, tablets and other portable and mobile devices nowadays have a crucial impact on making decisions on travelling. Consumers have access to abundance of information, several options for its collection, but also more opportunities to express their opinion through digital platforms, which sometimes can damage the image of a destination, and on other occasions to be the best ambassador for a particular destination.
4. Moreover, popular blogs are a powerful marketing means for tourist organisation in terms of enhancing visibility. The power of travel blogs is very important on social networks, and Web Search is nowadays more important for decision-making than personal recommendations. On the other hand, travel blogs and tagging not only expand the market, but also influence quick adjustment to

consumers' wishes and, importantly enough, to elimination of omissions or oversights.

5. 3D technology has introduced revolution in the placement of promotional messages by encouraging experience and emotion, and thus adrenaline. In addition, ICT technology and social media give special opportunities to developing countries to catch up with contemporary trends and act more efficiently in the market, without engaging large financial resources, as well as a chance for inaccessible destinations to communicate with the tourism market" (p. 20).

Tourism Development Strategy expresses the view that the improvement of promotional mix, introduction of new communication and promotion tools and orientation for the purpose of online marketing, mobile applications and common platforms for information placement and distribution also involve a transformation of marketing activities organisation method of the National Tourist Organisation.

Tourism Development Strategy bases its views on the necessity of a more extensive application of ICT sector in the field of tourist offer promotion and booking, among other things, on the SWOT analysis results (Strengths, Weaknesses, Opportunities, Threats), as a strategic planning tool which summarises the key aspects of development of a certain area/field in a concise and succinct manner (p. 29). The results of the existing weaknesses and threats in the field of tourism, taking into account the reflection on the importance of ICT application, presented in the SWOT tourism analysis in the Republic of Serbia for the previous period (2006-2015), are shown in the following table:

Table 1: *Weaknesses and threats in the field of tourism, presented in the SWOT tourism analysis in the Republic of Serbia for the previous period (2006-2015)*

No.	Weaknesses	Threats
1	Neglect of contemporary trends in the global tourism market and lack of their implementation in programming and development of tourism in the Republic of Serbia	Long-term policy of uncritical repetition of budget support practices of exclusively public institutions and public enterprises, in contrast to strong support of innovation, existing and new SMEs
2	Outdated and inadequate model of tourism management, marketing and promotion of destinations,	Lack of reforms in the management and coordination system in the development of tourism industry in

	instead of products and attractions based on visitor experience	the Republic of Serbia
3	Lack of innovations and new entrepreneurial projects	
4	Insufficient information obtained by the companies in the field of tourism and hospitality	
5	Lack of practice of promoting best experience in tourism development	
6	Inadequate local Internet platform and ICT application for the promotion of tourist attractions, virtual guides and presentations	

Source: *Tourism Development Strategy of the Republic of Serbia for the period 2016-2025*, "Official Gazette of the RS", no. 98/16, p. 30-32.

The conclusion reached by SWOT analysis of weaknesses and threats in the field of tourism, which the Republic of Serbia faced in the previous period, is that our country "has the chance to develop tourism to the level where it becomes one of the key economic sectors if the space for more efficient use of all resources for realisation of new innovative projects and free entrepreneurial action of existing and new SMEs and large domestic and foreign investors is opened" (Tourism Development Strategy, 2016, p. 33). Tourism Development Strategy should pave just that direction.

In that sense, the Tourist Organisation of Serbia, in the field of planning and realisation of measures and activities for the implementation of Tourism Development Strategy, in the domain of ICT sector application in the field of tourism, predicts as the fourth one the use of new technologies and ICT applications, as follows (p. 64-65):

1. the ministry responsible for tourism operations will support activities on the development of ICT digital marketing and online promotion and booking tools and web portals by products,
2. the ministry responsible for tourism operations will, in an appropriate form of contest of competition (independently and/or with the help of EU programmes), in cooperation with tourist organisation in the Republic of Serbia support on all levels the most advanced ICT and software solutions (web portal development and digital platform presence) that enhance promotion and increase in capacities of use of local and national tourism products,

3. form the Centre for ICT promotion in the field of tourism of the Republic of Serbia.

Significant support to the strategic treatment of ICT application in the field of tourism is the Digital Agenda for Serbia, as an important initiative of the Digital Agenda of Europe for 2020, whose goal is to define ICT roles and various aspects of ICT application in the Serbian territory. In that context, a brief overview will be made of the strategies defining the umbrella documents of the process of introduction and application of ICT in Serbia

Digital Agenda for Serbia and strategy priorities that define it

Digital Agenda 2010-2020 for Europe was launched in 2010. Its purpose is to define the key role that ICT will have in the plan realisation until 2020 (Hodžić, 2014, p. 2). Within the European Union, ICT has been recognised as the main impact factor on economic growth and innovation (Bogojević and Gospić, 2010, p. 95). As already mentioned, the Digital Agenda for Serbia is a significant initiative of the Digital Agenda for Europe for 2020. The basic starting point of the Digital Agenda is that ICT has been taking on an increasingly important, if not the most important role both in production and economy, and all the other spheres of life of individuals and society as a whole. Digital Agenda for Serbia is defined by the Information Society Development Strategy until 2020 and E-Communication Development Strategy in Serbia from 2010 to 2020.

The basic goals of the Information Society Development Strategy until 2020 are: 1) development of the information society should be directed towards exploitation of ICT potential with the aim of enhancing work efficiency, economic growth, higher employment and raising the quality of life of all the citizens of the Republic of Serbia; 2) by the year 2020, according to the indicators of development of the information society, the Republic of Serbia should reach the EU average. The activities undertaken with the aim of development of the information society should be directed towards priorities within the following fields: 1. Electronic communications; 2. E-administration, e-health and e-justice; 3. ICT in education, science and culture; 4. Electronic trade (e-trade); 5. ICT business sector; 6. Information security.

The strategy of development of electronic communications in the Republic of Serbia from 2010 to 2020 is of great strategic importance and

should set the main course and goals of successful development of electronic communications in the Republic of Serbia. Namely, this Strategy indicates that electronic communications are an integral part of all economy sectors and one of the main factors of not only economic, but also social development. Overview of the state of electronic communications, as an important economic and social driver, i.e. accessibility of various forms of communication and services, represent one of the very important indicators of the development of the society (p. 1). In addition, the E-Communications Development Strategy in the Republic of Serbia from 2010 to 2020 has decided on direct and indirect priorities. Direct priorities include: identification of the existing situation in the country, pointing out of the obstacles to the development of electronic communications, defining of measures what will enable application of new technologies, improvement of e-communications, etc. Indirect priorities include: achieving an increase in total value of the competitiveness index in the Republic of Serbia, accessibility to the electronic communications infrastructure, etc (p. 1-2).

Conclusion

The last two decades have been marked by the rapid development of high technologies, including ICT, which caused a number of changes in the ways of people's life and work, as well as changes in the ways in which legal entities operate. Tourism business operators have been increasingly relying on ICT, especially the Internet, as the most commonly used global computer network, having in mind primarily its spatial and temporal capabilities. The widespread application of the ICT sector in tourism in general, especially in the domain of tourist offers, has become inevitability and necessity, which is fundamentally justified by various reasons. Reasons that significantly influence the continuous development of ICT segment application in the field of tourism are certainly: market expansion, improvement of tourist arrangement placements, increased business efficiency, cost reduction and other reasons. Until 2016 in Serbia, ICT was not represented significantly in the field of tourism. By adopting a new Tourism Development Strategy of the Republic of Serbia, adopted for the period of 2016-2025, the treatment of ICT sector applications in tourism has improved considerably. Namely, by the Strategy, the ICT application in tourism, among other things, primarily covers new trends in the promotion and booking methods.

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TOURISM PROMOTION THROUGH THE WEB BY TOURISM ORGANIZATIONS AND BOARDS IN BOSNIA AND HERZEGOVINA

Željko Vaško¹; Boris Vaško²;

Abstract

Tourist organizations and boards are key public tourism promoters in Bosnia and Herzegovina playing a role of destination managers and connecting individual travellers, travel agents and other stakeholders with particular destination. They are mainly organized on municipality (in the Republic of Srpska) or canton level (in Federation of Bosnia and Herzegovina). For tourism promotion mentioned promoters recently massively used IT technology based on World Wide Web platforms and social networks. The Republic of Srpska has 29 municipal tourism organizations of which 19 have web sites, and the Federation of Bosnia and Herzegovina has 10 cantonal tourism boards, and 7 of them have web sites, and they have been taken as a case study for research. The aim of the research presented in the paper is to analyse and evaluate the content of these websites in terms of their accessibility, comprehensiveness, usefulness and interactivity. A widely used content analysis method has been used to analyse the content of web sites of tourist promoters, additionally followed by the descriptive statistics method, method of comparison and ranking method.

Key Words: ICT, web, touristic destination, promotion, Bosnia and Herzegovina.

JEL classification: Z33, M15

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Introduction

Nowadays tourism has become one of the most powerful and fastest growing sectors of the economy in the world. According to World Trade Organization (2017a), for seven straight years tourism has grown in average around 4% per year, and more than 300 million people travel internationally. International tourism represents 7% of the world's exports in goods and services, and over half of that was for leisure purposes (WTO, 2017b). After the recovery from the war, Bosnia and Herzegovina (BiH) became desirable tourist destination with high percentage growth in the number of tourists. In 2017 it records the growth in the number of incoming tourists for 18.6% and overnights stay for 16.2%, comparing to the previous year (Agency for Statistics of Bosnia and Herzegovina, 2018), and according to these data, BiH was at the top of the world. Generally, tourists do not travel around the world because they have to, than because they want it, and on that occasion they freely choose their next destination, guided by different information about it and their perception of the experience that the destination provides. Destination is "the place that hands something to the traveller to keep forever and share with others" (Stange et al., 2011), where the destination could vary from country, over region and municipality, to specific single attraction.

Promotion plays an increasing role in approaching services to consumers, as one of the elements of marketing mix. This may be even more relevant for tourist services, because it is a type of service that consumer does not fulfil some existential need, so he should be further motivated and convinced to use and purchase that service. In the era of digitalization and massive use of information technologies (IT), one of models of presentation tourist offer are multimedia contents based on web platforms. Those are websites where tourist service provider presents offer to a wide range of potential customers. According to Bakić (2010), this is (web) the media that nobody wants miss out of their marketing activities. The advantages of this type of promotion of tourist offer are broad accessibility, low costs and ability for fast content changes. The tourist offer could be distributed through different channels, directly by the tourist service provider or indirectly through interest organizations with which a number of providers of tourist services have certain contractual or other relationship. One of promoters of tourist offer are tourist organizations that are promoting specific tourist destination in the interest of all providers of certain tourist services at that destination.

WTO defined tourist destination as (according to Vujović et al., 2012) a more or less rounded geographical entity that has attractive, communicative and receptive factors, i.e. all those natural, social, anthropogenic, cultural-historical, traffic and other assumptions for accommodation, food, entertainment, leisure and recreation (i.e. creation of tourist offer). Indirect intermediaries in the promotion of specific destinations in Bosnia and Herzegovina are organized in two different ways, depending on the entity in which they operate. Municipal tourist organizations (TOs) are promoting the tourist offer of municipalities in the Republic of Srpska (RS) and tourist boards (TBs), organized on cantonal level in the Federation of Bosnia and Herzegovina (FBiH), are promoting unified tourist offer of all municipalities in specific canton. In addition to the Tourist Organization of the Republic of Srpska (TORS) in the RS there are 29 municipal tourist organizations. By the law of tourist organization and tourist promotion in Federation of Bosnia and Herzegovina in all 10 cantons in FBiH tourist boards have been established, as well as the umbrella tourist board of FBiH.

Information technology is widely used nowadays to promote the tourist offer, including web technologies, and that applies also for tourist organizations and tourist boards, that are existing in Bosnia and Herzegovina.

Literature review

Unlike the market of goods on which the offer is directed towards the demand, in tourism demand is directed towards the offer (Vojnović et al., 2012). According to Ubavić (2015), the main role of promotion, as a marketing mix instrument in tourism, is securing the appropriate level of demand based on the creation of a positive attitude towards products or services. According to Popesku (2013), promotion in tourism is communication with customers/consumers focused on informing, reminding or convincing. Therefore, in the tourist promotion the key is the message that bidder sends to consumers and the way and quality of its placement, so that the reaction of the consumer results just by choosing the destination that is being promoted.

Tourist promotion can be done in many ways, through travel agencies, tourist fairs, professional associations and organizations, press and the Internet.

Nowadays, for tourist promotion, as one of the activities for market appearance, information technologies are being used to send promotional messages, so improvement of promotion largely depends of the development of information technology.

For the joint promotion of local tourist offer, especially in the case of agricultural households that provide agro-tourism and rural tourism services, the role of local tourist organizations and promotion through their websites is important, as Vaško & Vojnović (2016) noted in the case study for rural tourism development in one of BiH municipalities. The need for better promotion as one of the priorities for the development of rural tourism in the function of a stronger economy is also indicated in another survey, also in the area of BiH (Rokvic et al., 2017).

Market promotion is increasingly associated with promotion and distribution, because the means of electronic communication are simultaneously used for promotion and as a channel for (on-line) sales of a tourist product.

More and more researches have been done to analyze the application of the web and other information technologies for promotion purposes. Many researchers narrowed the focus to the use of IT technology in tourism promotion, generally as for example Sambanthan et al. (2012), Bethapudi (2013), Ray et al. (2014), Milovanović and Gligorijević (2017) or specifically related to a particular tourist destination. Below are some of them. Havliček et al. (2009) have explored the use of ICT for promoting agro-tourism in the Czech Republic concluded that "promotion of agro-tourism is very diverse and disorderly and not enough presented by web". Platania (2014) researched the same subject on a selected example of 94 farms dealing with agro-tourism in Sicily (Italy) and concluded that, "with a few interesting expectations, they still lagging behind in the tourism market online". Bassolas et al. (2016) focused on the Twitter social network and researched accessibility and attractiveness of 20 most popular worldwide touristic web sites. Stankov et al. (2009) observed 260 travel websites including 50 travel and tourism organizations in Serbia during 2008. They found that in that time the most of tourism websites in Serbia were static and most of main indicators showed low quality. The almost same authors (Stankov et al., 2010) a year later published additional paper assessing the same web sites from which is emphasized that lowest rank according to number of visitors had tourist organizations' websites. Lacurezeanu et al. (2013) set up 7

hypotheses which they reviewed and statistically tested on 5 web sites of pioneers of Romanian tourism. They concluded that Romanian on line tourism web-sites have a futures comparing with a similar web-sites in developed countries. Klimova (2016) investigated six home pages of Italian regions rating their attractiveness, representativeness, content and accessibility, and Brovelly et al. (2015) did it at the level of Via Regina project (Lake Como in Northern Italy). Antonovic et al. (2015) researched slow food web promotion in Italy and Swiss and compared classic 2D visualization with opportunities of multi-dimensional viewers which allowed 4G mobile application technology. Przybylska (2011) studied the attractiveness of 75 sites of Lubenska province municipalities in Poland, not as tourist destinations, but as destinations for attraction of foreign investors, by using similar approach as in this paperwork. Tunez Lopez et al. (2016) studied public government web sites for tourism promotion and advertising in 22 Latin American countries, concluding that tourism promotion platforms used by Latin America governments still follow a traditional and one-way model of communication, and thus they are not attractive for visitors. Petrevska & Kocevski (2012) ranked 445 tourist objects in FYR Macedonia based on the evaluation of their presentation via the web and concluded that, although web-based tourism portal was in that time in initial phase, they generally increased awareness for Macedonia as a touristic destination. Kitti & Kitti (2016) did similar research in Hungary, Ayalew (2016) in Ethiopia, Alsarayreh et al. (2011) in Jordan.

Mentioned, and many other surveys showed that there is considerable interest for researching how and how successfully touristic service providers use ICT in their promotion and this research is contribution to explore and assess the same in Bosnia and Herzegovina.

Material and method

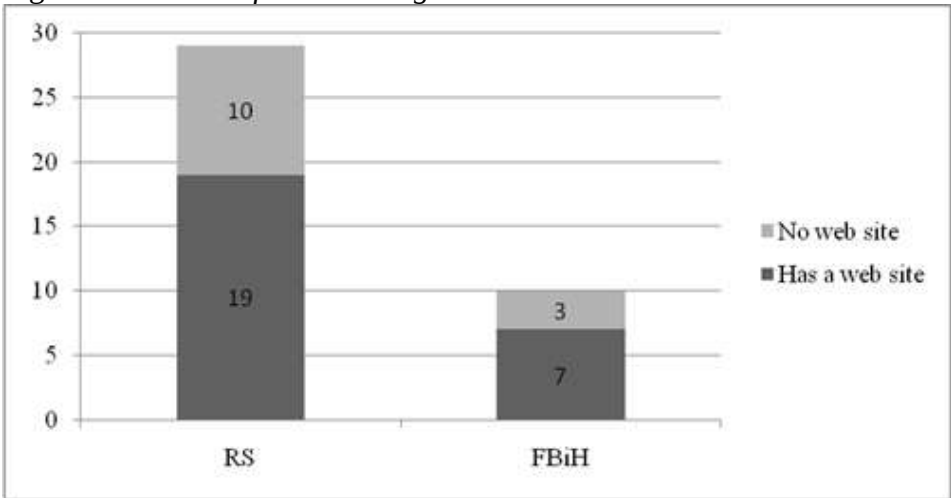
In this work cantons or municipalities were observed as tourist destinations, depending of the model how the promotion has been organised.

The web content analysis of the tourist organisations has been performed by using following methodological approach that have been exposed by Kim & Kuljis (2010), and that have been applied by Vaško (2017) during the content analysis of municipalities web pages in Croatia.

On the territory of FBiH all 10 cantons have been formed tourist boards (which by this way promote the tourist offer of a total of 79 municipalities, how many there are in that entity). In the RS, almost half of municipalities (29 of 64) have already formed municipality tourist organisations. Furthermore, it has been researched how many of tourist boards have a web site as a modern way for promotion of their activity.

Trough Internet search in January of 2018 was found that 19 out of 29 tourist organizations in RS have their own website (65%), and that in FBiH 7 out of 10 cantonal tourist boards have websites (70%). Although this is about the time when IT technologies are widely used, about 1/3 of tourism organizations and communities do not use this type of media presentation, mainly less developed municipalities and cantons (which was probably affected by the disputed situation with funding tourist providers).

Figure 1: *Number of touristic organizations and boards with web sites*



Source: *Data processing from research by authors.*

Below is a list of 26 websites of tourism organizations and communities in BiH, which are analyzed in more detail.

The unified offer of municipalities and cantons represented by these providers is presented through the websites of tourism organizations and boards.

Table 1: *Analysed sample of TOs/TBs*

The Republic of Srpska	The Federation of Bosnia and Herzegovina
Tourist organizations	Tourist boards
1. TO of the City of Banja Luka	1. TB of the Bosanan-Podrinje Canton
2. TO of the City of Bijeljina	2. TB of the Canton 10
3. TO of Derventa Municipality	3. TB of Herzegovina-Neretva Canton
4. TO of the Municipality of Foča	4. TB of Sarajevo Canton
5. TO of the City of Istočno Sarajevo	5. TB of Central Bosnia Canton
6. TO of the Municipality of Kalinovik	6. TB of Tuzla Canton
7. TO the Municipality of Kozarska Dubica	7. TB of Zenica-Doboj Canton
8. TO of the municipality of Laktaši	
9. TO of the municipality of Modriča	
10. TO of the municipality of Nevesinje	
11. TO of the municipality of Prijedor	
12. TO of the municipality of Sokolac	
13. TO of the municipality of Srebrenica	
14. TO of the municipality of Šipovo	
15. TO of the municipality of Teslić	
16. TO of the City of Trebinje	
17. TO of the municipality of Višegrad	
18. TO of the municipality of Vlasenica	
19. TO of the municipality of Zvornik	

Source: *Data processing from research by authors.*

Firstly, those touristic organizations and boards that have a website at all have been identified, and then their content has been analyzed and evaluated according to certain criteria and attributes. Within web sites are analyzed 49 attributes grouped according to content data, location data, general web site information, languages option, content search possibilities, multimedia content, accessibility by 2.0 web technologies, accessibility by mobile technology and speed of opening. At the end was given overall rank of analyzed web sites (R) by aggregation the number of pointes assigned to each attribute (n=49) within several group of considered criteria.

$$R = \sum_{i=1}^{49} ax_i$$

Where are:

a -the number of assigned points and

x - the number of attributes.

The number of points for each attribute was 1 (without appliance different point weights for different group of attributes), expect opening speed attribute where was used 1-5point system, according to ascertained speed.

Results and discussion

In this paper, 39 tourist organizations and tourist boards were analyzed. The focus is narrowed on the analysis of 26 web pages and their content. The goal of this analyze was to determine the adequacy of web pages and their content. The following tables are displaying the results of analyses by criteria groups and individual attributes within the groups.

The first table shows the representation of different attributes related to contact data on 26 analyzed web sites.

Table 2: *Contact data (n=26)*

Attribute	No. of websites	Percent
Address	25	96.15%
Email	25	96.15%
Telephone	25	96.15%
Fax	17	65.38%
Working hours	3	11.54%
Useful links	10	38.46%
Important phone numbers	12	46.15%

Source: *Data processing from research by authors.*

Most websites (except one) have information about the different possibilities of reaction on the offer presented through the website via e-meal or phone or address for personal visit.

Previous information is accompanied by detailed maps and instructions how to physically find the office of a tourist organization or board, where additional promotional materials can be obtained or oral explanations. Most sites also contain this useful information. The frequency of

information about location and orientation at the geographic location is shown in Table 3.

Table 3: *Location data (n=26)*

Attribute	No. of websites	Percent
Location of region/city	20	76.92%
Geographic information	21	80.77%
Map	19	73.08%
How to get to the location	13	50.00%

Source: *Data processing from research by authors.*

Next table (Table 4) presents the frequencies of websites that content information about attractions of the presented destination, its history, accommodation, gastronomy, entertainment and other opportunities. The most important data for increasing number of visits and touristic turnover are information about accommodation(existence of hotels, motels, hostels and rooms rental) and gastronomic offer (restaurants and other type of food providers) which are present on the more than 3/4 websites. It is surprising that destination promoters (which operations are financed by public money) link their web sites with web sites of touristic agencies as main facilitators for destination visit in less than 1/4 cases (an example of bad public-private partnership).

Table 4: *General website information (n=26)*

Attribute	No. of websites	Percent
History data	18	69.23%
Accommodation	24	92.31%
Gastronomic offer	20	76.92%
Shopping opportunities	8	30.77%
Sightseeing tours	7	26.92%
Tourist agencies	6	23.08%
Cultural and historical sights	23	88.46%
Cultural manifestations	21	80.77%
Entertainment	20	76.92%
Sport activities	20	76.92%

Source: *Data processing from research by authors.*

The following table (no. 5) presents the number of websites with website map, possibility to search for specific data on the website and calendar that shows all events chronologically. These features make it easier to

navigate a website, especially in the case of web pages with more extensive content.

Table 5: *Content search (n=26)*

Attribute	No. of websites	Percent
Website map	0	0.00%
Website search	17	65.38%
Events calendar	7	26.92%

Source: *Data processing from research by authors.*

Table 6 presents how many of analyzed websites have content in only one language and how many of them have support for two, three and more than three languages.

Table 6: *Multilingualism (n=26)*

Attribute	No. of websites	Percent
1 language	26	100.00%
2 languages	14	53.85%
3 languages	2	7.69%
more than 3 languages	1	3.85%

Source: *Data processing from research by authors.*

Although the reality is that tourism consumption is largely based on visits and spending of foreign tourists (BiH has been hit for foreign tourists in recent years), and third of the sites cannot be viewed in any other language other than local. Half of the sites offer content in one more language that is generally English. Only every tenth site has been translated for viewing in one or two foreign languages (except English), which confirms that web site owners did not put too much efforts to attract some tourists who do not use the English language.

Multimedia visualization is important for differentiating a destination from one another. The many websites have different kinds of multimedia data. Dominate photographs (without the evaluation of their quality and number), followed by videos. Arms or logos of a municipality or canton are most commonly present (probably due to some legal obligations), although it is least important for attracting tourists. Not many organizations and boards offer brochures for particular attractions, which are adapted for browsing and downloading through the website. That is one more example of insufficient cooperation between public promoters

of the destination tourist offer and the providers of certain services or organizers of certain manifestations at that destination.

Table 7: *Multimedia (n=26)*

Attribute	No. of websites	Percent
Photographs	21	80.77%
Videos	18	69.23%
Coat of arms /logo	24	92.31%
Brochures	11	42.31%

Source: *Data processing from research by authors.*

Next table (no. 8) presents how many websites have different 2.0 services that are subjected to social networks. Most often, the primary offer is available not on websites, but also on Facebook, and much less frequently on Tweeter and Instagram. In more than half of cases, some promotional tourist videos are available on You Tube.

Table 8: *Web 2.0 technologies (n=26)*

Attribute	No. of websites	Percent
Facebook	19	73.08%
Twitter	6	23.08%
Instagram	4	15.38%
RSS	3	11.54%
You tube	15	57.69%
Other 2.0 services	2	7.69%

Source: *Data processing from research by authors.*

The 23 of 26 analyzed websites are functional on mobile devices, and 17 of them are specially adjusted for mobile devices. All websites are fully functional on desktop devices and that desktop layout is in most cases functional on mobile devices. Some websites have another layout for mobile devices that improves usability and visibility of content on smaller screens.

Table 9: *Mobile device accessibility (n=26)*

Attribute	No. of websites	Percent
Functional on mobile devices	23	88.46%
Adjusted for mobile devices	17	65.38%

Source: *Data processing from research by authors.*

Mobile applications are usually more adjusted form of websites or it provides additional functionalities for the website. It is specially adjusted for operating system of mobile device. Sometimes it has identical content as a website, but sometimes it offers additional features like news notifications, chat services, dynamic tourist guides, etc. Down is the number of websites that complements their offer with mobile applications created for specific operating system.

Table 10: *Mobile applications (n=26)*

Attribute	No. of websites	Percent
iOS	1	3.85%
Android	8	30.77%
Windows mobile	0	0.00%

Source: *Data processing from research by authors.*

Very important factor for overall web surfing experience is the website opening speed. It depends of website memory size, web server speed, speed of user's internet link, technical solution of the website and many other factors. The following table is showing disposition of analyzed websites according to five different time ranges for website opening. For opening speed measuring purposes it has been used web service Pingdom³. Time ranges are created by dividing time difference between fastest and slowest opening time with value of five, to create five equal time ranges. It is important to emphasize that one webpage opening time is excluded because of inability to measure it.

Table 11: *Website opening speed (n=25)*

Group	Lower limit (s)	Upper limit (s)	No. of websites	Percent
1	2.64	9.55	19	76.00%
2	9.55	16.46	2	8.00%
3	16.46	23.38	1	4.00%
4	23.38	30.29	2	8.00%
5	30.29	37.20	1	4.00%

Source: *Data processing from research by authors.*

According to the previously presented attributes every website could earn one point for every characteristic it possesses. Only exception from previous rule was ranking by opening speed, where slowest group of

³<https://tools.pingdom.com/>

websites holds 1 point and the fastest group holds 5 points. The maximum number of points that some website could earn was 49. Next table presents overall ranking of websites by the number of achieved points, beginning from best ranked.

Table 12: *Overall rank (n=26)*

No.	Name	No. of points
1.	Tourist board of Sarajevo Canton	37
2.	Tourist organization of the City of Banja Luka	36
3.	Tourist organization of the Municipality of Laktaši	36
4.	Tourist organization of the Municipality of Sokolac	35
5.	Tourist organization of the Municipality of Šipovo	34
6.	Tourist organization of the Municipality of Trebinje	34
7.	Tourist organization of the Municipality of Zvornik	32
8.	Tourist organization of the Municipality of Istočno Sarajevo	31
9.	Tourist organization of the Municipality of Prijedor	31
10.	Tourist organization of the Municipality of Višegrad	31
11.	Tourist organization of the Municipality of Srebrenica	29
12.	Tourist board of Herzegovina-Neretva Canton	29
13.	Tourist organization of the Municipality of Derventa	28
14.	Tourist organization of the Municipality of Foča	28
15.	Tourist organization of the Municipality of Nevesinje	28
16.	Tourist board of Tuzla Canton	28
17.	Tourist organization of the Municipality of Vlasenica	27
18.	Tourist board of Zenica-Doboj Canton	27
19.	Tourist organization of the Municipality of Bijeljina	26
20.	Tourist organization of the Municipality of Kozarska Dubica	26
21.	Tourist board of the Bosanan-Podrinje Canton	25
22.	Tourist board of Central Bosnia Canton	23
23.	Tourist organization of the Municipality of Modriča	21
24.	Tourist organization of the Municipality of Kalinovik	20
25.	Tourist organization of the Municipality of Teslić	16
26.	Tourist board of Canton 10	15

Source: *Data processing from research by authors.*

Finally, the general ranking of all evaluated attributes, according to the total number of points the first places are taken by the web sites of Sarajevo Canton touristic board and Tourist organization of city of Banja Luka, two largest cities in BiH. This is logical, given the overall tourist

offer that they integrate, as well as the number of employees and financial resources (a significant part of financing depends on the number of tourists visits). The weaker ranking of the remaining cantonal tourist boards in relation to the most of municipal tourist organizations is surprising. Cantonal tourist boards represent a wider base (more municipalities), therefore they have a richer offer and a wider interest in promotional activities. Problems with their financing (a dispute over the right to a tourist tax) probably demotivate them to improved old-fashioned and modest web sites and channelled the focus of their efforts in the other directions.

Conclusion

The tourism is an economic activity that brings more and more income, not only in developed countries, but also in developing countries. Bosnia and Herzegovina records a very high growth rates of the number of incoming tourists and overnight stays, although tourism consumption is still low (about 3% GDP comes from accommodation and food service activates). In order to attract tourists and increase their consumption, the proper promotion of the tourist offer is important. In addition to its own promotional activities undertaken by providers of certain tourist services, promotion of the entire destination is also important. It presents the basis on which offers of specific tourist facilities and manifestations relies. The promotion of certain tourist destinations in Bosnia and Herzegovina is carried out by the tourist boards at the level of the cantons (group of several municipalities) in FBiH, and by the tourist organizations for individual municipalities in the Republic of Srpska. A total of 26 tourist boards and tourist organizations in BiH use world wide web platforms and social networks to promote the tourist offer of the destinations, which they founded for that reasons. By analysing the content of these websites, it has been found that they are not equally developed and accessible. The range goes from those who have a richly presented tourist offer, that are easily and fast accessible in several languages, from different devices and social networks, to those who have static websites with outdated design and limited information. Basically, the websites of larger and richer cantons and municipalities were better positioned, which implies that a certain amount of funds should be allocated for good promotion. However, promotion in general, including those related to the tourist offer, based on the web platform, is among the most favourable, comparing its costs in relation to the number of those to whom the posted messages reach in this way. Unlike other media, promotion via web is

much more dynamic, it allows quick and simple changes of the content, enables direct communication with the recipients of messages and connection of various providers and users of tourist services.

Based on the conducted research, it can be concluded that the possibilities of promoting certain tourist destinations through the web sites in BiH did not use sufficiently. A number of cantons and municipalities still do not have dedicated websites designed to promote their tourist destination, and existing sites could be enhanced and improved, without significant additional cost. Therefore, the recommendation of the authors to the management of tourist boards and organizations is to more and better utilize the opportunities offered by IT technology, because in this way they can achieve significant effects in the area of increasing revenues from basic tourist services. In that direction, cooperation between the private and public sectors should also be improved, because the promotion of the tourist destination through public service providers gives indirect benefits to numerous providers of tourism services that are mainly from the private sector.

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WHY MILLENNIALS AS DIGITAL TRAVELERS TRANSFORMED MARKETING STRATEGY IN TOURISM INDUSTRY

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Abstract

As digital natives, millennials have led to significant shifts in the marketing approach of organizations in the tourism industry. The aim of the paper is to analyze how digital technologies have influenced the travel behavior of millennials and to create their profile, in order to help marketing managers in tourism to create effective marketing strategy. Meta-analysis approach has been used, taking different published studies into account, focused on tourism and marketing concepts in the era of information technology. The analysis showed that millennials have a high level of technological proficiency, they are price sensitive, not predictable, do not respond to traditional marketing, use social media and digital influencers as a source of information for travel decisions, prefer mobile applications for travelers, are equipped with many digital devices while traveling and choose destinations that offer them experience that can be shared on social networks instantly.

Key Words: *millennials, digital technologies, tourism, travel, travel behavior*

JEL classification: *M31, M37*

Introduction

In the last several decades, the tourism sector recorded a constant growth, regardless of intermittent turbulences, which turned it into one of the greatest and fastest growing economic sectors in the world. According to the World Tourism Organization report (2017), tourist services make 6.6% in total global export, and 30% in global export of all services. For many countries, tourism is the foundation of economy development

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(Popescu et al., 2015). In time, there has been a significant diversification in tourism sector, as well as significant alterations in travel behavior of consumers due to the shift of generations which are the key consumers in tourism. According to Veiga et al. (2017), millennials or the generation Y have caused the greatest disruption so far in the functioning of tourism sector in the world. They are not just “one new generation in tourism,” but consumers with completely different behavior and motivation compared to previous generations, which are particularly caused by their maturation accompanied by digital technologies (Moscardo & Beckendorff, 2007). Marketers in numerous industries, not just tourism, were for a long time unaware of the fact that traditional marketing techniques no longer suffice for this generation. That is one of the reasons why millennials have still not been studied enough compared to the older generations, their travel behavior in particular. Studies so far have mostly dealt with demographics, motivation, attitudes and millennials’ behavior in general, while scarce number of studies dealt with their travel behavior and the adaptations of marketing strategies to their behavior (Bochert et al., 2017; Garikapati et al., 2016; Hamed, 2017; Nielsen Research, 2017; Ruspini, 2016; Veiga et. al, 2017). At the same time, while these studies are relatively fresh, the topic has held research merit for quite some time. Since there has been no research on the travel behavior of millennials in our domestic scientific discourse, the aim of this paper is to analyze the profile and the behavior of millennials as travelers (where and why they travel, how they plan their travels and what they expect from them, etc.), with special attention to the influence of digital technologies on their behavior and, consequentially, their reflection on the adjustment of marketing approach to millennials as travelers.

Who are millennials and what are their characteristics

Millennials are one of the most numerous generations in history, outnumbering even the generation of Baby Boomers (Scotlands National Tourism Organization, 2017). At the moment, they form almost one third of the world’s population (Hamed, 2017), are the greatest working generation ever (Bochert et al., 2017), and one of the most influential generations when it comes to consumer power (Schiopu et al., 2016). Generation Y follows Generation X, but there is no precise line where one ends and the other starts. That is so because the Generation Y beginning was not defined by any significant event, as was the case with previous generations (Second World War, the Great Depression, Woman’s liberation etc.) (Nielsen Norman Group, 2016). The most used birth limit

defines the generation as born anywhere between 1981/82 and 1996/97 (MDG Advertising, 2015). The commencement of this generation was mostly marked by the development of digital technologies and the expansion in their global use. Millennials are also known as the GenNext, netGeneration, GenMe, Google generation, and Digital generation (Schiopu et al., 2016), which clearly indicates that this generation is highly connected to digital technologies. Hence, millennials are most often identified as “digital natives,” which is a term referring to people who grew up with digital technologies and are familiar with computers, the Internet and mobile devices from their early age. Prensky (2001b) believes that one of the most radical consequences of growing up in such environment is a fact that “digital natives” learn, think and process information completely differently than their predecessors. Such standpoint is in line with the “theory of neuroplasticity,” which defines human brain as flexible and prone to environment-induced adjustments. That is why Prensky (2001a) defines digital natives as “native speakers of the digital language of computers, video games and the Internet” (p. 1). Numerous authors agree with this theory, while numerous authors question it at the same time, as there are no clear evidence that “digital natives” differ in their thinking or cognitive abilities from other generations, particularly not from the “digital immigrant” born slightly before them (Helsper & Eynon, 2010). Even though it is evident that millennials process information quickly and are more prone to multitasking (caused by digital devices), it is a misconception that they outperform other generations in multitasking because “multitasking ability” does not necessarily imply “multitasking proficiency” as an individual’s ability to simultaneously and efficiently process information from several sources (Nielsen Norman Group, 2017).

Although the terms are most often equalled, not all millennials are “digital natives,” especially not those who grew up in poverty. Simultaneously, the emerging “generation Z” are also “digital natives” (Nielsen Norman Group, 2016). At the same time, not the entire millennial generation should be seen as a completely homogeneous segment of consumers with a unique set of attitudes and values. Since the generation includes an almost 20-year-long time span, life cycles of individuals vary, as well as their career, income, etc. Older millennials were growing up at the time of the introduction of personal computers, while the younger ones grew up with digital technologies, smart devices and social networks (Scotlands National Tourism Organization, 2017). Regardless of the differences in millennials subgroups, some traits typical

of millennials as a group in general have been defined based on numerous international studies. Those are the following: they easily understand digital technologies and are “connected” at all times (Hamed, 2017); they are used to simultaneously using several digital devices; they are prone to multitasking; their attention span is relatively short; they are highly friendly and less physically active than previous generations; they are team players; are greatly influenced by trends and their peers; they like to display their skills and be valued for what they are; they are very much informed and educated, thus self-empowered (Bochert et al., 2017; Nielsen Research, 2017); they are even called the “hero generation” because they believe they can make the future better (Ruspini & Melotti, 2016); they postpone the life milestones (such as marriage and having children) (Bochart et al., 2017); they are not as material as previous generations (owning properties, cars, etc.); they prefer spending money on interesting experiences such as traveling and leisure (Garikapati, 2016); they are price-sensitive and consider themselves to be smart consumers thus they expect value for their money (O’Connel, 2015); they are highly tolerant to change and believe in seizing the day; they are interested in sustainable development, and, in general, are considered disloyal consumers with highly unpredictable purchasing habits – especially the younger millennials (Bochert et al., 2017). It is believed that the millennials generation is to redefine every aspect of demographic, social, political, economic and technological environment (Garikapati et al., 2016). Growing up in the period of swift change has made their priorities and expectations much different from all previous generations (Goldman Sachs Report, 2016).

There is no doubt that in the next few years millennials would become the key consumers in travel industry, due to their high interest in traveling, especially abroad, much more than the older generations, and because they start traveling at an earlier age than before (Gardiner et al., 2014). All millennial generations are characterized by a positive attitude towards spending on traveling rather than on material goods (FutureCast, 2016). It is expected that, by 2020, travel expenses of millennials will reach more than 50% of all travel expenses on the global scale (Hamed, 2017). Not only did the number of journeys grow, but their diversity as well, due to greater availability of traveling to millennials from underdeveloped countries too. An average number of overnight stays of this generation on a global scale is constantly growing (Schiopu et al., 2016). Millennials can no longer be seen as impulsive young consumers, because they are one of the most informed groups of travelers ever (FutureCast, 2016).

They have completely modified how traveling and tourism function in general, pushing companies in the tourist market towards adjusting their products, business processes and marketing strategies to the unique needs of this significant segment of consumers (Barton, C. et al., 2013).

Why millennials travel and what they expect from traveling

Numerous international studies have shown various rationale behind the millennials travels: gaining experience, learning about different cultures and peoples, language learning, employment or studying, family or friends' visits, or for more specific events such as celebrations, concerts, etc. (Schiopu et al., 2016). It could even be said that millennials assign special value to gaining "new and unusual experiences" during their travels, regardless of the type of travel. Numerous studies have also confirmed the belief that millennials lack interest in traditional, summer or winter travel arrangements (the sun, the sand, the sea, the snow idyll, etc.), unlike their parents. They thrive for much more, because they perceive themselves not as tourists but as explorers (FutureCast, 2016). They prefer city breaks (weekend tourism), for even "a day or night," to attend an event. On the other hand, they are prone to longer travels, lasting up to two months, with visiting numerous locations (MDG Advertising, 2015). Although millennials are the most international traveling generation ever, it does not always imply long-distance journeys, as they can have new experiences nearby. They are also prone to visiting "non-tourist" urban and rural locations, which could become a part of other millennials' travel itinerary due to sharing on social networks. Unlike previous generations, millennials consider traveling their right rather than luxury.

Millennials share the desire to visit authentic culture locations with the generation X, yet they define destination authenticity differently. For millennials, it is the possibility to "blend in" with the local population, to find the hidden places, see something genuine, etc. (Future Foundation, 2016). They want unique, interactive experiences and destinations with personality (Hamed, 2017). The concept of destination personality, defined as destination branding by the usage of personal traits and characteristics typical of humans, has been out and about in marketing from long ago, because it was demonstrated that travelers establish much stronger connection with tourist destinations when it is humanized and with a soul (Starčević, Marinković, & Majdarević, 2017). Cities such as Barcelona, San Francisco, Ottawa, Seattle and Manhattan in New York

are implementing the tourist policy directed at millennials consisting of city personality in accordance with the millennials aspirations. These cities were turned into “smart cities” and a friendly tourist environment, opening a new field of international competition (Ruspini & Melotti, 2016).

Millennials are inborn explorers, so they want to learn in their travels. To satisfy this craving in millennials, some tourist agencies have started offering “edutainment travel packages” as a mixture of education and entertainment (Bochert et al., 2017). Millennials also appreciate the safety of a destination, more than the older generations. According to a research by Future Foundation (2016), their risk aversion is a wide notion even referring to bad weather. In fact, they expect a “verified experience,” confirmed by a peer who has already visited a destination, so as to consider a destination safe. Millennials are interested in sustainable development, also much more than the previous generations. As tourists, they appreciate sustainable products and sustainable destinations (Bochert et al., 2017). They are also often referred to as “cause activists,” because they perceive traveling as purposeful, contributing to a better life in the future. Millennials also favor “volunteer tourism,” as traveling to volunteer in social communities in need (Veiga et al., 2017). That is why, since they are prone to participating in sustainability and environmental protection activities during their traveling, one of the possibilities for travel suppliers is to include such activities in their offers, as a segment which could contribute to their experience (Hamed, 2017).

Having in mind their current career status and the fact that, as a generation, they have been immensely affected by the global economic crisis, millennials are price sensitive consumers. Their budget is limited and they expect to gain “more for less” (Faat et al., 2017). They balance their budget, so one weekend they could stay at an expensive hotel, while the next they can afford a cheap hostel only (Nielsen Research, 2017). Numerous millennials are “travel hackers,” which means they know the best websites and methods to get travel deals (FutureCast, 2016). They look for low-cost flights and peer-to-peer accommodation (Nielsen Research, 2017). Although price sensitive, millennials often keep their pocket money for some “luxury” in their travels, such as perfumes, watches, jewelry, etc. At the same time, what matters for them is that what they buy belongs to some special local collection (Nielsen Research, 2017).

The concept of sharing economy is very popular with millennials, because it implies receiving high value for money (Scotland National Tourism Organization, 2017). Airbnb has recorded the highest growth thanks to millennials by being adjusted to their need of finding adventures and something “more local,” with personality. According to the Airbnb Citizen report (2016), millennials prefer “cool” accommodation closer to locals; they strive for active, explorative vacations, tasting local food and meeting a lot of people; they appreciate local experience more than souvenirs; they favor hidden places over top tourist sights; home sharing is gaining importance; and they want their own order of things and travel control rather than pre-arranged schedule (Airbnb Citizen, 2016). Sharing economy concept has expanded to transportation sector too. According to Garikapati (2016), millennials, more than ever, rely on on-demand transportation, such as Uber or Lyft, helping them to significantly decrease their travel expenses. Kwoka-Coleman (2017) claim that these services in countries such as the USA jeopardize public transport agencies and taxi services. It is also believed that millennials are to bring about transformational change in transport sector, because they gladly accept technology-based and alternative transportation means, which could have impact on the decrease of car ownership (Garikapati, 2016).

Millennials have also caused significant change in the hospitality industry. In general, they are not prone to paying for accommodation as much as their parents did, thus increasing the popularity of hostels, apartments and camps (Scotland National Tourism Organization, 2017). Even after the emergence of disruptive brands such as Airbnb, there is still room on the market for traditional accommodation, as long as it is adjusted to this target group. Guided by the millennials preferences, “poshtels” gained popularity around the world, as a mixture of style and comfort provided by luxurious hotels, yet at affordable rates (Schmalbruch, 2015). The chain of luxury Marriott hotels developed its sub-brand of hostels, Marriott Moxy, by completely adjusting their design, food and drinks, to the local experience. Aloft hotel brand, within the Starwood Hotels chain, was also developed to attract millennials. Guests are given the possibility to check in, check out, and unlock their rooms, using their smartphones or Apple Watches. Botler mobile application provides guests with numerous services (FutureCast, 2016). Accommodation brands now must adjust themselves to millennials not only with prices and services, but with hotel design too. To exemplify, millennials do not spend time in their rooms, because they rather use lobby for leisure and work activities (Scotland National Tourism

Organization, 2017). The choice of accommodation is primarily influenced by technology, prices, design, whereas free wifi access and digital technology communication are implied by default (Schiopu et al., 2016). It is quite clear that millennials have caused the transformation of the entire 7P marketing of tourist services.

Who do millennials travel with and how they plan their travel

One of the greatest misconceptions is that millennials are inferior in social skills and that they are losing them (Nielsen Norman Group, 2016). On the contrary, millennials are very friendly both online and offline, only they changed the means of direct communication, i.e. they communicate more online than face to face. Millennials, as great socialites, almost never travel alone, although this is also an option. They mostly travel with their friends or family, often even mingling with other destination visitors (Scotland's National Tourism Organization, 2017). They enjoy socializing with both locals and other tourists (Hamed, 2017). It is also typical of millennials to keep traveling with their non-relatives and friends even after they have already formed their own families (Future Foundation, 2016).

On the one hand, it could be said that the process of travel planning is quite complex for millennials, because they rely on numerous information sources. Decision makers generally prefer having a great and vast knowledge at their disposal so as to be able to make the right decision (Konjikušić, 2013). On the other hand, millennials are prone to spontaneous traveling decided on "immediately," e.g. by chatting to their friends (Future Foundation, 2016). It is, hence, no surprise to learn that, from the marketing standpoint, this group is considered highly unpredictable.

When they are deciding on traveling, millennials rely on opinions, information and recommendations of various social groups. They consult a wide span of their "peers," unlike the previous generations. Peers include both their "close contacts" such as family and friends, and a "wider group of contacts" on social networks. This generation expanded the notion of "peers" on additional online groups, such as bloggers, reviewers, forum members, etc. (Future Foundation, 2016). It is a misconception that millennials no longer consult "non-peers" groups, such as travel agents. There is a confirmation in the Future Foundation report (2016) that, for all generations together, travel agents are still the

most consulted sources, although there are some shifts in the millennials segment.

Millennials use numerous online information sources throughout their travel planning (Schiopu et al., 2016). When compared to other generations, they are most engaged in social media, where they find inspiration for traveling in most cases. They browse other users' content, such as photos on Facebook, Pinterest and Instagram, they exchange comments on Twitter and rely on "bookmarks" (Future Foundation, 2017). This concept of "online social travel networking" has completely modified how millennials make decisions in traveling (Hamed, 2017). Web platforms such as TripAdvisor and TravelBuddy offer the possibility of destinations and accommodation rating, as well as uploading personal multimedia user generated content (UGC) (Miguens et al., 2008). Users of review websites are individuals with no personal contact ever before. In numerous product categories, UGC has the highest impact on purchase decisions, even higher than celebrities and influencers' posts, as well as professional photographs (Stackla, 2017). To summarize, millennials rely on "online crowdsourcing" in travel decision making, because for them traveling is a social experience in all its stages – information browsing, decision making, purchasing, and post-purchasing behavior (Schiopu, 2016).

Impact of digital technologies on travel behavior of millennials

Tourism is information-intensive sector which was one of the first in the world to introduce the usage of information-communication technologies (ICT) in business. One of the first forms of using ICT was a computer system for booking tourist services (Milovanović, & Gligorijević, 2017). ICT was a key competition factor for all participants in tourist market, such as airline companies, tour operators, travel agencies, hospitality units and chains, destination marketing organizations (DMO's), etc. (Bojnec & Kribel, 2004). In time, many of these have introduced not only digitalization, but the entire digital transformation of business process. Low-cost airline companies were the first to record success by being at the forefront in introducing digital technologies and online consumer communication. Quick development of ICT has also caused alterations in how consumers behave on tourist market (Mašić & Konjikušić, 2017). According to data available in Schetzina (2015) study, the usage of PCs in the world is declining, while mobile devices (smart phones and tablets) are on the rise, as much as their impact on travel decision making. While

tourist market participants are trying to keep their share on the market, a lot of it depends on their adjustments to the habits of key consumers target groups. Millennials are used to digital technologies efficiency in numerous tasks. They are addicted to the Internet and mobile devices in all stages of traveling, i.e. in information browsing, booking, communicating and content sharing (photographs and videos) on social media during and after their journeys (FutureCast, 2016; Kim et. al, 2015; Mašić & Konjikušić, 2017). Millennials mostly carry several digital devices with them while traveling and they rely on diverse travel apps such as TripAdvisor, Yelp, Expedia, Google Maps, Hotels.com, etc. Schetzina (2015) claims that millennials are more likely to book flights on the air carriers' websites directly, while for booking accommodation they use more online travel agencies or aggregated booking web platforms, because they offer more in a single click. Airline companies have achieved the direct booking option by offering special benefits not available via intermediaries and agencies, such as extra legroom, special discounts, priority boarding, etc. (Pacific Asia Travel Association, 2017).

For millennials, the usage of digital technologies has also altered the meaning of “purchase benefits” which they now relate to control. They feel they are in control when a digital device is at their disposal, because it helps their swiftness in travel-related issues. Older generations were skeptical about the possibilities of digital technologies, while millennials are the opposite – they believe the impossible. Namely, there is a constant growth of apps which allow control over things, such as calories burned. From their point of view, a single app with the ultimate control would be ideal. For millennials, the notion of convenience is constantly expanding, and convenience in traveling implies the following: less confirmation emails, booking or canceling at the last minute, simple choice options, more payment methods, even the option of changing the names in purchased tickets (Future Foundation, 2016; Kim et al., 2015). It has never been a better time for tourist companies to connect with millennials, thus those who integrate digital devices with planning a journey and staying at a place while traveling have an impact on a higher general satisfaction level. Such services are more recognizable among millennials, because they mutually share experiences and post quality recommendations on review websites (FutureCast, 2016). It is particularly useful for companies to monitor their online reputation. Led by the millennials expectations, the concept of “instant concierging” emerged throughout the world, defined as providing services to consumers via instant messages. Millennials are online virtually 24 hours a day, and they

are comfortable with technologies which are at their disposal at any point in time (Future Foundation, 2016).

It is also important how organizations present their content to millennials. Millennials react best to interactive and non-standard websites. Photographs and videos should be regularly updated and should reflect the reality, otherwise millennials punish you with low online reputation. Accordingly, websites must be presentable and intuitive, fast-loading and mobile-friendly (Hamed, 2017). It is desirable to have travel-related mobile apps, because they offer electronic links between companies and clients (Milanović & Gligorijević, 2017). Besides linking websites to individual's social networks (Facebook, Twitter, Instagram, Pinterest, etc.), websites offer the possibility of linking other websites relevant to millennials, such as Travel Advisor, Yelp, Google places, etc.

Since millennials are on the move all the time, and their attention span rather short and fragmented, advertising campaigns in traditional media do not work for them. Because "digital technology is at their fingertips," digital media are the only channel for reaching them. However, they do not distinguish between various digital channels (digital=social for them), and would use the first available gadget (smart phone, laptop, tablet, etc.), it is important to display a single message and experience in all channels (MDG Advertising, 2015). At the same time, you should address them in their own language and via media they use. Millennials prefer brands that resonate with their peers (Williams and Page, 2011) and short content, mostly videos, which allow fast forwarding to the next one. If your content is interesting, regardless of being an advertisement, it will be shared on social networks because millennials love sharing (MDG Advertising, 2015). In February 2018, Tourism Australia opted for the "smart strategy" of promoting Australia as a tourist destination during Super Bowl, so their video commercial, uploaded to their YouTube channel, which featured the popular Crocodile Dundee from long ago, has been immensely viewed and shared in just a week (The Conversation, 2018).

"Content shareability" is an extremely important concept for travel marketing aimed at millennials. Millennials culture is greatly influenced by social networks, hence they prefer documenting and sharing each moment, such as lunches, training sessions and socializing at cafés. Traveling provides them with content that is ideal for sharing on social networks, hence one of the important traveling motivations in millennials

(Future Cast, 2016). This is the “image driven” generation comfortable with leaving their own stamps via photographs and videos (Williams and Page, 2011). They are “online autobiographers” who share their life stories on social media, focusing on single content as opposed to ready-made patterns (Hamed, 2017). MDG Advertising (2015) report claims that millennials, when traveling, share content on a daily basis, even several times a day. Although Facebook is still the network with the highest number of active users on the global scale, millennials tend to prefer Instagram and Snapchat, with an observable popularity growth of Pinterest as well (Stackla, 2017).

Under the influence of development of digital technologies and social networks, FOMO effect (fear of missing out) has become a cultural phenomenon of millennials (Scotland National Tourism Organization, 2017). Related to it is FOLO – fear of living offline, yet another phenomenon which emerged and became popular in a short while, characteristic of both millennials and the generation Z, because they are addicted to peer approval (FutureCast, 2016). Not even the best experience they may have had is enough unless shared on social networks. Furthermore, not even content sharing is enough unless followed with enough likes and comments, i.e. if not approved by peers (Future Foundation, 2016). Sharing the UGC made during traveling is a part of millennials’ individual identity. Social media help them in creating their ideal personal social concept, i.e. displaying how they would personally like to be perceived by the society (Starčević, 2016). That is why travel organizations must be aware of the millennials’ shareability need and incorporate experiences worth sharing in their travel offers. A great number of posts on millennials’ timelines refers to “travel stories.” Simultaneously, millennials like being included in campaigns and the lives of destinations they visit (Schiopu, 2016). Organizations which rely on the user generated content (UGC) for their own promotion could transform consumers to ambassadors (Bochert et al., 2017). The classic loyalty strategies no longer work with these consumers (Gursoy et al., 2008). To be loyal, they expect to be rewarded, hence one of the efficient methods to do so is to reward the consumers who post photographs and videos or comment and share content (Schiopu et al., 2016).

What marketers have in their sleeve is the lack of privacy concerns in this generation. Their data are often publicly posted, because they are a means of expressing personal identity. At the same time, if these data enable their owners to get something in return (such as traveling discount or a

special offer), a vast percentage of millennials will reveal their private data (MDG Advertising, 2015). Many entertainment apps on social networks, such as “click to find out what is your dream travel destination,” rely on this – to acquire something “entertaining” millennials easily approve access to their list of friends, interests, etc. Besides data collection on millennials’ online searches via cookies, it is easy to discover when and where they go, as they are passionate about using geographic “check in” apps, such as Foursquare. Wherever they are, they usually momentarily share information on their location.

Behavior of millennials as business travelers

Millennials are a demographic segment with a significant participation in business traveling. It is expected that, by 2020, up to 50% of all travels would be made by millennials (O’Brien, 2014). Regardless of the slow economic growth, it is also expected that, in the next 5 to 10 years, millennials would spend more on business trips, and travel for business up to 5 times a year (MDG Advertising, 2015). Gould (2014) claims that millennials, when traveling for business, use mobile devices (smart phones and tablets) much more often than their peers from other generations; they book their journeys and flights via smart phones; they spend more money on business trips than non-millennials; while their trips are usually made so as to visit conferences or trainings rather than clients. It is interesting to note that millennials also spend more than non-millennials on high-end meals in expensive restaurants, which could be related to their desire to share content suitable for direct show off. They also expect less steps in and mobile-friendly booking options, and are prone to expressing their (dis)satisfaction on social media (O’Brien, 2014). When flying, they prefer buying flexible rates, last minute booking, the option of changing flights and additional options. They behave differently from other generations in airports too – using “charging stations,” vending machines, buying wifi access or viewing downloads on their mobile devices while waiting for their departure (Scotland National Tourism Organization, 2017).

Several studies have confirmed that millennials are passionate about the balance between their work and leisure time. According to Kowalczyk-Aniol (2012), millennials expect flexible working hours and the possibility to choose between full-time and part-time employment. Highly familiar with modern technologies, independent and ambitious, millennials are self-confident and highly involved with their jobs, if

interested in it. As business travelers, millennials look for journeys where they could experience the unusual and learn something new. That is why “bleisure travel” is one of the great business opportunities for tourist companies. “Bleisure traveling” implies the mixture of business trips and vacations, or the continuation of business trip with vacation days (Alderton, 2017). “Bleisure” trips are gaining popularity, with big hotel chains and tourist agencies going with the flow and offering activities and tours with the possibility of new experiences to their guests. Booking.com (2017) report states that almost one half of business travels was prolonged in the last 12 months, even when traveling to another city or a country, with one third of travelers confirming they would do the same next year (Booking.com News, 2017). What also changed is how business travelers use hotels. According to the Scotland National Tourism Organization (2017) research, business travelers used to rely on “room service” in the past, but millennials do not find this service useful anymore, because they prefer socializing. That is why hotels modified their concept, hence delivering food where the guests want it, and they started preparing “lunch packs” for any time of the day. Likewise, desks in hotel rooms are no longer important, because business travelers prefer sitting and working in lobby or beach cafés.

Conclusion

When compared to the behavior of previous generations, millennials have caused the greatest shift in tourist marketing, especially because they grew up with digital technologies which transformed the specificities of demand and supply on tourist market. Consumers’ travel behavior became predictable and stereotypical in the previous decades, and now, all of a sudden, it is not anymore. Companies participating in tourist market (travel agencies, air companies, accommodation facilities, DMO’s, etc.) are facing a great challenge of adjusting their marketing approach to this new, crucial segment of passengers on a global scale. As it has already been said, millennials have an impact on the transformation of the entire 7P marketing of services. In summary, marketers and organizations on the tourist market should comply with the following recommendations:

- “offer them unique experience and destinations with personalities,” because their motivation is related to exploration, learning, leisure and socializing;
- “offer them several distinctive options, with their budget in mind,” because millennials like being in control of their travels;

- “think digital/mobile” is becoming a necessary precondition for communication with millennials;
- “think local,” because millennials prefer not to be plain tourists but to actively participate in the life of the destination;
- “be fast and less formal” – do not keep them waiting and communicate with them using the language they understand. Millennials are the generation which expects a friendly rather than authoritative relation to their surrounding;
- “be shareable” – offer inspirational content that is shareable, pinnable, twittable, etc. and you will turn them into your best ambassadors of electronic word-of-mouth (e-WOM), because they believe the user generated content the most; and
- “do not treat them as a homogeneous segment,” i.e. discover the niches in the segment, because they travel for various reasons and are in different points in their lives.

The contribution of this paper is in offering an overview of travel behavior of millennials, absent from the domestic scientific discourse, with generally insufficient number of papers on the topic. It could be said that we are currently in the age when marketers realize that this segment of consumers is different and that something must be done about it. Hence, there is a lot of room for further research. Since tourism is highly important for the competitiveness of Serbia on the global market, it would be interesting to delve deeper into the behavior of domestic millennials, as domestic tourism is an underdeveloped segment in Serbia. Likewise, it would be useful to research the attitudes and the perception of marketing communication and the available offer of tourist destinations in Serbia (including a sample of domestic and foreign millennials as tourists), so as to adjust this economy branch to the needs of this significant segment of consumers and, based on it, record growth in the future.

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FROM WORD OF MOUTH MARKETING TO WORD OF MOUTH IN THE TRADITIONAL AND DIGITAL MEDIA

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Abstract

Consumers use the recommendations as a source of information in deciding on their purchase. With word of mouth marketing (WOMM) organisations wish to accomplish word of mouth (WOM) communication, i.e. to make as many users share information. This paper presents model “4M”, according to which 4 key ways to spread recommendations are: “mouth”, “mouse”, “mobile phone” and mix – a combination of previously mentioned ways. The survey was conducted on the territory of the Republic of Serbia, on a sample of 200 tourists between 16 and 74 years. Tourists use various ways to spread recommendations. Findings show that WOMM (in order to stimulate WOM) has to be an integral part of holistic marketing activities of an organisation.

Key Words: word of mouth marketing, word of mouth, offline media, online media, communications, tourists

JEL classification: M31

Introduction

“Marketing plays an important role in the process of sustainable development, because it can affect behavior of key actors in society – from individuals (as members of family, human resources and consumers), through different organizations to governments” (Rakić & Rakić, 2015a, p. 887). “One of the most significant changes in business in general, and marketing in particular, is the growing use of technology. Digital (r)evolution in marketing is a result of ICT development” (Rakić & Rakić, 2013, p. 449). The ICT impact on the behavior of tourists and organizations (Bradić-Martinović & Miletić, 2017; Vukotic &

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Maksimović, 2017; Vidas-Bubanja & Bubanja, 2017). At the time of digitalization, the power of recommendations for both tourists and tourism organizations, has influenced the choice of the subject matter of this paper. The importance of WOM and WOMM is best shown by the following fact – 92% of consumers worldwide trust their family and friends recommendations more than any other form of advertising (WOMMA, 2013). In the era of digital transformation, electronic WOM (eWOM) is one of the major sources of information for consumers, both with respect to tourism and in general (Doosti et al., 2016; Jalilvand & Samiei, 2012; Litvin, Goldsmith & Pan, 2018; Llamero, 2014; Wang, 2015; Yan et al., 2018; Yang, Park & Hu, 2018). This paper is organized as follows. First, we provide a review from the literature related to WOM and WOMM and hypotheses. Then, we describe method and results. Finally, we summarize the findings.

From WOMM to WOM

Word of mouth marketing (WOMM) is “any business action that earns a customer recommendation,” but, in the big world of creative campaigns and engagement techniques, WOMM means much more. WOMM is about harnessing the power of people to build brand awareness (Word of Mouth Marketing Association – WOMMA, 2013).

There is difference between Word of Mouth - WOM and Word of Mouth Marketing - WOMM. Understanding that WOM can be considered a naturally occurring phenomenon, it is important to distinguish WOM from WOMM which involves “intentional influencing of consumer-to-consumer communications by professional marketing techniques” (O'Reilly & Marx, 2011). WOM is the act of someone sharing something interesting with someone else. WOM is the passing of information from person to person (face to face, by telephone, e-mail, social media etc.). WOMM is the input. WOM is the output. WOMM is the conversation starter. WOM is the conversation (WOMMA, 2013).

As defined by The American Marketing Association (AMA, 2013), (in terms of consumer behaviour) WOM “occurs when people share information about products or promotions with friends.” The information imparted by a consumer or individual other than the sponsor. It is sharing information about a product, promotion, etc., between a consumer and a friend, colleague, or other acquaintance. For example, a consumer may tell a friend about a particularly good price he or she received on a

product. Research has found that word-of-mouth communication about products is more likely to be negative than positive. Helm and Schlei (1998) describe WOM as verbal communications (positive or negative) among groups like products supplier, independent experts, family and friends, current and potential consumers. WOM refers to “informal, person-to-person communication between a perceived non-commercial communicator and a receiver regarding a brand, a product, an organisation, or a service” (Harrison-Walker, 2001). WOM is informal advice among people about goods, services, and social issues (East et al., 2007). WOMM communication is becoming a central platform for interactive marketing communications. WOM embraces “all interpersonal communications” (Stokes & Lomax, 2002, p. 350) and now encompasses new media marketing communication channels, such as the Internet (Cruz & Fill, 2008, p. 744). Sweeney et al. (2008) state that the important role WOM plays has been long recognised by diffusion of innovation researchers (e.g. Ryan & Gross, 1943), and has been acknowledged as the most important communication source between consumers (Derbaix & Vanhamme, 2003). At its core, WOM is a process of personal influence, in which interpersonal communications between a sender and a receiver can change the receiver’s behaviour or attitudes (Merton, 1968; Sweeney et al., 2008). WOM is often viewed as part of a wider concept, such as loyalty (e.g., Mazzarol, Sweeney & Soutar, 2007; Zeithaml et al., 1996). O’Reilly & Marx (2011, p. 332) also mention the definition of electronic word-of-mouth (eWOM) adopted by Hennig-Thurau (et al., 2004, p. 39) as: [. . .] any positive or negative statement made by potential, actual or former customers about a product or organisation, which is made available to a multitude of people and institutions via the Internet. Mazzarol et al., (2007) state that there is considerable debate about whether WOM involves an active recommendation or is merely a positive or negative discussion about a product or other offering. Some researchers include both aspects in their measures; others view WOM as product-related conversation; and yet others measure WOM through recommendation. A special advantage of WOM is the fact that personal or advertising messages originating as one-to-one communiqués can - and occasionally do - reach millions of consumers within days. “Like their microscopic namesakes, ‘viral’ WOM messages can quickly and exponentially replicate themselves” (Strutton et al., 2011, p. 559). A research done into impression management 2.0 (the relationship of self-esteem, extraversion, self-efficacy, and self-presentation within social networking sites) showed that self-efficacy with regard to impression management is strongly related to the number of virtual friends, the level

of a profile details and the style of a personal photo (Kramer & Winter, 2008).

The focus of this paper is the relation between WOMM and WOM, so that the following two hypotheses have been set up.

Hypothesis 1: WOM depends on WOMM.

Hypothesis 2: WOM depends on the holistic marketing activities of the organisation.

From WOMM to WOM via consumers

Two important questions are why consumers spread recommendations and why consumers rely on recommendations as a source of information. “An individual’s behavior depends on the family he or she lives in, the organization he or she works at, the environment and the society he or she lives in” (Rakić & Rakić, 2015b, p. 897). The Internet and social network sites in general and in particular, respectively, provide a great potential for communicating. Different forms of online social information, such as user comments and likes, might foster the effectiveness of these communication channels (Peter, et al., 2014). Factors that encourage consumers to spread recommendations are: satisfaction or dissatisfaction with products/organisations, good experiences with a product or service, desire to help others – e.g. friends to make smarter purchase decisions, commitment to the firm, length of the relationship with the firm, novelty of the product, desire to show others that person is knowledgeable about certain brands and types of products, getting incentives and rewards (e.g. free products, discounts, cash, points) for recommending (Bruyn & Lilien, 2008; Ho & Dempsey, 2010; Maul, 2012; Rakic & Rakic, 2017). Ho and Dempsey (2010) point out four potential motivations of Internet users' to forward online content: (1) the need to be part of a group, (2) the need to be individualistic, (3) the need to be altruistic, and (4) the need for personal growth. When answering question: “Why do consumers give WOM referrals online?”, O'Reilly and Marx (2011) state that the desire for social interaction, concern for other customers, the motivation for economic incentives, and the potential to enhance one’s own self-worth have been established and accepted as primary motivations for engaging in eWOM (Hennig-Thurau et al., 2004).

According to TNS research findings, the reasons that consumers worldwide write about brands online are: offer advice (64%), praise a brand (61%), ask advice (60%), criticise a brand (52%), share content

brands produce (51%), receive customer service (46%) and because they are rewarded for doing so (40%). Motivations for commenting about brands are led by advice and praise/criticism...but sharing brand content is also a significant motivator. Gil-Or (2010, p. 9) states the impact of positive and negative WOM on the introduction of new products. Positive word of mouth can really make a difference in the launch of a new product. On the other hand, negative word of mouth or no word of mouth can either delay the diffusion of the product or even lead into a failure in its launch. When making purchase decisions, consumers rely more on WOM communications in relation to other sources of information in the following occasions: consumers with little expertise in a product category, they perceive a high risk in decision-making, or they are deeply involved in the purchasing decision (Bruyn & Lilien, 2008). In answering the question: "Why consumers accept WOM referrals online?" O'Reilly and Marx (2011) give the following answer - online consumers have confidence in the validity of consumer-provided information online, enjoy interacting with other consumers online, and rely on a network of consumers with marketplace knowledge or expertise to guide their purchase decisions.

Hypothesis 3: WOM depends on the profile of consumers.

From offline to online and mix WOM and WOMM

WOM and WOMM can be conducted both online and offline (WOMMA, 2013). Electronic referrals (eWOM) are different from the *offline* ones because: (1) by their nature, they are electronic so there is no face-to-face of communication and (2) they are not usually required, they are sent to recipients who do not seek information so they are not necessarily willing to pay attention to them (Bruyn & Lilien, 2008). The information can be easily stored in computers and the web; therefore digital WOMM information exists everywhere on the Internet and for a long time. Most people can take part in WOMM process in their leisure time, so by nature it is a non-synchronous spreading mode of advertisement. The anonymity feature enormously reduces the limitation induced by personal identities thereby making mutual communications on the web much easier than face-to-face in real life. Digital WOMM through the Internet can spread more widely and much faster at a significantly lower cost as compared to most if not all traditional methods (Yang et al., 2010). Camarero & Jose (2011) state that the main difference between eWOM and WOM is that the message circulates through a purely digital channel and that, coupled

to what was mentioned above, there are also all the particular aspects of such channels with regard to scope, speed and ease of spreading the message. Electronic WOM has two key advantages over traditional WOM (Kaplan & Haenlein, 2011). First, electronic WOM provides a higher speed of information dissemination. In traditional face-to-face communication, diffusion is limited by the size of the social network of each individual. Considering the fact that, on average, each person has only three close friends, and an overall social network of not more than 150, the "chains" of WOM communications and consumer recommendations are disappearing rapidly. On the contrary, electronic WOM can cover a much larger group of other consumers. Second, electronic WOM is easier to follow. "Compared to traditional WOM, online WOM communication spreads at an unprecedented speed for a much lower cost" (Li & Zhan 2011, p. 239). O'Reilly & Marx (2011, p. 333) state that for some authors, there is a fundamental difference between online and offline WOM. For instance, taking online recommendations or advice may be more powerful due to the viral nature and reach of eWOM. eWOM may also carry more weight due to its print format as compared to the purely verbal exchange of traditional WOM and, finally, eWOM may in fact create more influence since the internet allows access to information at the exact moment the user seeks it out. In contrast, eWOM is significantly less personal than traditional WOM, which may in fact lessen its impact. Authors (Hoffman & Novak, 1996; Huang et al., 2011) mention following differences between offline and online WOM:

- Number of participants; – Offline WOM communications are one to one, while online WOM can be one to one, one to many and many to many.
- Communication medium – for offline WOM, communication medium are: talk, telephone, meeting (letter), and for online WOM: e-mail, text chatting, voice chatting (one to one); group e-mail (one to many); discussion forums, blog (many to many). Traditional – offline consumers, through oral recommendation ("word of mouth" – in person), communicate their (dis)pleasure to others, and thus they become the most important i.e. the most influential "movable media" (Rakic & Rakic, 2014). The process of digitalisation influences the acceptance of new digital media like the Internet, mobile phones and other mobile devices (e.g. iPad), digital newspapers and magazines (through the Internet and mobile phones), digital radio, digital TV and digital consumers. Online consumers can

quickly convey messages to multiple people - friends, acquaintances, but also to strangers (Rakic & Rakic, 2014).

- Form – Offline WOM communication are oral (written), while online WOM communication are written. After receiving information, resenders in offline WOM have to remember the information and then transmit it to others. It is easier to process (e.g. edit, copy, and paste) online written information than oral information. Although WOM is an alternative for advertising, it is hard to manage as marketers cannot control consumers' oral communication content in an offline environment. The internet, in which most of the information is in written format, makes it possible to track, copy and analyze WOM content (Godes & Mayzlin, 2004). Therefore, marketers could have more control over WOM in an online environment than in an offline environment.
- Synchronicity – Offline WOM requires resenders and receivers to interact in real time, which is termed as “temporal synchronicity” by Hoffman and Novak (1996). In sum, in online discussion forums, many to many communication is asynchronous (interaction among participants does not occur in real time), anonymous, and written information-based, which could significantly widen the scope of social interaction and, consequently, make the ripple effect bigger. Relative to offline environments, online discussion forums can provide not only a better environment for social interaction but also a better opportunity for marketers to manage WOM information (Huang et al., 2011). While WOM is an immediate intimate conversation, eWOM, much like e-mail communication, is most frequently an asynchronous process whereby sender and receiver of information are separated by both space and time (Steffes & Burgee, 2009).
- Type of interaction – Offline WOM communications are conducted through direct, face-to-face interaction and online WOM communications are conducted through indirect, virtual interaction. Traditional WOM emanates from a sender who is known by the receiver of the information, thereby the credibility of the sender and the message contents are known to the receiver. The electronic nature of eWOM in most applications eliminates the receiver's ability to judge the credibility of the sender and his/her message (Steffes & Burgee, 2009). Coulter & Roggeveen (2012) point out that under the influence of the Internet the environment for communications is being changed – it is being redirected from face-to-face settings to more transparent environment like social networking. Traditional WOM is a powerful force in shaping consumer attitudes and behaviour, and can

actually have greater influence on product adoption than any form of mass media advertising. However, due to the Internet, WOM no longer takes place in the exclusive context of face-to-face settings, involving one source and one recipient. Rather, it now increasingly occurs in the more transparent public domain of online social networks (Ho & Dempsey, 2010). Recognising this trend, marketers have begun leveraging social networking sites (e.g. MySpace, Facebook, LinkedIn, and Twitter) in order to generate awareness, interest, and ultimately product purchase (Coulter & Roggeveen, 2012).

- Format – Offline WOM is a form of linear communication because each participant is thought of as being a singular entity, and the sequence of the WOM is chronological (Greimas 1971). Compared with a linearly constrained offline WOM model, online WOM could be nonlinear communication. This is due to its interactive character (e.g. directed to multiple individuals and available to other consumers for an indefinite period of time) and it treats its audience as co-creators (Gumpert & Cathcart, 1986; Hoffman & Novak, 1996).
- Relationship between sender and receiver – In offline WOM communication, senders and receivers must know each other and must have some form of social ties, so that the receiver pool is limited. In one-to-one (and one-to-many) online WOM communication, sender and receiver can know each other, but also to be anonymous; they can be connected by real and virtual ties. In many-to-many online WOM communication they are generally anonymous and there are virtual social ties. Compared to offline WOM, in online WOM the receiver pool is bigger.
- Ease of transmission – offline WOM communication is difficult to transmit, and online WOM communication is easy to transmit/forward.
- Ripple effect – the ripple effect in essence is driven by social interaction among people. In online discussion forums, many-to-many communication significantly enlarges the scope of social interaction, consequently making the ripple effect bigger. Theoretically, relative to an offline environment, online discussion forums can provide not only a better environment for social interaction but also a better opportunity for marketers to manage WOM information (Huang, Cai & Tsang, 2011). While WOM is generally a process of sharing information between small groups of two or more interested parties, eWOM harnesses the bidirectional communication properties and unlimited

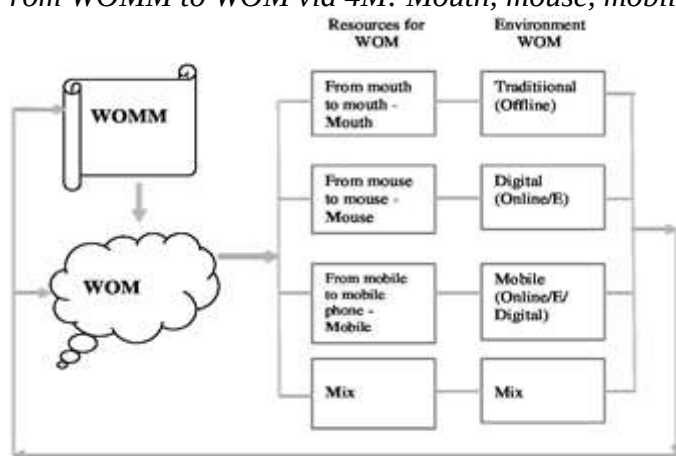
reach of the Internet to share opinions and experiences on a one-to-world platform rather than a one-to-one platform (Dellarocas, 2003).

- Focus – In offline WOM communication the focus is on persuasive communication, and in many-to-many online WOM communication the focus is both on persuasive and diffusive communication.
- Critical role – In offline WOM communication, critical role have opinion leaders; and in many-to-many online WOM communication, critical role have resenders.

Model “4M” - From WOMM to WOM via mouth, mouse, mobile and mix

Figure 1 shows the relationship between WOM and WOMM, resources and environment to spread recommendations. According to the model, “4M”, 4 key ways to spread recommendations are “mouth”, “mouse”, “mobile phone” and mix - a combination of the above ways (mix). Consumers can be in traditional (offline) or in digital (e/online) environment (Rakic & Rakic, 2015c).

Figure 1: *From WOMM to WOM via 4M: Mouth, mouse, mobile and mix*



Source: Rakic, B. & Rakic, M. (2015c). *Digitalni marketing: Integrirani pristup digitalnim marketinskim aktivnostima (monografija)*, Zavod za udzbenike, Beograd.

Recommendations can be spread directly - face to face (*word of mouth* - recommendations “from mouth to mouth”); via the Internet - the “mouse” (*word of mouse* - recommendations “from mouse to mouse”); via mobile phones (*word of mobile* - recommendations “from mobile to mobile

phone”) and also by combining the above means (Rakic & Rakic, 2015c, p. 348). To explore the influence of 4M: mouth, mouse, mobile and mix, the following hypothesis are tested:

Hypothesis 4: The ways of WOM depend on the development of technologies (from mouth / mouth to mouse and mobile phones).

Hypothesis 5: The speed of WOM depends on various ways of WOM.

Hypothesis 6: The importance of WOM depends on the various ways of WOM.

Method

The survey was conducted involving a convenience sample of 200 tourists between 16 and 74 years on the territory of the Republic of Serbia (June 2017). The students received questionnaires with 10 questions and assisted in the interview as interviewers. The survey consisted of 15 questions:

1. Do you spread recommendations?

Why do you spread recommendations?

Why do you rely on recommendations as a source of information?

Do you notice any forms of the WOMM of any tourist organizations?

Did WOMM influence you to spread recommendations?

Did WOMM influence you to make buying decisions?

Mark the three most important factors that influence your purchasing decision. The available answers are: the product, pricing, distribution channels, the promotion of organizations, recommendations.

How often and in which way (the mouth, the mouse, the mobile or a mix of them) do you receive and spread recommendations?

What way (of recommendations spreading) has the biggest influence on your attitudes?

What way (of recommendations spreading) has the biggest influence on your purchasing decisions?

After questions related to the characteristics of respondents (age, gender, income, education, employment), the second group of questions in the questionnaire was whether and why they spread recommendations. The focus of the third group of questions was why tourists rely on recommendations as a source of information; the relationship of WOM and WOMM. After had been given an explanation about WOMM, the respondents were asked whether they noticed any forms of WOMM, whether WOMM influenced them to spread recommendations and make

buying decisions. Respondents were asked to mark the three most important factors that influence their purchasing decision among the available answers (product, pricing, distribution channels, promotion of organisations, recommendations). The next group of questions was related to the influence of 4M. The following questions were put – how often and in which way (mouth, mouse, mobile or mix) they receive and spread recommendations; what way (of recommendations spreading) has the biggest influence on their attitudes and purchasing decisions.

Respondents, according to their age, were divided into the following groups: 16-34 (22%), 35-54 (30%), 55-74 (48%). According to gender, the sample consisted of 51% of women and 49% of men. According to educational level, the respondents were grouped using EUROSTAT classification: 0-2 basic, lower secondary education (preschool education; primary education or first phase of the primary education – first to fifth grade; lower high education – 6th to 9th grade); 3-4 higher secondary education (high school; - 1st to 4th grade; post secondary but not tertiary education – first degree studies); 5-6 tertiary education (higher education, Master studies and PhD studies). In the sample, 25% of respondents had lower than secondary education, 50% had secondary education and 25% had tertiary education. According to employment status, the respondents were divided into following groups: employed (30%), unemployed (25%), students (7%), other but unemployed (38%). According to income of the households where they live, the respondents were divided into following groups: up to 300 euro (68%), 300-600 euro (21%), over 600 euro (11%).

Results

Almost all respondents (89%) spread the recommendations, but in different ways and at different rates. The reasons to spread the recommendation are: satisfaction with the product (83%), counselling others (82%), helping friends with purchase decisions (74%), dissatisfaction with the product (73%), because they get rewards - incentives (8%).

Respondents rely on recommendations as a source of information for their purchase when: they are not confident enough in choosing a product (85%), the product's price is high (78%), when they purchase durable goods, something that will last for a long time (74%), when they buy a new product on the market, so they are not very familiar with it (69%).

The respondents have noted various forms of WOMM cause marketing (56%), e-mail (54%), community (42%), buzz (37%) and influencer marketing (36%). It is interesting that cause marketing is very well noted. Among multiple choice answers (product, pricing, distribution channels, promotion of organisations, recommendations) respondents singled out the following three major factors that influence their purchasing decision: product (98%), recommendations (89%) and price (84%).

When it comes to the ways of receiving a spreading recommendations (mouth, mouse, mobile or mix), the respondents in various age groups differ significantly. The following is the order of the ways to spread recommendations by age groups of the respondents:

- In the group of 16-34 years: mobile (83%), mouse (58%), mouth (46%);
- In the group of 35-54 years: mouse (64%), mobile (56%), mouth (27%);
- In the group of 55-74 years: mouth (78%), mouse (28%), mobile (24%).

Older respondents often spread recommendations verbally – directly. Also, there are great differences in the behaviour of respondents based on their educational level. As expected, the order of the ways to spread recommendations, based on the educational level is as follows:

- in the group with the lowest education (in the group of respondents with lower than secondary education): mouth (73%), mobile (26%), mouse (8%);
- in the group with secondary education: mobile (78%), mouse (63%), mouth (49%);
- in the group with tertiary education: mobile (74%), mouse (58%), mouth (43%).

Since the respondents cited three ways to spread recommendations, it follows that the mix as a combination of these methods is involved.

The main way of spreading recommendations, based on the impact on attitudes and purchase decisions in the group, is the direct word of mouth (91%).

Discussion and conclusions

These data indicate that although respondents perceived some forms of WOMM and although recommendations have great influence, tourist behaviour depends on the holistic marketing activities of the organisation. This is in line with the first and the second hypothesis. WOM depends on WOMM. WOM depends on the holistic marketing activities of the organisation. Younger respondents mostly use mobile phones to spread recommendations. Older respondents use more traditional methods of communication and recommendations spreading (e.g. orally), and younger quickly adopt new digital technologies (e.g. the Internet and mobile phones). This is consistent with the fourth hypothesis. WOM depends on the profile of consumers. The ways of WOM depend on the development of technologies (from mouth / mouth to mouse and mobile phones). The speed of WOM depends on various ways of WOM. The slowest way of spreading recommendations is by word of mouth. This is in line with fifth hypothesis. Almost all respondents trust most when they hear recommendations directly from people they know. Spreading recommendations via mobile phones is graded as well since they are “communication on the move”.

The importance of WOM depends on the various ways of WOM. This is consistent with the sixth hypothesis. The conclusion is that the starting hypotheses have been confirmed. WOM mouth, mouse and mobile communications have different impact on consumer behaviour. Consumers typically use multiple ways of spreading recommendations - mix. The data about the importance of certain ways of WOM to customers help organisations to define WOMM. Word of mouth marketing leads to word of mouth via 4M: mouth, mouse, mobile and mix. Ha & Im (2012) talk about “word of mouth generation”. We can conclude that we live in a “word of mouth, mouse, mobile and mix generations”.

On the basis of information on offline and online consumers' behaviour and WOMM, organisations can direct offline and online WOM communications about the organisation. With the development of new technologies, the ways to spread recommendations are changing, but the purpose of WOM communications remains the same. Findings show that from the organisations' point of view the adjustments of WOMM, in accordance with changes in tourist behaviour, are necessary.

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DATA ANALYSIS APPLICATIONS IN TOURISM AND HOSPITALITY MARKETING

Dragana Čamilović¹;

Abstract

The hospitality industry is highly competitive today, and many companies have a customer focus. Successful marketing starts with recognizing and tracking patterns within customer data. For each hospitality company it is essential to determine which customer segment it wants to serve. Marketing segmentation is often performed by using cluster analysis which is presented in this paper. It is a known fact that it costs more to acquire a new customer than to retain an existing one. Thus, a special attention is given to retention models. Models which predict who and why is likely to churn are discussed in the paper. Sentiment analysis becomes especially important with the development of social networks, since it identifies the sentiments and opinions in a text. Data analysis can also be used for predicting next best offers (NBOs). NBOs can boost revenues with cross-selling and up-selling, and improve customer relationships as well.

Key Words: *hospitality marketing, data analysis, customer segmentation, retention models, sentiment analysis, next best offers*

JEL classification: Z33

Introduction

Today's businesses generate large amounts of data, such as profile data, purchase history, channel usage, browsing history, Internet clickstreams, social media data, etc. These belong to one of two broad categories:

Structured data: highly organized data that uploads neatly into a relational database (Schaefer, 2016), such as customer buying habits and other transactional data. These are often processed and stored in a data mart or a data warehouse, as described by Čamilović et al. (2009).

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Unstructured data: does not reside in a traditional database and may have its own internal structure (Schaefer, 2016). Unstructured data can be acquired from emails, documents and various social media sites. Analysis of social media data gives us a valuable insight into individual customers' preferences, their likes and dislikes (Dubey & Nainwani, 2014).

Structured, semi-structured and unstructured data can be stored in a data lake – a storage repository that holds a vast amount of raw data in its native format, without a specific purpose in mind (Harris, 2016). This means that data structures and business requirements do not have to be defined until the data is needed (op. cit.).

Both structured and unstructured data are used extensively in data analysis.

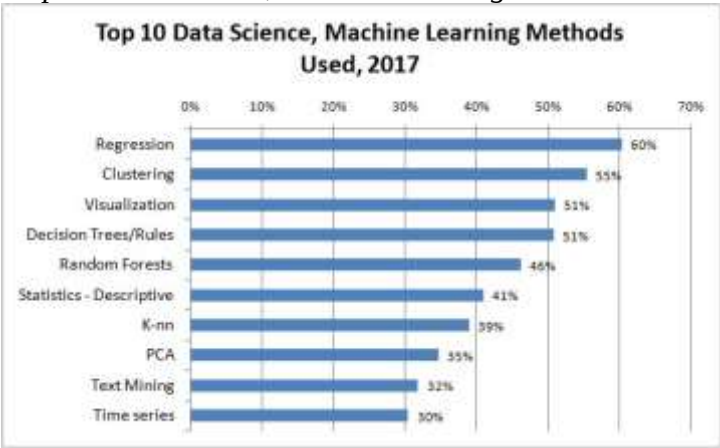
Data Analysis

Data analysis involves employment of different data mining techniques, depending on business objectives. Regardless of the data mining technique used, there are several steps in each data mining project (Ćamilović, 2008):

1. *Defining the business objectives.* Each data mining application has its own business objectives and requirements. Talking to business people is the best way to define them.
2. *Assembling and preparing the data.* When the data needed resides in multiple data repositories, this step takes a lot of time and effort. Variable selection is a critical step within the data mining process. Usually, the variables have to be transformed in accordance with the requirements of the data mining algorithm chosen.
3. *Modelling.* Data can be presented to a data mining tool, but modelling phase very often involves coding in some data analysis programming language (Python and R are the most popular).
4. *Interpreting the results.* The model should be evaluated with respect to problem solving objectives and discussed with business experts.
5. *Applying the results.* The goal of data mining is to apply what was discovered in order to solve the business problem defined in the first step (e.g. customer churn).

Some data science techniques are used more often than the others. Most popular techniques used in 2017 are presented in Figure 1.

Figure 1: *Top 10 data science, machine learning methods used 2017*

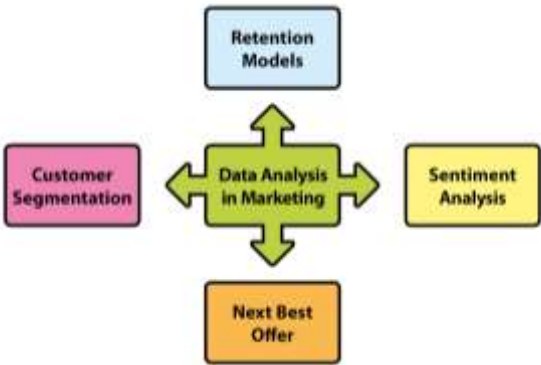


Source: *Piatetsky-Shapiro G., 2017*

Some of the techniques are very popular in marketing: regression analysis and decision trees are useful for product propensity scoring, clustering is often used for customer segmentation, text mining is valuable to sentiment analysis etc.

As shown in Figure 2, data analysis in marketing can be used for different purposes: customer segmentation, retention models, sentiment analysis, and next best offer. These are described in more detail in the sections that follow.

Figure 2: *Data analysis applications in marketing*



Source: *Author*

Customer Segmentation

Most markets are not homogeneous, because different people have different preferences. This is why it cannot be served by one type of product/service offering (Jain, 2000). It is very important for a company to decide which customer segments it wants to connect with and serve.

A market segment is “a portion of a larger market whose needs differ somewhat from the larger market” (Hawkins, 2010, p. 16). Customer segmentation is grouping similar customers together, based on many different criteria and variables (Ćamilović, 2008). Depending on the major segmentation variables, there are four different types of market segmentation: geographic, demographic, psychographic, and behavioural segmentation (Kotler & Keller, 2016).

Geographic segmentation divides a market into different geographical entities. There are several approaches to geographic segmentation. A market can be divided by geographical areas, such as city, state, region, or country. It can also be divided into rural, suburban, and urban market segments. And, finally, a market can be divided by climate or total population in each area (Study.com, 2017). Some methods combine geographic with demographic data in order to get an even better segment description and understanding.

Demographic segmentation divides a market by demographic indicators, such as age, gender, income level, education, family size, life stage, etc. Many purchase behaviours are influenced by how old the customers are, because the purchase of goods and services changes over time. But, most importantly, the year of birth can also predispose the individual's lifelong preferences (Hsu & Powers, 2002).

When segmenting a business market, restaurants must take age and gender into account. Age is an important factor that determines when and where customers eat in terms of location, time of the day, underlying food principles of health, convenience, variety, etc. (Scott-Thomas, 2012). A marketing research conducted in the USA has shown that marketers should target the over- 65s with healthy food and beverages and under-45s with snack and late night meals, and also that Generations X and Y want their meals at their fingertips (op.cit.).

It is also a well-known fact that men and women have different eating preferences. Women are more concerned about nutrition, they are more adventurous in food choices than men, but eat out less often. Men appreciate familiar food, they are meat lovers and do not like fruits as much as women (Hsu & Powers, 2002).

New generations are well educated. There is a tendency for openness to try new foods among customers exposed to education (McCluskey, 2015). Income level impacts how much money customer spends on eating out and influences the choice of a restaurant. Hotels can also identify which customers are most valuable to them through demographic information.

Psychographic segmentation divides a market by personality traits, lifestyle, as well as values and beliefs.

Behavioural segmentation is the process of dividing a market into segments based on customers' shopping and buying behaviour, the way customers respond to, use or know a product (Bhasin, 2017). There are several behavioural characteristics that can be taken into account (MBASkool):

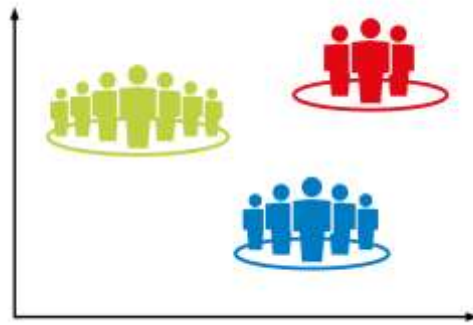
1. *Occasion segmentation* focuses on dividing the market based on certain events when a customer uses or purchases a product or a service. In restaurants, typical meal occasions are breakfast, lunch and dinner. Snack occasions are midmorning, mid-afternoon, and late evening (Hsu & Powers, 2002).
2. *Usage based segmentation* is grouping based on how much a product is being used/consumed by the customer. For example, pizza delivery operations target the heavy users (Hsu & Powers, 2002).
3. *Loyalty status segmentation* usually divides the market into four segments based on brand loyalty status (Kotler & Keller, 2016): hard-core loyals, who buy the brand all the time; split loyals, who are loyal to two or three brands; shifting loyals, who move from one brand to another; and switchers with no loyalty. Loyal customers are of great importance for chained-brand hotels and this is why they use data analytics to identify this segment and engage it with loyalty programs.
4. *Benefits segmentation* is grouping based on different benefits perceived by different customers.

Depending on the research objective, segmentation can be performed by using different data mining techniques and methods: clustering algorithms, factor analysis or principal component analysis, logistic

regression, discriminant analysis, cross-tabulation, chi-square automatic interaction detection (CHAID), etc. This paper is focused on segmenting customers with clustering techniques.

Cluster detection is the most important unsupervised learning technique, as there is no output variable. This is unlike the supervised learning algorithms, which prescribe a target variable. In other words, in case of unsupervised learning, an algorithm works only with a set of input variables, trying to find a hidden structure or relationships between different inputs. Cluster analysis divides data into groups – clusters. It finds sets of cases that are more similar to one another than they are to cases in other sets (Ćamilović, 2008). This is displayed in Figure 3.

Figure 3: *Using clustering for customer segmentation*



Source: *Author*

Clustering algorithms can be directly applied to input data, but it is recommended to employ some data reduction technique first, for example, principal components analysis (PCA). The goal of PCA is to derive the smallest number of components that make up as much information as possible about the original input variables (Tsipitsis & Chorianopoulos, 2009). These components are uncorrelated, and for this reason they are suitable input to many data modelling techniques, including clustering.

There are a number of clustering techniques and the most commonly used is the k-mean algorithm. The “K” in its name refers to the fact that the algorithm looks for a fixed number of clusters (Berry & Linof, 2004). It randomly selects K instances (data points) as initial cluster centres. Instances are assigned to the nearest cluster seed (usually simply by

calculating Euclidean distance), which is then updated to the average position of the data points of each new cluster. This process is carried out iteratively until iteration of the algorithm shows no change in the cluster centres (Roiger & Geatz, 2003).

When using cluster analysis, a valuable issue to consider is the effect of possible outliers. An outlier is something that lies outside the group that it is a part of, a record with extreme value. Outliers can be detected by examining data through simple descriptive statistics or by specialized modelling techniques (Tsiptsis & Chorianopoulos, 2009). In many cases, the differences between the outlier and other records are so immense that they may mask the existing differences among these other “normal” records. As a consequence, algorithm can find the solution that barely separates outliers from the rest of the records. This is why it is a good approach to identify outliers and treat them in a special manner (Tsiptsis & Chorianopoulos, 2009).

After performing clustering, the model should be evaluated. It is a good idea to use supervised learning techniques in this process. Roiger and Geatz (2003) suggest a three step approach:

1. Perform clustering.
2. Choose a random sample of instances for each cluster (initial choice should be two-thirds of all instances in a group).
3. Build a supervised model using randomly sampled instances as a training set and the rest of instances for classification correctness. Decision trees or rule-based structures can be used in the process of supervised evaluation.

Once clusters are identified, their business interpretation comes into play. This process of describing the clusters is known as profiling. The variables used for clustering can be useful in describing each segment, but additional data, such as demographic, can also be beneficial (Venkatesan, 2007).

Usually the profiling process starts with an examination of the cluster centroids. Each cluster should be examined individually and its means should be compared with the input attributes to the overall population means. The analyst should look for large deviations from the “typical” behaviour (Tsiptsis & Chorianopoulos, 2009). After that, additional data (such as customer demographics) can be used in order to fully identify the features of each cluster. This involves examination of the mean of each

continuous attribute for each cluster. For categorical attributes, the procedure includes frequency and percentage comparisons in order to uncover the cluster differentiation (Tsiptsis & Chorianopoulos, 2009).

Retention Models

In the highly competitive hospitality industry, customer retention is very important. Losing a customer means more than losing a single sale – it means losing the entire stream of purchases that the customer would make over a lifetime of patronage (Kotler et al., 2014). Customer churn, also known as customer attrition, is the loss of clients or customers. The percentage of customers who are lost within a given time period is known as churn rate (or attrition rate). High churn rate is a sign that customers are not happy with what they are getting.

Churn models, also called retention or attrition models, predict the probability of customer attrition (Parr Rud, 2001). They seek to understand customer behaviours and attributes which indicate that he/she is a potential churning. Churn prediction is one of the most important data mining applications in customer relationship management (CRM). Most advanced casinos and hotels can predict churn (McGuire, 2017).

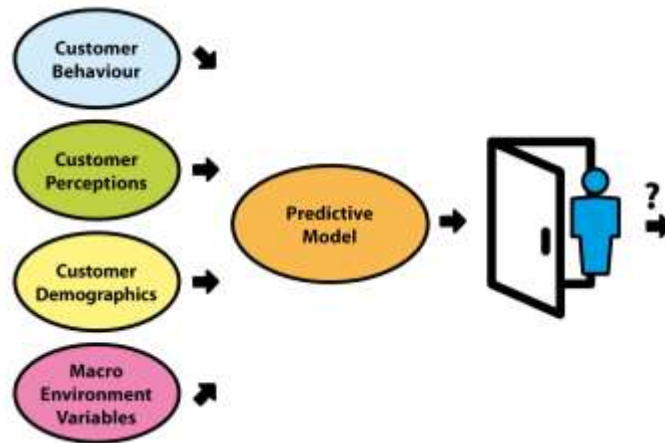
In order to answer the question who and why is likely to churn, the analyst needs to apply a classification data mining algorithm. Classification algorithms predict the class or category, based on a given input. In order to predict the outcome, the algorithm processes a training set containing a set of input attributes and the respective outcome, known as the goal or prediction attribute. The algorithm seeks to discover relationships between the attributes in order to predict the outcome (Voznika & Viana, 2001).

A number of supervised learning techniques can be used for churn prediction: logistic regression, neural networks, decision trees, random forests, support vector machines (SVM), survival analysis.

No matter which algorithm is used, it all begins with assembling and selecting the data. It is very important to take all the important variables into consideration. Business experts' input and guidance is advised in the input variables selection process. Lazarov and Capota (2007) suggest using four groups of variables (as shown in Figure 4):

- *Customer behaviour*: variables that indicate which products/services a customer is using and how often he/she uses them.
- *Customer perceptions* that show how a customer perceives the product/service. They can be measured by surveys.
- *Customer demographics*, such as age, gender, level of education, geographical data, etc.
- *Macro environment variables* that describe changes in the world and distinct experiences of customers.

Figure 4: Sets of data variables in churn prediction



Source: Author

Assembling the data is followed by data pre-processing. Besides data transformations (such as normalization) and sometimes data smoothing, this step includes resolving the problem of missing values. There are several options for dealing with missing data (Roiger & Geatz, 2003): to discard records with missing values, to replace missing values with the class mean, and to replace missing attribute values with the values found within other highly similar instances.

It is important to choose the right set of attributes when building a model. The process of selecting a subset of relevant features (attributes) to be used in model construction is known as features or attributes selection. The optimality of a feature subset is estimated by an evaluation criterion (Tiwari & Singh, 2010). Different algorithms have different evaluation criteria and they fall into one of the three categories (Tiwari & Singh, 2010):

- Filter model: evaluates and selects the right subset of attributes only by their general characteristics. It does not engage any data mining algorithm.
- Wrapper model: requires predetermined mining algorithm and uses its performance as the evaluation criterion.
- Hybrid model: tries to take advantage of the two models by applying their different evaluation criteria in different search stages.

Attributes highly correlated with other input attributes are redundant (Roiger & Geatz, 2003). The correlation between two attributes can be measured by computing the linear correlation coefficient.

Whichever supervised learning algorithm is chosen for churn prediction, the analyst always needs to train and evaluate the algorithm. The data set has to be partitioned appropriately so as to avoid overfitting or underfitting. Overfitting occurs when a model fits the data too well. What happens is that the model captures the noise of the training data in such a manner that it negatively impacts the performance of the model on new data. Underfitting happens when the model does not fit the data well enough, which means that it cannot capture the underlying trend of the data. To prevent this issue, data set should be properly divided into the following (Condamoor, 2015):

- Training set (60% of the original data set), which is used to build up the model.
- Validation set (30% of the original data set), which is used for evaluating effectiveness of the model. The model generating the least amount of error normally gets to the test.
- Test set (10% of the original data set), which is used to test the model that was selected from the validation.

Sannel (2015) emphasizes that churn prediction is an iterative and incremental process. When the model identifies potential churners well and retaining efforts are successful, the customer will not leave the company. This will invalidate the current churn prediction model and may require a new iteration in order to identify the high impact factors that cause customer churn. This process can be repeated numerous times (Sannel, 2015).

Understanding how to reduce churn is critical for the success of a data mining project. The data analyst must be aware of marketing actions that

are going to follow. Cisternas (2010) points out that the best model is not necessarily the one with the best statistical precision, but the one that provides the best insights to prevent churn.

Sentiment Analysis

Sentiment analysis or opinion mining uses different methods to extract and identify the sentiments, attitudes and opinions in a text. It is very useful in analysing opinion-rich resources such as product/service reviews, surveys, customers' emails, call logs, tweets, Facebook comments or posts, and comments on a blog or a Web site.

Sentiment analysis can be considered as a text classification problem, since an opinion may be positive, negative or neutral. There are three main classification levels (Medhata et al., 2014): document level, sentence level, and entity-aspect level. Overall opinion is examined on the document level, while opinion of a particular sentence is examined on the sentence level. The level which focuses on the opinion itself is known as the entity and aspect level (Vaghela & Jadav, 2016). Most common techniques used in sentiment analysis include Naive Bayes, support vector machines, and entropy classification.

There are many ways in which a business can use sentiment analysis (Sheey et al., 2014): to track what customers say in order to improve marketing efforts, to boost word of mouth marketing, to discover product/service improvement opportunities by analysing customers' feedback, etc. It is very useful to monitor what customers say, because in this way a company can get real understanding of customers' attitudes toward its products/services, brand or commercials. These insights are the strengths that can be used for better marketing.

Word of mouth marketing is still a very effective practice for marketers. A company needs to identify its highly influential customers, because it can involve them in advertising at a much lower cost than traditional methods. Analysis of large amounts of data from social networks and across the Web, or from emails and call logs can be very helpful in improving products and services in a timely manner. This is very often an easier and quicker way of identifying customers' opinions than conducting surveys or focus groups (Sheey et al., 2014).

Next Best Offer

This is a revolutionary data mining application in the travel, tourism and hospitality industry. By analysing the data, from detailed demographics and psychographics to Web clickstream data, marketers create customized next best offers (NBOs) which direct their consumers to the right products/services, at the right moment, at the right price and in the right channel (Davenport et al., 2011).

In the travel industry, NBOs can be used as a secure path to further monetize existing customers' itineraries, as well as significantly improve customer experience and satisfaction (Kremer, 2014). By predicting which product a particular customer is going to buy next, a company can boost its revenues with personalized cross-selling and upselling (Sheey et al., 2014). But, next best offers should not be confused with in-path upselling implemented by many travel brands. The main difference is that NBO is typically sent not before, but after a purchase and it is designed to be relevant and complementary to that purchase (Kremer, 2014). Figure 5 illustrates this concept.

Figure 5: *Next best offers*



Source: *Author*

For the purpose of data mining, a company needs to assemble three types of data (Davenport et al., 2011):

1. Customer data: customer demographic, psychographic, and behaviour data, as well as data about their previous purchases.

2. Data about the company's product offers: information about the company's products or services. It is advisable to classify products into groups.
3. Data about the purchase context: the channel through which a customer is making contact with a business, reason for purchase, customer emotion, weather, the time of day or the day of the week, etc.

Two most commonly used data mining techniques in predicting what a customer wants to buy next are link analysis and decision trees. Link analysis is used to link the customers' market basket and historical transactions to products they may want to buy. Then, decision trees can be used for scoring suitable timing of marketing messages (Sheey et al., 2014).

Decision trees can also be used, together with regression analysis, for product propensity scoring (Sheey et al., 2014). Furthermore, link analysis helps in determining what products naturally go well together, which is the key for developing an effective cross- and upselling campaign (Sheey et al., 2014).

Conclusion

Marketing has always been driven by data. In order to segment their customers, predict which customers are at risk of leaving, identify customers' opinions, and create customized next best offers, companies need to analyse large amounts of data. Besides collecting and integrating the data, creating a model presents an even greater challenge. Choosing the right variables, the right data mining algorithm and the right data analysis tool is not an easy task. This is why data science is the latest in-demand skill within the marketing profession.

Unfortunately, many hotels and restaurants currently do not perform data analysis and thus their data remains an underused asset. This is mainly because they do not understand the potential of data mining applications. The aim of this paper is to emphasize why data analysis is so important and what it can be used for. If hotels, tourist organizations and restaurants start analysing the captured data properly, they will be able to understand their customers' needs and expectations, create better offers that meet customer needs, keep customers loyal and happy and maybe even manage to turn them into their biggest advocates.

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THE IMPORTANCE OF ACCOUNTING INFORMATION SYSTEMS USAGE IN HOTEL INDUSTRY

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Abstract

Accounting information and Accounting Information Systems are of great importance in the company in support of various business-financial decisions. Considering the growing and more dynamic development of information technologies and the "information society", there is a need to constantly review the existing, develop and implement new and more modern technologies. The aim of this paper is to examine the importance of Accounting Information Systems, by examining the importance of using Accounting Information Systems in the hotel industry, in order to indicate the necessity of development. Also, on the basis of the subject of research and analysis of results, several research questions were opened regarding further directions of research and the possibilities of perceiving the importance of using Accounting Information Systems in the hotel industry.

Key Words: *Accounting Information Systems, hotel industry, accounting*
JEL classification: *M41, L83*

Introduction

Accounting information facilitates strategic long-term planning for companies that operate in a highly competitive and dynamic environment and provide the necessary basis for financial reporting (Mitrović & Knežević, 2016). The development of accounting information, in addition to supporting business and financial decision-making in many sectors of the company, according to Downie (1997), to support marketing decisions in hotels provides opportunities to improve the quality of the decisions

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made, because the capacity of the available technology can produce information that was not previously possible.

With the emergence of information technology (IT), the use of IT solutions to support the collection and communication of accounting information must be a priority as part of initiatives to increase business competitiveness and productivity. Accounting information, which is usually of quantitative character, i.e. numerically expressed in order to reduce the uncertainty and risk in the business of the company, gives priority over other types of information. This information, important for effective corporate governance, helps different customers meet their demands. In this regard, the accounting information produced by Accounting Information Systems (AIS) is important for accounting information both to external and internal users. It helps to improve accounting information and provides an adequate basis for decision making (Mitrović & Vučić, 2015). The AIS enables more accurate reporting, processing large quantities of transactions and producing significant reports for analysis needs.

According to Boczko (2007: 13), two common interrelated purposes are possessed by the AIS:

- providing users with information, or the function of decision facilitating – that is the function dealing with assisting decision making/decision makers by providing ‘useful’ information, and
- the function of decision making support and facilitating control, or the function of influencing/mediating decision – that is the function regarding control and inducement of alternative forms of behaviour where conflict exists and/or mediation is required between transacting parties.

Managers in the hotel industry, compared with other managers in the manufacturing industry, face more non-standardized and complex operating conditions due to the unique characteristics of hotel services. Budgetary participation of hotel industry managers and their use of information technology for communication can help them face non-standardized and complex work tasks in order to better perform their work (Winata & Mia, 2005).

In the study by Mia & Patiar (2001) the use of AISs by general managers and managers in the sector of luxury hotels is explored. The study further investigates the emphasis of general managers on financial and non-

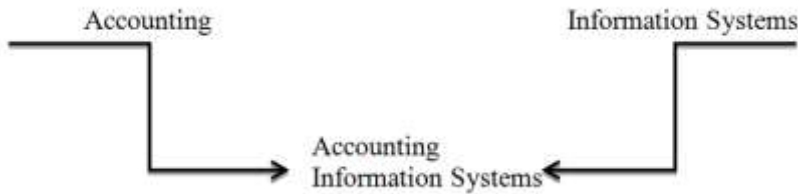
financial performance indicators when evaluating the performance of their department managers. Additionally, the satisfaction of managers with details and availability of their hotel's Management Accounting System (MAS) is assessed. The results show that general managers and department managers equally utilize MAS for both short and long-term decisions. However, a detailed analysis of the data by manager groups shows that general managers differ from department managers regarding their use of MAS for decision-making. Further, compared to department managers, general managers are found to be more satisfied with the frequency in which MAS is available to them. Regarding department manager's performance evaluations by general managers, the results reveal that general managers put more emphasis on financial than on non-financial performance indicators.

Having in mind the importance of IT and AIS, this paper discusses the importance of the AIS in general, as well as the importance of using AISs in hotel companies. The second part deals with a review of the literature on the importance of Accounting Information Systems. The third part of the paper points to the importance of the use of Accounting Information Systems in Hotel Industry, given the importance of hotel companies. Examples of accounting organization charts are given for a typical full-service hotel. Further indicated is that most common technologies adopted by the hotels are accounting-based applications and minimal use of management accounting types of modules.

Literature Review – the Importance of Accounting Information Systems

An Accounting Information System is a collection of data and processing procedures that creates the necessary information for its users according to Bagranoff, Simkin & Strand (2010). An AIS represents a unique structure within an entity (Wilkinson et al., 2000). All financial and non-financial data that occur in enterprises will be transformed into accounting information, in order to meet the needs of informing different users. An AIS is to a large extent dependent on the application of information and accounting systems. Figure 1 precisely shows that an AIS is a combination of the following disciplines: accounting and information systems (Bagranoff et al., 2010).

Figure 1: AISs used two important disciplines - Accounting and Information Systems



Source: according to: Bagranoff, N.A., Simkin, M.G. & Strand, C. (2010). *Core Concepts of Accounting Information Systems*, Tenth Edition, John Wiley and Sons, Inc.

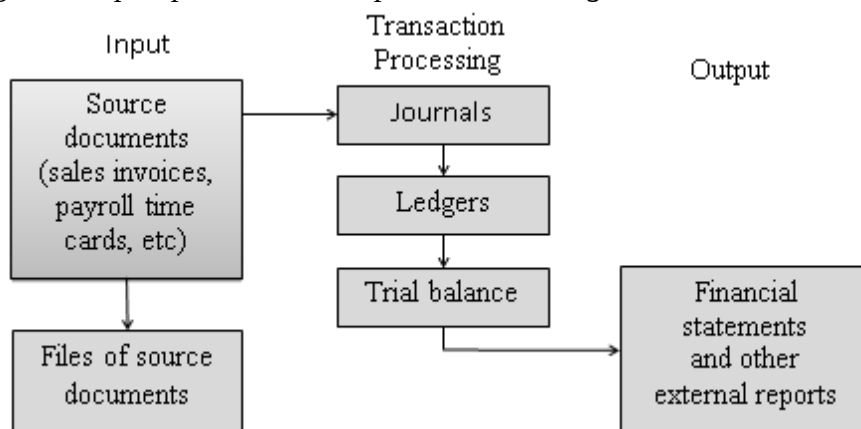
Accounting information plays a very important role in supporting various business decisions. Expanded IT use improves accounting functions to make them more efficient and effective in complementing accounting information. An AIS enables accurate reporting, processing of a large number of transactions, and the production of significant reports for analysis purposes. Despite the many advantages of AISs, small and medium-sized enterprises (SMEs) lag behind in the implementation of AIS. Therefore, the study Lutfi, Idris & Mohamad (2016) examined the factors that influence the use of AIS among Jordanian SMEs based on technological, organizational and environmental factors, where, based on the response of 187 companies, it was found that compatibility, owner/manager commitment, organizational readiness, competitive pressure and government support have a significant impact on the use of AIS among enterprises.

The Accounting Information System should adequately respond to the information requirements of the management in the company. Information and reports required by managers at all levels in companies depend on the specific nature of each entity's activity, position and area of responsibility of each manager (Stanković et al., 2012). The connectivity of the Accounting Information System with company management is specific for the purpose of adjusting the management with the overall information capabilities of the Accounting Information System. It produces financial reports that are important for the management and decision-making of management, and precisely by the action of management for eliminating the weaknesses of production by re-demands, which is an initial impetus for the improvement of information content (Knežević et al., 2012).

In order to respond adequately to the requirements of the management, the Accounting Information System must be organized as an active and creative system. How does the Accounting Information System respond to management requirements? With its proactive solutions, the organizer of the accounting function should consider, direct and improve the information requirements of the management. In this way, it increases the information power of the Accounting Information System and makes it easier for management to make business-financial decisions (Knežević et al., 2012).

Managers may be helped by the accounting information to understand their tasks more clearly and narrow down uncertainty before decision-making. Figure 2 shows input, process and output in accounting. The Law on Accounting (2013) provides that a legal entity and an entrepreneur that processes data on a computer is required to use standard accounting software that allows the functioning of the internal accounting control system and prevents the deletion of recorded business changes.

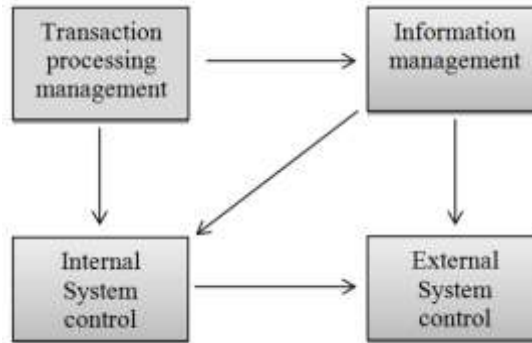
Figure 2: *Input, process and output in Accounting*



Source: according to: Bagranoff, N.A., Simkin, M.G. & Strand, C. (2010). *Core Concepts of Accounting Information Systems*, Tenth Edition, John Wiley and Sons, Inc., p.15.

Through understanding the wider sense, we can say that the Accounting Information System has an integrating, that is, a unifying role in meeting the organizational goals of a modern organization. The Accounting Information System through a unifying role affects the fulfillment of the organizational goals of modern enterprises. Figure 3 shows the integrated nature of an AIS.

Figure 3: *The integrated nature of an AIS*



Source: Boczek, T. (2007). *Corporate accounting information systems*. Pearson Education, p.15.

In modern enterprises, knowledge of employees is a key production factor in the organization and as the fundamental task of AISs, the satisfaction of the various information needs of the management regarding the making of business and financial decisions is emphasized (Stankovic et al., 2013).

When we talk about accounting specifically, it can be noted that accounting has made tremendous progress due to the development of ICT. Accounting software today is replacing traditional ways of doing business, and depending on the needs of companies, they can contribute to the realization of specific requests by the company's accountants. Information technologies have resulted in numerous advantages in processing and presenting accounting information, and in that sense, specifically for reporting purposes, the shortened time needed by accountants for the compilation and disclosure of reports, and hence the efficiency in presenting information is improved, which is certainly positive also from the aspect of the quality of business decisions of various stakeholders.

According to Mancini, Vaassen & Dameri (2013: 2), three factors can be considered as the main factors of AISs change or development:

- Technology;
- Management practices and models;
- Accounting rules.

The development of Accounting Information Systems is directly reflected in the development of reporting. The general conclusion is that shifting from traditional data processing modes in accounting to more modern

ones leads to various benefits, among which the key point is the reduction of time and hence the improvement of efficiency and accuracy of information. Previously, in terms of the continuous development of accounting information systems, the reports are available immediately, at the request of appropriate groups of users, with specific requirements regarding information detail (Mitrović, 2016).

The Importance of Accounting Information Systems Usage in Hotel Industry

Given that the hotel industry has a major impact on the contribution of GDP and the development of countries, the importance of studying the hotel industry and all the factors that lead to the development of this industry is perceived and can lead to improvement in the future. One of them, imposed in the last couple of years as necessary, with the growth and development of IT, is AIS (According to Ramli, 2013).

In the Republic of Serbia by the classification of activities, the Republic Institute of Statistics defines sectors, areas, branches and groups of activities with activity codes. Sector I includes accommodation and food services through: provision of short-stay accommodation for visitors and other travelers, as well as the preparation of complete meals and drinks for direct consumption, specifically covering the areas 55-Accommodation and 56-Food and beverage serving activities.³

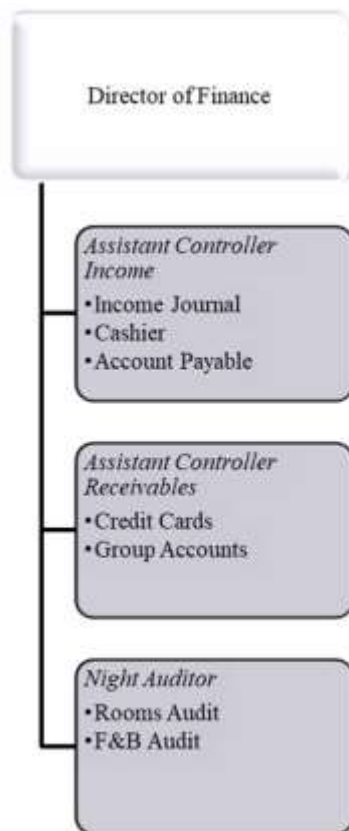
The accounting sector in hotel companies helps other departments in relation to the appropriate procedures to be followed by each department to provide planned sales of products and services to customers, following up established hotel policies and procedures (Hales, 2005). Collaboration can be seen in the following example: Managers in the front office analyze sales revenues in relation to different segments on a daily basis, compared to the number of available rooms, and other criteria. It is very important that managers make a comparison of realized revenues with planned revenues, and compare them with revenues generated in the previous period, in order to look at a certain trend of income trends.

³ See more Knežević, S. & Mitrović, A. (2017). Analysis of the Opinions in the Audit Reports of Companies in the Hospitality Sector: Accommodation and Catering Service. *2st International Scientific Conference, Tourism in Function of Development of the Republic Of Serbia – Tourism product as a factor of competitiveness of the Serbian economy and experiences of other countries*, 1-3 June 2017. Thematic Proceedings II, Faculty of Hotel Management and Tourism in Vrnjačka Banja, 324-340.

Managers participate in the process of paying bills by customers, forwarding invoices for payment, checking the correctness of parts of invoices in order to ensure account approval and correctness. Then they hand their day's work to the Night Auditor that checks in any remaining guests and starts the process of auditing the day's work (Hall, 2008).

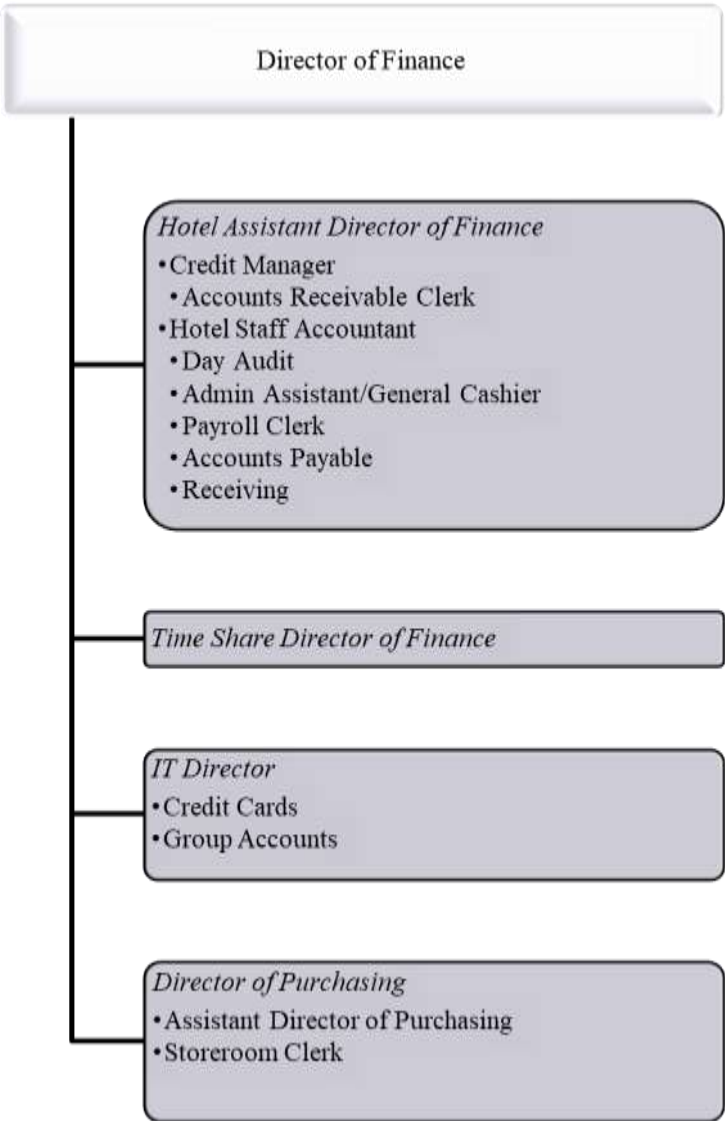
As we can see from the hotel organization chart, the Accounting sector is one of the staff departments with the Director of Finance or Controller responsible for all accounting operations and reporting to the General Manager. The accounting personnel include both managers and hourly employees. Figure 4 and 5 contain two accounting organization charts for a typical full-service hotel.

Figure 4: *Example for accounting organization charts for a typical full-service hotel*



Source: according to: Hales, J. (2005). *Accounting and Financial Analysis in the Hospitality Industry*, Elsevier: Butterworth Heinemann, p.53.

Figure 5: *Example of accounting organization charts for a typical full-service hotel*



Source: according to: Hales, J. (2005). *Accounting and Financial Analysis in the Hospitality Industry*, Elsevier: Butterworth Heinemann, p.53.

Managers in restaurants and catering establishments cooperate with the accounting sector in the same way as managers in the front office. However, instead of market segments, these managers are interested in

information on food and drink (breakfast, lunch and dinner) to analyze sales (Hales, 2005).

In classifying IT in hotels it is important to take into account the following functional area it affects:

- Rooms.
- Back office or administration.
- Marketing and sales.
- IT systems for clients.
- IT infrastructure.
- Additional hotel services.

The following areas of accounting are defined in administration or back office or management (Bulchand-Gidumal & Melián-González, 2015):

- Hotel accounting. Systems for management of hotel accounting. As in most back-office systems described in this section, some authors have found that generally unsophisticated uses oriented toward basic automation. Nevertheless, as the possibilities offered by IT are realized, incorporating indicators of key performance for the hotel with the link between the use of IT and organizational performance becoming clearer.
- Guest accounting. Systems for accounting guests' consumption during their stay at the hotel and preparation of the final bill. The information from all points where consumption takes place in the hotel is being received by the system.

When selecting a specific AIS in a hotel, one needs to consider several factors. Some of them are the size of the hotel, the number of employees and the organizational scheme of the hotel. In all this, it should be borne in mind that the AIS must be accessible and a system that will be chosen to serve the purpose of the hotel, which justifies the investment in the AIS. When, for example, we look at hotel companies that according to the size criterion belong to middle and large legal entities, first of all, we can conclude that these hotels have many departments, cost centers and revenue centers, a large number of employees and have a large number of customers, a significant number of suppliers (usually).

The foregoing leads to the need to implement an efficient AIS, as accounting becomes more and more complex, with more and more business transactions, changes in legal and secondary legislation, which a

modern AIS has to follow. Since business is becoming an increasingly complex the key to monitoring and analyzing the problems are also AISs.

The decision to invest in a particular AIS will usually be made by the upper management level at the hotel, which will look at the level of sales and revenues as the main factors in making decisions. The hotel industry is still, in most countries, dependent on the state, the development strategies and investments at the local level, the level of local communities. Certain hotels are largely dependent on government agencies and the local population, and when the government reduces consumption or in case of economic downturns, these hotels that are directly dependent make a drop in sales.

Hotels that are directly under a certain program by the state can better cope with economic downturns, because in this case, most often, they will have reservations by government agencies (example Vouchers for tourism development in Serbia). In contrast, other hotels, usually defined as large legal entities, are not very interested in local economic services, since their customers are from abroad and focus their sale to mostly international tourists.

The users will utilize the AIS to the extent they are satisfied with it, especially when there will sometimes be situations in which the AIS will not be able to respond to all user needs. For these reasons, the AIS should be a flexible system that serves to meet the needs of users and is constantly upgraded. Hotel companies that value AIS capabilities invest in good AIS systems and thus affect return from the investment. An AIS affects the achievement, preservation and improvement of the competitive advantages of hotel companies on the market and directly or indirectly, AIS affects the performance of hotel companies (Ramli, 2013, p.233).

According to Boczko (2007: 151) the following is provided by the most contemporary, computer-based accounting software:

- fully integrated general ledger, sales ledger and purchase ledger systems,
- audit services for integrated transaction,
- facilities for performance evaluation,
- solutions for report writing (e.g. VAT reporting), and
- preparation facilities of financial statement.

The study by Ramli (2013) found that accounting-based applications are the most common technologies adopted by the hotels such as payroll, account receivables and payables, and hotels less utilize billing, online reservation, purchasing and inventory modules and interviewed respondents stated that compared to other applications they were more concerned about accounting related applications. This study also shows minimal usage of management accounting types of modules for cost accounting, budgeting, budget variances and operational planning and control and other optional modules of financial analysis, online payment and receipting, also at a relatively low level of utilization are order entry and personnel management.

Conclusion

The development of IT and the development of AISs continuously lead to the need to perceive the state of development, the need to upgrade and implement new and more contemporary solutions.

AISs are used in a variety of activities, of service or production character, and due to the specific nature of the business that the company is dealing with, AISs must be adapted to the specifics of that enterprise. In addition to other activities, an important segment in the use, having in mind the significance of the development of tourism and hotel industry, are the AISs in the hotel industry. It is important that the AIS implanted in the hotels is a flexible system, which can monitor development trends and trends in line with any changes.

Once again, it must be pointed out that the AIS product is mostly quantitative information, which may be a major disadvantage, especially if it is taken into account that these are mainly information of a historical nature. Regarding the AIS, the slogan "more is better" should not be valid, because the view that the higher the amount of data processed, the greater the amount of information it produces, and the company becomes more efficient is wrong. In connection to the foregoing, particular attention should be paid to the quality of information, because it is well known that for the successful operation of companies it is necessary to provide quality information in a timely manner.

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THE DIGITALIZATION OF ACTIVE OUTDOOR TRIPS IN SERBIA

Sretenka Dugalić¹; Snežana Lazarević²;

Abstract

The development and application of various data and communication technologies have caused the digitalization and even personalization of most tourist programs today. The paper examines the possibilities of implementing digital sales of active outdoor trips through improving the resources of the TOS and the Serbian GIS. The experiences of developed countries, in the aim of more efficient promotion and adoption of superior solutions of national tourism, have been examined, systematized, and explained by comparative analysis. The goal of the research is to answer the question: How does modern digital technology affirm tourism and contribute to the understanding of national tourism in the global market? The research results show the following: Serbia has unused resources and capacities for placing active outdoor trips; the application of digital technology in tourism can enhance the reputation of the country and the region, while mobile applications increase sales in tourism, and growth of economic development indicators.

Key Words: *active outdoor tourist trips, mobile applications, digitalization of tourism.*

JEL classification: *M37, O32, P48, Q26, Z32, Z33*

Introduction

In the 2016-2025 Serbian Tourism Development Strategy (STDS), the tourism products of special importance for its development are listed as follows: 1) city breaks; 2) events (cultural, sports, etc.); 3) mountain tourism; 4) spa & wellness/health tourism; 5) thematic routes; 6) rural

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tourism; 7) nautical tourism; 8) meetings, incentive trips, conferences and exhibitions/events (MICE tourism); 9) cultural heritage; and 10) special interests (Serbian Tourism Development Strategy 2016-2025, 2018, p. 28). However, “for an active vacation, it is necessary to invest in infrastructure, regulate and adapt national parks and rivers, modernize spa tourism and sports facilities, as well as build new ones”(Dugalić, 2017a, p. 5). A SWOT analysis of the STDS includes the following: An obsolete and inadequate model of tourism management, marketing and promotion of destinations instead of products and attractions based on the experience of visitors; and an absence of innovation and new entrepreneurial projects - insufficient involvement of professional associations, social and citizen associations in the planning process and implementation of specific tourism activities (STDS 2016-2025, 2018, p.31). These are the reasons that Serbian tourism has entered the era of digital transformation. Digital marketing channels require a deeper analysis through the following elements: an exclusion of agents (and a redefinition of their role); flow of information in relation to product flow; and the structure of the virtual marketing channel in relation to the structure of the physical distribution channel (Lovreta, Končar, & Petković, 2005, p.114). An exclusion of the intermediary arises due to the fact that customers today can access and explore the Internet directly with the manufacturers, and if they find a good offer, they can purchase it online. The previous specialization of activities within which larger tourist organizations brought tourists, while smaller ones offered excursions, sightseeing, visits to sports and entertainment events and active vacations, has been surmounted. Many tourists come to the country individually, and thus they need to make decisions from home or at the destination regarding active outdoor activities. Electronic intermediaries gain in significance because they take responsibility in execution and billing. Technological achievements allow organizers of various daily trips to promote and sell their offers on the spot. Due to relatively small expenditures and existing needs, intermediation is not economically viable and cost-effective for traditional distributors, and thus, this type of tourist sale is suitable for electronic stores.

New digital communication tools for tourists are being developed in the areas of promotion, reservation and payment via marketing strategies. Digital promotion is the core of the communication strategy of effective marketing. Nowadays, destinations and companies reach out to tourists through a number of common digital platforms. Sharing economies and a virtual intermediate platform for providing data and communication

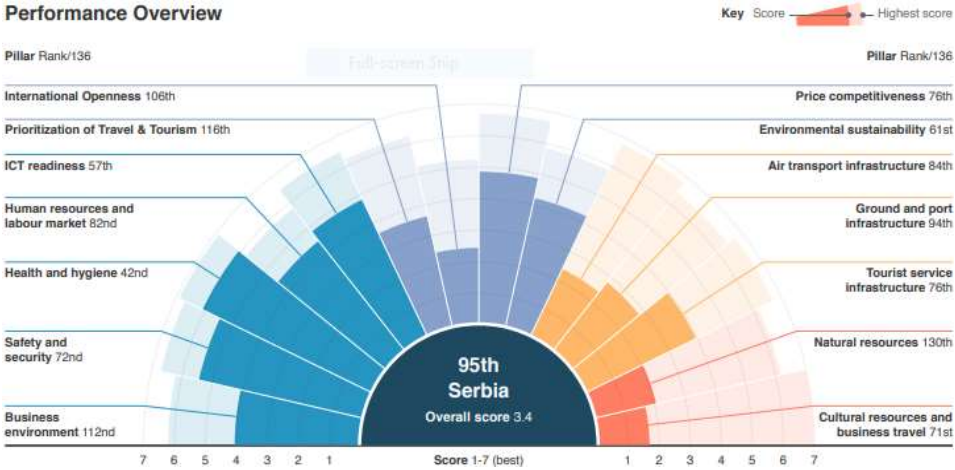
among consumers according to the peer to peer model reflects a new position of tourism. Also, in line with UNWTO advice, e-marketing tourist communication technologies must be accessible to people with disabilities, and facilities and other promotional content must display an accessibility pictogram (STDS 2016-2025, 2018, p.20). Electronic sales have both advantages and disadvantages. The benefits are global availability, comfort and speed of transactions, more efficient and flexible product data, managing sales through a database, and lower sales and distribution costs (Rosenbloom, 1999). E-commerce based on POS equipment (Electronic Point of Sale) and EFT payment (Electronic Fund Transfer) is applied, but it is suppressed by new modern forms of digital sales via IT and B2C e-commerce (Business-to-Consumer). This sale is based on TV shopping channels and some programs as well as commercial informative programs (Infomercial) and interactive e-travel. Based on this, new forms of sales have been developed: TV (radio to a smaller extent); Electronic kiosks; Systems based on a central computer and terminals or personal computer; and Innovative methods of e-sales. Digitizing sale channels that followed has transformed tourism, repressing intermediaries becoming a medium in itself. Due to the exclusion of tourist agencies, the emphasis is on promotion, contracting and payment, as the offer of active day trips requires speed, innovation and payment security. Thus, digital tourist information boards have become a media tool for advertising others as well, whose money can fund such a demanding network. An active vacation can be offered via digital kiosks and public networks. The following are needed in this type of sales: hardware & software for digital commerce, a Home Page: the existing Tourist Organization of Serbia (hereinafter: TOS), GIS network and special digital commerce software for m-commerce (supported by a network of digital tourist info boards). This network should involve entrepreneurs who, based on an employment contract, will create and realize day trips by the public call for tenders and licensed schedules. For tourists, sales can be suspicious, unsafe or they can be unwilling to leave their data, and thus the sale of active outdoor trips over the Internet (video control, institutional support, adequate data protection and secrecy of payments) must be protected from misuse (Dugalić, 2014).

The state and competitiveness of domestic tourism

According to UNWTO and the World Travel and Tourism Council (WTTC) data, Serbia has realized 1,132,221 international tourist arrivals; US\$ 1,048.4 million from international tourism inbound receipts; and

US\$ 926 average receipts per arrival in 2017 (World Economic Forum, 2017). The T & T Serbian industry participated with 808.4 million US\$ of GDP (or 2.2% of total), and employed 36,766 jobs (2.2% of the total). The analysis of the Serbian Travel and Tourism Competitiveness Index (TTCI) was the basis of the data for creating the strategy of developing active outdoor trips project. This analysis works by way of values that are above and below the average. Here are some of the subindex average values (including 136 countries) of TTCI Serbian tourism: Enabling an environment subindex (62; 4.9); T & T policy and enabling conditions subindex (112; 3.8; with a critical value for International openness - 106; 2.4; Prioritization of T & T - 116; 3.6, on average). The following were below average: The Infrastructure subindex (83; 3.0), and the very low TTCI of Natural and cultural resources subindex (119; 1.8). This pillar measures the available natural capital as well as the development of outdoor tourism activities. Natural capital is defined in terms of landscape, natural parks and richness of the fauna (Fig. 1).

Figure 1: *Performance of Serbian tourism by subindex, 2017.*



Source: *Travel & Tourism Competitiveness Index 2017* (World Economic Forum, 2017).

The Infrastructure subindex (83; 3.0), and Tourist service infrastructure (76; 3.9) is relatively satisfying so the data was used in the project. Unfortunately, Air transport infrastructure is very dissatisfying (84; 2.4) as well as the Ground and port infrastructure (94; 2.8). In the first case, it is necessary to strengthen the capacities of Belgrade airport and use the airports in other cities. Serbia has 588 km of international waterway on the Danube, 211 km on the Sava and 168 km of the interstate waterway

on Tisa, which connect tourism destinations that generate the highest income from tourism (Belgrade and Novi Sad). The priorities of further development of port tourism is 1) the modernization of the infrastructure and attracting tourists from river cruisers depicted by high spending; 2) the development and sale of half-day/day trips; and 3) the development of a network of new ports at sites with prominent natural resources and national heritage. It is known that there are numerous archeological sites throughout the length of the Danube waterway, as for example Vinča, Viminacium, Pontes, Diana, Smederevo, Lepenski vir, Tabula Traiana, etc. (Arheological sites of Serbia, 2018), as well as conservation areas: natural habitats of birds and animals (the national parks of Fruška Gora and Đerdap, the nature parks of Tikvara and Begečka jama; special nature reserves: Upper Podunavlje, Karađorđevo and Koviljsko-Petrovaradinski rit; the natural monuments Kalemegdan fortress; Emerald Area: Great War Island; (Danube Virtual Museum, 2018), the Special Nature Reserve Deliblatska Peščara (2018), etc., as a rich offer of outdoor tourist activities.

While Serbia abounds with natural resources more than other countries in the region, it occupies the 130th place with 2 points. Even more disheartening is the fact that the 2nd subindex of Natural Indicators, Cultural Resources and Business Travel has only 1.7 points (71st place). In fact, this is the worst indicator of the performance of Serbian tourism.

The STDS noted the following: no practice of promoting the best experiences in tourism development –an inadequate domestic Internet platform & ICT applications in promotion of tourist attractions, virtual guides and presentations (STDS 2016-2025, 2018, p.32).

This sector is not yet regulated, management and national marketing tourism have a serious lack of capacities and there is hesitation to implement the necessary public investments which slows down the process of product development and their commercialization. Hence, increased security is needed for active vacation and religious destinations (Dugalić, 2017b).

Based on this, it can be concluded that there are reserves in regards to Business environments (112; 4.0), Human resources and the labor market (82; 4.4), ICT readiness (57; 4.8), Prioritization of T & T (116; 3.6); and Environmental Sustainability (61; 4.2).

Tourist expectations and the necessity of digitizing tourist offers

Tourists today have different motives and high expectations, as follows: 1. An intensive vacation: most tourists expect to be guaranteed a cost-effective and fulfilling vacation time; 2. Tourists enjoy sharing their vacation experiences and are guided by the idea of “making an effort to rest,” combining visits with events, celebrations and active outdoor activities, which includes an additional benefit of returning home with new skills (most tourists want to believe that a city break vacation is useful); 3. City breaks offering various activities have special benefits from this trend; 4. Cruises are popular because they allow tourists to visit a large number of destinations within the same vacation. Within IT, broadband Internet has already changed the communication and electronic culture and has a direct impact on the (self) organization of vacations (STDS 2016-2025, 2018, p.20-36). The reasons for the transformation of the business mission of Serbian tourism are foreign trade effects, stirring other economic areas, especially agriculture, as well as other non-economic reasons. Therefore, the essential transformation of the mission of tourism makes better and more efficient entrepreneurial and sustainable use of the existing and unused protected natural and cultural resources. The analysis shows that the STDS should include measures related to the infrastructure (air transport, ground and port infrastructure), especially for Natural & cultural resources and Business travel. In accordance with the results of the research, the aim is to promote areas of tourism development that have been neglected so far and have great potential. The data based on the assessment of the Serbian Tourism Development Strategy, favorable indicators of the success of the Tourist Organization of Serbia’s existing network (Tourist service information, 76th; 3.9) and the potential of GIS prove the validity of the project of digitizing offers and selling active outdoor trips. Immersive videos, for example, can increase the number of international travelers reached by using online presence to persuade and motivate people to visit certain destinations. Today, tourists have access to a multitude of information, more choices for collecting data and the ability to express opinions through digital network which can both disparage the image of the destination as well as promote it. It is hence necessary to have a permanent presence and monitor the reaction of tourists. Popular blogs are a powerful marketing tool for tourism organizations to enhance visibility. The power of “travel” blogs is very important on social media, and Web Search has become more important for making decisions than references from friends. Travel blogs and tagging expand the market and

affect a rapid adaptation to the needs of tourists and eliminate oversights. New 3D technology has introduced a revolution in the placement of promo messages as it simplifies experience and emotions, as well as boosting adrenaline. Also, IT and social media give greater opportunities to developing countries to keep track of contemporary trends and to act more effectively on the market, without using more capital, as well as a chance for less accessible destinations to communicate with the tourism market. An advancement of the promotional mix, the introduction of new communication and promotional tools, and the orientation toward online marketing, mobile applications and common platforms for distributing and pushing information imply the transformation of the TOS's marketing. Lansky (2016) discovered that cities and regions keep building and maintaining tourist offices and visitor centers, but he asked himself if they serve a necessary function or were destinations people went to from force of habit. Thus, it is time to convert tourist offices and visitor centers into visitor lounges. When tourists walk around a city for hours, would they not prefer something that more resembles an airport business-class lounge, a place to put their feet up, access to a clean restroom and decent Wi-Fi? What we don't want is for wealthy seniors' citizens to feel they need to return to hotel room for a rest. It is better to provide some comfortable chairs so they can make a pit stop, rest their aching feet, and recharge their shopping and sightseeing batteries. Thereby, e-commerce has gone a long way from innovation to interactive public network.

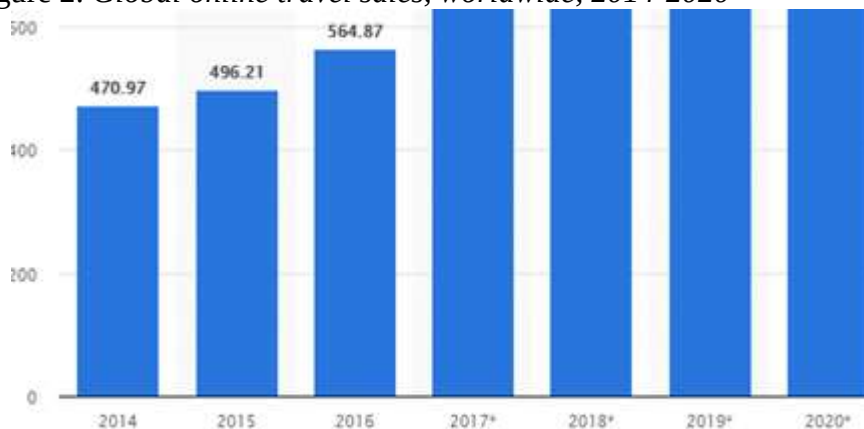
The commercial phase (Internet I) involved limitations: bandwidth (low capacity, a slow connection, especially in metropolises); service quality restrictions (e.g. service delays); network setting limitation (a slower connection within a large network); and language limitation (more developed web pages needed). The infrastructure of Internet II has enabled a rapid growth of services and e-commerce opportunities. The ultimate phase of e-commerce growth is manifested in m-commerce, sales by mobile smart phones and digital support. For sales of active outdoor trips by mobile phones, some basic conditions should be provided: technical infrastructure, payment security; simple and fast services; clear, emphatic and concise portals; prices adapted to services; cooptation of all members in mobile channels; good informing; education and readiness for technological innovations (Lovreta, Končar, & Petković, 2005, p. 361). Therefore, traditional market institutions (travel agencies, TOS, GIS) must undergo transformation, modernize business and act as special m-commerce stock exchanges on the global market, susceptible to seasons, tourist expectations, and a new mission made by the Ministry of Tourism.

Digital sales of outdoor tourism activities and digital info boards

The e-travel market is defined by the sale of online services and digital goods via the internet. The definition includes online travel bookings (package holidays, hotels and vacation rentals) and mobility tickets for services such as flights, long-distance bus tickets, train travel, car rentals and ride sharing services. Ticket reservation or purchase can be made on a desktop PC or via mobile devices (smartphones or tablets). The definition of e-services includes the following: media content acquired online (Digital Media) or the online sale of physical goods (e-commerce). An appearance of social media in business has inducted these trends (Krstić & Lazarević, 2014). Furthermore, no Business-to-Business segments are included in the data shown in Fig. 2 and neither are revenues from online gambling, software downloads and services, or commission fees for price/product comparison sites. The market contains segments: online Travel Booking and Mobility Services.

Distribution of digital travel sales worldwide from 2014 to 2020 is analyzed, by region. The travel and tourism industry is one of the world's largest industries with a global economic contribution (direct, indirect and induced) of over US \$7.61 trillion in 2016. At the same time, the global international tourism revenue was US \$1.22 trillion (Statista, 2018). The direct economic impact of the industry, including accommodation, transportation, entertainment and attractions, amounted to approximately US\$ 2.3 trillion that year. Worldwide revenue in the e-travel market amounted to US \$739,219 million in 2018. Revenue is expected to show an annual growth rate (CAGR 2018-2022) of 8.5%, resulting in a market volume of US \$1,025,032 million in 2022. The market's largest segment is Mobility Services with a market volume of US \$501,077 million in 2018. The revenue of the e-Travel market in Serbia amounted to US \$415 million in 2018 (Statista – The portal for statistics, 2018). The revenue is expected to show an annual growth rate (CAGR 2018-2022) of 9.4% resulting in a market volume of US \$595 million in 2022. The market's largest segment is Mobility Services with a market volume of US \$300 million in 2018. The revenue is expected to show an annual growth rate (CAGR 2018-2022) of 7.9% resulting in a market volume of US\$407million in 2022. The market's largest segment is Flights with a market volume of US \$226 million in 2018. Global digital-travel sales worldwide totaled US \$564.87 billion, and are projected to grow to US \$755.94 billion in 2019 (Fig. 2).

Figure 2: *Global online travel sales, worldwide, 2014-2020*



Source: *Statista (2018)*.

Mišković et al. (2016) researched e-business in Serbian travel agencies based on a sample of 65 companies. The research results of 14 items explained 62.2% of e-business of travel agencies. The arithmetic means ranged 2.48 to 4.37 with the following items: Clients were notified about new offers and sales via a website (4.37); E-communication and online marketing expanded the circle of potential clients (4.29); Spending money on computers, equipment and education considered as an investment (4.28); Surveys via websites are increasingly more common (4.12); and Online promotion (4.04%) were above arithmetic means. The lowest value was the following: occasional giveaways and quizzes (2.83); Working hours' reduction vs. sales improvement (2.85); and Electronic communication enabling a shortening of working hours (2.86). But there were still 37.8% factors that influenced the process of implementation of e-business that were not included in this model, and need to be researched in the future. By reviewing the priority activities in tourist destinations, the Serbian Strategy predicts the development of online reservation systems and the development of innovation and entrepreneurship in tourism, among others. The aim of the Ministry of Trade, Tourism & Telecommunication (2018, p. 66) is to support the most advanced ICT and software solutions in the appropriate form of public call for tender (independently and/or by the help of EU programs) in cooperation with Serbian tourist organizations on all levels (creating a web portal of destination management organization - DMO and visiting 65 digital platforms) that encourages the promotion and capacity building of local and national tourist products. Also, the Ministry has undertaken to establish an ICT Center for the promotion of domestic tourism.

Interactive digital info boards (Fig. 3) are successfully applied in all foreign tourist-developed destinations, and their absence seriously threatens competitiveness and inhibits further tourism development. The supporters of active outdoor trips in Serbia should be athletes (engaged by contract), which would also be a protection against the breakdown of unethical phenomena (Lazarević, Dugalić, Milojević, Koropanovski, & Stanić, 2014). They need to devise an offer of active outdoor trips, submit it for licensing to the competent body, and implement the trips in practice.

Figure 3: *Active outdoor trips, digital signage*



Source: www.infinitus-outdoor.com/images/imgNews/max/1043.jpg

Annex 2 of the STDS (2018, p. 97), contains a List of priority activities and programs foreseen in financing, supported by the EU: 1) research related to tourism, technological development and innovation, including innovation in services (demonstration projects, tourist service incubators, live labs, etc.); 2) development of tourism-related ICT products (applications, collection, analysis, processing and presentation of data, etc.); 3) development of an “e-Tourist” program activities as follows: making a mobile app by destination management; development of an official interactive tourist website for a destination (for vacation and business tourists); development of interactive digital info boards for a destination; development of an interactive interpretation system via QR codes (video, sound, tourist information, etc.); the inclusion of all key participants in the destination into the program in order to provide current and timely information about their capacities, offers, programs, and events. According to Lazarević et al. (2014, p.915), type of info board depends on the restraints of the financial capabilities of the contracting authority. Geometric modeling of digital tourist info boards can be described by the five-step algorithm: 1. Selecting images and text in

accordance with the type of data and message that is visually transmitted; 2. Forming the composition of the image and the background using tonal contrasts; 3. Text data of a selected type, size and color of the font; 4. Additional and/or contact data; 5. Final solution. Within the proposed algorithm, the possibility of an additional correction of the solution is provided in Step 3 and Step 4, in order to obtain a better final solution. For this purpose, the existing TOS platform, which is available through public networks in all regions (rich content based on data, picture and video), can serve it ideally. It is necessary to set up digital info boards or electronic kiosks for sale of outdoor tourism activities in a certain number and places with the highest frequency of demand. This network must be compatible with an m-commerce app. Video control and protection of equipment from destruction, as well as protection against cybercrime, must also be ensured.

Mobile application and supporting outdoor tourism activities

Online distribution networks, info boards, mobile smartphones, tablets and other mobile devices today have a crucial impact on decision making when it come to travel. Mobile phones become personal means of travel organization, and artificial intelligence software performs the role of personal virtual tour operators by the use of various mobile apps. Augmented Reality (AR) app is software app that merge the digital visual (audio and other types) content into the user's real-world environment. There are many uses of that software like training, work and consumer applications in various industries, including public safety, healthcare, tourism, gas and oil, and marketing (Eight Examples of Augmented Reality Apps and their Successful Uses, 2018). Many smartphones applications include the Global Positioning System (GPS) to spot the user's location and its compass to detect device orientation, like AR GPS Drive/Walk Navigation. This app makes uses of the smartphones' GPS and camera to execute a car or walker navigation system with AR powered technology. It is easier and safer than the normal navigation system, and tourists use it in their own tours in nature (Fig. 4). This application is available only on Android, and it guides the tourists directly by the virtual path of a preview video which makes it easy for them to understand. There is no need map to map path and the road while using this app, as there is a real-time camera preview navigation screen to be aware of the driving conditions without also hindering its safety.

Figure 4: AR application in tourism



Source: <https://www.shutterstock.com/image-photo/augmented-reality-marketing-travel-40-concept-515607943>

Some of the AR mobile apps used in tourism are Geobe AR, Theodolite; LocalScope for finding surrounded places and peoples, the Augmented Car Finder, Wikitude, etc. This technology changed the face of smartphone apps. It added digital images and data to amplify views of the real world, giving users more information about their environments. This step is beyond virtual reality which attempts to simulate reality, and it is also growing at a tremendous speed as they give businesses a different edge which attracts customers. A typical GPS based smartphone AR app for outdoor use gives available data as video, images, text or symbols for different types of landmarks. These data include a description of tourist attractions, restaurants and monuments, Wi-Fi spots, ATMs, car parks, transport, local news items, weather, etc. Some applications allow access to geo-coded user-generated content like tweets, videos and photos, comments and reference about a place. All apps provide criteria and inventory: visual augmentation of the environment; deliver content; must be available for iPhone smartphones; can be downloaded/purchased from App Store; and use a marker-less, GPS based approach to track, register and align virtual and physical object. The requirements of digital (mobile) guides are information, entertainment, ease of use, technical requirements, etc. They are grouped into the factors as follows (according to the UTAUT model): 1. Informativeness (IF); 2. Entertainment (EN); 3. Performance Expectancy (PE); 4. Effort Expectancy (EE); 5. Social Influence (SI); 6. Facilitating Conditions (FC); and 7. Behavioral Intention (BI). A survey conducted by Lai (2013) with 205 respondents in the Chinese city of Macao found that the IF factor is crucial for a user's impression (i.e. quality, quantity, relevance and updating of data that the app offers). In tourism, there are various types of mobile apps currently available on the market, categorized and evaluated by Grieve et al., (2010) as follows:

1. *Transport planning apps* (e.g. Serbia Maps offline, CoGIS Mobile) use track flight information in many locations in real time, helping tourists share information on travel disruptions with other users to make alternative arrangements.

What's On guide/Event listing apps (e.g. The Guide, Serbian National Theater) allow users to up(down)load information on events and activities in their current location and to rate/recommend places/events. It can increase tourist sense of spontaneity, encourage new forms of sociality and enhance word of mouth in the sense of authentic experiences and interactions within destinations, beyond the sanctioned guides.

Travel planner apps (e.g. Serbia Travel Guide by Triposo) performs integrated itinerary management functions including flights and car hire, hotel and restaurant reservations, and meetings, which are synchronized with the user i-calendar. They carry out the traditional function of the tour operator and allow users to manage online itinerary easy.

Accommodation planning apps (e.g. Trivago) function as a location-based tourist information centre service for accommodation services. Tourists are able to locate hotels within their current location and compare prices, quality levels and other, as well as book accommodation. They assist with user information search processes, enabling shorter planning times and increased flexibility and choice.

Tour guide apps (e.g. Serbia Audio Guide, Tour Guide, Serbian Adventures - potentially) offer city guide recommendations for restaurants, shopping, attractions, nightlife and other AR services. They replace paper guidebooks and add value, as data is constantly updated, and include reviews by other visitors, as well as sponsored information. They are easy to use as well as being cost-effective.

Directional services apps (e.g. Google Maps) offer complete satellite navigation software designed for a mobile platform, or a simple map service to help users find their way and give them data about their location. They offer simple solutions to explore a city or destination as well as searching for functions, distances, and other information.

Location based social-networking apps (Swarm; Tinder) offer important social opportunities for tourists, helping them identify friends and contacts in their location and discover different aspects of a destination. They also enhance the intimacy of a place, and lead to more authentic experiences, based on the fact that users ‘‘check in’’ – allow others to see their location – and share information about what

they are doing with other users. Also, users receive rewards and can play games, adding value to their experience.

Attraction apps (e.g. EcoVirtour, SerbiaEcotour) are developed to deliver an enhanced visitor experience of a particular site or attraction. They include an augmented reality feature which allows users to point their camera phone at a location and additional information is overlaid onto the viewfinder to create a more interactive user experience and add additional quality to the interpretation of an artifact or location.

Company specific apps (e.g. Serbia News; My Vip) allow viewing and managing user bookings and other information that the company may hold. Also, they provide tourists with boarding cards for their mobiles, thus being quite useful in managing customer relationships.

Tourist assistance apps (e.g. OASA Telematics, TripAdvisor, Alexa) provide services for travelers including spoken language translation and translation services using the camera function; they can also facilitate tourist experiences and enable new types of tourist interactions.

Social-media apps (e.g. Facebook, Instagram, Twitter) enable users to share information, photographs and experiences of places with friends, join groups and creates new forms of destination marketing.

Figure 5: Market share for Serbia (all platforms), (StatCounter, 2018)



Source: <http://gs.statcounter.com/platform-market-share/desktop-mobile-tablet/serbia/#monthly-201801-201803-bar>

Mobile used devices are shown in Fig. 5: according to StatCount, (2018) 37.4% of all Serbian website visits 2018 come from mobile web browsers. More and more smartphone owners use it to make purchases online, so 69% of users in the US performed at least one mobile

banking activity in 2015. More searches and sales take place on mobile devices than on computers; 68% of digital media time now is spent on mobile devices; and 35% of online purchases are carried out on mobiles. The company estimated that mobile commerce is bound to grow 2.58 times faster than total e-commerce sales. The report noted that mobile commerce took up as much as 29.7% of all US e-commerce sales (Piejko, 2016).

The browser most used 2018 in Serbia was Chrome (70.25%) as Fig. 6 shows (the browser worldwide market share was 56.89%).

Figure 6: *Browser Market Share in Serbia.*



Source: <http://gs.statcounter.com/browsermarketshare/all/serbia/2018>

According to Yovcheva et al. (2012), smartphone AR tourist apps also include: Search & Browse; Context-aware push; m-Commerce; Feedback; Routing and navigation; Tour generation; Map services; Communication; Exploration of visible surroundings; Interactive AR view; and Filtering of AR content. There are groups of apps needed in sale of active outdoor trips as mobile payment apps (mPay-Raiffeisen bank Serbia), etc. On their website, TOS present sports and recreational data for riding, hiking, mountaineering, biking; and on the adventure page, free climbing, flying, and rafting. These activities can only be run by experienced domestic athletes who are the best promoters (ambassadors) of Serbia in the world (Dugalić & Lazarević, 2016). It is necessary to add information for sport, recreation and adventures facilities, which is very important for tourists like Serbian Adventures site (2018). This information must be networked

through various mobile apps with respect to market requirements (a digital info board of active outdoor trips, the most used browser, etc.

Conclusion

The paper analyzed the assessment of the activities, bearers and timing of the priorities listed in the Action Plan of Implementation of the Serbian Tourism Development Strategy. This particularly refers to encouraging the development and adaptation of new technologies and ICT applications, as tools for transforming domestic tourism. In order to make a comparison, the following aspects are taken into consideration: 1. An ICT promotion center; 2. An ICT platform for standardized promotion of destinations and tourist products and services; and 3. A national reservation platform. As there is no interest for change in the tourism sector, the research results aim to promote entrepreneurial capacities (setting up a network of digital info boards, creating mobile apps for guiding tourists, and engaging athletes as creators and guides for active outdoor trips). The development of a National recreational platform and presenting tourism products and services is impossible without the workers themselves, so it is recommended to invest in the infrastructure (a network of digital info packages) from the budget, instead of bureaucratized incentives (vouchers), which lead to an increase in accommodation prices. Scientific and educational institutions, in cooperation with tourist business associations and interested parties, can compensate to the creators of active vacation experiences for the inaction of state structures, which note software applications and websites of professional tourist's associations as some of the activities concluded in the Serbian Tourism Development Strategy (2018, p. 89). The public call for awarding subsidies and grants for tourism development projects stipulates, among others, using grants for setting up tourist signaling. However, development of ICT promotions and active vacation sales is based on entrepreneurial initiative that is eliminated by the Tourism Development Strategy. Thus, that competition which the state supports is declarative. This results confirm as follows: 1. Natural and cultural resource and outdoor tourist activities are not completely used; 2. Affirmation of outdoor tourism activity and day trips requires digital offer and licensing via bid by active and former sportsman who make and realize it; 3. Use of the existing TOS capacities (network must be maximum modernized as well as existing data and video materials) presented via digitalized tourist info boards; and 4. The technology as

well as ICT support and digital software apps give us base for organizing, promotion, payment, video control, signaling and misuse protections.

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CHANGES IN TOURIST AGENCIES' OPERATIONS TOWARDS CONTEMPORARY DIGITAL TRENDS

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Abstract

The changes in tourist agencies' operations within the digital era have a completely new and positive character towards providing greater accessibility to tourists. With such changes, they retained the ways they run their business operations, but those ways also received new physiognomy. They follow altered requirements for services and the scope of spatial diversification of tourism products. Also, increased scope and quality of promotional activities for tourism products and specific travel arrangements have become an important issue. The research shows that there is improvement in different segments in tourist agencies' operation, determination of the degree of attractiveness of tourist values and assessment of the quality of delivered tourism services. This indicates that contemporary digital trends have essential character not only for travel agencies, but for tourists as well.

Key Words: tourist agencies, operations, changes, contemporary, digital trends

JEL classification: L83

Introduction

Tourist agencies' activities are in constant change because of the conditions in which they exist. Related to the constant change in the scope of tourists' demands for agencies' services, there is an evident transformation from services that were mostly related to travel to those that have evident tourist attributes on which nowadays tourist agencies

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base their business operation. The development of tourism and the changes that followed consequently brought about changes in the working operations of tourist agencies, their organizational setup and their role on tourism market. Thus, with the development of agency work and their role as travel mediators, the other functions of agencies are developed in the field of providing information, travel advising, and promotion. Besides the changes in the concept of their operation through the period of their development, travel agencies base their activities on providing services to tourists in relation to travel and tourists are provided with content of activities to enrich their experience. Tourism development is closely related to the introduction of a new quality in working operations of the agencies and a continuous development of their role as travel mediators.

It is evident that there is a change in the way of travel as well as in forms and contents of the tourist activity. In this way, tourist agencies are adapted to innovative solutions and receive an appeal of a contemporary activity that is developing intensively. The intensive development of agency work is parallel with the intensive development of tourism. In this context, it is important to note that due attention by different authors (Alvarez, Martin & Casielles 2007; Buhalis and Schertler 1999; Fesenmaier, Klein, and Buhalis et al. 2000; Sheldon, Wöber, and Fesenmaier 2000; Wang and Cheung 2004) is addressed to the role and impact of information and communication technologies in agencies' working activities during the past few decades. Zolkiewski and Littler (2004) argue that the Internet, as the most pervasive communication tool, has a particular role in accessing different information very quickly and easily.

Tourist agency' performance is changing and promoting not only from the aspect of essential content components, but also by using new theoretical and practical methods and specific technical and technological tools. A revolutionary advancement in this regard is the digital approach to travel agency's operations. The phenomenon of digitalization requires special attitude to the immediate activities undertaken by the tourist agency. The era of digital technology in tourism has revolutionary features. They have been so drastic that could be perceived as fatal, in the sense that there will be no need for a travel agency if the services can be provided and obtained on-line. However, the changes in agencies' work within the digital era have a completely new and positive character. As

Bethapudi (2013) states, travel agencies have achieved significant synergies, efficiency and cost savings by integrating their back office (e.g. accounting, commission monitoring, and personnel) and front-office (customers' history, itinerary development, ticketing and communication with suppliers) through the implementation of the information technology (IT) in their internal organization. The IT approach in different agencies' operations provide greater accessibility to tourists as a value of enhanced tourist demand. According to Ku and Fan (2009), the electronic distribution of travel information, prices, and availability has opened new channels by which people can reserve travel products.

Unlike the research within international frames, it is interesting that this issue of IT in tourist agencies' operation in Macedonia is still not explored, and there is a lack of research work in this area. The benefits of the application of IT in the field of tourism is explored by Marinovski (2003), who underlines the benefits of IT as a possibility of virtual approximation of phenomena and relationships as tourist value and tourist services from the receptive tourist areas towards tourists as agency's clients. He further explains that this at first glance can be accepted as a threat or taking over the functions of travel agencies, or bypassing them in the use of performances that are at the disposal of the intermediary. However, the process of successful implementation of IT in tourist agency' operations is evident. The digitization of travel agencies' business can be labeled as a recognizable evolutionary qualitative step.

On the other hand, the digital framework enables occurrences and relationships that do not have a sufficient reputation through GIS systems to receive full affirmation. Changes in the work process have been raised to a higher level in the sphere of promotional activities. This facilitates easier access to the general promotion, the promotion of specific components, the dominance of tourism products and specific travel arrangements. The research shows that there is improvement in the sphere of payment, determination of the degree of attractiveness of the values and assessment of provided tourism services.

Since there is a lack of academic research that investigates the implementation of IT in travel agencies' operations in the Republic of Macedonia, we found that it is necessary to conduct research that will contribute to enriched exploration in this field. This research also provides practical information for travel agencies about the commitment

of employees in the use of IT from two aspects: as a mandatory obligation related to their working position, and as employees' ability and willingness to follow the contemporary trends related to IT implementation in everyday working operations. The purpose of our research is to determine how travel agencies implement IT in their working operations and the level of IT knowledge of employees, in the case of Lake Ohrid Region.

The role of tourist agencies in tourism development and the use of the information technology

Historically, the development of tourist agencies is connected to socio-economic development but within the specific tourism market conditions. Since tourism development is closely related to the technical and technological innovative development as well, rapid IT development enables an increase in tourism because of its contribution to diversification of tourism as a contemporary and rapidly developed phenomena. The modern conditions that arise in all social spheres, and in this context within tourist mediation, significantly contributed to the increase in the number of participants in tourist activities. Thus, tourism is transforming in the field with the availability of information, which makes its establishment a massive social phenomenon (Marinoski, 2003).

Tourist agencies with their information structure have influence the character of the selective forms of tourism activity. The availability of information helps travel agency to systematize different types of travel products and facilitates the inclusion of individual requirements of the clients within their differentiation, for which the increase in tourism activity leads to increased tourism turnover. The increased turnover is realized by all subjects in the tourist activity which enables the travel agency to reduce the price of its services. The agency itself, with the increase in the number of tourists and services, makes higher turnover, which also contributes to the reduction in the price of its part of the services. The reduction of the prices of services is also reflected in tourism, which is a significant return impact. Thus IT emerges as a contemporary development factor. In turn, it stimulates information research even more in the discovery of the opportunities for increase of tourism activity through new instruments and information methodologies. The facilitated approach to information has a paradigmatic character in the promotion of tourism relations. Through the improved interest in the

process of use of the agency' services, the more intensive development of tourism as a whole and certain segments come to force.

Through the use of modern information systems, tourist agencies stimulate tourists to decide to participate in tourist activity, not only with the reduction of prices, but also with informational and promotional activities that should provide them with an insight into the tourist offer, and with different activities' content.

The scientific and technological development, and social and economic relations that take place are a basis for the development of tourist agencies. Under the influence of the increasing volume of demand by tourists as users of the services and the more advanced forms of tourist offer, there is a change in the operations of travel agencies. The development of travel agencies is related to the market conditions in tourism industry, as these specific economic entities appear on the tourist market to mediate between those offering services and those seeking services (Nestoroska, 2006).

Tourist agencies in the modern information society have very good conditions to establish easier communication links not only with the direct providers and users of the services, but also with the stakeholders in tourism development. Modern IT enables improved accessibility to stakeholders, both horizontally and vertically. Because of the influence that travel agencies have due to the diverse demand by the clients on the one hand, and service providers on the other hand, they often have to adjust their operations to different changes that occur on tourism travel market.

As travel mediators between the service providers and the clients they usually organize and combine services into tourist products i.e. tour arrangements for which the use of IT helps travel agencies to create them. The use of IT allows the travel agency to develop the relationships in the new role that it has on the tourism market. IT enables tourist agency to get information much more easily and to establish business relations not only with carriers and caterers but also with other segments of the tourist offer. On the other hand, with the help of IT, the agencies are able to control the tourist demand and expand the range of tourist services. This progressive change is due to the advanced systems of social importance that are particularly important.

Information technology in function of quality and reputation of the travel agency

The improvement of the quality of travel agencies' services by using IT is a result of the continuously increased competition that occurs on tourism market. Namely, the inclusion of a larger number of tourists who use the information services of travel agencies implies more sophisticated demands of the broad heterogeneous tourist clientele. Fulfillment of the required conditions implies taking care of the quality. The improvement of the quality of services, which is the result of the availability of information, also appears as an imperative in conditions of increased competitiveness in the performance of travel agencies on tourism market.

Travel agencies tend to guard their place on tourist market in order to try to keep their reputation. Once the reputation is lost, gaining it again proves to be very difficult, which affects not only on the revenue of the travel agency, but also of the other stakeholders as business partners of the agency. The improvement of the quality of services stems from competitiveness in this respect. Therefore, tourist agencies protect their reputation by improving the constant quality of services, and promotion of the products on the market is a result of the involvement and commitment of the information society. The improvement of the quality of the services as a necessity in the work of tourist agencies is based on the use of IT, as well.

Due to their orientation to the improvement of the quality of services, travel agencies provide and include new contents in their offer, by the implementation of modern IT. Thus, travel agencies contribute to the discovery of new tourist destinations. As business operators which use IT, they are an important factor of tourist destinations development within national and international frames that are not very much promoted on the tourist market, or are still undiscovered for tourist demand and supply. Through different IT tools, travel agencies are in position to valorize attractions for tourism, thus activating those new attractions as tourist attractions that have potentials to be part of tourist offer of a region or country. According to Tsang, Lai & Law (2010), tourist agencies not only serve as a channel to promote information for new destination, but enable visualization of travel products and services through video clips and graphical images. Thus, the development of tourism on different spatial levels contributes to the valorization of

potential tourist attractions which become an active segment of tourist market offer. In this process, travel agencies not only include new spatial areas as elements of tourist attractions, but they also valorize and activate some of the economic and non-economic activities for tourism purposes. In this way, the tourist offer is enriched with interesting content. As a result of implementation of the modern processes in the use of information and technology systems, the confidence in travel agency is growing. The use of IT helps the travel agency to develop the relationships between the participants on the tourist market and to define the new role that it has on the market. Modern IT enables an improved and efficient functioning of different organizational systems.

The interior arrangement of the business premises is also an important component in the work of travel agencies, because it is the area where the direct contact with the tourists and clients is usually established. The aesthetic arrangement of the business premises has an important role because it has an attractive effect on agency's clients and it draws its attention. The arrangement is part of the comfort of the travel agency. The arrangement contains the aesthetics and decoration that has a tourist promotional significance. The use of video presentations complements the content offer with audio and visual impressions.

The equipment of travel agency in the business premises where a direct contact with agency's clients is more frequent should also be in the function of as much communication as possible. In that direction, it needs to have modern infrastructure, and the most important thing is to provide IT tools for those employees that will help them to use the Internet. The participation of electronic technology and automatics in tourist agency operations today is almost mandatory. The application is present both in the work of travel agencies, and in the work process of tour operators. Computer systems are used for concluding contracts with business partners as service providers. In such a way, computer systems provide expediency and reliability in the work of travel agencies.

IT knowledge of travel agencies' employees- the case of Ohrid Lake region

Information technologies and human resources have a noticeable place in travel agencies' working processes (Marinoski, 2003). In this regard, the employment process should be followed. The modernization of the

working process and the use of information, technical and technological tools enables employment of staff in travel agencies that, in addition to their knowledge for the tourist activity, will be able to use these tools in an appropriate way.

Nestoroska (1999) argues that some activities in the working operations of travel agencies cannot be performed without the direct participation of the employees. A very good example is with the tourist guiding service which means that travel agencies are an opportunity for employing staff or engaging tour guides regardless of the increasing application of modern information technology in their work. However, even tour guiding cannot be full and of high quality unless tour guides do not use different IT tools. Examples include pointing and guidance information systems that help the travel guide to lead its group professionally.

Technical culture implies that, in current employment conditions, it is usually connected with appropriate level of IT knowledge. The ratio of employees to such technical means is of crucial importance in the development of travel agencies. This means that tourist employees should use such appliances for their work and maintain them timely and appropriately.

Taking into account the place and role of travel agencies on tourism market, the conducted research covers the travel agencies in the Ohrid Lake tourist region in order to determine the IT knowledge of the employees who are on operational and managerial level. We selected this region for two reasons: it is a region that is the most developed tourist region of Macedonia, and because the number of tourist agencies has increased to 49. (Annex 1). We decided on this empirical research because this issue has not been enough researched to obtain knowledge about the structure of the employees in the travel agencies in this region.

In this research we implemented different research methods and techniques depending on the data we wanted to gain for obtaining as objective and accurate information as possible. Methods of critical analysis, description, and comparative analysis we applied, and theoretical and empirical research was conducted through collection of data, cabinet and field research, processing of primary and secondary data, analysis and interpretation of gained results from conducted interviews, for which we selected a comprehensive and representative

interviewees that are on the operational level and higher level of management.

Secondary data analysis, and literature review was conducted prior to the interview that supported this research. We conducted guiding interview and discussion with the interviewees. We chose to conduct the interviews with the employees in those travel agencies that actually perform on the market, i.e. active travel agencies. The list of agencies that we gained for Ohrid Lake region is extracted from the Register for all registered travel agencies in the Republic of Macedonia published by the Ministry of Economy-Sector for tourism and hospitality for the period 2011-2015. The interview data in this research was as follows in table 1.

Table 1: *Interviewee data*

<i>Interviewee characteristics</i>	<i>Average or prevail</i>
Age: between 22-56 years	34 years
Gender: 30 female (62%) 19 male (38%)	Female
Time for interviewing: 20-35 min	27 min

The interview was conducted within the period February-March 2018 for the purpose of this paper. Female interviewees prevail in the employment structure with the ratio of 62% to 38%. The questions were designed to identify the IT knowledge of employees in travel agencies, both on operational and managerial level. The questions were divided into two groups of interviewees: employees on operational and on managerial level. Such division was made because we tailored the question to gain information about the implementation of IT on different levels of working operations. The questions were created and interview was guided to meet the research aims. The structure of the interview incorporated the following segments:

- Introduction with the interviewee with the aim of our research and the importance of their IT knowledge for the working operations
- Interviewee data (presented in summary in Table 1)
- Description of the employee's work position with questions related to: sales, air ticketing, advisory, promotion, organization, managerial position with the duties, and implementation of IT in their working operation, as well as their level of knowledge of IT. They were asked to explain the difficulties that they face in

implementing IT in their work. The intention was to diagnose the needs of employees to improve their IT knowledge (if needed).

After the completion of the interview, the qualitative data analysis followed in order to summarize the gained information related to the issue of IT knowledge of employees on different working positions.

Findings and discussion

Knowledge improvement of the employees in travel agencies is an important factor in the performance of the working operations on different levels of job positions. In this context, IT knowledge has a special place. Therefore, the maintenance and development of the knowledge can be performed through various possible forms:

- permanent IT training;
- attending specialized courses;
- organizing lectures and discussions about the work of travel agencies and the use of IT;
- creating opportunities to improve job skills within travel agencies through job recruiting;
- enabling employees to follow professional magazines, books, newsletters and other printed materials in the field of IT and publishing magazines and other printed forms that treat professional issues of tourist agency and IT.

The findings upon the gathered data from the conducted interview show the following:

- the average age of the employees is 34 years, which is an indicator of a relatively young employment age structure, which again is an indicator of a higher possibilities to apply IT more easily during the working operations;
- from the aspect of gender structure, female population prevails with 62%. This can be explained somewhat by the fact that the work is not physically demanding, creative, a job that requires resourcefulness and contact, which are features that are particularly appealing to women;
- although the travel agencies are characterized by a relatively small size in organizational structure (an average number of employees ranges between 2-5) that is in accordance with their scope of work, yet they have division of work (according to which we organized the

- structure of questions for those who work on sales, air ticketing, advisory, promotion, organization, and those on managerial position;
- because of the small size of the agencies, most of the employees work on several tasks simultaneously, i.e. there is no strict division of job duties (as we divided them for the interview);
 - all of the interviewees answered that they constantly use IT in their working operations on daily basis;
 - older employees of an average age between 48-56 emphasized the contribution of IT in making their work easier, although at the beginning of the implementation of IT, they had difficulties to start using it in the working operations;
 - other employees of an average age between 23-47 emphasized that the use of IT in their working operations is indispensable in the realization of their everyday tasks. They stressed the advantage of IT particularly in the sphere of communication, both with tourists and business partners, promotion, sales, ticketing;
 - employees on managerial position find that IT enables smooth, simultaneously facilitated, efficient and practical realization of the work activities of the travel agencies.

The employees need to have appropriate level of knowledge to perform their tasks in the best possible way on different operational positions of travel agencies, as well as on managerial position. Special tasks are performed by the employees that provide tourists with services related to air ticketing, sell tour packages, excursions and other services, advise tourists on different issues related to their travel or tourist stay, promote travel agencies' products and organize different tour packages. They can specialize in specific tasks, as well. Such is the example of staff that is specialized in selling air tickets. They are obliged to have IATA license to hold this job position in the agency. The constant changes that appear in this area of work require that IT education should be a priority, because of the character of the applications and reservation systems that are used for air ticketing.

Direct contact with service providers in the field of sales, promotion and organization should be tailored to perform the intermediary activity. The perceptions of the counters and desk services and the provision of easy customer fluctuation through the business premises and avoidance of unnecessary crowds represent significant assumptions about the functionality of the business premises. In this sense, the information

equipment that is used ensures order in the sales employees' contacts with the clients by issuing ordinal numbers.

Conclusion

The tasks which travel agency have nowadays are huge and complex (either on domestic either on international market), and they need adequate organization toward successful fulfilment. The complexity in organizing different tour arrangements has influence on a serious and detailed approach to work organization of the travel agency. How it will do depends on the agency's scope of work (business), the market where it is oriented, market segments, clients, or business partners. A basic rule for every organization is that different working operations depend on whether the employees are adequate for the tasks which they have to fulfil. It is the same rule for the travel agency. But what is specific is also the IT knowledge because of the fact that nowadays the use of IT is inseparable part of all working activities. What is also very important is that employees in travel agency have to possess high professional level regardless of the work they perform.

The main objective of our research was to identify the level of IT implementation, and readiness and ability of travel agencies' employees to implement IT in their working performance. The research indicated that the employee structure in travel agencies in Ohrid Lake is very satisfactory related to age and working operations performances. As for the employees in travel agencies of Ohrid Lake region, we are free to say that they satisfy the needs of the travel agency performance related to the IT knowledge, which is supported by the research findings. The relatively young age structure of employees (34 years) is a good indicator of future possibilities to apply IT in agency operations. Since agencies are of very small size (2-5 employees) and most of the employees perform several tasks simultaneously, it is, on the other hand, positive because they use more IT to contribute to facilitate the working operations.

The modernization of the work process and the use of IT and technological tools enables employment of staff in travel agencies who, in addition to their knowledge of the tourist activity, will be able to use these resources in an appropriate way. Based on the research findings, this paper recommends future actions that will contribute to the research

of situation of IT implementation in travel agencies by the employees in broader frameworks, regionally or nationally.

We would also like to emphasize that, conducted research was limited because it focused on determining the state of things using a relatively small sample of travel agencies in the regional context, but on the other hand, this sample is appropriately representative taking into account the level of tourism development in the region and the scope of agency's work. Therefore, we recommend that future work be oriented towards a broader scope of research that will contribute to increase the awareness of the importance of implementation of IT in travel agencies' operations.

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ANNEX 1: List of travel agencies in Ohrid Lake region *

1. Agency ING Polozani	26. Lale Tours
2. Albtravel	27. Life is Good Travel & Tours
3. Antonio & Bojan	28. Lukan
4. Atlantik Tours	29. Macedonia Travel
5. Aura Travel	30. Maxx Travel
6. Bale Tours	31. Mega Tours
7. Balkan Net	32. Mergimi
8. Balkans Time Ohrid	33. Mergimi Travel 2013
9. Blue Holiday	34. MTC Travel
10. Dimaks Travel	35. Ohrid Holidays
11. DMC Travel	36. Ohrid Travel
12. Elida Tours	37. Pelikan Travel
13. Europe tourist	38. Polet
14. Eurotours EHP	39. Rasim Tourism
15. Fibula	40. Relax Travel
16. First Class Struga	41. Safet Tours
17. Flamutari	42. Skipona Reisen 2003
18. Gema Travel	43. Tina Tours
19. Generaltourist	44. Transfer Tourist
20. Generaltourist 2000	45. Venus Travel
21. Globi Struga	46. Vis Poj
22. Globus Travel	47. Visit Ohrid
23. Ibegalis	48. Vizija
24. Intertravel	49. Wellness Holiday
25. Kompas Travel	

- Data for the travel agencies is according to the Register for travel agencies in Republic of Macedonia published by the Ministry Of Economy-Sector for tourism and hospitality
- (http://archive.economy.gov.mk/ministerstvo/sektori_vo_ministerstvo/sektor_turizam_ugostitelstvo/3886.html)

COMPONENTS OF SMART TOURISM

Nebojša Pavlović¹; Irena Čelić²;

Abstract

According to the research conducted by the European Commission, over 95% of travelers use digital resources in the course of their travel, which indicates the significance and influence of digitalization on tourism.

The aim of this paper is to analyze the impact of digital technology on the events and changes in tourism. The paper focuses on new approaches in tourism which, aided by digital technology, aim to improve service quality and attract a larger number of tourists.

Today, numerous papers deal with the issues of modern tourism and employee's efforts to establish rapport with the more and more demanding tourists.

The conclusion is that tourism is quickly abandoning the traditional way of working in order to embrace the digital way of conducting business. Future research should not focus on the introduction of the digitalization in tourism, but on the ways to train employees in order to satisfy the needs of "smart tourism".

Key Words: *smart tourism, digitalization, tourism transformation, smart tourism destination, smart experience, smart business, technology*

JEL classification: Z30, O30

Introduction

Technology has a significant impact on the lives of people due to its constant and rapid development. Therefore, technology can be viewed as an unpredictable force of crucial importance to people. Tourism and hospitality industry are always facing new challenges and undergoing changes. It is important to take seriously and make use of the rapid

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increase in the importance of information and communication technology, especially of online business. Not only did the emergence of the Internet exert influence on the demands of tourism, but also advanced technology did.

The term “smart” is widely used in different fields of industry, technology, tourism and in everyday speech in the XXI century. The term itself describes the technological, economic and social growth that has been brought about by technology and is based on sensors, large and open database, new ways of communicating and connecting. This does not refer to the individual use of technology but to interconnection, synchronization and shared use of technology (Höjer & Wangel, 2015).

Harrison et al. (2010) define “smart” as exploiting operational, near-real-time real-world data, integrating, and sharing data, and using complex analytics, modeling, optimization and visualization to make better operational decisions.

The term has been added to cities (*smart city*) to describe how to use technologies and communication systems innovatively in order to achieve high standard and better quality of life. In relations to physical infrastructure (e.g. *smart home*, *smart factory*) the focus is on decreasing the differences between the physical and the digital world and on fostering technology integration. When the term is added to technologies (*smart phone*, *smart card*, *smart TV*, etc.), it describes the devices supporting new forms of connection and communication and creating new values that lead to innovation, entrepreneurship, and competitiveness with a view to bettering the quality of life.

Tourism denotes traveling either because of personal or business reasons. It can also refer to researching the areas that are of paramount importance for tourism, e.g. attracting tourists, advertising accommodation and destination, and organizing sightseeing. The word “tourism” is derived from the English word *tour* that means a journey to different places in order to achieve personal satisfaction (Stevenson, 2010).

In the context of tourism, smart is used to describe a complex amalgam of all of the above-mentioned terms and represents the development of traditional tourism in accordance with the development of technology and the needs of the society.

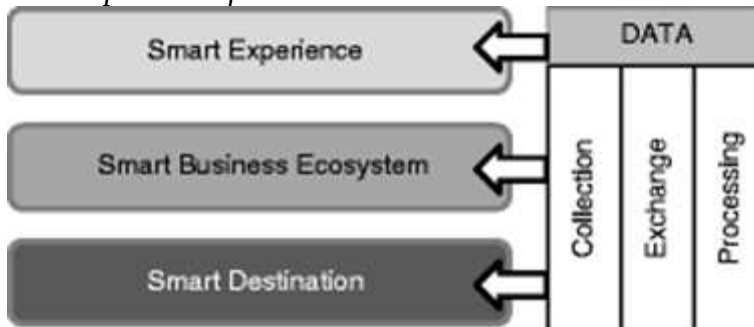
Smart tourism

According to the UNWTO – *United Nations World Tourism Organization* (UNWTO) tourism is a social, cultural and economic phenomenon that entails the movement of people to countries or cities outside of their usual environment for personal or business purposes.

Given the intensive growth of technology and information flow, it is not surprising to see the emergence and development of the term “*smart tourism*”. It can be perceived as a logical progression from traditional tourism. The rapid development of information and communication systems and technologies has brought about significant changes in tourism and hospitality industry, such as easier booking and communication between tourists and hosts (Pavlović, 2016). This development of tourism continued with the adoption of social media and the decision to realize mobile tourism because of the high mobility of tourism information, and tourists (Buhalis, 2003). Smart tourism aroused as a consequence of the evolution of information and communication technologies and systems with a view to connecting the real and the digital world which would make life easier both for the hosts and tourists (Gretzel, Sigala et al., 2015).

Lopez de Avila (2015) defines smart tourism as an innovative tourist destination, built on an infrastructure of state-of-the-art technology guaranteeing the sustainable development of tourist areas, accessible to everyone, which facilitates the visitor’s interaction with and integration into his or her surroundings, increases the quality of the experience at the destination, and improves residents’ quality of life.

Figure. 1: *Components of smart tourism*



Source: Gretzel, U., et al., *Smart tourism: foundations and developments*. 2015, p. 179-188

Figure 1 shows the basis, i.e. components which are a part of smart tourism and whose basis is information and communication technology.

Smart tourism is based on three basic components: business, experience and destination.

Smart tourism destinations

Smart tourism destination can be defined as a platform which implements information and communication technology, such as artificial intelligence and the Internet so that tourists can have all the necessary information and services on their smart devices: mobile phones, computers (Boes, Buhalis et al., 2015). The main objective of this platform is to establish a quick information exchange regarding all tourism related activities (Buhalis & Amaranggana, 2013). According to Lopez de Avila (2015), apart from increasing the quality of life of the residents and the quality of the experience, smart tourism needs to ensure the sustainable development of tourism.

There is a myriad of ways to make a tourism destination “smart”. One of them would include the development of tourism in the smart cities. Also, creativity and innovation need to be constantly developed. This would encourage the hosts and make room for them to thrive. Apart from this, it is important to establish communication with the public and the government. The government needs to show support for the development of this type of tourism.

The key part of the smart tourism destinations is the integration of information and communication systems into physical infrastructure. For instance, Barcelona has interactive bus shelters that, apart from giving touristic information and bus arrival times, provide USB ports for charging mobile devices. Aside from this, tourists can find bicycles throughout the city and they can check their locations by using a mobile app. This fosters the environment. The city of Brisbane serves as a second example for the smart destination. It has introduced 100 centers where tourists can communicate via a mobile app and exchange information if they are within the centers’ radius. Amsterdam has introduced an app which helps tourists translate any word they see or hear. The government in Seoul has approved investment for providing free wi-fi that will enable tourists to better communicate and be exposed to information they need. Additionally, the Jeju Island in South Korea has been declared a smart

destination because of the investments in information and communication systems that will enhance tourist's visits. The Sunmoon Lake in Taiwan has improved tourism by creating bus stops that tell you the location of the bus in question. Certain hotels in South Korea give tourists mobile phones that they can use during their stay in the hotel. The host then improves the quality of the service and experience of the tourist. Also, the host gets feedback which tells him/her the good and bad sides of the hotel and the destination (Gretzel, Sigala et al., 2015; Smith, 2015).

Therefore, a smart destination can be cities, islands, lakes, and mountains. In the early stages of the convergence of traditional tourism destination into smart one, the number of tourists visiting a destination has had an important role. The countries that have developed their tourism to the fullest have different characteristics from those countries that are in the beginning stages of developing it. The increase in the use of information and communication systems by tourists can have a negative impact on the surrounding destinations. The negative effect can exert influence on the exponential growth of smart destination, while traditional tourism destinations do not progress and develop as fast as smart destinations do (Gahr, Martín et al., 2014).

However, the implementation of information and communication systems does not turn a destination into a smart one (Pavlović, 2015). This type of destination is characterized by a complex structure and specific traits that entail having a lot of employees. In order to achieve full development, it is of paramount importance for the public and private organizations to cooperate. Also, it is important to encourage the development of local communities and to have the government invest in them (Pavlović, 2017). This entails a high degree of complexity of the system and the coordination of a large number of interested parties. The most important means of cooperation between the above mentioned groups is a voluntary and selfless exchange of information, their analysis, availability, as well as earning a profit. The main task of the government is to recognize the potential of a destination, establish relations between the mentioned groups and invest in their growth. In order to gain the status of a smart destination the government needs to show managerial skills. However, it is important for the government to employ skilled individuals from the field of technology and information systems (Gahr, Martín et al., 2014).

Smart destinations have to face a series of challenges if they want to be successful, sustainable and withstand the test of time (Wang & Fesenmaier, 2013; Gahr, Martín et al., 2014)

The hosts need to be aware that their and their visitor's privacy is of paramount importance:

- The increase in the number of individuals able to interact using the Internet has led to the distribution of false information, data; and the emergence of fraud.
- The elderly, who are unable to keep up with the technology development, might hinder the hosts and tourists.
- The use of technology and devices has to be regulated because it may exert negative influence on the experience and overall impression of tourists (e.g. virtual tours of certain destinations).
- The constant connection that mobile devices create brings about the indifference for activities offered by a destination, which leads to the loss of adventurous spirit.

All these efforts and investments are done in order to improve tourism, which creates a better standard of living. It is crucial to highlight that being deemed smart should not be the ultimate goal. One should strive for sustainability, promotion and improvement of destinations, creation of better quality of life of the local communities and the improvement of the tourists' experience.

Smart experience

A component of smart tourism, smart experience is based on the use, assessment, accessibility, simplicity and availability of devices and information. This experience does not merely refer to the understanding and use of technology, but also to the change in marketing, offers and arrangements depending on the season, destination and trends. Like any other experience, this one is valuable and important. In this case, tourists are actively participating in creating, enhancing and optimizing smart tourism, i.e. all devices and apps that are important for this field. By actively using different apps in order to exchange information (e.g. *Instagram, Facebook, TripAdvisor, Google Maps, Booking.com...*) tourists are involved in the development and enhancement of smart tourism. In order to use these apps advanced technology is required (smartphones, computers, tablets) as well as internet connection which

exerts an impact on the development and growth of smart tourism all over the world (Gretzel, Sigala et al., 2015; Kauppila, 2017).

It is paramount to manage the customer's experience in this business. By analyzing the experience one can improve economy and the reputation of the company, destination and hotel.

The systems that are a part of the customer's experience are: sensation, knowledge, influence. Also, the experience can be social or physical. In order to research the experience, it is important to identify the following things (Gentile, Spiller et al., 2007; Barten, 2016):

- Sensory (related to the senses);
- Emotional (stimulated by different emotions);
- Cognitive (refers to encouraging the customers to think and be creative);
- Pragmatic (simple use);
- Lifestyle (the clients' values derived from their lifestyle);
- Relations (the relations between the clients and the host; and between clients).

The research of the above-mentioned things leads to the data that shows how the existing tourism is developing and enhancing. Those pieces of information are crucial because they indicate the needs of the clients; their suggestions, positive and negative comments about the existing events, facilities, nature. This should serve as a guideline for innovating tourism (Novak & Hoffman et al., 2000).

The process of analyzing the experience is a complex one because it depends on the personal impression of the clients. Cognitive and emotional components need to be carefully investigated. It is important to identify interactivity, capability, participation, and positive impact of tourists through information and communication systems in smart tourism.

The tourist's experience has three phases (Wang, Park et al., 2012):

1. Tourists gather information, plan their trip and sightseeing;
The personal experience of visitors of a particular destination;
Tourists voice their opinion of a destination, reflect on its advantages and disadvantages, and talk about their personal experience.

The use of mobile phones, apps and platforms is present in all three phases of the experience. They enable them to obtain information about a specific destination, find out which hotels are available and review their quality, and book rooms and tickets. Also, recommendations and comments of visitors who had an experience with the hosts, airlines, tourist attractions and events, restaurants and bars influence the decision of the individual who is yet to acquaint himself/herself with these services.

Smart business

The third component of smart tourism is smart business. It refers to the need to establish sustainable development, decrease the negative impact on the environment, and enhance standard of living. However, in order to do this, a destination has to generate profit. This business entails involving the public, local community and the government in order to improve infrastructure and information and communication technology.

In order to overcome traditional tourism, it is necessary to develop a new form of business – a business that has different demands and creates new values. The changes have occurred in the market and in the institutions, which means that we now have at our disposal a huge amount of data and advanced technology (Morabito, 2015; Sigala, 2015).

In smart business every person, be it a tourist or a host, and whose ultimate goal is information exchange, has a role in the development of this business. Every interested individual can become a manufacturer, consumer or intermediary depending on resources and connection. This establishes a new relationship: host-tourist (Anttiroiko, Valkama et al., 2014; Gretzel, Werthner et al., 2015). In other words, tourists can be both creators of the necessary information and ideas, and consumers, i.e. the users of information. Of course, all information is shared willingly (Gretzel, Sigala et al., 2015).

The function of smart business is based on two components: active, which entails sharing information and content on social media, blogs and portals; and implicit, which shares information on sensors on mobile phones and other devices. It is implied that the accesses to information, apps and platform are free, which brings about the development of tourism and business. The hosts who want to move from the traditional

tourism need to recognize and accept the use of technology and information exchange.

Even though smart tourism rests on two components – internet and apps – this implies that it does not need a major interference from organizations and government. However, the development of smart tourism would not be so quick had it not been established that a huge number of interested parties can profit from it and its consumers. For instance, apps such as *TripAdvisor* and *Google Maps* enable tourists to find restaurants, bars, hotels, motels, spa centers. Also, there are apps created by airlines such as British Airways and Lufthansa. It is necessary to show devotion and make bigger investments while creating a smart destination. It is also paramount to modify and enhance its infrastructure.

Technological foundations of smart tourism

The technological foundations of smart tourism are based on smart devices that are using information and communication systems. The foundations that are necessary for smart tourism to function are: mobile phones, software and internet which enable interaction between visitations and hosts. This way, thanks to a large number of available data, tourists effectively and efficiently reach a decision to visit a particular destination.

Smart tourism is based on three tools (Smith, 2015):

1. Mobile application – a small piece of software that enables a specific goal to be achieved through the available information. There are a number of applications which provide a wide range of services within a destination. For instance, tourists can make a reservation, find directions, translate foreign words, choose local amenities, and find out interesting facts about a destination, its cultural places and events. Some apps serve as a tourist guide. Also, some apps establish communication between the user of the app and the resident. Aside from this, you can share your experience; offer recommendation and suggestions.

Augmented Reality – it represents the available information about a local community and events. In order to use this system one would need a smartphone or other device such as *Google Glass*. The most important part of the system is the cultural heritage. For instance, in a Roman theatre it is possible to virtually relive a gladiator fight or see how things used to be. Apart from being used for cultural heritage,

this system can be used for finding a location or it can serve as a tourist guide. Also, this allows the users to experience the Northern Lights anywhere in the world and anytime. In other words, by using a smartphone, this system creates a unique experience for tourists through the virtual world.

Near Field Communication (NFC) – it is the data exchange between two devices (mobile phones, tablets) which are very close to each other. It can be used in museums where tourists can scan information points at paintings or sculptures, historical artifact and they will get information about the pieces on their mother tongue. NFC tags across tourism destination offer the tourists information about sightseeing, historical and cultural events, as well as a suggestion about which location of interest to visit next. Additionally, if a tourist hovers the phone over a NFC Smart poster, the system would be redirected to the train station website with the timetable and the current location of the train.

The decrease in the use of most mobile apps and platforms is due to the availability of wi-fi. Introducing wi-fi all over a destination leads to tourists positively grading the location. Also, it is important to enhance the infrastructure of the destination in order to effectively and efficiently use the above mentioned tools. The enhancement is done by installing interactive smart points where tourists can connect their phones, find out new information, connect to wi-fi or charge their phone free of charge.

One more goal of smart tourism is the preservation of the environment. Thanks to the development of technology, it is possible to obtain power from sustainable sources, which means that interactive smart points do not create additional costs. Their sources of power are usually solar panels which turn the sunlight into electricity.

The relation that is established between a destination, visitors, and technology is based on the framework 6 A's (Buhalis, 2000; Smith, 2015): Attractions: nature (mountains, savannas, lakes, and national parks), special events.

1. Accessibility: transportation systems connecting a destination with other ones, public transportation,
2. Amenities: relating to accommodation, booking, tourist attraction and routes,
3. Available packages: all packages and services available to tourists on a destination, with a special attention to the unique parts of the destination,

4. Activities: all activities available at the destination which attract tourists,
5. Ancillary Services: such as banks, posts, hospitals, etc.

By analyzing the abovementioned components of 6A framework, it can be decided which app, platform or smartphone to use. Table 1 shows the relationship between technology and tourism based on the rule 6A.

For instance, if a tourist is interested to find out about available packages within a tourism destination, he/she should visit the app *Tourist Guide*. The good side of this app is that it does not require internet connection. Another example refers to *Accessibility* in which, by using NFC or an app for navigation, the user can obtain information about transport network or facilities. The detailed description of the above-mentioned tools will be given below.

Table 1: *The relationship between technology and tourism based on the rule 6A.*

No	Tourism application in smart tourism destinations	Utility function	Destination components	Smart tourism destination dimensions
1.	<i>Augment reality</i> enables visitors to experience digital recreation of tourism sites and time travel	Interpretation	<i>Attractions</i>	<i>Smart people, smart mobility</i>
2.	Vehicle tracking system provides a real-time information of transport network and could be distributed to end-user devices	Planning	<i>Accessibility</i>	<i>Smart living, smart mobility</i>
3.	Hosts and tourists need to be aware of energy saving and preservation of the environment	Sustainability	<i>Amenities</i>	<i>Smart environment</i>
4.	Multi-languages applications that provide information about services	Guidance	<i>Available packages</i>	<i>Smart people, smart mobility</i>

5.	NFC, mobile apps and platforms need to provide information about points of interest	Marketing	<i>Activities</i>	<i>Smart mobility</i>
6.	Tourists should be able to register their praise and complaints about their experience	Feedback	<i>Ancillaries</i>	<i>Smart living</i>

Source: *Smith, R. (2015). SMART Tourism Tools: Linking Technology with the Touristic Resources of City Destinations, Doctoral dissertation, NHTV Breda University of Applied Sciences, p.18.*

The Advantages of Smart Tourism

The advantages of smart tourism have an impact on tourism destination, hosts and tourists. The advantages brought about by the destination and hosts while using technology and information and communication systems are (Smith, 2015):

- Revenues are based on investing in innovations, promoting tourism destinations and decreasing unnecessary spending, as well as understanding the needs of local community, hosts and visitors.
- Investing successfully in smart tourism attracts foreign investors. These investments can enhance the quality of life of the local population and the experience of tourists visiting. Thanks to these investments, the infrastructure is improved and tourism destination remains popular.
- Monitoring and fulfilling demands of the society, i.e. visitors, this leads to them giving a second chance to forgotten tourism destinations.
- The huge amount of available data gives competitive advantage to destinations and facilities. This creates an opportunity to follow the migration and demands of the tourists.
- Providing digital information about tourism destination, such as data on sights, heritage and local population, is important for competing with destinations that are similar or different.
- Establishing communication on smart devices between tourists and hosts during all three phases of the tourist experience.
- Increasing the number of providers offering services to tourists.

- Preservation and restoration of cultural heritage through *Augmented Reality* and securing additional resources for new digital ventures and education.
- Improving services of local communities and transportation by gathering information.
- Promoting tourism destination and its sights, events and heritage through the use of platforms, websites and blogs dedicated to tourists.

The advantages of smart tourism that leave an impression on the tourists (Smith, 2015):

- The availability of data and information, as well as the exchange of experience among tourists.
- The technology present in the tourism destination improves the quality of the visit.
- Decreasing spending because the internet is free. Thus, tourists are able to access apps free of charge.
- Offering services, information and reviving old sights by introducing new digital content.
- The availability of information about tourism destination and its services.
- Being informed about the events. For instance, “Exploration” in the Augmented Reality offers information about the environment.
- Having an option to translate a word into the app (Augmented Reality and NFC).
- Navigation: introduced in order to find a specific location or artifact.
- Sustainable tourism due to which tourists are able to travel without any books as they can use apps and smartphones.

The development of tourism has led to the creation of Tourism Carrying Capacity (TCC) which researches the holding capacity of a destination. The data given by TCC is accurate due to smart tourism. The data are gathered by analyzing infrastructure, location and culture of a destination. It is easier to locate and determine the number of tourists by using social media and apps.

The tourism destinations can operate similarly during and after the season which improves the economy. The hosts can provide the same quality of service all year long. This leads to them having an excellent grade on the app.

Conclusion

The development of technology has led to big changes in the industry, education, business, medicine, economy and tourism. The growth of the Internet and information and communication systems has brought about the faster data exchange and better communication. The development of the society and improvement of the standard of living has exerted influence on the breakthroughs in tourism and hospitality industry. This has introduced smart tourism. The basis for smart tourism was taken from technology, information and communication systems and tourism. Smart tourism has three components: experience, destination and business. The experience is connected to the use of technology and the Internet. The use of the Internet and apps starts from the very beginning: gathering information, planning the trip and booking tickets; paying for the hotel. It is also present in the final stages – while posting a comment and photos on social media and platforms.

Smart destinations create an opportunity for the tourists to use mobile phones, the Internet and apps in order to improve the quality, reputation and generate profit. The infrastructure is enhanced, the Internet is available across the destination, and the overall experience is better. This allows those forgotten destinations to restore their reputation.

The advantages of smart tourism are felt by both the tourists and hosts. This is a sustainable tourism due to the fact that it has improved marketing, made it easier for people to communicate and improved standard of living.

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DIGITAL TRANSFORMATION OF TOURISM

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Abstract

Digitalization is increasingly influencing the way of travel planning, exploring new destinations, promoting them, but also the experience of traveling. New technologies are changing and will continue to change the face of tourism in the years ahead. Numerous challenges are created, which countries, destinations, and especially business entities need to find a response, or a strong wave of digitization will erase them from the market. At the same time, opportunities are being created that should be used.

Generations of tourists born after 1980. (Y and Z generation), and especially those who will be growing in the next ten years, will have radically different expectations and requirements in relation to today's tourists. The sharing economy and the experience economy strongly influence the creation of new business models in tourism. The integration of mobile technologies into hotel business processes, the ability to inspect business and adapt to new conditions in real time, as well as digital interaction with guests will be crucial for achieving competitiveness and survival in the increasingly demanding international market.

Key Words: *digitization, sharing economy, economy of experience, mobile and smart technologies, millennials*

JEL classification: *F20, L15, L83, O33.*

Introduction

Tourism is one of the most dynamic and most flexible branches of the economy today (Pindžo & Barjaktarović, 2016). The authors of this study sought to draw attention to the strong link between the successful business of tourism companies and the application of new technologies

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and innovations. Furthermore, the subject of research of this paper is the influence of digitization, new technologies and innovations on tourism and hospitality industry as well as on increasing contribution of tourism to the national economy by changing the traditional business models. Furthermore, the paper deals with the research of new economic phenomena as well as the response of hotel companies to the increasingly demanding needs of modern generations of consumers in tourism.

Special attention will be paid to the application and potentials of digitization in Serbia and the challenges that digital tourism is faced with. Research is based on data and research provided by the United Nations World Tourism Organization (UNWTO), the United Nations (UN), World Economic Forum (WEF), National Tourism Organization of Serbia business associations and relevant scientific papers in the field of tourism and hospitality. Recognizing the object and purpose of research, this paper is conceived in six parts. The introduction defines the object, aim and expected contributions of the research. In the second part, global trends, results and predictions will be presented. In the third part of the paper, new business models in tourism as well as behavior patterns of modern consumers in tourism will be examined. The fourth part deals with the challenges that the hotel industry faces responding to the digitization, new technology implementation and innovations. In the fifth part, the current situation and potentials for digitalization and new technology implementation in the Republic of Serbia will be analyzed. The study will be completed with concluding remarks.

Global Trends and Forecasts

There is a widespread recognition among industry leaders that the role of digital technology is rapidly shifting, from being a driver of marginal efficiency to an enabler of fundamental innovation and disruption (WEF, 2016). Digital evolution, as all the other evolutions, is “rewarding” the ones that have managed to adjust but not the ones that didn’t do so – they won’t stand a chance to “survive” (Petković et. al., 2018). Technology is not the occupation but a tool, way, or means to realize a goal (Petković et. al., 2018). A new term called „Internet of Things” (IoT), denoting the next Internet evolution, has recently appeared, taking a huge leap in its ability to gather, analyze, and distribute data that can be turned into information, knowledge and basis for business decisions. According to the Cisco Internet Business Solutions Group (Evans D., 2015), IoT is simply the point in time when more “things or objects” were connected to

the Internet than people. Refining these numbers further, Cisco IBSG estimates IoT was “born” sometime between 2008 and 2009 (see Table 1). Today, there are around 25 billion connected devices in the world or 3.47 per person on average. It is expected that this number will have grown to 50 billion connected devices by 2020, approximately it is estimated that 2 billion people use the Internet today.

Table 1: *The Internet of Things (IoT) Was “Born” Between 2008 and 2009*

	2003	2010	2015	2020
World Population (in billion)	6.3	6.6	7.2	7.6
Connected divaces (in billion)	0.5	12.5	25	50
Connected divaces per person	0.8	1.84	3.47	6.58

Source: *Evans D., (2015)*

In order to understand the significance and the contribution of IoT, it is very important to understand the difference between Internet and World Wide Web (web). Internet represents network of switches, routers and other equipment and it serves mainly for information transfers and dissemination. Web is a kind of junction of applications based on the Internet. Both Web and Internet have evolved over time. In the first stage, Web was used only for academic purposes, than the second phase was some kind of informational phase when companies tried to get acquainted with their products and services. After that it was a phase in which it was possible to find out where and under what conditions certain products and services can be purchased and how they can be delivered. This phase is also called “dot-com” boom and bust phase (Evans D., 2015). Finally, the fourth phase has arrived, where we are still today. Then, a Web-based medium is a medium that allows users to communicate, share their experiences and connect with friends, family, colleagues etc. That's the time of the so-called social networks and experience based exchange. On the other hand, IoT presents the first true evolution of the Internet – „a leap that will lead to revolutionary applications that have the potential to dramatically improve the way people live, learn, work, and entertain themselves“ (Evans D., 2015).

Digital transformation of one industry represents a mix of significant customer demands and the new technology that can help meet those

demands and expectation. The top trends that are impacting the hospitality and tourism industry are (Newman D., 2018):

1. Mobile Integration,
2. Artificial intelligence (AI) and Chatbots,
3. Integration of the IoT,
4. Focus on Data,
5. Reputation,
6. Virtual Reality.

The tourism industry is being disrupted by digital technology and innovation. Having in mind the fact that 51% of all reservations are executed on-line, out of which 22.5% via on-line tourist agencies – OTAs, that 18% of all reservations are done in “motion”, usually via mobile phones or tablets (Berger R., 2016), and that Internet travel booking revenue has grown by more than 73% over the past 5 years clearly shows the impact of new technologies on tourism and hospitality. The latest research shows that online completely dominates in the process of selection of accommodation, with 86%; 85% of consumers trusting online reviews as much as personal recommendations (Local Consumer Review Survey, 2017). On the other hand, we must not forget that the number of tourists in the world is constantly growing. The results achieved in 2017 surpassed all expectations. International tourist arrivals grew by a remarkable 7% in 2017 to reach a total of 1,322 million, according to the latest UNWTO World Tourism Barometer. This strong momentum is expected to continue in 2018 at a rate of 4%-5% (UNWTO, 2018).

Given that an increasing share of online bookings goes to mobile devices and that customers/guests can do practically anything on their mobile devices (“smart” phones and tablets etc.) from checking in—to ordering room service - to unlocking the room door itself, or planning an entire trip, understanding of mobile integration became crucial for modern tourism industry.

Not long time ago, staff in hotels were provided information where guests could go, what they should visit, where they can go shopping etc. Today, especially for the guests of the newer generation, it is inconceivable: applications based on artificial intelligence are used. Things go as far as having curtains in rooms that open or close upon hearing the guest's voice, or ordering room service by voice activated chat etc. Marriott has been using AI-powered chat boots at nearly 5,000 hotels to do things like

make reservation changes, and check on account balances or redemption vouchers (Newman D., 2018).

As mentioned earlier, the number of devices that are connected to the Internet is steadily increasing. This fact precisely influenced the increasing use of collected data. In the coming period, the focus will be on the data as a prerequisite for creating personalized offers and for creating a personalized approach to each guest individually which represents a completely new approach and business model in tourism.

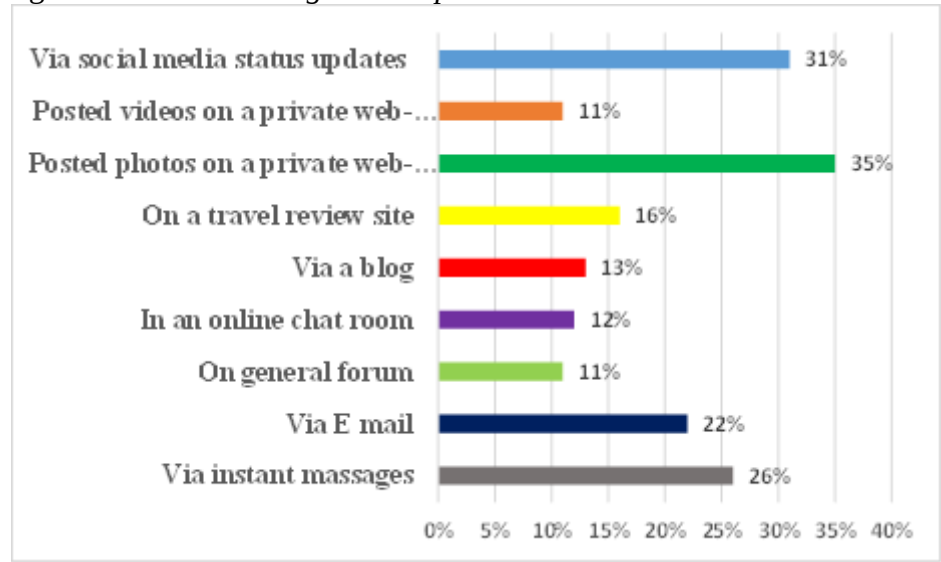
It is very complex to define term 'sharing economy' or 'collaborative economy'. Simply put, it is the system/platform that uses the Internet or technology to create a link between what people need and what other people have. Generally, this is a completely new business model that implies bypass institutions, mediators etc. and which brings in direct contact two parties that need to find, rent or give or sell something. This approach allows for immediacy, speed, directness, and at the same time lower costs. This approach promises a new exciting picture of the economy as we know it today.

The system of this new economy rests on the philosophy of modern times - access to goods / services versus the possession of goods. At the same time, the position of technology as a "facilitator" changes significantly - technology is not a topic in itself, but a means. In order to better understand the concept, its use and potentially adopt the basic principles of the sharing economy, it seems important to understand what kind of sharing economy can be, that is, how many "entities" the sharing economy has.

The focus of sharing economy are users benefits, which have more control and savings, but we should not ignore the benefits that this system brings to society and the natural environment. This is basically a platform that shares the principles of sustainable development and recycling - waste shortage, resource saving because existing ones are used, etc. Sharing economy offers possibility of changing perspectives and defining needs (use or possession, access or behavior ...), but also defining the response to the needs, as well as the providers of that response. It is clear that the sharing economy is much more accessible than the traditional economy sector and at the very least presents a serious challenge to big brands in terms of costs. The costs of the bidders, but also the costs of the claimant are immeasurably lower. Personalization is rooted in the

foundation of the sharing economy and the spectrum of possibilities is almost unimaginable, since the offer is created in relation to a very specific, sometimes completely personal need. Apart from the sharing economy, which has emerged as a consequence of the aspiration for new, authentic experiences and familiarity with local customs in the original and unique way, the economy of experience emerged as a result of the dissemination of information using new digital technologies. The fact that modern technology allows for the exchange of experiences and the expansion of sharing guests attitudes has made many tourism service providers to take into account the level of the quality of the services they provide. The latest research shows that 49% of consumers need at least a four-star rating before they choose accommodation or services (Local Consumer Review Survey, 2017). Sharing of photos and up-dating social media profile's are the most usual forms of online sharing post trip experience (Dempsey C., 2015).

Figure 1: *Online Sharing Post Trip*



Source: *Dempsey C., (2015)*

The economy of experience presents a great development opportunity not only for tourism, but also for culture and the creative industries in the world. The economy of experience can also be viewed as a shift in thinking, essentially as a matter of personal experiences for which we are ready to pay. Leisure and entertainment, history and culture, shopping and gastronomy are the most important segments for the development of the

economy of experience. Authentic locations and offers in every place, the city and even the whole country can be excellent underpinnings for creating an economy of experience, which should involve national, regional and global marketing agencies. That is the right way to open tourism offer to foreign markets, which is important for revenue and the growth of the national economy. Some countries have really benefited from the development of the economy of experience, which was under the strong influence of the implementation of the new technologies and the digitization of tourism. According to Thomas Keith (Petersham Group, 2017), the economy of experience in United Kingdom in 2017 was worth 117 billion pounds, accounting for 7.4 percent of its GDP, growing three times faster than other sectors of the economy, or on average 5 percent a year. Virtual reality has become a reality in many segments. Today is a completely normal step in the journey of getting to know one destination, its cultural heritage by a virtual walk before making the travel decision itself. However, that's not all. The virtual reality has led to the fact that if guests are not willing to pay transportation and accommodation costs, they can meet the destination in a virtual way with much lower cost.

New Business Models and Practice in Tourism

New technologies significantly influence the behavior of modern consumers in tourism. Around 74% of travelers begin their journey researching and choosing their destination; almost 45% of future travelers have a destination in mind when they start to plan their journey; today, there are four different reservation patters (Tripbarometer, 2016) that travelers can demonstrate (see table 2):

Table 2: Booking Patterns of Modern Travellers

Types/steps	1	2	3	4
Flight Bookers	Researching flights	Booking flights	Researching hotels	Booking hotels
Hotel Bookers	Researching hotels	Booking hotels	Researching flights	Booking flights
Balanced Bookers	Researching hotels	Researching flights	Booking hotels	Booking flights
„Mavericks“	Skip research phase and make bookings		Booking hotels	Booking flights

Source: *Tripbarometer 2016*

Flight bookers behavior is more common for longer holidays than shorter, when the flights are more expensive than for short holidays. Hotel bookers choose the destination according to the prices of accommodation and transportation, furthermore, a family friendly environment and attendance of events is the most important aspect for them. Experience of culture is the most important motive for travelling for balanced bookers.

Mavericks have a limited time for booking: 17% of them choose destination because they go there every year. Business travellers and long holiday makers do not spend a lot of time in researching process before making a decision on their destination for vacation.

Around 73% of travelers use online sources when deciding on their destination. Younger generations prefer using social channels in order to select their destination: both face to face and digital word of mouth are very influential for younger travelers. In 2017, according to the latest research of Tripadvisor, 9% more tourists travel on their own.

This group includes young people at a crossroad in life, older single men and married women, tired of waiting for their husbands. In two years, on Twitter, the keyword "travel alone" has grown in popularity by more than 100 percent in different languages. According to the Francesca Di Pietro (2017), this is the new trend in tourism due to the fast pace of life.

People are looking for travel opportunities on their own and need to disconnect. In addition, more and more people are single or separated. These tourist experiences are also affected by professional commitments, which are much more dispersed today than in the past. Many couples can not reconcile their holidays, so they go on vacation on their own.

Today, the tourism sector is aiming to support the traveller in every step of his/her journey to use with ease especially mobile digital tools that provide everything he/she needs from researching to booking, during the trip and on returning home. The modern tourists want the control of the whole process and to manage their own itinerary and spending.

According to Roland Berger (2016) tourists should be addressed in every phase of their journey and this represents crucial change compared to the period before digitalization.

Table 3: *Analitical Framework for the Customer Journey*

Phase	Activity
Before Booking	Searching & being inspired
	Discovering & planning
During Booking	Booking
	Refining & improving
After Booking	Experiencing
	Reflecting

Source: *Berger R., (2016)*

New entrants – especially digital natives such as online travel aggregators (OTAs), meta-search engines and travel service platforms – are shaking up the value chain in tourism (WEF, 2016). Digitalisation and the emergence of new digital business models have had an undeniable influence on the travel industry. With the emergence of innovative online platforms, consumers are organising their holidays online at an ever growing rate. Some of these innovative business models are based on the collaborative or sharing economy. While these new types of business models provide opportunities to those offering the service as well as to prospective tourists, this phenomenon poses difficult questions regarding security and the development of digital skills and competences.

The path that the technologically and digitally “growing” and demanding guests take today and will be taking in the forthcoming years includes "smart" mobile devices. If hotels want to be competitive, they will have to offer their guests the possibility to choose and reserve accommodation in their own simple way. Hotels have to enable their guests to choose the services as much as possible in the hotel itself as well as to receive the requested information and quick and efficient solution for their possible problems.

The emphasis is on technological solutions available on all platforms and operating systems that do not require a high technological knowledge necessary for installation and use.

How can this be applied in a concrete case? In developed hotel companies, new applications are in use; in one place they offer all the necessary information regarding the guests’ stay in the hotel. Application will welcome guests, unlock their room, order a massage, or dinner in the room or a wakeup call, check the timetable and weather forecast, call a

taxi, enable communication with the receptionist and other hotel staff... On the other hand, there are also applications that guests can also use on smart and mobile devices which they will find in hotel room; devices that will welcome guests in the room and which will allow them access to all hotel services, tourist information, control over air conditioners, curtains, lighting and TV in the room, and access, for example, to Press Reader. This type of application can be used on a large number of languages on Android and iOS, and it is also usually possible to integrate them into any existing hotel system (PMS, RMS, IPTV, POS), regardless of the size of the property or hotel company.

With the possibility of direct communication with the guest, the applications and the system as a whole cater to the caterer to obtain a wealth of data and information that can improve the business.

Trends in Digitalization of Hotel Industry

There is no difference between the digitalization events at the global level and those at the local level. Digitization and application of new technologies have a particular impact on hotel industry as an important segment of tourism. Digital transformation greatly influences hotel management. Hotel managers have to realize that changes and the speed of changes are important, just like their impact. Then they have to determine what they would like to achieve and where they want their company to be in five or ten years. The question arises how they will benefit from new trends, and what they have to do to gain advantage? It is necessary to transform the organization in terms of entrepreneurial culture, innovation and commitment to the goals if the management wants the digital transformation to be successful. Therefore, both hotel management and company's employees must adopt new skills such as digital marketing, data analysis, finding favorable and alternative sources of financing, creation of predictive concepts, artificial intelligence, and psychometrics.

The results of the research and analysis of the impact of digitization and trends in the hotel industry (Berger R., 2016) showed that the current situation is not satisfactory even in the tourist-developed destinations. Before the guest makes reservations for accommodation and is provided with accommodation services, the hotelier can contact the guest digitally, thanks to the so-called *touchpoints*, which are on average 21. At the same time, hotels and other accommodation providers are most often present in

the digital world only through a presentation on their website and possibly on Facebook. This fact indicates a huge loss of potential because the key success factor of a modern hotel company lies in his contact with the guest during his entire "journey".

Start-ups play a key role in the overall innovation process, as they promote creativity and innovation. Since most of the start-ups will fail, it's important to be in touch with more, track new startups and be able to put them in the context of business and goals.

In spite of systematic gathering of data, less than 50% of the hoteliers use these data in personalizing their services while rarely one may find a hotel group cooperating with start-ups in the tourist and leisure industry. Nonetheless, some of the big players have realized advantages and necessity of the innovation application and new technological solutions as well as the need to adjust to current market trends. Accor Hotels Group has presented revolutionary concept named Jo & Joe that entirely redefines approach to the members of generation Y (*millennial generation*) and Z (*known as iGen generation*) in accommodation segment and this concept is by far better than any other concept in this segment. During developing the concept in parallel with Accor team has been build a team of the future guests and experts so they have defined the concept together. Aforementioned concept redefines the role of management. The hotel manager is now being followed by community manager and event manager that are responsible for successful operating of the business. On the other side, successful example is Marriot company that has started with its own high-tech accelerating program for the start-ups in the catering industry called Marriot Test Bed that will secure strategic advantage in comparisson to competitors. TestBED is a unique 10-week accelerator program that gives start-ups an invaluable opportunity to test their products within operating Marriott Hotel in major European cities.

The key impact of technology on tourism in the immediate future will be, inter alia, the integration of mobile technologies into hotel business processes, the ability to inspect business and its adaptation to new conditions in real time and digital interaction with guests. The generation of millenials (a population aged between 20 and 35) would, according to forecasts, become the dominant consumer group by 2017. By 2025, it is expected that every other traveler will be a millennial.

This generation has grown in a world in which social networks led by Facebook, ubiquitous smartphones are virtually inevitable, and digitalization and internetization are unstoppably spreading around the world like a tidal wave. With postmillennials, the situation will not be different. On the contrary, it is to be expected that its members of yesterday's and today's digital and mobile novelties would be considered something normal and standard.

Social networks are a great channel for hotel communication with tourists and their potential guests. Traditional hotels that do not exist on these channels will require much more effort to successfully fight with increasing and stronger competition. Loyalty programs as they existed until now will be greatly reduced. Tourists will no longer collect points in order to get a reward from the hotel for their loyalty. Instead, one of the options is to integrate this program with the whole trip, in order to make the guest experience more intense. For example, guests will receive a discount on the next stay in the hotel if they write their experience on the booking sites.

Destinations and hotels that support healthy life will prevail in the future choice of hotels. Wellness and spa destinations that advocate both physical and mental health will become a new trend. In addition, other hotels will also be able to take part in this race by offering guests of air purifiers, modern exercise equipment, organic food or water enriched with vitamins and minerals. Also, green hotels and those who take care of environmental protection will become more and more popular among tourists. However, it is essential that all of these be enriched by modern technological trends and innovations.

Tourism Digitization: Where is Serbia?

Serbia seeks to streamline and modernize the country through the digitalization and improvement of the IT sector and creates a more competitive business environment introducing the latest information technologies (Barjaktarović et al., 2017). A framework for the improvement of electronic business and electronic communications in the tourism sector is being created by adopting regulations related to electronic commerce, electronic communications, electronic documents, electronic identification, as well as the information security (Barjaktarović et al., 2017a). Strategy for the development of new networks is adopted and the Broadband Law is being prepared for

adoption. This is considered to be a very important step in the process of introducing digitalization in the overall Serbian economy as well as in tourism too.

The survey of foreign tourists's attitudes carried out by the National Tourist Organization of Serbia /NTOS/ (2016) shows that 63.9 % of them obtained information about Serbia as a tourist destination through the Internet (different web sites, social medias...), 10% through newspapers, magazines, travel guides and other printed materials, 4.1% on TV, 4.3% through a travel agency and etc. On the other hand, the survey of attitudes of domestic tourists in 2015 (NTOS; 2015) has shown that they prefer personal experience (40%) and recommendations from friends and relatives (38%), while only 18% of them are informed via Internet and 2% of them contact local travel agencies. According to a survey carried out by HORES in 2017, 41.09% of all bookings in Belgrade were made through different online booking systems (websites). NTOS devoted a significant part of its 2018 marketing budget (around 12.5 %) to digital promotion channels. What needs to be done definitely is to support domestic travel organizers in order to improve their online promotion, possibilities for online bookings on their websites and finally, online sales. It seems that the online sale of Serbian tourist products is the weakest link in this stage in the process of digitalization of Serbian tourism.

In order to reduce the effects of the “shadow” (grey) economy, to provide support to the tourism industry and to obtain more realistic statistical data, the Government of the Republic of Serbia has begun reforming the tax system with regard to individual accommodation service providers, which is part of a wider story of the digital transformation of Serbian tourism: this is a precondition for the introduction of an electronic, digital system for registration of arrivals and departures of all tourists as well as the monitoring and analysis of their preferences in real time called *E- Tourist*.

The information system for registration and check-out of (domestic and foreign) tourists will be a unique information system that functionally connects all tourist stake holders in the Republic of Serbia, and it will be accessible via the Internet without the need for any other special installation. The mentioned information system will be a unique online system that should enable daily insight into the state of tourism traffic, an updated database of accommodation facilities (accommodation service providers) and capacities, to enable real time reporting for statistical and

marketing purposes, and better control of the collection of residence tax, and tax with the aim of generating higher revenues in the tourism sector in Serbia. Furthermore, this system will contribute to the process of improving destination management - further development of new modules and connection with other information systems in the Republic of Serbia (Pindžo R. & Barjaktarović L., 2016). That will give the *E - Tourist* system the possibility of expanding in the direction of business intelligence, which will enable even better management of destinations and tourism offer in real time, as well as integrated marketing activities of all users of the system.

The only thing required is access to the Internet, without additional installations, applications should be available through computers, tablets, mobile („smart“) phones, tablets and all other mobile devices. At the same time hospitality industry should bear in mind operational risk management, in order to maximize oportunites and to minimize negative effects (Barjaktarović L. & Barjaktarović D., 2011). Furthermore, digitalization will have impact on the changing of the structure of hotels' offer (Barjaktarović D. & Barjaktarović L, 2012)

Conclusion

Further technology development and the application of digitization will continue to have strong impact to the entire tourism sector (Pindžo R. & Barjaktarović L., 2016). Thanks to the technological improvement, the division of actors in tourism is clearly visible: those who invested in the Internet and modern technologies, and especially mobile channels of promotion and distribution, and those who did not, finding it very difficult to survive the current wave of digitization. Tourism is facing great changes that mean constant interaction with guests at all stages of their travel in real time. If they want to do business successfully, hotel companies will have to adapt their business models to new demands and the latest developments on the tourism market taking into account all technological changes and applied innovations. Robots, the virtual reality of playing new types of gadgets will find even greater application in tourism in the not too distant future. In order to attract new tourists whose expectations are (or will be) significantly different from those who today dominate and whose behavior is largely under the influence of new technologies, tourism stakeholders must have their own unique "story" which should be presented on the Internet and different social networks.

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MEASURING A TOURISM DESTINATION IN THE CONTEXT OF DIGITAL TRANSFORMATION WITH MULTIPLE ATTRIBUTE DECISION MAKING

Zoran Ćirić¹, Otilija Sedlak²

Abstract

There is no universal model for sustainable tourism destinations. Cities or tourist places are to have different offers, which require multiple demands and multiple attributes. A new approach to the digital transformation of competitive tourism destinations, in addition to the conventional attributes of destinations, including business competitiveness factors. Factors influencing the competitiveness and attractiveness of the destination and its tourism offer can be used to build a methodology for ranking of tourist destinations. The ordering method is focused on the multiple attribute decision making (MADM). This paper is an attempt to prepare a decision by the use of the fuzzy method of ordering alternatives (i.e. aims), and to set priorities among some alternatives and criteria. The aim of the paper is to present the complexity of the problem: sustainable tourism means the ability of a tourist destination to remain competitive considering all of environmental and quality problems.

Key Words: digital transformation of tourism, destination competitiveness, multiple attribute decision making

JEL classification: M31, Z32, C44

Introduction

Present-day tourists have special demands concerning performances of their tourism destinations due to gained wide experiences and possibilities for comparing tourist offers and relevant prices. The last mentioned issue is intensely supported by internet services.

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Using internet services modified the application of word-of-mouth marketing (WOMM) - the so-called electronic word-of-mouth (eWOM), alternated market demand analysis, improved exploration of the satisfaction and awareness of clients and using of various methods of business promotion are enabled. One of the advantages of internet marketing is that companies are enabled to gain feedback information on products and services in real time, and so they can promptly react and focus on target groups of customers. Internet services are excellent basis for manifold data collection, contributing so to further development of marketing activities. The reality, however, is different: very often, we lack precise information on the value of individual input parameters, or the values of coefficients in constraint and goal functions, and imprecise formulation of limitations themselves is possible as well.

In practice, we often find models where multiple attributes take part in decision-making simultaneously. This paper is an attempt to prepare a decision by the use of the fuzzy method of ordering alternatives (i.e. aims), and to set priorities among some alternatives and criteria, in the decision-making situations where there are multiple decision-makers, multiple attribute and multiple periods.

Electronic Word of Mouth - eWOM

Technological progress and the Internet have great influence on customer behavior and modes of informing them about products, services, companies, persons and ideas. As to minimize/eliminate risk customers usually rely on experiences of others. Appropriate information is obtained through information by the means of word-of-mouth, to which a new dimension is added since the Internet has been present. The communication between customers becomes digitalized, i.e. electronic word-of-mouth (eWOM) evolves. According to Hennig-Thurau et al. (2004), eWOM means “every either positive or negative opinion of present, potential or former customers about product, services or companies, that is available to multitude of other customers through internet services“.

The advantages of eWOM compared to the traditional WOM are a high level of adaptability and prompt diffusion. In the case of eWOM not all participant are necessarily present in communication at the same time, internet services preserve information for a longer period, thus allowing later inclusion of some participants. This feature of eWOM enables easier

measuring and analyzing of communication, compared to the traditional WOM technique. The difference between these two WOM methods is that in traditional communication the information receiver knows the information provider, while in the digitalized mode the source is usually unknown (Cheung, Thadani, 2012). Despite being impersonal, eWOM is a stronger communication tool for it is direct, credible, publicly accessible and thus might have a wider influence (Hennig-Thurau et al., 2004). Electronic communication is very practical and eliminates problems of direct communication (Phelps et al., 2004); besides that, electronic communication encourages people to ask strangers for their opinion, while this is a rare situation in usual communication.

Lack of information about the identity of the author is one of the shortcomings of eWOM (Kelly et al., 2010); this applies to electronic communication through internet forums and web pages when consumer are asked about their opinion on the purchased products.

On-line users claim that information on products and services collected from other consumers through social networks are more valuable than those offered by marketing managers (Wang et al., 2011). Consumers are capable of making difference between online recommendations of authorities and of those given by other consumers, and believe the opinion of other consumers is more credible (Huang and Chen, 2006).

Advantages of electronic WOM communication, which at the same time represent factors of promoting usage of personal messages (Lovett et al., 2013), are:

- **Independency from company influence** – a higher level of persuasiveness of this source, for it offers complete and unbiased facts given by the third party.
- **Experience transfer** – Information acquired from costumers who possess their own experience contribute to risk reduction and in the same time spare time and money.
- **High communication efficacy** – Closeness and orientation are supported by personal messages. In a direct personal communication, participants know each other, while by electronic means messages are being exchanged between totally unknown partners. This may represent a threat because credibility and truthfulness are sometimes questionable.
- **Multiplication** – Digital communication spares company's resources. eWOM is a marketing tool with great potentials, based on the

conception of customer satisfaction, two-way communication and transparent and open communication. Promises of eWOM are especially important for small and medium enterprises, which have weaker access to commercial advertising.

Marketing system should be organized in such a way that it is capable of optimal achievement of defined objectives. This task will be fulfilled by restructuring of the traditional marketing communication strategies applying new definitions of objectives, new media choice and specifically new modes of marketing messages creation. Uncontrolled commercial in media should be replaced with marketing activities precisely aimed towards target groups like opinion leaders, experts, proponents and loyal customers. When contemporary information and communication technologies are included into these processes then electronic word-of-mouth communication appears, while specific marketing messages are being created and transferred; this contributes to cost reduction - because part of the efforts invested into distribution of information is transferred onto customers – and to the efficacy of the total communication activities of the company.

Tourists’ opinion and factors of decision-making

Our investigation was performed based on the questionnaire “Impact of digitalization and communication between consumers on decision making about buying travel arrangement”. The questionnaire is shown in Table 1.

Table 1: *Questionnaire “Impact of digitalization and communication between consumers on decision making about buying travel arrangement”*

1.	Sex	Male	
		Female	
2.	Age	15 to 25 years	
		26 to 30 years	
		31 to 40 years	
		41 to 45 years	
		46 to 50 years	
		over 50 years	
3.	Dependent on your income how long can you stay annually at a tourist destination?	up to 5 days	
		6 to 15 days	
		16 to 25 days	
		over 25 days	

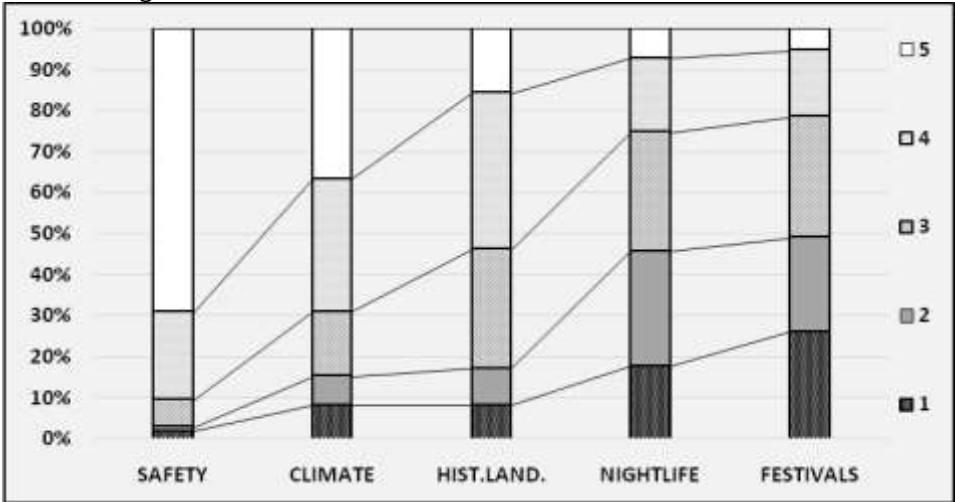
4.	When planning your travel you	ask a tourist organization					
		organize it yourself					
Please give a grade to the next statements (choose only one answer): 1 – totally disagree; 2 – disagree; 3 – unsure; 4 – agree; 5 – totally agree		1	2	3	4	5	
5a.	When deciding about my travel, then climate is important for me						
5b.	When deciding about my travel, then safety is of great importance for me						
5c.	When deciding about my travel, then historical landmarks are important for me						
5d.	When deciding about my travel, then nightlife is important for me						
5e.	When deciding about my travel, then festivals are important for me						
6.	When deciding about my travel I ask my family or my friends for information about the tourist destination						
7.	When deciding about my travel I assume information about the destination, accommodation and tourist programs given by tourist organizations are credible						
8a.	When deciding about my travel I seek for information on internet forums						
8b.	When deciding about my travel I seek for information on internet blogs						
8c.	When deciding about my travel I seek for information on internet pages connected to an evaluation of accommodation, tourist agencies and the destination (rating sites)						
8d.	When deciding about my travel I seek for information on social networks						
9a.	Information about the tourist destination, accommodation and agencies are most conveniently accessible through internet services						
9b.	Information about the tourist destination, accommodation and agencies found on the Internet are reliable						
9c.	Information about the tourist destination, accommodation and agencies found on the Internet are comparable to information collected from other sources						

The random sample of respondents included 210 persons of which 151 (71.9%) were females and 59 (28.1%) were males. In the sample, 150 persons (71.4%) were aged up to 35 years and the rest of 60 (28.6%) were 36 years old or older. Answers to the question about the usual annual length of touristic travel dependent on their income were distributed as follows: 160 of the subjects (76.2%) travel up to 15 days annually, 38 of them (18.1%) between 16 and 25 days, and only 12 subjects (5.7%) could afford to take a touristic travel over 25 days a year. Interesting is the fact that the number of respondents who organize their touristic travels by themselves is almost the same as the number of those who ask a tourist organization for help (49%:51%).

Respondents gave grades from 1 (totally disagree) to 5 (totally agree) to the question about the significance of particular elements influencing decision making about tourist destinations. The higher the grade the higher is the importance of a particular factor for the tested subject. These elements were climate, safety, historical landmarks, entertainment/nightlife and festivals/ cultural events. In the next figure, the distribution of tested subjects dependent on the given grades is shown. The lower slice of any column shows the number of subjects who gave grade 1 to the importance of a factor, the next over it is the number of grades 2, and so on; the upper part is the number of answers with grade 5. The total number of answers adds up to 210 respondents for every factor. In the figure, the factors are ordered by the size of the average of the given grades.

It appears that the most important aspect for the tested subjects is safety (Vojinović, 2016) when planning any travel, i.e. choosing a tourist destination; more than 90% of deliverers of opinion think safety is of extreme significance (grades 4 and 5), the overall average grade is very high and amounts to 4.54. The next element by importance for the tested tourists is climate, indicating the most often goals of travels, that are rest, leisure, summering or wintering holidays; this applies to 69% of respondents who gave grades 4 or 5 to this element. The average grade given to climate is 3.82. The succeeding factors ordered by importance are historical landscapes (with average grade 3.53), then nightlife (2.69) and the last one are festivals (2.51). The result was that nightlife is of interest for one quarter of subjects and festivals for around one-fifth of them (grades 4 and 5).

Figure 1: *Distribution of grades given to the significance of factors determining decisions about tourist destinations*



Data on average grades of elements ordered by importance are shown in the next table.

Table 2: *Average grades of decision-making factors*

No.	Factor influencing decision making	Average grade
1	Safety	4.54
2	Climate	3.82
3	Historical landscapes	3.53
4	Nightlife	2.69
5	Festivals	2.51
	Overall average grade	3.42

When analyzing correlations between the age of respondents and significances of particular factors, it was found that there is some negative weak or minor linear relationship (although statistically significant) between age on one side and importance of nightlife and festivals on the other side. Spearman’s correlation coefficient derived on basis of ranks $Rho = -0.29$, $p = 0.000$ (weak relationship, highly significant) and $Rho = -0.14$, $p = 0.043$, (minor relationship, significant) respectively, meaning older people rarely choose a tourist destination because of nightlife offers or festival events. Other decision-making elements do not have any significant correlation with the age of the respondents.

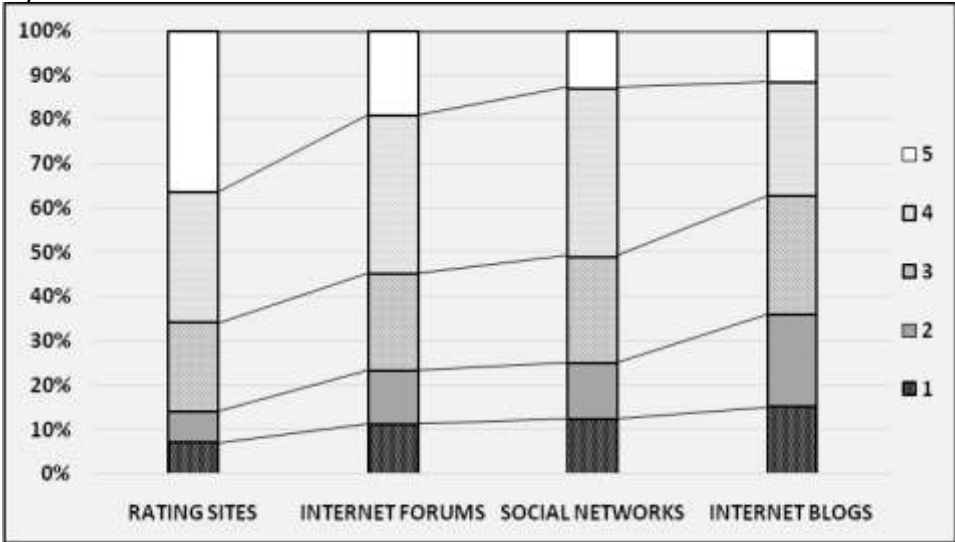
Also, the relation between sex and decision making factors was investigated. The sole significant value was established for the relationship between the sex of the respondents and safety as a determinant factor when deciding about a tourist destination. The linear relation is weak, the correlation coefficient highly significantly differs from zero ($Rho=0.24$, $p=0.004$). It appears that female tourists are somewhat more concerned about the safety of the chosen tourist destination than males.

The next question asked from respondents was to what extent they put their faith in either family members or friends' information about tourist destinations. Around one-half of the respondents think they can rely on this information, one quarter is not convinced this would be a satisfactory source of information, while the rest of them (one quarter again) are hesitant. Average grade of answers amounts to 3.39. Some minor downhill linear relationship is found as well between the age of the subjects and the fact if they ask friends or family members for advice about tourist destination: older people more rarely ask for this kind of opinion than younger tourists, and rather rely on other sources of information, ($Rho=-0.197$, $p=0.004$, minor linear relationship, highly significant). Opinion number seven asked for from the respondents was related to the degree to which tourists can have confidence in tourist organizations concerning information about the destination, accommodation and tourist programs. It is somehow disappointing fact that the average grade is lower than one could expect and it amounts to 3.33. Around 61% of respondents are aware this information are credible (grades 4 and 5), we assume 9% of subjects giving lower grades (1 and 2) is too much. Similar is with the hesitant respondents (around 30%), who are not fully convinced they can rely on tourist organizations, i.e. sometimes yes, sometimes not.

Seeking for information about tourist organizations, destinations, accommodation, tourist programs etc. through electronic media was the next package of opinions expected the respondents to give. Hereby we tried to access how customers use internet services, i.e. eWOM, as a source of data. The grades could be given were 1 (totally disagree) to 5 (totally agree). Respondents gave grades to the next four information sources: internet forums, internet blogs, rating sites and social networks. In the next figure, the distribution of subjects giving different grades to particular internet sources is presented. The sources are ordered by the value of the average grade. The majority of the subjects use rating sites

(65.7% of respondents gave grades 4 or 5); more than half of subjects also often use internet forums and social networks (54.8% and 51.0% respectively with grades 4 or 5) and the less popular is visiting internet blogs (only 37.1% with grades 4 or 5). This indicates people observe rating sites more reliable and trustful compared to other sources.

Figure 2: *Distribution of grades given to the use of internet sources of information about tourist destinations*



Data on average grades of internet sources ordered by importance are shown in the next table.

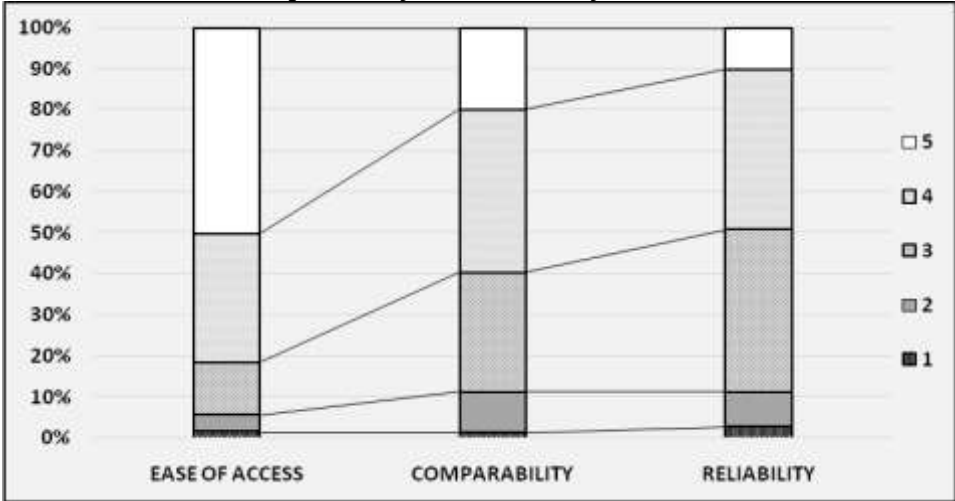
Table 3: *Average grades of internet information sources use*

No.	Internet services as sources of information	Average grade
1	Rating sites	3.80
2	Internet forums	3.39
3	Social networks	3.26
4	Internet blogs	2.97
	Overall average grade	3.36

On the other side, interesting is the number of subjects who think none of the internet sources is valuable/useful. The relative number of respondents who gave grade 1 to these sources are 7.1%, 11.4%, 1.24% and 15.2%, while the overall average is 11.5%, i.e. around one-tenth of all customers usually refuse to use internet services as to get information connected to their tourist travels. The following block of questions in the

questionnaire was related to the ease of access to information through internet services, reliability of information from internet sources, and comparability of information gathered from the internet with those obtained from other sources.

Figure 3: *Distribution of grades given to ease of access to internet services and their comparability and reliability*



Customers are aware of the presence and availability of internet services day and night and the possibility of accessing important information at any time and in any place, and they usually use its feature of quick and instantaneous access, choosing from a numerous of possible sites, even asking for automated help to find sites corresponding to their intents. According to this, tested subjects gave the high 4.24 average grade to this characteristic, over four-fifths of the respondents place high significance to the ease of access to information from the internet sources (81.4% with grades 4 or 5). When it is about the comparability of information from the Internet with information gathered from other sources, the average grade is 3.67, while 59.5% of respondents gave grades 4 or 5. Not all are totally convinced the information from internet sources are fully objective and reliable. The average grade is 3.45, and only around one-half (49.0%) of the tested subjects think they can completely rely on this source. Data on average grades of internet sources ordered by importance are shown in the next table.

Table 4: *Average grades of internet information sources use*

No.	Features of internet services	Average grade
1	Ease of access to internet services	4.24
2	Information from internet is comparable with other information	3.67
3	Internet sources are reliable and objective	3.45
	Overall average grade	3.78

Application of fuzzy logic for choosing an optimal tourist destination

There exist abundant of methods, models and computer software for analysis of decisions and for giving support to decision making. Often a new method arises, it becomes very modern to apply, but on the contrary, we should seek for the best method, although it is not an easy task to determine which one is the most convenient (Sedlak, 2016). One of the methods applicable for decision-making situations connected to choice of tourist destination could be that based on fuzzy systems. We start from the characteristic attributes of grades and the fuzzy system that is suitable to arrange these attributes. From the standpoint of fuzzy systems, the attributes of grades are as follows:

- different criterion is given the same grades, but not necessarily all criterions have the same number of grades
- grades are defined by such fuzzy sets whose membership function shows the level of assessment of average grade to set of grades; besides that, these fuzzy sets must indicate that average grades and its closest grades belong to two neighboring sets
- membership function of assessment to a fuzzy set of grades is a symmetric function, which has value 1 in the middle and it is monotonously decreasing to both directions; the shape of the function can be various, we decided to choose the triangle form.

Let the criteria be rated on a p-grade scale. Let the set of grades be the set of results, which contains the average grade as well. Sum of weighted grades is the set of extra grades, and it is a subset of the set of results. Average is in the center of gravity of this subset. The next rules apply:

- To every grade belongs a subset of uniform grades from the set of results; membership function is a triangular fuzzy number. Every grade affects the result as much as is the weight of the criterion where the grade belongs; the maximum weight is 1. E.g. the height of the subset given by imaging is multiplied with its weight, and the result is

only effected by higher values of weights (similar is with the Yager-method), while the height of the subset is multiplied with the square of the value of the center of gravity.

- If the grades for several criteria are equal, then to grades multiplied with different weights belong different subsets in the set of results of that very grade (which were equal).
- Applying the procedure of aggregating of subsets using imaging (t-conorm) the result is the set of extra grades. The center of gravity of the set of extra grades (i.e. its projection on the X-axis) is also a grade.

We define method of arranging with multiple criteria as follows:

- let $A = \{a_1, a_2, \dots, a_n\}$ be a finite set of alternatives
- let $K = \{k_1, k_2, \dots, k_n\}$ be a finite set of fuzzy criteria
- let $g_1, g_2, \dots, g_m$ be weights belonging to criteria, maximal value is 1
- let every fuzzy criterion k_j be given over a linguistic variable X , $j = 1, 2, \dots, m$
- let the set of values of the linguistic criterion be $k_j = \{S_1, S_2, \dots, S_{p_j}\}$
- let the membership function be denoted with $\mu_{S_{p_j}}(x)$
- let the support be $\sup S_{p_j} [p_j - 0.55; p_j + 0.55]$
- let the membership function be a triangular fuzzy number
- the valuation of the alternative a_i , $i = 1, 2, \dots, n$, can be performed with fuzzy sets $S_1, S_2, \dots, S_{p_j}$ of the criterion k_j .
- the estimation method assigns a fuzzy set of extra grades R_i , which appears in the fuzzy set of results E ; set E enables to compare sets R_i without defining those sets. Set E is a fuzzy set identical with the set of criteria: $E = \{S_1, S_2, \dots, S_{p_j}\}$, $k = \max(p_j)$, $j = 1, 2, \dots, m$
- every set R_i is formed on the basis of partially activated subsets of set E ; on the basis of input data - which are grades for criteria $o_1, o_2, \dots, o_m$ - sets R_i will be formed, and they will generate a program-block that functions as a fuzzy logic tool in the form of fuzzy associative memory (FAM) system

- every grade o_j partially activates either one or two neighboring criterion values out of the set $S_1, S_2, \dots, S_{pj}$; FAM system projects these partially activated sets to the set E
- R_i is the sum of either once or more times weighted values of partially activated sets $S_1, S_2, \dots, S_{pj}$; set of grades $o_1, o_2, \dots, o_m$ belonging to one alternative a_i partially activate sets $S_1, S_2, \dots, S_{pj}$ placed in the condition part of the FAM system, and applying the fuzzy rule the analog set from consequences is also activated
- every projecting to set E means multiplication with the triangle number; after projecting partially activated sets are being aggregated (algebraic summing applied)
- at the end, center of gravity of the aggregated set is determined using the process of defuzzification (Ćirić, 2015).

Estimation methods can be programmed using fuzzy logic software or applying expert systems. An example of fuzzy logic software is the FS (Fuzzy Soft) program package. This software obtains all the procedures needed for the elaboration of the estimation method; it is possible to define fuzzy sets with various membership functions and to construct the fuzzy system from basic elements in a graphical form.

In our investigations, we asked respondents to classify ten possible tourist destinations (D1 to D10) applying five criteria: safety, climate, historical landmarks, nightlife/entertainment and festivals/cultural events, so that they give grades from 1 to 5 to every destination, dependent on how do they judge the destination will meet their expectations (Sedlak, 2017). Grade 1 indicates the least satisfaction and grade 5 the best potential place for visitors. Grades given to tourist destinations are presented in the next table.

Table 5: *Grades given by respondents for tourist destinations*

No	Criterion	TOURIST DESTINATIONS									
		D1	D2	D3	D4	D5	D6	D7	D8	D9	D10
1	Safety	1	3	3	3	5	4	5	1	3	5
2	Climate	5	1	1	5	5	5	5	5	1	5
3	Hist. landmarks	5	5	5	3	5	5	5	3	0	2
4	Nightlife	2	3	4	0	3	4	0	3	5	5
5	Festivals	3	2	2	2	1	4	5	1	1	5

Weights that will be used in the program using fuzzy logic to define the best tourist destination were derived based on previous results in the first part of this study. To the factor with the highest average grade (safety, 4.55) weight 1 was given, and the other weight was calculated as average grade related to the highest average grade.

The values of weights are presented in the next table.

Table 6: *Average grades and weights for the criteria*

No	Criterion	Average grade	Weight
1	Safety	4.55	1.00
2	Climate	3.82	0.84
3	Hist. landmarks	3.53	0.78
4	Nightlife	2.69	0.59
5	Festivals	2.51	0.55

Taking into consideration grades given for tourist destinations and applied weights, the estimation method based on fuzzy logic gave a result that arranges tourist destinations.

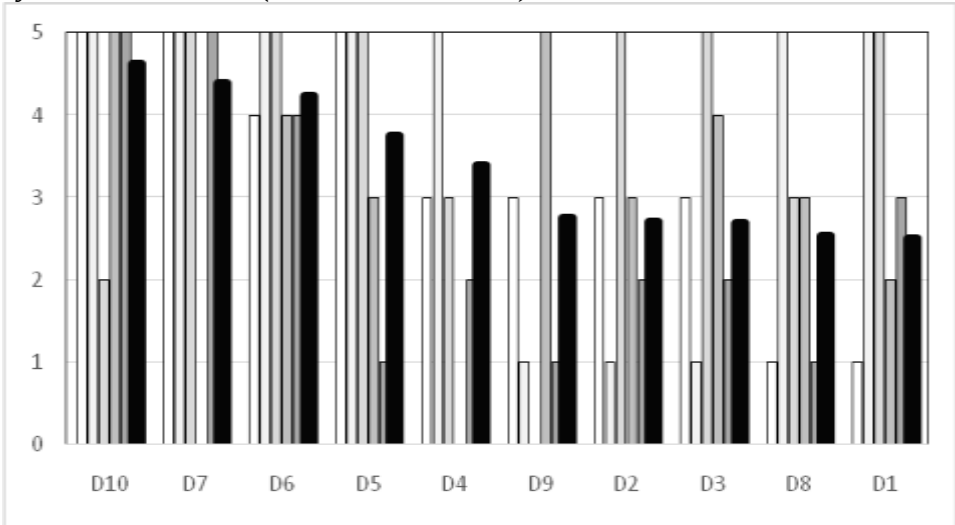
Every destination is given a compound value, the higher the value, the more valuable is the destination. It appears that destination D10 is most suitable, taking into account its characteristics, respondents' expectations and importance of particular characteristic to the subjects.

The results are presented in Table 7.

Table 7: *Final arranged grades estimated using fuzzy logic*

No	Tourist destination	Estimated grades
1	D1	2,48
2	D2	2,69
3	D3	2,67
4	D4	3,38
5	D5	3,73
6	D6	4,22
7	D7	4,38
8	D8	2,52
9	D9	2,74
10	D10	4,61

Figure 4: *Grades for five characteristics of ten tourist destinations ranked by estimated values (bold black columns)*



Conclusions

For communication is a very complex and sensitive process and suffers from the influence of multiple factors it is obvious that it easily becomes inefficient and inadequate. This may lead to weakening the motivation of employees and consecutive problems will produce poor business results. Negative effects can be prevented if management is acquainted with communication elements, if they find out sources of problems in communication and understand possible consequences. Modern marketing managers and specialists are devoted to communications in general and particularly to word-of-mouth-communication, they all agree that WOM represents one of the strongest marketing tools in our times. The reasons why customers rely on information acquired from WOM communication are that they conceive media advertising is not always reliable, the amount of information is so abundant there is not enough time at disposal to evaluate them, presence of so-called customer-controlled media, etc. Statistical research shows the topics of almost one-third of all communication are products and services. WOM marketing is not intended to replace the traditional marketing. It is a new way of thinking about marketing, pointing to creation of such marketing activities that form better and more effective relations with customers. WOM is not an isolated marketing technique, for it also represents a

marketing philosophy, which relies on principles of customer satisfaction and transparent and mutual dialogs with them.

As an aid for decision making about purchasing customers use information about products and services from two sources: formal sources (these are under control of the producer, here are advertisement and promotions) and informal sources (advice and recommendations from friends or experts). An average customer is burdened with formal communication that may have negative consequences on him. Of all available promotion activities customer usually only notices a few, and rarely reacts according to producer's expectations, that would be purchase. On the other side, producers do not recognize these problems and deliver additional information causing non-desirable effects with customers.

In this paper, the results of research about information sources and factors of determining tourist destination are presented. The research was conducted through a questionnaire completed by 210 respondents. When choosing tourist destinations, customers always collect information about travel, accommodation, conditions and characteristics of the location. The results of our investigation showed that as source of information friends/family members, tourist organizations and internet sites can be used, while WOM communication appeared to be very important. For the majority of potential tourist rating sites are most important, followed by internet forums, social networks and finally internet blogs. Of all the features of internet sources compared to other possibilities, ease of access appeared to be most important, that is followed by comparability and reliability.

Factors influencing decision-making about tourist destinations showed different importance; safety is on the first place (particularly for female subjects), and then follow climate and historical landscapes; nightlife and festivals are of less general importance, except for younger people. When different features of several tourist destinations are known and grades are given for all, fuzzy logic is a convenient method to determine the most appropriate destination. In the paper, an ordering method based on fuzzy sets is presented and results are derived about deciding for one out of ten potential tourist destinations, given grades for factors of every destination and also weights determined on the basis of average grades for each factor, derived in the first part of the study.

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DIGITAL TRANSFORMATION IN THE FUNCTION OF IMPROVING THE COMPETITIVENESS OF THE REPUBLIC OF SERBIA IN THE TOURISM SECTOR¹

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Abstract

According to numerous Travel & Tourism Competitiveness Reports, compiled by the World Economic Forum, the Republic of Serbia has occupied an unenviable competitive position for years. Such a position is a consequence of a poor state of a large number of relevant indicators, based on which the mutual competitiveness of national economies in the tourism sector is evaluated. The paper points to the possibilities and ways of enhancing the status of that group of indicators concerning the quality of information and communication technology applied in the tourism sector. The aim of the paper is to point to the need of strengthening the efforts towards digitalization of various spheres of tourism with the purpose of improving the functioning and competitiveness of the entire tourism sector.

Key Words: *digital transformation, tourism, competitiveness, Republic of Serbia.*

JEL classification: *Z30, M15, O33*

Introduction

In the era of the Internet, modern information and communication technologies and intensive business digitalisation, digital transformation is gaining importance. Digital transformation is a process that reflects the development and application of modern digital technology on different, although interdependent levels: individual level, organizational level, sector level, national economy level.

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Dramatic, predominantly positive, effects of the digital transformation process on different spheres of life and activity (Tolboom, 2016), classify this process as one of the present priorities. Among other things, digital transformation leads to enormous changes in various aspects of business (Federal Ministry for Economic Affairs and Energy), by offering incredible chances for creating and achieving higher values, as well as for gaining and maintaining competitive advantage.

Digitization has contributed to the transformation of many sectors (World Economic Forum, 2017a). Through the digital transformation process, among other things, the tourism sector obtains a chance to continue the prosperity trend that has been immanent for this sector over the last few decades. By timely monitoring and successful implementation of the current technological achievements it is possible to improve the tourism sector competitiveness, the competitiveness of individual organizations in its scope, as well as the entire national economy competitiveness.

Competitiveness of the Republic of Serbia in the tourism sector

The national economy competitiveness reflects the state of its institutions, policies and factors that determine the productivity level of the economy, its growth level and the prosperity level, achievable for a particular country (World Economic Forum, 2017b). Under conditions of intense business globalization, pronounced competition, dramatic demographic (Marinović Matović, 2017), economic and technological changes, the issue of national economy competitiveness is gaining importance. The number of the organizations that are expanding their business scope outside of national framework is growing, as well as of the organizations whose positioning of their own business (or any form of business cooperation with foreign countries) is largely conditioned by the competitiveness of the national economy that is potentially considered as an option for business cooperation (Simić, 2017).

Expanding the business field to one or more other national economies has its favourable and unfavourable aspects. For the purpose of their indicative presentation, the World Economic Forum has started compiling The Global Competitiveness Report (World Economic Forum, 2017b) once a year since 2005. Based on this Report, as of 2007 the World Economic Forum has published The Travel & Tourism Competitiveness Report. With the help of The Travel & Tourism Competitiveness Index, this report ranks the appropriate number of national economies (The

Travel & Tourism Competitiveness Report, made for 2017, covered 136 countries that produce over 98% of World GDP) (World Economic Forum, 2017c) in terms of their competitive advantages and disadvantages in the field of travel and tourism. It is a composite index identified on the basis of 90 indicators relevant for travel and tourism in a national economy. With the purpose of simplifying their monitoring, analyzing and finding opportunities for their improvement, these indicators are grouped into 14 pillars (Business Environment, Safety and Security, Health and Hygiene, Human Resources and Labor Market, ICT Readiness, Prioritization of Travel & Tourism, International Openness, Price competitiveness, Environmental Sustainability, Air Transport Infra infrastructure, natural resources, cultural resources and business travel), which are then systematized in four key subindices (Enabling environment, T & T policy and enabling conditions, Infrastructure, Natural and cultural resources) (World Economic Forum, 2017c).

According to The Travel and Tourism Competitiveness Report for 2017, with the travel and tourism competitiveness index of 3.4, the Republic of Serbia occupies a rather low 95th position on the list of 136 countries (World Economic Forum, 2017c). Interesting fact is that the Republic of Serbia occupied the same position (95th place on the list of 141 countries and the travel and tourism competitiveness index of 3.3) in the previous Travel and Tourism Competitiveness Report, compiled by the World Economic Forum for 2015 (World Economic Forum, 2017c).

This practically means that almost no improvement has been made in this economic field, or in the indicators relevant for the travel and tourism field, during the mentioned two-year period (2015-2017). Moreover, the position of the Republic of Serbia on the lists of travel and tourism competitiveness, as well as the values of its travel and tourism competitiveness indexes, have worsened over time (Simić, 2017).

The poor position of the Republic of Serbia on the list from 2017 is due to the poor state of a significant number of indicators relevant to the travel and tourism sector. This situation has led to the ranking of the Republic of Serbia in each of the 14 pillars of competitiveness in the manner shown in Table 1.

Table 1: *Competitiveness of the Republic of Serbia in the field of travel and tourism observed by pillars of competitiveness*

COMPETITIVENESS PILLARS OF TRAVEL AND TOURISM	RANKING OF THE REPUBLIC OF SERBIA ON THE LIST FROM 2017	TRAVEL & TOURISM COMPETITIVENESS INDEX
NATURAL RESOURCES	130.	2.01
PRIORITIZATION OF TRAVEL & TOURISM	116.	3.60
BUSINESS ENVIRONMENT	112.	4.02
INTERNATIONAL OPENNESS	106.	2.41
GROUND AND PORT INFRASTRUCTURE	94.	2.77
AIR TRANSPORT INFRASTRUCTURE	84.	2.35
HUMAN RESOURCES AND LABOUR MARKET	82.	4.43
PRICE COMPETITIVENESS	76.	4.82
TOURIST SERVICE INFRASTRUCTURE	76.	3.92
SAFETY AND SECURITY	72.	5.41
CULTURAL RESOURCES AND BUSINESS TRAVEL	71.	1.65
ENVIRONMENTAL SUSTAINABILITY	61.	4.18
ICT READINESS	57.	4.80
HEALTH AND HYGIENE	42.	6.04

Source: *World Economic Forum, 2017c*

Not particularly impressive competitive position of the Republic of Serbia, according to the Travel and Tourism Competitiveness Report for 2017, from the aspect of most of the analyzed indicators, signalizes that there is a lot of room for improvement in the travel and tourism field in the Republic of Serbia. By improving any of the indicators, pillars or sub-indicators of travel and tourism competitiveness, it is possible to improve the state's competitiveness in the travel and tourism field. Bearing in mind the fact that "ICT Readiness" is one of the 14 pillars of travel and tourism competitiveness, the possibilities for improving the value of certain indicators within the mentioned pillar, as well as their possible final effects, will be indicated below.

ICT Readiness

According to the Travel and Tourism Competitiveness Report for 2017, the Republic of Serbia was ranked by the competitiveness index of 4.8,

within the pillar of "ICT Readiness", and came 57th on the list of 136 countries. An overview of individual indicators within the specified pillar, their individual values, as well as the positions of the Republic of Serbia on the list of competitiveness based on each of these indicators, is given in Table 2.

Table 2: *Position of the Republic of Serbia and values of travel and tourism competitiveness indicators related to „ICT Readiness“*

COMPETITIVENESS INDICATORS WITHIN THE «ICT READINESS» PILLAR	RANKING OF THE REPUBLIC OF SERBIA ON THE LIST (rank/136)	SCORE *
ICT USE FOR BIZ-TO-BIZ TRANSACTIONS	95	4.4
INTERNET USE FOR BIZ-TO-CONSUMER TRANSACTIONS	89	4.1
INTERNET USERS % pop.	56	65.3
FIXED BROADBAND INTERNET SUBSCRIPTIONS / 100 pop.	51	17.4
MOBILE-CELLULAR TELEPHONE SUBSCRIPTIONS / 100 pop.	60	120.5
MOBILE-BROADBAND SUBSCRIPTIONS / 100 pop.	40	71.8
MOBILE NETWORK COVERAGE % pop.	50	99.8
QUALITY OF ELECTRICITY SUPPLY	70	4.8

*Scores are on a 1-to-7 scale

Source: *World Economic Forum, 2017c*

The state of the Republic of Serbia in the travel and tourism field, and above all within the pillar "ICT Readiness", can be analyzed by comparing the Republic of Serbia's position in the list of travel and tourism competitiveness, with the positions of individual national economies, competitors of the Republic of Serbia. The Strategy for the Tourism Development of the Republic of Serbia implicitly mentions the following countries as its main competitors for the period from 2016 to 2025: Bulgaria, Czech Republic, Hungary, Romania and the Slovak Republic (Ministry of Trade, Tourism and Telecommunication of the Republic of Serbia, 2016).

The relevant monitoring of travel and tourism competitive position, from the aspect of the Republic of Serbia, should be observed in relation to the mentioned national economies. Comparative overview of the Republic of Serbia competitive position, within the pillar "ICT Readiness", and its directly competitive countries, according to The Travel and Tourism Competitiveness Report for 2017, is given in Table 3.

Table 3: *Comparative overview of the Republic of Serbia competitive position and its directly competitive national economies within the pillar "ICT Readiness"*

ECONOMY	RANKING WITHIN THE «ICT READINESS» PILLAR (RANK/136)	COMPETITIVENESS INDEX WITHIN THE «ICT READINESS» PILLAR
CZECH REPUBLIC	26 / 136	5.60
BULGARIA	48 / 136	5.03
SLOVAK REPUBLIC	36 / 136	5.37
HUNGARY	54 / 136	4.88
ROMANIA	60 / 136	4.70
SERBIA	57 / 136	4.80

Source: *World Economic Forum, 2017c*

It is obvious that the lower position compared to the position of the Republic of Serbia (57th position with the competitiveness index 4.80) in the list of travel and tourism competitiveness, and within the "ICT Readiness" pillar, it occupied only by Romania. Other, directly competitive national economies of the Republic of Serbia, according to the indexes identified within the mentioned pillar of competitiveness, are ranked in a better position compared to the Republic of Serbia. Observed by individual indicators within the "ICT Readiness" pillar, a comparative overview of the Republic of Serbia position, and its directly competitive national economies, is given in Table 4.

Presented state could be improved by appropriate efforts, aimed at improving not only the mentioned indicators of competitiveness within the "ICT Readiness" pillar, but also in general, through a comprehensive and permanent process of business digitization of organizations in the tourism field. Such a process, among other things, implies monitoring as well as successful implementation of all those current up-to-date technological trends, that contribute to the increase of the digitalization level, success and, and ultimately, the competitiveness of organizations in the field of tourism. Just some of these trends include the active and regular use of mobile devices, wireless networks, wearable technology (portable gadgets), smart phones, smart watches, smart armbands, smart glasses, social media, web sites, instant messaging services, used by service consumers in the field of tourism, as well as by the very organizations themselves (compare with: Firoiu & Croitoru, 2015).

Table 4: Comparative overview of the Republic of Serbia competitive positions within the pillar "ICT Readiness" and its directly competitive national economies

ICT READINESS	CZECH REPUBLIC		BULGARIA		HUNGARY		SLOVAK REPUBLIC		ROMANIA		SERBIA	
	RANK/136	INDEX	RANK/136	INDEX	RANK/136	INDEX	RANK/136	INDEX	RANK/136	INDEX	RANK/136	INDEX
ICT USE FOR BIZ-TO-BIZ TRANSACTIONS	31.	5.4	51.	4.9	54.	4.9	32.	5.3	74.	4.6	95.	4.4
INTERNET USE FOR BIZ-TO-CONSUMER TRANSACTIONS	11.	5.8	40.	5.0	62.	4.6	24.	5.6	43.	5.0	89.	4.1
INTERNET USERS % pop.	26.	81.3	67.	56.7	40.	72.8	31.	77.6	69.	55.8	56.	65.3
FIXED BROADBAND INTERNET SUBSCRIPTIONS/ 100 pop.	31.	27.3	41.	22.7	30.	27.4	39.	23.3	46.	19.8	51.	17.4
MOBILE-CELLULAR TELEPHONE SUBSCRIPTIONS/ 100 pop.	57..	123.2	47.	129.3	62.	118.9	58.	122.3	86.	107.1	60.	120.5
MOBILE-BROADBAND SUBSCRIPTIONS/ 100 pop.	39.	72.0	29	81.3	89	39.8	48.	67.5	54.	63.7	40.	71.8
MOBILE NETWORK COVERAGE % pop.	45.	99.8	30.	100.0	65	99.0	1.	100.0	36.	99.9	50.	99.8
QUALITY OF ELECTRICITY SUPPLY	20.	6.4	78.	4.6	72.	4.8	34.	6.0	74.	4.7	70.	4.8

Source: *World Economic Forum, 2017c*

The purpose of using these technological achievements is reflected in the simpler, faster and more efficient tourists' orientation, better information delivery, and higher level of service quality for clients, higher level of their comfort before, during and after the use of tourist organization's services. All this contributes to a higher level of tourist satisfaction, which is a prerequisite for successful functioning of tourism organizations, existing and future. On the other hand, the aforementioned technological trends enable tourism organizations to make their offers available through online travel services 24 hours a day. The process of promoting tourist destinations, booking and payment for arrangements, as well as communicating with clients, can be done very quickly and easily today. By instant messaging or e-mail, organizations in the field of tourism provide their clients with the necessary information faster, with minimal

costs and effort. With the purpose of retaining their clients, these organizations have the opportunity to keep a record of them in a very simple way, and foster good customer relationship with their clients. Modern technological achievements have also contributed to the emergence of new forms of services in tourism (e.g. peer-to-peer trips, accompanied with specialized sites such as airbnb.com, homeaway.co.uk, etc. for their realization), and the emergence of new forms of tourist behavior (e.g. "braggies", trend that involves the publication of self-photography, while in the foreground of photography are the facilities, occupied or visited by tourist) (Firoiu & Croitoru, 2015).

Digital transformation

The process that enables the implementation of above-mentioned technological trends, trends that contribute to an increase in the digitalization level of organizations, sectors or the national economy, is a process of digital transformation. Pointing out that there is no single definition of digital transformation in the literature, Ahmed Bounfour (2016) denominates it as "a new development in the use of digital artifacts, systems and symbols within and around organizations" (p. 20). It is also defined as a set of those changes that digital technology causes in various aspects of human life (compare with: Tolboom, 2016, p. 3). The lack of a universal definition of digital transformation is, inter alia, a consequence of various aspects of its analysis. In this context, Bounfour (2016) states that digital transformation can be analyzed with two critical aspects. They are: macro-economic and micro-economic aspects of digital transformation. The macro-economic aspect of digital transformation is based on an analysis of the impact that Internet and modern technology have on economic growth at the national level. According to this aspect, digital transformation represents the process of expanding the application of Internet, and modern technological achievements, in different sectors of a particular country. Observed from this aspect, digital transformation can contribute in varying degrees to the different national sectors' performances, as well as influence the differences in the performances achieved by different national economies.

According to the second, micro-economic aspect, digital transformation is analyzed at the organizational level. It is defined as the use of modern technology for the purpose of radical improvement of the organizational performances (Capgemini Consulting and MIT Sloan Management, 2011). As such, digital transformation is determined by the digital

maturity level of the organization. On the other hand, the organizational digital maturity is determined by two variables. They are: digital intensity (the degree to which an organization invests in new technologies, compared to competition, or in relation to its clients' expectations) and transformation management intensity (the degree to which an organization is ready for digital transformation, or the degree to which it successfully manages this process) (Capgemini Consulting and MIT Sloan Management 2011). Observed from the aspect of digital maturity, and with respect to the nature of the two aforementioned variables, organizations can be categorized into: digital beginners, digital fashionistas, digital conservatives and digates (compare with: Bounfour, 2016, p. 21). An overview of these types of organizations, as well as their critical features, identified by the nature of aforementioned variables (digital intensity, transformation management intensity), are shown in Figure 1.

Figure 1: *Digital maturity matrix*

DIGITAL INTENSITY	HIGH	FASHIONISTAS	DIGIRATI
	LOW	BEGINNERS	CONSERVATIVES
		LOW	HIGH
		TRANSFORMATION MANAGEMENT INTENSITY	

Source: *Capgemini Consulting and MIT Sloan Management, 2011*

The global digital engineering survey, conducted in 2014, which included organizations of various sizes and sectors from 129 countries, enabled the identification of three types of organizations from the aspect of their digital maturity. They are (compare with: Kane et al., 2015):

- organizations that are in the initial phase of digitization,
- organizations that are in the central phase of digitization, and
- digitally mature organizations.

This research has shown that digitally mature organizations are more focused on integration of digital technologies, such as social, mobile, analytics and cloud. On the other hand, digitally less mature organizations are focused on solving discrete business problems with individual digital technologies (Kane et al., 2015).

The differences identified among these three aforementioned types of organizations point to issues that are crucial for the success of digital transformation process of organizations, i.e. for the achievement of digital maturity of organization. MIT Sloan Management Review and Deloitte's 2015 global study has shown that digitally mature organizations are distinguished by the following (compare with: Kane et al., 2015):

- clear and coherent digital strategy,
- flexible and innovative organizational culture,
- willingness and ability for effective talent management,
- digital fluency of top managers.

A clear and coherent digital strategy focused on successful business transformation, which can be effectively communicated to employees, also enables the clear guidance of digital technology towards achieving the strategic goals of the organization. Ahmed Bounfour (2016) points to the importance of having a clear and coherent digital strategy for successful realization of the organization's digital transformation, and identifies the following key dimensions of digital transformation (Table 5): the scope, the scale, and the speed (acceleration) of digital strategies, as well as the sources of value creation based on digital strategies (pp. 22-23).

Table 5: *Digital transformation: dimensions, issues and implications for managers*

DIMENSIONS OF DIGITAL STRATEGIES	QUESTIONS FOR MANAGERS (STRATEGIC, ORGANIZING, BUSINESS MODELS)	KEY TOPICS
THE SCOPE OF DIGITAL STRATEGIES	What analytical approaches go beyond the extended firm view? What are the emerging spaces for value creation?	Defining and analyzing spaces for value creation
THE SCALE OF DIGITAL STRATEGIES	What is the relative importance of platforms? What typology? Which governance structures foster innovation?	Defining and analyzing the new scope of value creation
THE SPEED OF DIGITAL STRATEGIES	How to define and deploy innovative offers?	Analyzing acceleration as a systemic phenomenon
THE SOURCES OF VALUE CREATION BASED ON DIGITAL STRATEGIES	What are sources of value creation in digital spaces?	Defining how values is proposed in digital spaces

Source: Bounfour, A. 2016

Flexible organizational culture that fosters innovation, creativity and change, which advocates minimal risk aversion, and whose work environment is characterized by a high level of mutual cooperation and trust of employees, as well as their efforts to permanently learn and improve, is a culture that favors a successful digital transformation of the organization. The significance of organizational culture (but also the

strategy) for an organization that tends to acquire an epithety of digital, is also indicated by the World Economic Forum White Paper (2016), which emphasizes that "what truly distinguishes and gives a digital enterprise its competitive advantage is its culture, strategy and way of operating" (p. 9).

Willingness and ability of the organization for effective talent management, with the aim of permanently tackling digital trends. A survey conducted by the McKinsey Global Institute (2014) indicated that in conditions of pronounced digital transformation, organizations face the lack of talented workforce. In order to overcome this problem, organizations are trying to develop their own talent base through various programs of internal and external trainings of existing employees (Simić & Stefanović, 2017). Digitally mature organizations, not only through various trainings, strive to provide the employees with the necessary knowledge and skills, but also try to maintain their own talented personnel in many other ways. The fact that digital mature organizations attract more talented employees (in comparison with organizations that are characterized by lower level of digital maturity) contributes to a more powerful talent base in these organizations. For this reason, successful finding and actively attracting potentially desirable talented personnel, is what differentiates the digital mature organizations from those that are not.

Strong support for the digital agenda of the organization by its top management (so-called "digital fluency"). Although awareness of the importance and necessity of digital transformation of the organization must be present throughout the whole organization, its presence must be most pronounced at the top of the managerial body structure (Daske et al., 2015). Supporting the efforts of the digital transformation of an organization does not necessarily imply that the top managers are experts in the field of modern digital technology. This support, to a greater extent, represents their perfect understanding of the digital technology's significance for the successful functioning of the organization, both in the present time and in the future, as well as the strong confidence of employees in top managers, in terms of this support.

Bearing in mind the fact that digital transformation is not only a micro-economic (organizational), but also a macro-economic (national) phenomenon, activities directed towards its encouragement and successful realization can also be undertaken by the state. These are activities that ultimately contribute to a more successful digital

transformation of different sectors and their respective organizations. Only some of these activities include: enhancing privacy protection and data sharing, liberalizing markets to promote innovations, developing workforce skills, expanding internet infrastructure and setting standards. (McKinsey Global Institute, 2014).

Table 6: *Digital maturity of individual sectors on a global level*

SECTOR	DIGITAL MATURITY ¹	DIGITAL TECHNOLOGIES ENABLE EMPLOYEES TO WORK BETTER WITH ²			SELECT DIGITAL QUALITIES ²				
		Customers	Partners	Employees	Clear strategy	Strategy to transform	Skills provided	Managers encourages use	Leaders have skills
IT AND TECHNOLOGY	6.23								
TELECOMMUNICATIONS	5.89								
ENTERTAINMENT, MEDIA	5.49								
PROFESSIONAL SERVICES	5.39								
TRANSPORTATION, TOURISM	5.18								
FSI – ASSET MANAGEMENT	5.18								
FSI - BANKING	5.14								
RETAIL	5.03								
AUTO	5.01								
PHARMA	5.00								
CONSUMER GOODS	4.90								
FSI - INSURANCE	4.80								
EDUCATION	4.71								
OIL & GAS	4.68								
HEALTH CARE PROVIDER	4.67								
MANUFACTURING	4.54								
PUBLIC SECTOR - FEDERAL	4.51								
CONSTRUCTION AND REAL ESTATE	4.50								

TOP 5
 BOTTOM 5
 BETWEEN TOP 5 AND BOTTOM 5

¹ Digital maturity is calculated as the average maturity of responses from a given sector. Respondents were asked to rate their organization's digital maturity on a 10-point scale with 1 being least mature and 10 being most mature

² Correspond to specific survey questions in the study. Percentage of respondents who agree/strongly agree their organization has the relevant digital skills or capabilities

Source: *Compare with: Kane, G. C. et al., 2015*

As Ahmed Bounfour (2016) points out, the process of digital transformation is ongoing in many economic sectors of a large number of countries. The Global Study of MIT Sloan Management Review and Deloitte's showed that, as a result of digital transformation at a global level, different sectors exhibited different levels of digital maturity (Kane et al., 2015).

An overview of the digital maturity levels of some of these sectors, globally, among which a noted place is occupied by transport and tourism sector, is given in Table 6.

As presented in Table 6, the tourism sector occupies the fifth position in the global sector ranking, compiled by the sectors' digital maturity level. The data given in Table 6 also indicate that the tourism sector (analyzed together with the transport sector) ranks among the top five sectors, when observing at usage of digital technologies with the aim of establishing better customer relationship, as well as better relations with employees within this sector. What needs significant improvements within the tourism sector, when it comes to the digital technologies usage, concerns its use for upgrading the relationships with partner organizations.

Among the digital qualities, presented in Table 6, where the tourism sector (together with the transport sector) is also among the five most digitally matured sectors, the following are highlighted: „strategy to transform“ and „manager encourages use“. From the aspect of other analyzed digital qualities („clear strategy“, „skills provided“, „leaders have skills“), the tourism sector is ranked at lower positions, below the fifth place. It turns out that these three digital qualities („clear strategy“, „skills provided“, „leaders have skills“) are areas that can be significantly transformed in the tourism sector in order to improve the overall digitization level of this sector.

Although the data presented in Table 6 are the result of a global research, they can serve to identify the guidelines and quality of digital transformation of the tourism sector in the Republic of Serbia. It is obvious that there is scope for improvement in this sector, among other things, on the basis of more intensive business digitization of all those entities operating within or with this sector. This would contribute to better performances, as well as raising the competitiveness level of the entire tourism sector.

Conclusion

As a process that involves the Internet and modern digital technologies utilization, digital transformation represents a valuable potential, which can radically improve performances and competitiveness within the tourism sector. Appropriate efforts of the state, as well as managers of tourism organizations, can significantly contribute to raising the digital maturity level of all relevant subjects in this sector. The state, among other things, can provide this by improving the privacy and data exchange protection, liberalization of the market for the purpose of stimulating innovation, encouraging the development of working-age population's digital skills, expanding the Internet infrastructure, establishing relevant standards, and similarly. On the other hand, managers of organizations, operating within the tourism sector, could encourage the digitization level by contributing not only to more intensive investment in modern digital technology, but also to: creation of a clear and coherent digital strategy, forcing a flexible and innovative organizational culture, readiness and the ability to effectively manage talents, providing a permanent and strong support to the organization's digital agenda.

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ICT READINESS AS A FACTOR OF TOURISM COMPETITIVENESS

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Abstract

Information and communication technologies have changed the way of doing business in all sectors of the economy. In the field of tourism, information and communication technologies are not only a generator of change, but also one of the most important drivers of the development and achievement of a satisfactory level of competitiveness of this sector. The paper analyzes the information and communication readiness of selected countries as a factor of tourism competitiveness. The aim of the paper is to examine the relative position of the Balkan countries, including Serbia, according to indicators of the ICT readiness pillar within the Travel and Tourism Competitiveness Index of the World Economic Forum. The methods applied in the paper are correlation and benchmarking analysis. The results of research indicate the existence of positive interdependence between ICT readiness and tourism competitiveness in the Balkan countries and enable the identification of indicators in this field that require improvement in the future.

Key Words: information and communication technologies, tourism, competitiveness

JEL classification: O33, Z32

Introduction

The role of information and communication technologies (ICTs) in contemporary conditions is undeniable and invaluable. For years, it has been said that we live in the information age. The amount of information exchanged is increasing, and the ways of transferring information are

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more efficient and more sophisticated. ICTs are an integral part of life to such extent that the functioning of any segment of the society is practically inconceivable without it. The role of these technologies in removing time and space constraints is as revolutionary as it was once the role of transport technology. Information systems have played an important role in many industries, including tourism.

Tourism is an information-intensive industry, therefore, it is critical to understand changes in technologies and consumer behaviour that impact the distribution and accessibility of travel-related information (Xiang & Gretzel, 2010, p. 179). Information is a crucial factor in planning, booking and during the travel, and sometimes even after that. Because of this, tourism is one of the industries the rapid changes in ICTs have had the greatest impact on over the last twenty years (Crnojevac, 2010, p. 40). These technologies in tourism are not only important for tourists, but for the overall way of doing business in tourism and related activities. ICTs have profound implications for tourism and e-tourism reflects the digitization of all processes and value chains in the tourism, travel, hospitality and catering industries (Buhalis & O'Connor, 2005, p. 11). The fact that tourism is the primary economic activity in many countries has been adopted by all countries in the world (Stanišić & Milutinović, 2016, p. 67), with an increasingly important role in the world economy (Gnjatović & Leković, 2015, p. 48). As tourism is one of the leading industries in modern conditions (Gnjatović & Leković, 2016, p. 51), the transfer of information, as well as the tools and mechanisms for its management, must be of high standard and quality. Among other things, tourism as an international industry with significant economic effects (Ristić et al., 2016, p. 666) and as the biggest provider of jobs on the planet boasts a greater array of heterogeneous stakeholders than many other industries. The accelerating and synergistic interaction between technology and tourism in recent times has brought fundamental changes in the industry (Buhalis & Low, 2008). The energetic growth and development of the tourism industry is perhaps only mirrored by the growth of ICTs.

The paper examines the role and importance of ICTs and ICT readiness for the achieved level of tourism competitiveness in selected countries. Two groups of countries are analysed. Firstly, indicators that represent ICT readiness of the ten leading European countries in this field are considered. Then, the ICT readiness of the Balkan countries is analysed. The importance of ICT readiness for the tourism competitiveness in the

Balkan countries is examined by the correlation analysis. Benchmarking analysis, with the achieved results by the leading European countries as benchmark, has highlighted critical ICT readiness factors in the Balkan countries that require improvement in order to increase the level of tourism competitiveness of these countries.

Literature review

Modern information technologies are changing our entire society, and also the tourism sector. Information technologies, Internet and social networks change tourism activity daily. Technology has become a propulsive development factor with great influence on all of the elements and factors of business processes, sectors and the economy as a whole (Krstić & Stanišić, 2014). Technology becomes a main source of sustainable competitive advantage and a strategic weapon, especially in the tourism and hospitality industries (Buhals & Main, 1998, p. 198). Since the value chain in tourism is made up of a large number of stakeholders, starting with the promoters of the tourist offer, through competition to the final consumers of tourist services, information systems play a key role in the exchange of information, knowledge, products and services (Milićević et al., 2013). The truth is that tourism may not follow these processes consistently, but it is more complicated. This complexity arises from the complexity of the tourist market, tourist product and all tourism manifestations. It also comes from the need to coordinate a number of participants in creating and delivering a tourist product (Rađenović & Kozić, 2014, p. 726).

Thanks to new technologies, tourism has recorded incredible growth nowadays, and this area of tourism has a need for professional staff. The ability of the ICT industry to respond to the high demands of users who want more bandwidth and availability of different services with an appropriate level of quality depends on the ability of the personnel (Krstić et al., 2015, p. 748). The ICT industry has changed everything in tourism and has brought completely new occupations and new business models. It is advantageous for tourism and hospitality managers in general and marketing managers in particular to be aware of the recent changes in ICTs and their relationship with customer service. As ICT development becomes more sophisticated, industrial practitioners, educators, and policy makers may find the selection, analysis, implementation and operating new ICT systems increasingly difficult (Law et al., 2009, p. 600). Successful and accomplished practitioners will demonstrate how

new technologies can be used in the promotion and sale of tourism products and services.

The most important forms of ICTs in tourism are reflected in the use of: reservation systems, global distribution software applications in catering, destination support and management systems, electronic intermediation in the organization of travel via the Internet, geographic information systems, mobile platforms, etc. The first major impact of ICTs in the tourism sector was the introduction of the Computerized Reservation System (CRS) in the 1970s. In the 1980s, the Global Distribution System (GDS) emerged, as a logical upgrade to the reservation system, uniting a wide range of services and products and bringing global distribution information structure in the entire tourism sector (Milovanović & Gligorijević, 2017, p. 109). Nowadays, the application of ICTs in tourism is very wide and constantly finds new areas of activity. Increase in capacity, speed of information flow and internet development directly affect the increase in the number of tourists in the world who use the Internet as the primary source of information when planning a trip, but also during its realization (Mišković et al., 2015, p. 76). The use of the Internet, Global Positioning System (GPS) or mobile phones influences the creation of a positive adventure and the experience of tourists (Borisavljević, 2016, p. 278).

With the help of ICTs, many activities in tourism are performed, such as direct contact with clients and partners, booking, check-in/check-out, payment, staff management, marketing, entertainment and customer service, communication with customers and partners, market research, differentiation and personalization of products, provision of new tools for marketing and promotion of destinations. Traditional marketing communications that establish unilateral, very often inefficient communication with tourists, in the last years of the 20th century and at the beginning of the 21st century, are enriched by digital communications whose basic characteristic is fast, efficient, two-way, interactive communication (Jovanović & Jovanović-Tončev, 2015, p. 65). Therefore, the intensive use of ICTs in the tourism sector, especially with the massive expansion of the internet services, has influenced the development of a new concept of tourism business that can be called e-tourism (Milovanović & Gligorijević, 2017, p. 109). Tourists can plan their trips, develop individual packages online, or buy commercial packages from tour operators.

New digital platforms connect service providers directly with tourists. It's easier to get directly to tourists, but also tourists have more and more easily accessible information, and the ability to voice their opinions and experiences. Attitudes about the significance and role of the Internet in the hotel and tourist business indicate that it has become one of the main pillars of the global communication and information society and the most important instrument for controlling, evaluating and improving the quality of hotel and tourist services. It performs the function of supreme, supra-corporative and transnational quality control of the overall tourism industry in the world, with quality control that is performed by all interested service users (Knežević et al., 2014, p. 771). Online reviews are continuing to foster a renewed spread of word-of-mouth in the travel industry. In the travel industry, online reviews can be considered as electronic versions of traditional word-of-mouth and consist of comments published by travelers on the tourism products, services, and brands they experience. Travellers are increasingly using online reviews to inform them about accommodations and other tourism-related products (Filieri & McLeay, 2015, p. 44). Today's tourists can communicate their dissatisfaction with poor service in public, but they can also be the largest ambassadors of the most beautiful experiences.

The promotion of tourist destinations and companies can no longer be imagined without the internet and new technologies that are aimed to attract the attention of domestic and foreign guests (Petrović et al., 2017). Destinations and companies must find ways to adapt to change and provide tourists with unforgettable experiences and best service, because they will otherwise "reward" them with negative comments that will echo on the Internet. The rapid growth in the number of online users and the increasing rate of online transactions provide clear evidence of the popularity of the technology. Businesses, including customer-oriented and information-intensive tourism enterprises, are increasingly adopting e-business models to achieve their organizational goals (Law et al., 2010, p. 297). To provide information to their customers, enable e-commerce, inform and coordinate, destinations and companies use information technologies. They also use these technologies to offset marketing activities with partners, employees and consumers. Both tourism destinations and enterprises increasingly need to adopt innovative methods and to enhance their competitiveness (Buhalis, 1998). By the impact on all mentioned aspects of business activities, the efficient use of ICTs and satisfactory level of ICT readiness can be considered as an

important factor of the competitiveness of tourism enterprises, destinations and tourism at the level of the country as a whole.

Methodology and information base of the research

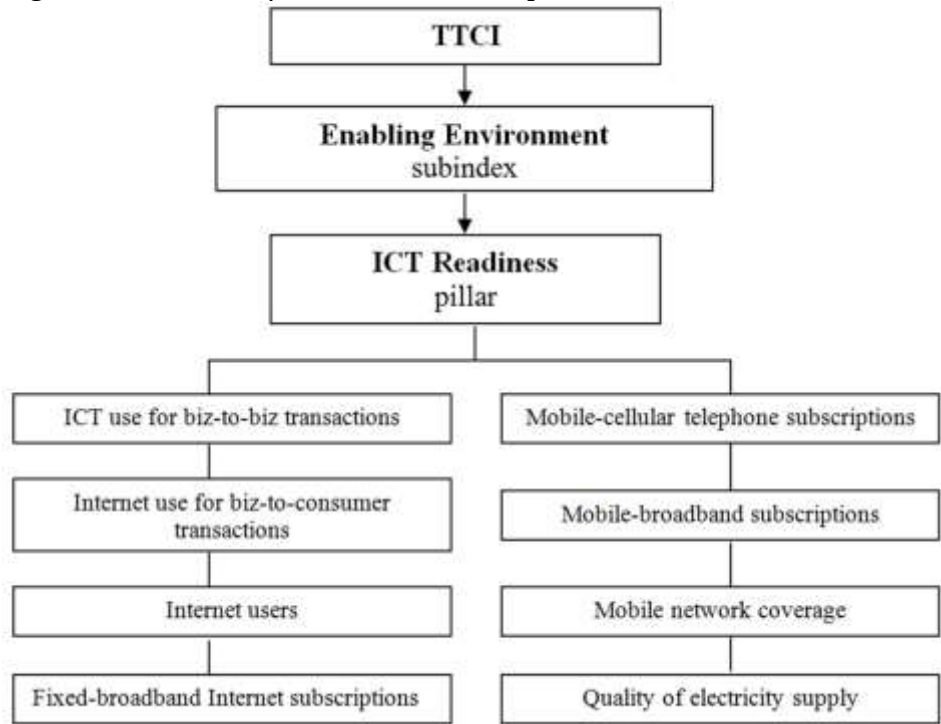
The information base of the research is data presented in The Travel & Tourism Competitiveness Report 2017 of the World Economic Forum (WEF). The Travel & Tourism Competitiveness Report 2017 contains detailed profiles for each of the 136 economies featured in the study, as well as an extensive section of data tables with global rankings covering the 90 indicators included in the Travel & Tourism Competitiveness Index-TTCI. The aim of the TTCI, which covers 136 economies this year, is to provide a comprehensive strategic tool for measuring the set of factors and policies that enable the sustainable development of the travel & tourism sector, which in turn, contributes to the development and competitiveness of a country (WEF, 2017, p. xi). Competitiveness in the tourism sector is an important factor to attract tourists and improve the environment in which tourist activity takes place. Competitiveness is one of the key issues for the tourism system and an important area for policymakers when they make tourism development strategies at the level of national economies in both, developed tourism countries, and in countries that do not have a large number of tourists (Krstić & Stanišić, 2015, p. 2).

The methodology for measuring the T&T competitiveness of the World Economic Forum systematizes the key factors into 4 subindices, i.e., into 14 pillars to quantify the level of competitiveness of each country and rankings. Each of the pillars within the TTCI subindices consists of a number of indicators (Krstić et al., 2016a, p. 13). The main focus of the research is on the ICT Readiness pillar within the Enabling Environment subindex of the TTCI. Within the ICT Readiness pillar, the eight indicators are measured (Figure 1).

Indicator *ICT use for business-to-business transactions* (I_1) represents the answer to the question: In your country, to what extent do businesses use ICTs for transactions with other businesses? (1 = not at all, 7 = to a great extent). Indicator *Internet use for business-to-consumer transactions* (I_2) presents answer to the question: In your country, to what extent do businesses use the internet for selling their goods and services to consumers? (1 = not at all, 7 = to a great extent). Indicator *Individuals using the internet* (I_3) presents the percentage of individuals using the

internet. Indicator *Broadband internet subscribers* (I_4) presents fixed broadband internet subscriptions per 100 population. Indicator *Mobile telephone subscriptions* (I_5) means number of mobile telephone subscriptions per 100 population. Indicator *Mobile broadband subscriptions* (I_6) means mobile broadband subscriptions per 100 population. This includes connections being used in any type of device able to access mobile broadband networks, including smartphones, USB modems, mobile hotspots and other mobile-broadband connected devices. Indicator *Mobile network coverage* (I_7) means percentage of total population covered by a mobile network signal. Indicator *Quality of electricity supply* (I_8) represents the answer to the question: In your country, how reliable is the electricity supply (lack of interruptions and lack of voltage fluctuations)? (1 = extremely unreliable, 7 = extremely reliable) (WEF, 2017, p. 356).

Figure 1: Structure of the ICT Readiness pillar



Source: WEF, 2017

In order to examine the impact of ICT readiness on the competitiveness of tourism, the values of these indicators for the top ten European countries and for the Balkan countries are analysed in the paper. The methods

applied in data processing are the method of correlation and benchmarking analysis.

Research results and discussion

The results of the research are grouped into several segments:

- a) Cross-country comparison of the scores of indicators within the ICT readiness pillar;
- b) Examination of the interdependence between ICT readiness and tourism competitiveness;
- c) Systematization of critical indicators within the ICT readiness pillar in the Balkan countries.

a) Cross-country comparison of the scores of indicators within the ICT readiness pillar

In order to separate countries of good practice and later benchmarking analysis, Table 1 gives an overview of the indicators within the ICT readiness pillar in the ten best ranked European countries according to the value of the ICT readiness pillar. Also, Table 1 also provides an overview of the TTCI scores for selected countries.

When the achievements of the leading European countries in the field of ICT readiness are observed, the results are fairly uniform and almost every country is a leader in at least one of the selected indicators. Norway is the best ranked according to the ICT use for business-to-business transaction indicator. United Kingdom records the best value of the Internet use for business-to-consumer transactions indicators. Iceland is the leader by the percentage of Individuals using Internet. Switzerland records the highest value when it comes to Fixed broadband Internet subscriptions and Quality of electricity supply. Estonia is best ranked according to the Mobile phone subscriptions/100 population. Finland is the leader according to the Active mobile broadband Internet subscriptions/100 population. Finally, Mobile network coverage rate of 100% is recorded in seven out of ten observed countries.

Table 1: Scores of the indicators within the ICT readiness pillar in the top ten European countries

Series	ICT use for business-to-business transactions, 1-7	Internet use for business-to-consumer transactions, 1-7	Individuals using Internet, %	Fixed broadband Internet subscriptions/100 pop.	Mobile phone subscriptions/100 pop.	Active mobile broadband Internet subscriptions/100 population	Mobile network coverage rate, % of pop.	Quality of electricity supply, 1-7	TTCI Travel & Tourism Competitiveness Index, 1-7
Denmark	5.84	5.70	96.3	42.5	128.3	116.8	100.0	6.75	4.43
Estonia	5.83	5.90	88.4	30.0	148.7	112.9	100.0	5.74	4.23
Finland	5.87	5.30	92.7	31.7	135.4	144.0	100.0	6.61	4.40
Iceland	5.83	5.60	98.2	37.0	114.0	93.4	99.0	6.72	4.50
Luxembourg	5.86	5.63	97.3	35.9	148.5	80.9	99.0	6.60	4.49
Norway	6.11	5.87	96.8	39.7	111.1	100.2	100.0	6.72	4.64
Sweden	6.03	6.17	90.6	36.1	130.4	122.1	100.0	6.78	4.55
Switzerland	6.09	5.76	87.5	45.1	136.5	102.0	100.0	6.89	4.94
United Kingdom	6.04	6.40	92.0	38.6	124.1	87.5	99.6	6.67	5.20
Netherlands	6.01	6.10	93.1	41.7	123.5	70.5	100.0	6.75	4.64
Average value – top 10 European countries	5.95	5.84	93.2	37.8	130.0	103.0	99.7	6.62	4.60

Source: WEF, 2017

In order to evaluate the relative positions of the Balkan countries, including Serbia, when it comes to the ICT readiness as a factor of the tourism competitiveness, Table 2 provides an overview of the scores of indicators within the ICT readiness pillar for this group of countries.

Table 2: Scores of the indicators within the ICT readiness pillar in the Balkan countries

Series	ICT use for business-to-business transactions, 1-7	Internet use for business-to-consumer transactions, 1-7	Individuals using Internet, %	Fixed broadband Internet subscriptions/100 pop.	Mobile phone subscriptions/100 pop.	Active mobile broadband Internet subscriptions/100 population	Mobile network coverage rate, % of pop.	Quality of electricity supply, 1-7	TTCI Travel & Tourism Competitiveness Index, 1-7
Albania	4.01	3.61	63.3	7.6	106.4	40.6	99.8	4.45	3.35
Bosnia and Herzegovina	4.12	4.28	65.1	16.6	90.2	33.5	100.0	4.59	3.12
Bulgaria	4.91	5.02	56.7	22.7	129.3	81.3	100.0	4.62	4.14
Croatia	4.51	4.22	69.8	23.2	103.8	73.1	100.0	5.77	4.42
Greece	4.34	4.23	66.8	30.9	113.0	44.0	99.9	5.26	4.51
Macedonia, FYR	4.52	4.38	70.4	17.2	98.8	53.5	99.7	4.91	3.49
Montenegro	4.38	4.11	68.1	18.1	162.2	58.2	99.5	4.01	3.68
Romania	4.62	4.97	55.8	19.8	107.1	63.7	99.9	4.73	3.78
Serbia	4.35	4.09	65.3	17.4	120.5	71.8	99.8	4.81	3.38
Slovenia	5.12	4.86	73.1	27.6	113.2	52.0	99.7	6.33	4.18
<i>The best result of selected countries</i>	5.12	5.02	73.1	30.9	162.2	81.3	100.0	6.33	4.51
<i>Average result of selected countries</i>	4.55	4.44	66.1	21.1	118.8	59.4	99.8	5.07	3.87
<i>The best result of the top 10 European countries</i>	6.11	6.40	98.2	45.1	148.7	144.0	100.0	6.89	5.20
<i>Average result of the top 10 European countries</i>	5.95	5.84	93.2	37.8	130.0	103.0	99.7	6.62	4.60

 Indicators whose score is below the average result of the selected (Balkan) countries

Source: WEF, 2017

Table 2 also gives an overview of the TTCI scores for the analysed group of countries and it can be concluded that the leading Balkan country in terms of the competitiveness of the tourism sector is Greece. When it comes to the ICT readiness, the results are quite heterogeneous. Slovenia

is the leader in three indicators (ICT use for business-to-business transactions, Individuals using Internet, Quality of electricity supply). Bulgaria has the best value of Internet use for business-to-consumer transactions and Active mobile broadband Internet subscriptions. Greece is leader according to Fixed broadband Internet subscriptions/100 population. Montenegro is leader according to Mobile phone subscriptions/100 population. Finally, Mobile network coverage rate amounts 100% in three out of ten Balkan countries (Bosnia and Herzegovina, Bulgaria and Croatia).

b) Examination of the interdependence between ICT readiness and tourism competitiveness

The importance of ICT readiness for the tourism competitiveness of Balkan countries is examined by determining the interdependence between scores of indicators within ICT readiness pillar and the TTCI. Given the available size of the sample, Spearman's rank correlation coefficient is chosen as an adequate indicator. This indicator belongs to a group of non-parametric indicators, whose application does not require the fulfillment of certain assumptions (first of all, the normality distribution) which requires the calculation of parametric indicators (Janković-Milić, 2016, p. 79). The calculated values of the Spearman's rank correlation coefficient between the selected variables are shown in Table 3.

It can be concluded that positive interdependence is observed among all the analysed indicators within the ICT readiness pillar and the TTCI. A high positive statistically significant correlation is observed between Fixed broadband Internet subscriptions/100 population and the TTCI (correlation coefficient of 0.964) and between Quality of electricity supply and the TTCI (correlation coefficient of 0.661). Moderate positive correlation is observed between the TTCI and following indicators: ICT use for business-to-business transactions, Internet use for business-to-consumer transactions, Individuals using Internet, Active mobile broadband Internet subscriptions/100 population. Low, but also positive interdependence is recorded between the TTCI and Mobile phone subscriptions/100 population, as well as between the TTCI and Mobile network coverage rate.

Table 3: *Values of the Spearman's rank correlation coefficient*

		TTCI
ICT use for business-to-business transactions, 1-7	Correlation	0.503
	Coefficient	
	Sig. (2-tailed)	0.138
	N	10
Internet use for business-to-consumer transactions, 1-7	Correlation	0.345
	Coefficient	
	Sig. (2-tailed)	0.328
	N	10
Individuals using Internet, %	Correlation	0.309
	Coefficient	
	Sig. (2-tailed)	0.385
	N	10
Fixed broadband Internet subscriptions/100 pop.	Correlation	0.964(**)
	Coefficient	
	Sig. (2-tailed)	0.000
	N	10
Mobile phone subscriptions/100 pop.	Correlation	0.297
	Coefficient	
	Sig. (2-tailed)	0.405
	N	10
Active mobile broadband Internet subscriptions/100 population	Correlation	0.382
	Coefficient	
	Sig. (2-tailed)	0.276
	N	10
Mobile network coverage rate, % of pop.	Correlation	0.116
	Coefficient	
	Sig. (2-tailed)	0.749
	N	10
Quality of electricity supply, 1-7	Correlation	0.661(*)
	Coefficient	
	Sig. (2-tailed)	0.038
	N	10
TTCI	Correlation	1.000
	Coefficient	
	Sig. (2-tailed)	.
	N	10

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Source: *Authors (SPSS Statistics 19)*

Since the results of the correlation analysis point to the great importance of ICT readiness for the competitiveness of Balkan countries' tourism, a

more detailed analysis of critical ICT related factors requiring improvements is needed.

c) Systematization of critical indicators within the ICT readiness pillar in the Balkan countries

By benchmarking analysis of the data presented in Table 2, it is possible to systematize critical indicators in the field of ICT readiness in the Balkan countries that require improvement. Each country should first apply corrective measures and make improvements in indicators in which it deviates from the average of the comparable (Balkan) countries (indicators of the first level of priorities), and then the target should be the average value of the ten best ranked European countries (indicators of the second level of priorities) (Krstić & Stanišić, 2016, p. 102).

Table 4: *Specification of the indicators within the ICT readiness pillar according to the priority of improvements in the observed countries*

Country	Indicators of the first priority level - the benchmark is the average of the Balkan countries	Indicators of the second priority level - the benchmark is the average of the top 10 European countries
Albania	I ₁ , I ₂ , I ₃ , I ₄ , I ₅ , I ₆ , I ₈	/
Bosnia and Herzegovina	I ₁ , I ₂ , I ₃ , I ₄ , I ₅ , I ₆ , I ₈	/
Bulgaria	I ₃ , I ₈	I ₁ , I ₂ , I ₄ , I ₅ , I ₆
Croatia	I ₁ , I ₂ , I ₅	I ₃ , I ₄ , I ₆ , I ₈
Greece	I ₁ , I ₂ , I ₅ , I ₆	I ₃ , I ₄ , I ₈
Macedonia, FYR	I ₁ , I ₂ , I ₄ , I ₅ , I ₆ , I ₇ , I ₈	I ₃
Montenegro	I ₁ , I ₂ , I ₄ , I ₆ , I ₇ , I ₈	I ₃ , I ₅
Romania	I ₃ , I ₄ , I ₅ , I ₈	I ₁ , I ₂ , I ₆
Serbia	I ₁ , I ₂ , I ₃ , I ₄ , I ₈	I ₅ , I ₆
Slovenia	I ₅ , I ₆ , I ₇	I ₁ , I ₂ , I ₃ , I ₄ , I ₈

Source: *Authors*

Albania, Bosnia and Herzegovina and Macedonia are the worst positioned Balkan countries in terms of ICT readiness. That is why they do not have, or have a small number of indicators of the second priority level, since they are far from the results achieved by the leading European countries in this field. After these countries, Serbia and Montenegro are the following according to the weakness of performance and achievements in the field of ICT readiness. Relatively good performance is recorded in Bulgaria, Croatia and Slovenia.

If the position of Serbia is considered, it can be concluded that a greater number of indicators within the ICT pillar which require improvement can be separated in Serbia. Priority in Serbia should be given to improving the following indicators: ICT use for business-to-business transactions, Internet use for business-to-consumer transactions, Individuals using Internet, Fixed broadband Internet subscriptions/100 pop., Quality of electricity supply. After their improvement, in order to reach European standards in this field, Serbia should focus on achieving better results in the field of Mobile phone subscriptions and Active mobile broadband Internet subscriptions.

Conclusion

Information and communication technologies have changed and constantly change the way of life and work in modern conditions. Their influence is evident in all spheres of life and all sectors and industries. The role of information and communication technologies is particularly important in the tourism sector as an information intensive sector. In tourism, information and communication technologies find a wide field of use in all business segments. They are important both for the tourists and for the carriers of the tourist offer. Considering the wide range of use of information and communication technologies in the tourism sector, it is justified to study and measure the contribution of their efficient use to the level of tourism competitiveness.

The paper examines the impact of the level of ICT readiness on the level of tourism competitiveness in selected groups of countries. The analysis has shown that the leading European countries in the field of ICT readiness, countries identified as countries of good practice, simultaneously record significant results in the field of tourism competitiveness. The Balkan countries are the other analysed group of countries. The results of the benchmarking analysis point to the significant lag behind of these countries when it comes to ICT readiness for the leading European countries. However, regardless of this fact, the results of the correlation analysis indicate that ICT readiness is an important factor of the tourism competitiveness of the Balkan countries.

This initiated the need to examine the critical indicators in the field of ICT readiness in Balkan countries that require improvement in order to achieve a higher level of tourism competitiveness. Except Bulgaria, Croatia and Slovenia, which have relatively good results, a large number

of indicators have to be improved in all Balkan countries and must be a priority in the future functioning of policy makers in technology and tourism development. It can be concluded that the worst results in this field are recorded by Albania, Bosnia and Herzegovina and Macedonia. Serbia also does not have a satisfactory level of ICT readiness. The use of Internet in business transactions, as well as the individual use of the Internet and the quality of electricity supply are fields that require priority action and improvement in Serbia.

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THE INFORMATION AND COMMUNICATION TECHNOLOGY IN THE FUNCTION OF TOURISM DEVELOPMENT

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Abstract

Rapid development of information and communication technology, above all computer reservation systems, global distribution systems and Internet, has introduced a series of changes in recent tourism development. These changes are primarily related to the establishment of new relations between supply and demand in the tourism market. In terms of supply, some of the advantages of using information and communication technologies are business operations performance efficiency, direct contact with clients, flexibility in work, lower operating costs. In terms of demand, the advantages are reflected in a quick and easy access to information and easier booking and payment of tourist services. Influences of modern information and communication technologies on tourism development are numerous. This paper focuses on the impact of information and communication technology on the formation of new relations on the tourism market and changes in the tourism industry.

Key Words: information and communication technology, computer reservation systems, global distribution systems, Internet, tourism, development

JEL classification: Z32, L86, 039

Introduction

Tourism is one of the factors of growth of the world economy, the biggest export “industry”, a significant factor in foreign exchange earnings and a source of added value of undeveloped areas (Hrabovski-Tomić &

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Milićević, 2012). As the most dynamic and heterogeneous phenomenon of modern society, tourism should be a long-term priority of economic development of each country as it represents one of the most remarkable economic and social phenomena of the XXI century (Milićević & Petrović, 2017).

According to the World Travel and Tourism Council (WTTC) the total contribution of the tourism industry in the global GDP in 2016 was 10.2%. That same year, the recorded 297,896,000 employees in economic activities were directly and indirectly related to tourism, or 9.7% of total employment (WTTC, Travel&Tourism Economic Impact 2017 World). According to the data of the World Tourism Organisation, one out of ten job positions in the world are in the tourism sector. The total number of international tourists in the world in 2016 amounted to 1,235 million (3.9% more than in 2015). Expenditure by international visitors on accommodation, food and drink, entertainment, shopping and other goods and services in tourism destinations reached US\$ 1,220 billion (euro 1,102 billion) in 2016 (UNWTO Tourism Highlights, 2017 Edition). Such development of international tourism evolved in constant growth of tourism role in overall economic development of most countries over the world (Petrović & Milićević, 2015).

Continuous innovation of tourism offer is required because the tourism development happens in a very turbulent environment (Krstić et al., 2015), and because today tourists increasingly strive for new tourism products, new destinations, new experiences. New experiences become a main motive for a decision on tourism travel (Milićević & Petrović, 2016). New, sophisticated and demanding tourists require information about new destinations and authentic experiences, as well as an interaction with providers in order to satisfy their specific needs and wishes (Buhalis, 1998). Starting from the changes in requirements of tourism demand, hoteliers, travel agencies, tour operators, rent-a-car companies and other participants in tourism distribution chain base their business on technological achievements. Information and communication technologies have made big changes in the operating manner in tourism industry. Success in tourism market depends on the ability to anticipate changes in requirements and motives of tourists. Application of information technologies is related to numerous and complex tourism demand, as well as expansion of tourism products meant for smaller market segments (Milićević et al, 2013).

The tourism industry can be seen as one of the first business sectors where business functions are almost exclusively using information and communication technologies (Garzotto et al. 2004). The information and communication technology is crucial to the tourism industry and its success. The information and communication technology has brought with it a number of changes and challenges that affect business and tourism (Pease & Rowe, 2005).

Many tourism companies have begun to complement their service by using innovative technology to meet the demands of modern tourists. Robots, virtual reality and different gadgets are already being used in the tourism industry. Passengers can now do an online check-in when travelling by plane via a home computer, a tablet, or a smartphone. They can, before entering the plane, reserve the desired seat or choose a favorite meal (Milićević, 2016). New ways for doing business are developed through the innovative usage of information and communication and internet technologies. It helps companies to achieve the competitive advantage on the global market (Janković & Galetić, 2014).

Information and communication technology through efficient and fast data processing basically change the quality of business in tourism by creating new methods of business management and decision making. The development of information and communication technology has introduced significant changes in the way hotels and transport companies, tour operators and travel agencies work, and has improved the process of distribution of tourist products (Milićević & Štetić, 2017). Important factor of the tourism destination competitiveness is a high-efficient information technology (Petrović et al., 2017). The information and communication technology allow tourists to quickly and easily access information about tourism destinations and purchase the desired services without intermediaries (Petrović & Milićević, 2015). In contemporary terms of business, survival and advancement of tourism market position cannot be imagined without the implementation of contemporary information and communication technologies in business systems. Electronic commerce has opened up new opportunities in the global tourism industry.

So far three significant innovations within the information and communication technology have influenced the redefinition of the

organizational structure in the global tourism industry. These are (Pease et al., 2007; Shanker, 2008; Štetić et al., 2017):

- The development of computer reservation systems as the first globally present information application,
- The development of global distribution systems, and
- The development of the Internet as a new platform for tourism companies business and tourism destinations management.

In addition to implications on the change of tourism industry structure, development of information and communication technologies influenced the changes in perception of consumers through strengthening the interaction between consumer-tourism destination, consumer-tourism companies and the consumers themselves (Milićević et al, 2013).

The computer reservation systems and tourism

The initial impulse of application of information and communication technology in tourism has resulted in deregulation of air traffic. New competitive relationships between airline companies meant that much more information was used in the business with constant changes that were conditioned by the emergence of new airlines, new airline lines, constant tariff changes, etc. The development of a computer reservation system is the main change in the distribution of tourism products. This was a transition from a manual reservation system to a fully automated computer reservation system.

The main initiators for the development of computer reservation systems were airlines, first in the United States and then in Europe. They then represented the internal systems of large airlines that provided travel agencies with direct access to information about available seats on the plane and ticket prices, with the possibility of direct reservations. In 1964, *American Airlines* introduced the first *computer reservation system SABRE*, which later developed and expanded into the global distribution system and today is one of the leading in the world. Computer reservation systems of airline companies are in fact the outbreak of global distribution systems and online agencies.

Recognizing the importance of this technology, other tourism industry subjects, primarily hotel chains and tour operators, begin developing their information and reservation systems. The main advantages of these systems for tour operators are reflected in the speed at which they can

register free accommodation and traffic capacity, efficiency in the reservation system and the sale of the package of arrangements, as well as the ability to react quickly to changes (e.g. *last minute* tourism offers) (Milićević & Štetić, 2017).

The first tour operator who introduced the computer reservation system into its business is the British *Thomson Holidays*, in 1976 under the name *TRACS (Thomson Reservation and Administration Control System)*. At that time, ten regional offices were connected to a central computer, and travel agencies could call any of these outlets to reserve a package of arrangements (Kärsher, 1997). Employees of *Thomson Holidays*, who worked on the booking, communicated through the terminals with a central computer and thus provided the agents with the necessary informations and reservations. In addition to reservations, *TRACS* also supported procedures related to finance and administration. The disadvantage of *TRACS* was that reservations between travel agencies and *Thomson* offices continued to be made by telephone, which caused excessive overhead of telephone lines and high costs during the season. The solution to this problem was to connect travel agencies with *Thomson's* computer reservation system directly *online*. This was done in 1981 when *Thomson Holidays* set up the *TOP (Thomson Open Line Programme)* system, the most famous and successful system of a tour operator, which was a key factor in achieving the competitive advantage of this tour operator on the British market (Milićević & Štetić, 2017).

Global distribution systems and tourism

In the mid-'80s, the computer reservation system is developed into a comprehensive global distribution system that offers a wide range of tourism products and services and provides mechanisms for communication between airlines and travel agencies. The development of the computer reservation system in the global distribution system integrates various tourist services, uses the computer reservation system infrastructure and provides additional value of services (Njeguš, 2010).

For travel agencies, this was an opportunity for significant improvement of business, and above all a more efficient process of reservation of airline tickets, hotel accommodation, *rent-a-car* services and other services. The Global Distribution System has provided a number of advantages to all tourist companies, which in this way have placed their services to end consumers - tourists, through sales sites of travel agencies,

who have had access to a set of offered services by entering the global distribution system terminal. The main advantage of using the global distribution system for travel agencies was based on the global availability of tourism products, as well as accurate and up-to-date information on these products, significant reduction in communication and booking costs, facilitated commission fees and efficient printing procedures and all information needed by clients (Spasić, 2013).

Global distribution systems have influenced the expansion of tourism companies and tourist destinations, through linking suppliers in tourism with tourist intermediaries. Today, leading global distribution systems sell their services through the Internet on the open market, own their own websites, and thus successfully market and efficiently distribute their services on the online market and continue to intensively expand the network of users among travel agencies. The aim of global distributive systems is to make their services available to online consumers through high technology and simultaneously to provide them with different products at attractive prices. Such an approach requires the global system to offer a series of information on different elements of tourist offer and to include economic and noneconomic entities into the system work (Radosavljević, 2009).

The four most important global distribution systems are *Amadeus*, *Galileo International*, *Sabre* and *Worldspan*, through which it is possible to reserve all the services necessary for the realization of the tourist arrangement. On the territory of the USA, leading global distribution systems are *Sabre* and *Worldspan*, while in Europe the most widely used are *Amadeus* and *Galileo International*. *Amadeus* is the largest global distribution system in the world (Milićević & Štetić, 2017).

Amadeus was founded in 1987 by four air companies: *Air France*, *Iberia*, *Lufthansa* and *SAS*, but it started operating in 1992. Until then, most European air carriers developed their own computer reservation system, however, due to the unification of the European market, there was a need for creating such a distribution system that will distribute airline seats in Europe and around the world and will establish a direct link with travel agencies. Today, *Amadeus* is the leading global distribution system according to the number of users - travel agencies. Over 230 tour operators can make reservations of air tickets, hotels, etc. in this way. *Amadeus* includes 709 airlines, over 379.000 hotel properties, 43 car rental companies, 50 cruise and ferry lines, 90 rail operators, 16 insurance

provider groups, 200 airport operators, etc. More than 190 countries served by *Amadeus* and its 70 local *Amadeus Commercial Organisations*. More than 14,250 employees work in the *Amadeus group worldwide*, representing 118 nationalities worldwide. The benefits of *Amadeus* include: insight into driving schedule, sale of air, rail and boat tickets, hotel sales, car rentals, cruises sales, sales of travel arrangements, etc. Over 3.9 million reservations are made daily through this system. The company's headquarters are in Madrid (Amadeus Global Report, 2015). The *Amadeus Serbia & Montenegro* was founded in 1989 by national carrier *Air Serbia* (former name *Yugoslav Airlines*) and *Amadeus Group*. *Amadeus* is dedicated to deliver *Amadeus* products and solutions and to serve travel agency network in Serbia and Montenegro (Amadeus Serbia, 2017).

The Internet and tourism

During the 90s of the twentieth century, the era of Internet and web sites emergence that were involved in tourism travel followed. Development and application of information and communication technology has linked both the supply and demand operators on the tourism market, and thus facilitated the distribution and promotion of tourism and hotel services (Petrović et al, 2016). The Internet, being one of the most influential information and communication technologies, has served as a competitive marketing and communication tool for tourism and hotel companies in facilitating information sharing and online transactions (O'Connor & Frew, 2002; Doolin et al, 2002).

Collaboration around the Internet is a way for tourist operators, such as hotels, to deal with excess capacity and increase occupancy rates quickly. This already occurs within many chains and is evident in the participation in intermediaries or websites such as Travelocity.com (Pease & Rowe, 2005). Traditional travel agencies are developing their online sales, creating web sites and encouraging tourists to online shopping of arrangements and travel services because it brings them savings in time and money. An example of successfully used new channels of sales is *Thomas Cook's website* (Spasić, 2013).

Dynamic expansion in the use of the Internet has led to substantial changes in the channels of distribution of tourist services. Travelers using the Internet can explore, plan and book tourist services. The websites of travel agencies and on-line platforms are the main source of travel

information. In one place, travelers can get a lot of information related to transport, accommodation and other tourist services. They have enabled all tourism companies to place their products on the tourist market without intermediaries (Milićević & Štetić, 2017).

The availability of the Internet has introduced new modes such as infomediation, i.e. exchanges of information between consumers on forums, personal websites, and pages dedicated to comments and advices, on professional tourist sites or portals (Gensollen, 2001). With a rapid development of the Internet and the emergence of Web 2.0, which has enabled the development of social networks and virtual worlds, tourists are able to estimate the destination before they physically travel to it. Social networks that enable people to experience a destination through the impressions of other consumers, of both, those they know and completely unknown are extremely prominent (Neuhofer et al., 2014). Social networking sites and photo/video sharing sites have become more popular serving as websites used for trip planning (Xiang, Magnini & Fesenmaier, 2015). Mariani, Di Felice, and Mura (2016) carried out a survey exploring Facebook strategic use by Italian destination management organizations (DMOs). Their study-outcomes indicate that each organization employs social media in a different manner and with variable frequency (Semerádová & Vávrová, 2016). Similarly, Yoo and Kim (2013) investigated the availability of online newsrooms (such as Facebook, Twitter, Youtube, or Flickr) on U.S. state tourism websites. Despite the high availability ratio, the authors found shortcomings in the ways organizations distribute this newsroom content (Semerádová & Vávrová, 2016).

The Internet has undoubtedly brought real revolution in the mode of distribution and promotion of hotel accommodation facilities (Buhalis & Law, 2008). The hotel industry experiences dynamic expansion of the Internet application. Strong changes occur primarily in the field of promotion and sales, due to the willingness of an increasing number of tourists to take advantage of new technology to book, purchase, and pay for tourist services.

The phenomenon of Internet has always changed the way travel agencies operate. This has also influenced the formation of new electronic mediators in tourism, which have been recording rapid growth. These are *Internet* or *online* agencies (also called *electronic* or *virtual* agencies) whose basic characteristic is the lack of direct communication with

consumers and business partners, i.e. business based on electronic (*online*) communication (Milićević & Štetić, 2017). These *online* agencies use the same computerized booking systems as traditional agencies, but provide additional information such as information about tourist destinations, weather forecasts, foreign currency, city maps, etc. They are available to customers non-stop (*24/7 customer service*). The main advantage of *online* agencies is the possibility of direct booking of tourist services through *websites*, which reduces the cost of sales staff in making direct contact with consumers (Radosavljević, 2009).

These new distribution channels allow tourists to browse through the Internet and create a "real" package arrangement that meets their own requirements. Also, in this way, the costs related to the payment of agency fees are reduced, as well as the number of other costs that tour operators have in stimulating the retail network. Certainly with these savings, the possibility of lowering the prices of tourist arrangements and partial tourist services is created. Electronic agencies have increased their global participation, but at the same time they have become strong competitors to traditional travel agencies with classically organized sales at outlets (Milićević & Štetić, 2017).

The expansion of the Internet has influenced the emergence of new opportunities in the distribution of tourist services, and large global distribution systems have adapted very quickly to these trends by forming their own electronic agencies. The first electronic agency, *Travelocity.com* was established in 1996 by SABRE, the leading global distribution system, precisely as a reaction to market challenges. That year, another electronic agency, *Expedia.com*, was set up in the United States, founded by *Microsoft*, which is gaining momentum in market growth.

Today the *Expedia.com* is one of the largest online travel companies in the world, with an extensive brand portfolio that includes some of the world's leading online travel brands: *Expedia*, *Hotels.com*, *Expedia Affiliate Network (EAN)*, *Trivago*, *HomeAway*, *Egencia*, *Orbitz*, *Travelocity*, *Hotwire*, *Wotif Group*, *Expedia MediaSolutions*, *CarRentals.com*, *Classic Vacations*, *Expedia Local Expert*, *Expedia CruiseShipCenters*, *TravelDoo*, *SilverRail*. Korisnici platforme mogu da pretražuju over 500.000 hotels, over 500 airlines, paket aranžmane, krstarenja, *rent-a-car* agencije, itd (Expedia Group, 2017).

Some online travel agencies have seen an opportunity to improve the market position in the business specialization. For example, there are online travel agencies that base their business on the sale of accommodation facilities. Some of them offer a large number of hotels around the world, like *Hotels.com* or *Booking.com*. There are travel agencies that specialize in luxury hotels, such as *Mrandmrssmith.com*. On the other hand, there are agencies specializing in last minute booking, such as *LateRooms.com* or *Lastminute.com* (in addition to accommodation and transportation, offering package arrangements, rent-a-car, tickets for musicals and attractions, etc.) (Milićević & Štetić, 2017).

Established in 1996 in Amsterdam, *Booking.com* has grown from a small Dutch start-up to one of the largest travel e-commerce companies in the world. Part of The Priceline Group, *Booking.com* now employs more than 15,000 employees in 198 offices in 70 countries worldwide. The *Booking.com* connect travellers with the world's largest selection of incredible places to stay, including everything from apartments, vacation homes, and family-run B&Bs to 5-star luxury resorts, tree houses and even igloos. The *Booking.com* website and mobile apps are available in over 40 languages, offer 1,534,024 properties, and cover 123,217 destinations in 229 countries and territories worldwide. Each day, more than 1,550,000 room nights are reserved on the platform. On the platform, availability and price can be checked and online reservations made, and payments are made through credit cards. *Booking.com* does not charge any fees for services to users of the platform. In addition to photos, maps and hotel descriptions, you can also find hotel reviews, as well as guest comments. The platform is also available through mobile applications (*Booking.com*, 2017.).

The intensification of competition in the sales channels was influenced by the emergence of new types of *online* companies, *Aggregators* or *Metasearch engines*, which are an alternative to global distribution systems and online agencies. They represent the kind of search engines that have the huge ability to search the databases on a large number of sites in order to give the best possible offer according to the requirements of the consumer (Spasić, 2013). *Metasearch engines* are the search engines that do not have their own database, they send queries to someone else or to several other browsers, and on the basis of his/their database form the search results. In this way, passengers can search and compare offers of multiple bidders at the same time. The most famous aggregators are: *Kayak*, *Mobissimo*, *Cheapflights*, etc. For example, if a tourist

searches for a particular hotel in London, *Kayak* will offer him the prices of the largest *online* search engines with whom it cooperates, such as *Hotels.com*, *Priceline.com*, *Booking.com*, *Expedia.com*, *Travelocity.com*, *Tripadvisor.com*, *Hotwire.com*, *Orbitz.com*, etc. In this way, the client has the opportunity to compare prices and choose the most favorable bid (Milićević & Štetić, 2017).

New distribution channels are becoming more and more popular in the market, and tourists are increasingly relying on this kind of search of travel services. Certainly the great advantage of using electronic platforms is the availability of pictures and video content, as well as comments by other tourists, which can make it easier to make decisions about travel and hotel choices. On each platform, tourists can create a user profile where reservations are kept. Depending on the type of content search, there are various "filters", starting from the choice of tourist destination and date of travel, airline company, hotel type, child benefit, type of car rented, price, etc.

Almost every tourist or hotel company maintains online presence on the market using some of the social networks (Parker, 2012). Social networks help companies manage the brand of a company and influence its presence in everyday life of consumers; to approach consumers and get to know their needs, participate in discussions and offer them a solution; offer cheaper propaganda than traditional media; and offer numerous ways to measure and monitor performance (Milićević & Štetić, 2017).

Conclusion

Development of information and communication technologies in the last decades has conditioned a revolutionary shift in all segments of development and functioning of society (Milićević et al, 2013). The influence of modern information and communication technologies is major in all forms of business, and consequently in the areas related to hospitality and tourism (Milašinović & Kraguljac, 2015). Tourism is one of the first sectors to embrace information and communication technology (Pease & Rowe, 2005).

Development of mass tourism is followed by dynamic changes in tourism supply and demand. Development of computer reservation systems in the 1970s, global distribution systems in the 1980s and Internet in the 1990s have transformed operative and strategic business practice of tourism

companies (Milićević et al, 2013). Since 2000, the era of modern information and communication technology has started, which in a completely new way through the development of the Internet, Extranet, mobile applications and interactive digital television connects tourist demand with tourist offer, which contributes to a more significant democratization of tourism as a phenomenon (Bakić, 2010). Modern technology has made a step forward with the development of destination virtual experience system and online agencies. Therefore, main precondition for successful operation of the carriers of tourist offer is abandoning of conditional and transfer to electronic manner of tourist services distribution.

Perhaps the most significant change in the tourism industry business operations and the consumer behavior in tourism is enabled by a rapid development of the Internet. Today the Internet is not only a portal toward tourism enterprises and destinations but also a platform for both, their entire business operations on one side and a source of information about a trip, helping tourists with decision-making, planning and paying for it on the other side (Štetić et al, 2017). The application of the information and communication technology and the increasing use of the Internet in tourism industry business operation not only facilitate communication with customers and business partners, but it also ensure the future success at the tourism market (Čavlek, 2006).

New digital technologies leave a deep trace by ensuring global connectivity and interactivity (Štetić et al., 2009). The survival of tourism companies in the future will depend exclusively on identifying appropriate trends and their timely incorporation.

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INFORMATION TECHNOLOGY AND SUPPLY CHAIN MANAGEMENT IN TOURISM

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Abstract

Today the supply of tourist centres and destinations takes place through supply chains that connect different suppliers, manufacturers, distributors, logistics companies, and tourism and hospitality. The main task and objective of the supply chain is to deliver the right products and services to the right place at the right time in the right quality and at acceptable costs. To fulfil the said objectives and tasks, it is necessary to manage all processes and activities in the supply chain. Effective management cannot be imagined without the use of modern information technology and systems. The objective of this paper is to present in detail new information and logistics solutions that are used in the process of selling products and services, i.e. the supply of tourism and hospitality systems. Different solutions based on sensor technologies and devices, RFID technology and barcode systems, which are used for the identification and monitoring of processes, activities and products in various stages of the supply chain, will be presented. The application of information technology and systems ensures cost efficiency monitoring and increases visibility and security of supply chains in tourism.

Key Words: *tourism, supply chains, logistics, information technology, barcode, RFID*

JEL classification: *Z32, L86, R41*

Introduction

Accelerated tourism development and growing competition in this area have forced numerous tourism organizations to look for ways to improve their position in the tourism market. This is most often achieved by using

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new technologies and strategies. The new solutions are mainly based on information technology used in various segments of the business of touristic operators and organizations. An important precondition for the development of tourism, the competitiveness of the tourist destination, as well as customer satisfaction is the efficient development of supply chains. It is necessary to manage supply chains in order to provide the offer of tourist destinations, systems and facilities with the right products at the right time and in the right place with the least possible cost. Through supply chains, time and spatial transformation of material goods, information, energy, waste and capital takes place in order to provide quality tourist services at the lowest price. The main goal is to optimize the flow of goods from the place of origin to the place of consumption of goods, through production and distribution, in order to fulfil the requirements of the market with minimal costs.

Despite the great importance of logistics and supply chain for the development of tourism and supply, a lot of attention is paid to this issue. Research on supply chains and logistic processes in tourism have been relatively recent and are significantly limited. Such a situation is the result of a large number of companies in the supply chain in tourism, but they each have different objectives that are often opposite. In addition, many experts mainly focus on the marketing and sales of a tourism product, ignoring the management of a complete supply chain that significantly impacts the competitiveness of the tourist offer. The integration and coordination of all participants in the chain is very important, and enables the realization of a common goal, which is the fulfilment of the user's requirements (Odoom, 2012). This situation has to change because the logistics and supply chain management is often a prerequisite for a quality tourist service and customer satisfaction (Kilibarda et al., 2012).

It is necessary to define an appropriate logistical concept of supply chain management that will enable the increase of the competitiveness of tourist destinations and products. It is certainly not possible without the use of modern information technologies and systems. Information technologies and new digital business systems have found their wide application in online services for marketing, sales and reservation of tourist capacities. However, when it comes to supply chain management, these technologies have a very low degree of application.

The insufficient level of development of the supply chain management system and the low level of application of information technologies in the

supply of tourist destinations were a sufficient motive for the creation of this work. The authors intended to examine and present the most important problems, limitations, opportunities and solutions related to information technology and supply chain management in tourism. The paper has three basic units. The first unit refers to the definition of logistical and supply chains in tourism, the second to the basic logistical problems in the tourist region and the third to information technology and their application in the supply chain management.

Characteristics and structure of supply chain in tourism

The concept of supply chains in tourism can be considered from different perspectives. Although this is an insufficiently explored area in scientific and professional literature, there are several different definitions of this term. Among the most important definitions, the following can be distinguished: (Tadić, et al., 2012):

- Kotler, Bowen and Makens (2006) in their presentation on marketing in tourism and hospitality industry, define a supply chain in tourism as a system that includes suppliers of all goods and services that consist of tourist products intended for consumers.
- On the other hand, Scavarda, Lustosa and Scavarda, (2001), consider that the chain of supply in tourism, besides the supplier of all goods and services, includes the tourists themselves, as they actively participate in the production and consumption of tourist services.
- Still, Zhang, Song and Huang (2009) presented perhaps the most comprehensive definition of this term in their publication. They defined the supply chain in tourism as a network of tourism organizations involved in various activities, from the procurement of various components of tourism products and services, such as travel and accommodation, to the distribution of the final tourist product to specific tourist destinations, and which involves a large number of participants in both private and public.

Generally, the type of product greatly influences the characteristics of the supply chain. When it comes to tourism, the supply chain includes all categories of suppliers of goods and services that participate in the creation and delivery of tourism products. In order to adequately analyse the characteristics of logistics in tourism and in order to perform successful supply chain management, it is necessary to know the specifics of tourism and tourism products. In other words, tourism has certain characteristics, from a logistic point of view, which are specific only to

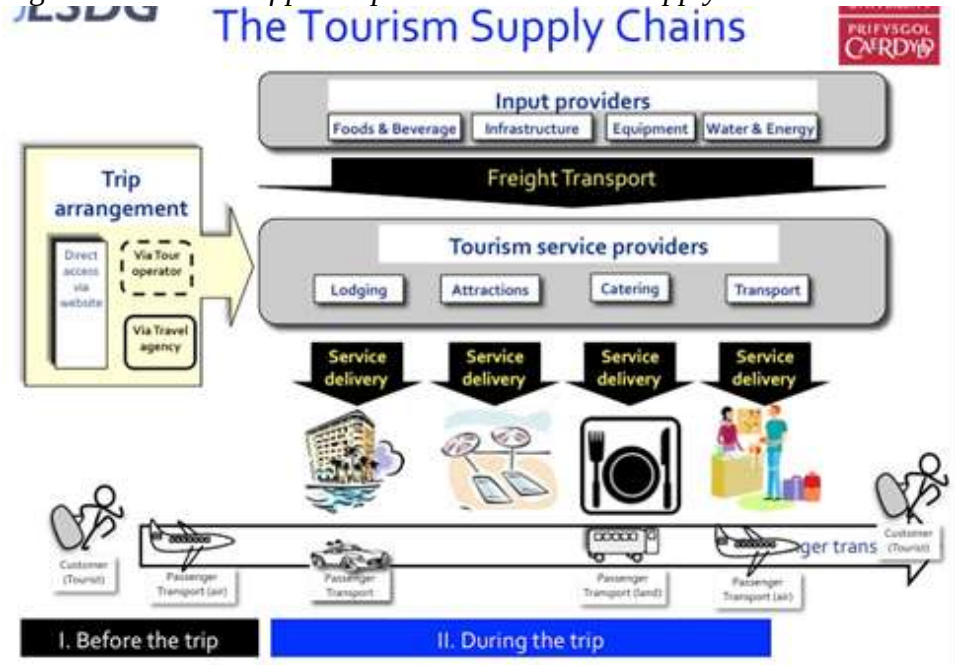
those activities that make a difference in relation to other economic activities. First of all, tourism is an interdisciplinary activity in which different products and services (travel, accommodation, etc.) are connected in order to form the final tourist product. On the other hand, the transit of tourist products is present. Tourist products are simultaneously produced and consumed, which results in the inability to store tourist products and services. In order to consume products of tourism, tourists must travel to destinations where these products are made. Tourist objects and attractions, as well as hospitality industry, represent places of demand and supply, but due to the impossibility of transporting and distributing both material and intangible values from their place of origin to guests, it is necessary for guests to move towards the tourist offer, that is, the distribution takes place in the opposite direction of tourist services. All of these have a significant impact on the complex structure and character of supply chains. Since the tourism product, unlike a manufactured product, cannot be brought to the consumer and the consumer must go to the product, it can be said that tourist complexes and hospitality industry represent the meeting place of two distributions of different directions, i.e. the flow of "distribution" of guests traveling to a tourist destination and the flow of "distribution" of material goods and goods in the system of supplying tourist facilities.

It is necessary to have in mind the complexity of the tourist product, which is global, heterogeneous and represents a blend of various components of services such as: accommodation, transport, sightseeing, shopping, etc. Likewise, the tourism industry faces greater uncertainty and the dynamics of demand, unlike its partners, as a result of the great competition between providers of tourism services. All of these have a major impact on the complex structure and character of supply chains (Figure 1).

Each of the participants in the tourism supply chain has certain goals and interests that are often conflicting with one another. For example, the goal of the supplier is to deliver enormous quantities of goods to a tourist destination in order to maximize profit. On the other hand, the goal of the tourists is the widest scope and variety of tourist services available at a moderate price. The conflict is more pronounced in cases where a supplier can also be a consumer of tourist services. The goal of logistics and supply chain management in tourism is to improve logistics performance, the excellence of business processes and customer satisfaction. This is achieved through the complete integration and

cooperation of all participants in the creation and consumption of tourist services. The consequences of tourism specificity, as well as the supply chain structure, are critical problems that arise in managing logistics processes in this activity. These problems are observed in practice and are subject to numerous researches in the professional literature, and are analysed in more detail in the next chapter.

Figure 1: Structure of participants in the tourism supply chain



Source: <https://pairach.com/tsc/>

Specificity of logistics problems in the tourist region

Each logistical region or destination is characterized by a number of logistical problems which are primarily due to: the great unevenness and seasonal character of demand for tourism products, the limitation of transport and logistics networks, insufficient application of modern information technologies and products management systems and processes in the supply chain.

During the tourist season, the number of inhabitants in the tourist region multiplies with respect to the local population. As a consequence, there are quantitative and qualitative changes in demand for products and services. First of all, there is an increase in demand for consumer goods,

including: groceries, cosmetics, clothing and footwear, sports equipment in accordance with the type of tourist offer, oil derivatives, water, electricity, etc. In addition, demand for services such as catering, hotel services, accommodation, sports and recreation, transport, etc., are also increasing. Production, or the enabling of these services, requires more intensive supply flows, which additionally burden mainly underdeveloped transport capacities. In addition to the quantitative increase in demand, there is a demand for certain products that are not available to the population outside the tourist season. This primarily refers to objects of artistic value, souvenirs, monographs and other tourist publications, as well as to specific products depending on the characteristics of the destination and the tourist offer (Fantazu, et al., 2007).

During the season, there are also quantitative and qualitative changes in transport requirements in the territory of the tourist destination, which affect the volume of business of commercial enterprises, hotels and accommodation facilities, as well as other participants in the formation of a tourist product. For transport companies, there are more and more requirements for the transport of goods and people (Mrnjavac, Ivanović, 2007).

Supply chains are mainly run through different logistic and transport networks, which are made up of transport infrastructure and logistic facilities. Very often transport areas and logistics networks are underdeveloped in tourist areas, and there is no space for capacity building. Coverage of the area of transport infrastructure, as a rule, is determined by the locations of cultural and historical monuments, hotels and other facilities for accommodation, sports, recreational and objects of interest to tourists. For example, in many tourist destinations there is a problem of lack of capacity of road roads, and the construction of additional capacities would negatively affect the appearance, or attractiveness of the destination. This makes it even more difficult to form an adequate transport network and increase capacity during the tourist season at the destination, although minimal investments are required. Various ways are developed to address these problems such as: customized traffic regulations during the season, closing the central city area for passenger cars and offering alternative modes of transport in major tourist destinations that are attractive to tourists (travel trains, tourist buses, etc.), as well as providing the necessary capacity for parking connected with the city centre.

The management of logistic processes and supply chains in tourism can be viewed through two levels. The first one deals with the macro aspect of supply chain management and the optimization of product, people, information, energy, waste and capital flows, which are directed towards the tourist region, destination, or specific geographic area. The management and optimization of logistics operations at this level is directly conditioned by the flow of information and data related to the acquisition, delivery, sale and distribution of material goods and products. The second level relates to logistic services, processes and operations within tourist facilities and between tourist facilities and capabilities within a tourist region or a tourist destination. It is necessary to manage the flows of products and goods that take place in the fittings of individual units and sub-systems of the tourism destination and which have a key influence on the user's satisfaction. The precondition for this is the application of appropriate information technologies and systems that will ensure the visibility of the supply chain and track product traceability through all stages of the chain from the source of raw materials, through production, sales and distribution to tourist facilities (Kaurin, 2017). Primary technology and tools for identifying and monitoring products are key elements for real-time management based on relevant data and facts. Unfortunately, in today's practice, this technology is not sufficiently applied, resulting in a number of problems in the daily supply of tourist regions and destinations. The following is a brief overview of information technologies and solutions that are most commonly used in developed supply chains.

Application of information technology in supply chains

Information Technology (IT) has a very important role in the tourism industry. Modern information technologies enable the presentation and interpretation of tourism products. IT is an effective means of promoting cooperation between stakeholders in the supply chain and improving supply chain efficiency through providing real-time information related to product availability, stock levels, delivery status, and production requirements (Tadić, et al., 2012). They allow suppliers to monitor, manage, and control their flows, products, processes, and activities. Transparency and communication achieved through the application of IT reduces unit operating costs and improves the competitiveness of companies, as well as efficiency, flexibility and cooperation in the entire tourism supply chain. All of the above points to the importance and

necessity of the information technologies application in the management of logistic processes in supply chains in tourism.

The significance of information technologies is even greater if one considers the fact that the application of modern technologies such as e-logistics, electronic distribution and information warehouses can help alleviate and solve numerous problems and difficulties that arise in tourism logistics (Dima, et al., 2014)

Information and communication technologies have a wide range of applications in the tourism supply chain. It is primarily their task to ensure efficient collection and flow of information necessary for the process of management and decision-making, as well as real-time monitoring of products and ensuring the visibility of all processes in the chain and product traceability. In the initial stages of development, the application was limited within the company or within a limited environment, and today, thanks to the Internet, electronic data exchange and powerful telecommunications services and networks, it has assumed global conditions. In general, IT application can be viewed with three significant areas or application problems. The first area is the supply chain visibility, other localization and tracking of shipments, facilities and assets, third-party application solutions and real-time parameter management software (Kaurin & Kilibarda, 2016)

Visibility of the supply chain

The greatest potential of information technologies is to facilitate collaboration between participants in the supply chain in order to achieve better information visibility and facilitate decision-making. There is a possibility of creating information visibility between suppliers, manufacturers, distributors, tourist organizations and end users. Visibility of information is the process of sharing critical data that is needed to manage the flow of products, services and information in real time between different stakeholders in the supply chain. If information is available but cannot be accessed by participants who need to respond to a particular situation, its value will be reduced exponentially. Increasing information visibility in the supply chain enables revenue growth, resource utilization and cost reduction. In order to increase accountability in supply chains, companies are considering the use of common models that share information at different levels of all participants - from suppliers of their suppliers to customers of their customers (Kaurin &

Kilibarda, 2016). These trading partners need to share forecasts, manage inventory, schedule work, optimize deliveries, and thus reduce costs, increase productivity and create greater value for the end-customer in the chain. Traditional supply chains are rapidly evolving into "dynamic business networks that consist of a group of independent business units that share planning and information execution to meet user requirements.

One of the concepts that are often mentioned lately, which could be applied in the supply chain of tourist destinations, is the concept of the "control tower of the supply chain" (Handfield, 2002; Heaney, 2013). The control tower provides key information available to supply chain partners to facilitate the coordination of customer requirements and supplier response. In order to transform the available data into useful information, development is needed in three areas:

- Processes - Processes should become common, with data exchange and collaboration between departments but also between organizations. Co-ordination of sales projections and supply chains can help suppliers to anticipate future needs. Companies should develop data that can be shared between partners to make it possible to plan demand. Risk management should also be implemented in order to reduce the possibility of supply chain interruption.
- Connection - Information must be shared between processes, different business functions, and outside of the company, providing a realistic insight into processes for all participants. Collaboration is also needed to increase the level of trust between partners.
- Technology - The main challenge in information sharing is the problem of data transfer between different information systems. Innovations such as cloud computing, databases and different software make the control tower possible. Once data are designed to provide participants with all the necessary information, they can later be used for different analysis and planning. The control tower allows companies to manage demand more precisely, in order to reduce inventory levels and respond to customer demands faster and more precisely (Handfield, 2002).

Choosing an adequate solution to improve the visibility of the supply chain requires a complete understanding of what is needed now and in the future in order to outperform competition. The first step in ensuring the visibility, responsibility and control of the supply chain of a tourist destination is to choose the best technology to support this venture. The most important precondition for introducing technology is the ability to

act on the basis of real-time data, which directly relies on the integration of multiple different systems and the ability to monitor data. If any of the two critical components are not available, the solution and also the results will be limited (Heaney, 2013).

Traceability of the product in the supply chain

A significant part of the supply chain refers to the distribution of food products. In order for these products to be safe, with high quality and known geographical origin, it is necessary to provide a traceability monitoring system on the complete supply chain. Traceability as part of logistics management enables food business subsystems to control the process of moving food from the raw material to the final product (Figure 2). Traceability is the ability to track product series and their complete or only partial history, in a production chain from harvesting, through transportation, storage, processing, distribution to sales, or internally in each of the above steps (Bevilacqua, 2015). It is also possible to check the safety and quality of products at all stages of production, distribution and serving and consuming food.

The traceability system should be: verifiable, applicable consistently and impartially, results-oriented, cost-effective, convenient to use, compliant with all applicable regulations or policies and in accordance with well-defined requirements (Bosona, et al., 2013). Of course, this cannot be realized without the use of appropriate information technologies.

Figure 2: Traceability system in the supply chain



Source: <http://backtrackerinc.com/>

One of the most well-known systems for traceability in the supply chain is based on Global Standard 1 (GS1) tools (Bechini, et al., 2015). The GS1 system is a set of standards that enable efficient supply chain

management through the unique identification of products, transport units, assets, locations and services, facilitating e-business processes. These standards facilitate national and international communication between all trading partners participating in the supply chain, including suppliers of raw materials, manufacturers, wholesalers and retailers, as well as end users. The system is designed so that it can be used in any industry, commerce or public sector, with no changes being introduced to the system that are harmful to current users who can follow the principles of the GS1 system design applications for automatic processing of GS1 data. This system allows:

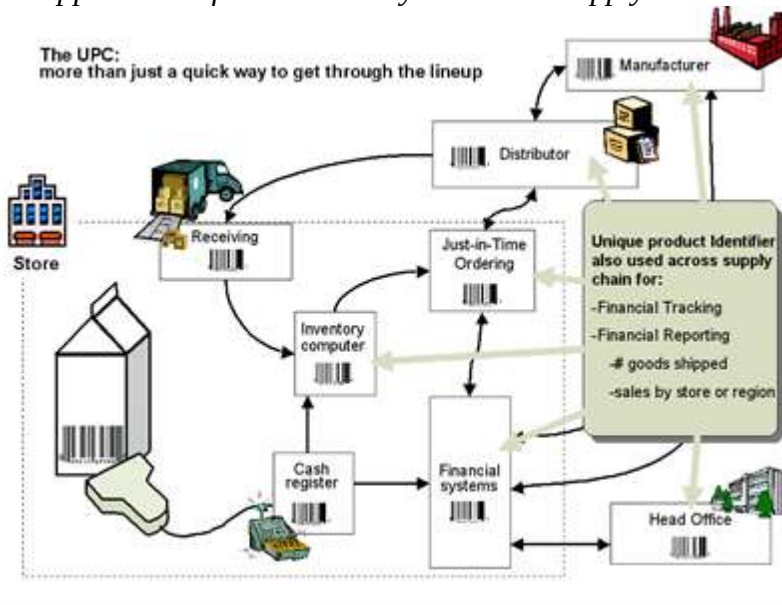
- Unique identification of all products. Any product that we want to track or need to monitor must be uniquely identified. GS1 global unique identifiers are keys that allow access to all available history, application, and product location information. In other words, all traceable units must carry a global, unique identifier directly on the traceable unit. If that is not possible, at least on the packaging or the transferring agent or on the accompanying document.
- Identify the exact location of the product. Unique location identification is provided through GLN (Global Location Number) allocation, for each location and functional entity.
- Identification of trade units GTIN (Global Trade Item Number). In order to identify certain elements, the GTIN is combined with a serial number or batch number (Serial Number or Batch Number) to ensure the complete traceability of the product.
- Identification of the product group. Group traceability is provided through the assignment of a GTIN and a serial number (Lot/Batch Number) to each product (e.g., a consumer unit).
- Identification of the product series. The traceability of the series is ensured by assigning a GTIN and a Serial Number to each product (consumer unit).
- Identification of logistic units (transport packages, pallets). Logistic unit traceability has been provided through the assignment of the GS1 Serial Transport Container Code - SSCC (Serial Shipping Container Code), to each new logistic unit.

In addition, GS1 enables the recording and tracking of all data, managed connections and communication between all participants in the supply chain.

Systems for identifying, locating and monitoring products

Barcode technology has a significant application for automatic identification of goods in different supply chain processes. It is the most common data identification system, and is usually used in warehouse systems, distribution and logistics centres (Figure 3). It is a relatively inexpensive technology that enables automatic identification of data with a high degree of efficiency. The workers once entered the data manually, which took a lot of time. The barcode greatly simplifies the identification, collection, processing and tracking of information, which enables better productivity and time and cost savings. Barcode provides high precision, as well as good data protection. Data cannot be read without an adequate scanner, unless there is a printed field in which the numbers and letters indicate barcode interpretation. The disadvantages are reflected through the constraints related to the rapid reading of a large number of data and the scanning from a greater distance.

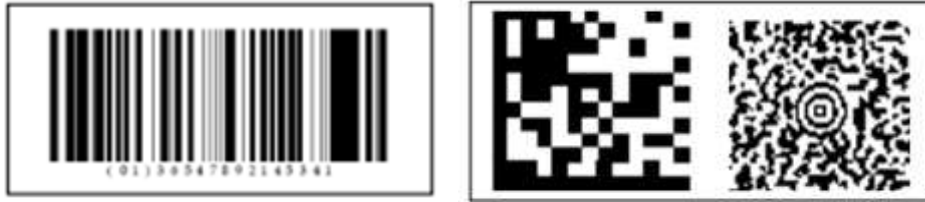
Figure 3: *Application of the barcode system in the supply chain*



Source: <http://www.contentdirections.com/materials>

Basically there are two types of barcodes: linear and 2D barcodes (Figure 4). Linear barcodes are part of everyday life and can be found in supermarkets, bookstores, hospitals, post offices, etc. Linear barcode generally functions as an identification code (ID code) for products.

Figure 4: *Barcode tags*



a) *Linear barcode*

b) *2D barcode*

Source: <https://www.gtin.info/barcode-101/>

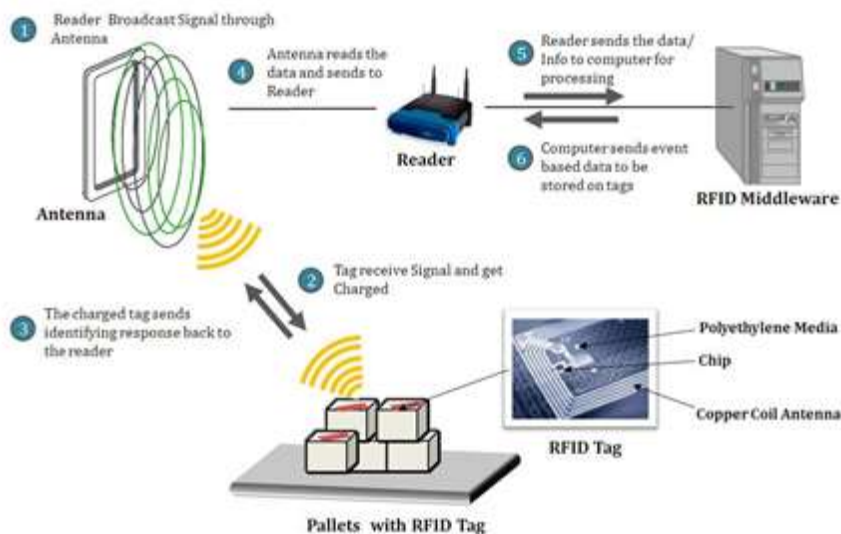
The need to process more information in lesser space has led to the development, standardization and growth of the application of 2D bar technology. Where linear barcodes can only perform product identification, this same task can be performed by a 2D barcode by occupying considerably smaller space. Figure 4. shows some examples of 2D barcodes. The 2D barcode can hold up to 2000 characters while the linear barcode will hold much less data up to a maximum of 20 characters. For the same surface occupied by the capacity of the 2D barcode, it goes from 20 to 40 times higher than the linear codes. For this reason, in the traceability concept, 2D barcodes are more suitable for use.

Another important system for product tracking and identification is based on RFID (Radio-frequency identification) technologies. The bases of this system are the tags (radio frequency transponders) which are information carriers and are affixed to products (Figure 5). The second component of this system is readers with an antenna. The RFID device (the reader or information gathering terminal) uses radio waves to send energy to the tag, which then broadcasts feedback. In this information sent by the tag there is a unique identification code or a set of data, which have already been entered in the tag itself. The data thus collected in the reader, as well as in the case of a barcode, can be further processed. The RFID reader transmits the corresponding digital data to the computer in which further processing is performed. The information may contain product location information, and information such as price, color, expiration date, etc. RFID technology ensures greater efficiency, accuracy and visibility (Nikolić, et al., 2015).

For example, it is possible to place a fixed RFID reader in the warehouse that will control and register the complete entry and exit of goods. Each passage of goods is activated by a reader who reads the goods that are

coming out, or coming in the location. These readers can also be placed on the shelves of the warehouse or the store where the products are exposed, so that every product is taken from the rack or shelf is detected. In the RFID system, a connection must be established between the RFID reader and the computer (or computer system) in which the collected information is stored and updated.

Figure 5: *Application of RFID technology in the supply chain*



Source: <http://newcanaanitect.com>

The Global Positioning System (GPS) is a technology that allows continuous monitoring of products in real time. GPS technology is based on the reception of satellite signals (24 satellites), based on which it is possible to determine the precise position of the device receiving the signals (Figure 6). Today, GPS technology is widespread in various areas and is applied worldwide (Kaurin T., 2016). GPS technology is based on receiving signals from a satellite. Satellite scheduling allows users at any point on the ground to receive signals from at least four satellites. On the basis of satellite data, the GPS receiver determines the exact position of the object (latitude, longitude, altitude) and the exact time Universal Time Coordinated (UTC). There are many examples of the application of GPS technology in different areas, from individual GPS devices that can be used for private purposes, to modern systems for managing different objects and processes. Each application points to a number of advantages of this technology depending on the objectives of the application. The direct benefits of applying GPS technology include: the ability to locate

real-time locations continuously at any point on the ground, in water and air; use of satellite signals is free of charge; high accuracy of location determination and the possibility of installing GPS receivers in different mobile objects or living beings, etc. The indirect benefits of GPS technology depend on the specific application and realization of the planned goals. In different business systems, indirect benefits can be: more efficient product management, better utilization of business resources, faster response and more efficient deployment of mobile facilities in real time, product traceability, increased security of assets, faces and environments and reduction of environmental pollution, and others. (Fang, et al., 2013).

Figure 6: *Application of GPS system in supply chains*



Source: <http://webcast-inc.com.ph/services/technology-services/>

Conclusion

In the field of logistics and supply chains in tourism it is possible to achieve significant improvements, which will increase the efficiency and cost-effectiveness of the supply of tourist regions or destinations, as well as the quality, and certainly the absolute competitiveness of the tourist offer. An efficient system of supply and service would certainly raise the level of customer satisfaction (Andrejić, et al., 2013). Improvements can be achieved in different areas of logistics and supply chains, and management based on modern information technology is definitely one of

the most important areas. Information technologies and systems provide exceptional opportunities to improve the entire supply system. This paper presents the technologies and solutions that are most often used in different supply chains and are very suitable for use in tourism. In fact, their application is a prerequisite for management and improvement. These technologies allow connecting and informing all participants in a complex supply chain, as well as managing all processes and activities. Suppliers of the supply chain can connect with their business partners and reliably exchange information about products, deliveries, maintain a high level of customer satisfaction and better manage logistics processes (Kilibarda, et al., 2016). Information technology enables real-time visibility of all operations in supply chains and ensures traceability of products through the delivery chain. This is especially important when it is known that dominant products in the supply of a tourist region or destination are food products. Consumers are particularly interested in the quality, safety and origin of these products. In addition, information technology, appropriate platforms and software solutions provide management bases aimed at: ensuring the delivery of the right products at the right place and the right time, in order to achieve high quality of service and user satisfaction, provided that everything is effective and economical. On the other hand, these systems prevent the occurrence of errors such as: delayed or wrong deliveries, expiration of deadlines for the use of products, unnecessary write-off of inventories, large returns of products, etc. After the introduction of new information technologies, conditions are created for the development of information management platforms and the integration of all participants in the supply chain in tourism. This requires a number of software solutions and applications to ensure the full implementation of advanced information and logistics solutions.

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ANALYSIS OF THE OF DIGITAL TECHNOLOGIES APPLICATION IN NATURE PROTECTED AREAS

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Abstract

Nowadays, digital technologies are fundamental in all areas of society, including the protection of natural and cultural heritage. The access to online data, the use of remote sensing technologies and platforms will determine the basis for future trends in nature protection and environmentally friendly tourism.

In this paper, we seek to identify and analyze the application of digital technology in the nature conservation of the Serbian protected areas and different aspects in tourism offer. The Republic of Serbia is characterized by a well preserved nature and high level of biodiversity, which is reflected also in the number of protected areas. We will investigate databases that are available to the public through the digitized online register of natural heritage with presentation of all Serbian data related to nature conservation in terms of tourism offer.

Key Words: *Digital technologies, protected areas*

JEL classification: Q57

Introduction

Nowadays, if we follow the development of the history of humankind, the period characterized by the increasing use of digital technology to mediate access and manage information has been described as the Age of Information (Maffey et al. 2015). Like many other societal domains, the environmental sciences have embraced digital technology to manage information and enhance analytical power (Stafford et al. 2010). The establishment of sub-disciplines such as ecological modeling or predictions and bioinformatics or global footprint calculations, as well as

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the embedded use of digital technology within others (e.g., Geographic Information Systems - GIS, climate modification, visualization of ecological networks...), testifies to this. As we have mentioned before, we are in the age of laptops, tablets, smart phones, the internet, social networks, and innumerable miniaturized computing devices which permeate every aspect of daily life (Joppa, 2015), also different computer applications, programs or platforms. Also, anthropogenic phenomena defined by an exceptionally rapid loss of biodiversity caused by human activity and changing climates. Conservation biology is the scientific discipline that addresses the dynamics and problems of perturbed species, communities, and ecosystems (Joppa, 2015). The practice of nature conservation has always been interdisciplinary, and searching new methods such as role of digital tools and technology can play in helping monitoring, modeling, mapping and responding to the challenges of global enormous biodiversity loss, ecosystems changes, and finally global tourism interaction or contribution (Galán-Díaz et al., 2015).

Study on the use of digital technologies in the context of nature conservation in its broadest sense is less developed. The academic studies that have begun to consider the use of digital technology in conservation are a big issue and considered to be key challenges in this area. Researching available literature related to this issue, we found a small number of international articles or publications, while there were no publications by national authors or in the Serbian language. According to these facts we can consider that this paper is the first review on this topic. In this paper, we seek to identify and analyze the application of digital technology in nature conservation, with the emphasis on the actual level on application of modern technology in nature conservation, and also compare it with the neighboring countries or world known nature reserves. To undertake this analysis, it was necessary to extend our search beyond peer-reviewed publications and other scholarly works.

The adoption of new digital technologies by State authorities, Institutes or nature conservation organizations, such as GPS enabled mobile devices, interlinked databases and high-performance computing, has led to state changes in a wide range of dimensions including data gathering, public engagement, increased knowledge and skills, and monitoring. Modern technology does not always contribute to protection directly, but in spite of this, nature conservation organizations adopt new digital technologies because of the belief that these may help them to deliver the plurality of

conservation and organizational objectives more efficiently (Verma et al. 2015).

Study methods and approach

The general method we conducted for three study areas is related to:

- keyword searches with Google Scholar and Web of Science, using search terms related to *nature conservation* and *digital technology*. In addition, we gathered material from available online sources.
- results were assessed (by title, introduction, abstract, images, and where needed, body text) to derive recurrent themes, which were subsequently grouped. On the basis of this, we identified key areas of research
- also, it was important to provide an overview of five dimensions recommended by Arts et al., 2015, related to possibilities and problems, challenge of how to increase benefits associated with digital technology in nature conservation

Our investigation focused on three digital innovations in nature conservation, especially the highest rank of protected areas – National parks and Nature parks, as well as some interesting special nature reserves. The first case study is focused on GIS coverage and application in chosen protected areas with emphasis on the conservation of wildlife (birds, other animals or plants) and the places in which they live in a wide variety of ways. Also, attention will be paid to web platforms.

The second case study involved information and research on the community-based endeavor aimed at digital promotion of protected areas as tourist important localities. Through the collaboration with tourist organizations, and developed infrastructure for online data gathering, we collected information on actual problems, level of digitalization and relationship conservation-tourism.

The third case study focused on digitalization review of supporting wildlife and habitat diversity, through the different ecological networks such as NATURA2000 or EMERALD.

Review of nature protected areas

Protected areas are areas characterized by significant geological, biological, ecosystem and / or landscape diversity, for which they are

declared as protected areas of general or public interest. The Institute for Nature Protection of Serbia is developing protection studies of certain areas on professional and document basis. Protection studies contain data on the property, protection zones and cadastral municipalities that includes data on natural characteristics and values of the property (geographical and geomorphologic, geological and hydrogeological, climatological characteristics, data on wildlife species, animals and mushrooms, cultural heritage, tourism, socioeconomic, and other aspects), the protection regimes and proposed protection measures, as well as the proposal for the management of a natural good (National Institute for nature conservation, 2018). Based on the applied measures of institutional protection, for more than six decades, the area of protected sites in Serbia currently stands at 662,435 ha, or 7.9% of the territory of Serbia. According to the data (November 2015) by National Institute for nature conservation, there are 461 areas under protection in the Republic of Serbia:

- 5 national parks
- 18 nature parks
- 20 landscapes of outstanding features
- 68 nature reserves
- 3 protected habitats
- 310 nature monuments
- 38 areas of cultural and historical significance that are protected on the basis of the former Law on Environmental Protection and the Law on the Protection of Cultural Monuments.

Besides the protected natural resources, 1760 strictly protected and 868 protected wild species of plants, animals and fungi are also protected by the Law.

An area with the following characteristics is protected as the national park: a large number of diverse natural ecosystems of national significance, the prominent landscape features and cultural heritage, the existence of human populations in communion with nature, an area intended for the preservation of existing natural values and resources, with the overall landscape, geological and biological diversity, also intended for meeting the scientific, educational, spiritual, aesthetic, cultural, tourist, health and recreational needs and other activities in accordance with the principles of environmental protection and sustainable development. It is important to mention 5 National parks:

Đerdap, Fruška gora, Kopaonik, Tara and Šar-planina. Nature Park is an area of well-preserved natural values, with mostly preserved natural ecosystems and picturesque landscapes, designated to ensure the overall geological, biological and landscape diversity, as well as to meet the scientific, educational, spiritual, aesthetic, cultural, tourism and health and recreation needs and other activities in accordance with the traditional way of life and the principles of sustainable development. There are 16 Nature parks, where, among others, the ones worth mentioning are Golija, Stara mountain, Sićevačka gorge.

In addition to the natural resources protected at the national level in Serbia, there are also protected areas which are important according to international regulations (Luković, 2017). Internationally significant natural resources in Serbia are also the basis for the development of international cooperation and the exchange of good practices, in order to improve the protection of nature. Internationally important protected areas are also under the ecological networks. The ecological network includes interconnected or spatially close protected areas and ecologically significant areas which are connected by natural or artificial corridors.

Figure 1: *Map of the identified 61 EMERALD areas*



Source: Institute for nature conservation of Serbia (http://www.zzps.rs/novo/index.php?jezik=en&strana=zastita_prirode_ekoloske_mreze_emerald 2.03.2018.)

The ecological network of Serbia contains 101 ecologically significant areas. The most important networks in Serbia, as well as in Europe and

wider are NATURA2000 and EMERALD. "Emerald" is a European ecological network for the conservation of wild flora and fauna and their natural habitats in those non-EU countries.

Natura 2000 is the cornerstone of the EU's policy for nature conservation and biodiversity, designed as a broad European network of protected natural areas, and is designed on the basis of the Habitats Directive. "Natura 2000" is the name of a European ecological network that includes protected areas in the territory of EU Member States, established under the 1992 Habitats Directive. The network includes the Special Areas of Conservation (SAC) declared by EU Member States under the Habitats Directive and Special Protection Areas (SPAs), which were designated under the 1979 Birds Directive.

These areas of importance for nature protection have been isolated on the basis of the implementation of EU directives and uniform criteria based on the principles of sustainable development and the application of other international conventions related to the conservation of biodiversity, in particular the Biodiversity Convention (Kostić, 2016). Natura 2000 areas cover an average of 17.5% of the territory of the European Union, and the network comprises 26,106 areas with a total area of 949,910 km² in (then) 27 Member States.

Application of Geographic information system (GIS) in protected areas - Case study: National park Đerdap

Geographic information system is an information technology that combines geographical locations of natural and artificial structures (mountains, rivers, forests, roads, buildings, bridges...) and other data aimed to generate interactive visual maps and reports (Nevetić, 2004). We can say that GIS is a spatial database which contains the data sets that represent geographic information in terms of a general GIS model data. In this paper we will give general review of GIS application and possibilities for the protected areas (Pavlović, 2008).

Đerdap National Park is located in the southeastern part Europe, in northeast Serbia at the border with Romania. The total area of the national park is 63,608 hectares, while the protected zone covers 93,968 hectares. National Park covers parts of three Municipalities: Golubac, Majdanpek and Kladovo, where the largest national park in Serbia is situated. Due to its large surface, in order to maintain efficient and durable protection as

well as a sustainable use of natural resources, it is necessary to start building the potential of the National Park Đerdap, and then to implement an integral geographic information system. A unique database will be created to contain forest types, flora, fauna, paleontology, hydrology, geology, nature reserves, special areas, natural values, natural monuments, roads, hiking trails, immovable cultural goods of exceptional importance, etc. National Park "Đerdap" is among the most attractive national parks in the Balkans with its unique natural characteristics and the specificity and biodiversity and protected species of plants and animals. Member of the EUROPARC association is incorporated in the List of International Important Bird Areas - IBA (Important Bird Areas) area, also in the Important Plant Areas List (IPA) and in the list "Selected areas for daily butterflies"- PBA area (Prime Butterfly Areas) under Butterfly Conservation Europe. A part of the Emerald Network of Areas of Special Conservation Interest (ASCI) identified / established under the name of the National Park Đerdap. The National Park Đerdap represents the unity of the natural and cultural heritage of Serbia, because of the specific natural features of this area, there is also an extremely valuable cultural heritage (<http://www.npdjerdap.org>).

The process of implementation of the geographic information system in the National Park Đerdap is in progress, and the phase of scanning and georeferencing of forest maps is currently underway, as well as their digitization. By completing the system, i.e. the implementation of GIS in the "National Park Đerdap" will primarily be able to provide:

- more efficient and lasting protection of the biodiversity of the park
- more efficient management of the national park
- better protection of natural assets
- interactive access and management (query, update, delete, add, connect...) with databases
- identification and evaluation of natural potentials (park potential)
- statistical analysis of data
- displaying digital maps (displaying maps on the computer screen and printing them)
- management of forest cadastre
- displaying multimedia data (establishing connections between data on the map and photos or films about, for example, certain plant or animal species)
- analysis and modification of existing data
- display and print reports, etc.... (Pavlović, 2008).

Figure 2: Map of the National park "Djerdap" (protected zones and nature reserves)



Source: <http://www.geografija.rs/zasticena-podrucja/zasticena-podrucja-zasticena-podrucja/nacionalni-parkovi/djerdap/derdap-proglasenje-i-zone-zastite/>

In terms of other digital presentation, national park "Đerdap" has one of better web site presentations available to wider public. This information is comprehensive and systematically scheduled. In the context of tourism, web presentation is divided in several parts: basic info, news, cultural heritage, natural heritage. Each of these sections is divided into detailed information in these issues. Especially, section for guests is covered by maps, walking routes, info tables and many other visual features (www.npdjerdap.org.)

Figure 3: Web site presentation

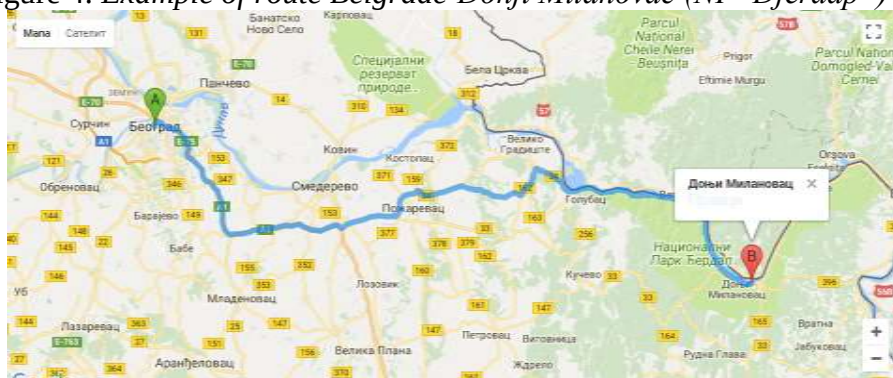


Source: http://www.npdjerdap.org/novi/?page_id=6013

The national park's position is georeferenced and covered by map route for tourists. The area of the park is between 44°42' - 44°24' of the northern

latitude and 22°33`-21°40`of the eastern latitude. Access to the NP Đerdap is possible from three directions: the Đerdap highway from the direction of Belgrade, the Đerdap highway from the direction of Kladovo and from the direction of Niš, via Zaječar, Bor and Miloševa tower by a regional route. Đerdap National Park has three primary entrances, two are located on Đerdap highway near Golubački grad and Diana Karatas, and one on the regional road Porec bridge – Klokočevac (www.npdjerdap.org).

Figure 4: Example of route Belgrade-Donji Milanovac (NP “Đerdap”)

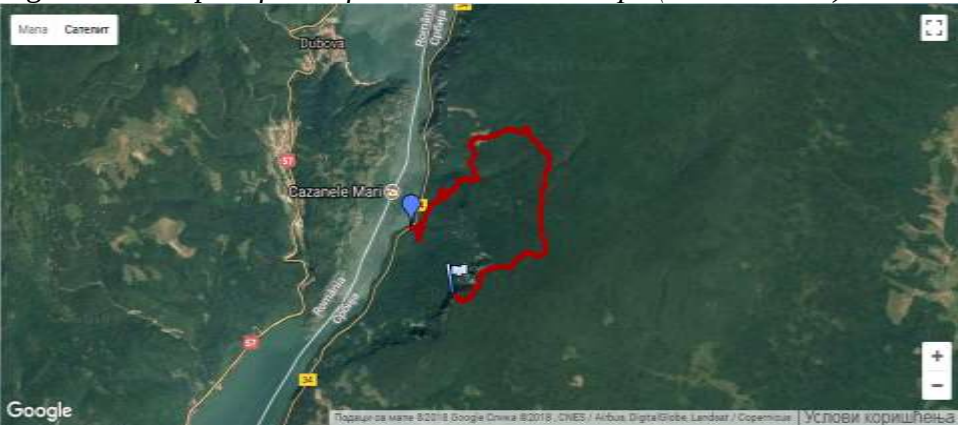


Source: http://www.npdjerdap.org/novi/?page_id=101, modified by author

Renovated and marked walking paths of different lengths passing through attractive areas, nature reserves and ending on viewpoints, is the way to get to know NP Đerdap. With the nature conservators of JP National Park Đerdap, the use of pedestrian paths is a real experience, but it is also possible to use a personal GPS device with routed maps. With each marked hiking trail, the slope of the terrain is also prominent (www.npdjerdap.org).

Other protected areas in Serbia have also started with digitalization. A table with the level of digitalization of several main protected areas and its connection to the modern technologies is given in Table 1. Results of this research shows that coverage of the main National parks by GIS is almost partly applied, and better visualized then low level of protection. Almost, all protected areas have web presentation, but the information varies from basic to very complete. None of the researched protected areas has any applications that are related to mobile phones. Also, all protected areas offer walking tours through the nature, but only four have georeferenced routes.

Figure 5: *Example of one of the seven routed maps (Veliki Štrbac)*



Source: http://www.turizam.npdjerdap.org/?page_id=110

Figure 6: *Example of elevation profile for Veliki Štrbac trail*



Source: http://www.turizam.npdjerdap.org/?page_id=110

Table 1: *Review of digital technologies application in chosen protected areas*

Protected area	Status	GIS application		WEB site presentation	Connection to phone application	Georeferenced rout maps
		Partly	Full			
Kopaonik	National park	+	-	+	-	+
NP Fruska Gora	National park	+	-	+	-	-
NP Tara	National park		+	+	-	+
NP Sar planina	National park	-	-	+	-	+
Golija	Nature park	-	-	+	-	-
Stara planina	Nature park	+	-	+	-	+

Zasavica	Special nature reserve	-	-	+	-	-
Carska bara	Special nature reserve	-	-	+	-	-

Source: *created by author*

In order to manage natural resources in a sustainable manner, accurate and timely information is needed to timely address the changes in space. For this reason, it is necessary to create a system that will integrate all the relevant data in order to achieve the given goal (Silc, 2016).

Example of digitalization in world protected areas

Protected areas, special places set aside for conservation and sustainable use have a long history. While many cultures have regarded certain natural areas as sacred for centuries, the first “modern” protected area, Yellowstone National Park in the United States, was established in 1872. Early park rangers relied on paper maps and physical patrols to document the health of parks, tools that many still rely on today. But we now live in a world with more than 177,000 protected areas in more than 150 countries (Davis et al., 2014). Patrolling these large areas to document and crack down on harmful and often illegal activities like logging, mining, and poaching requires time and money – resources lacking in many countries. By enabling the creation of networks of electronic sensors and human participants, new technologies have shaped the ways in which conservation-related organizations monitor wildlife. These networks enable gathering data perceived as necessary to evidence conservation strategies and foster public support. In terms of practice, large amounts of new data can now be gathered and processed more cost-effectively (White, D., 2009).

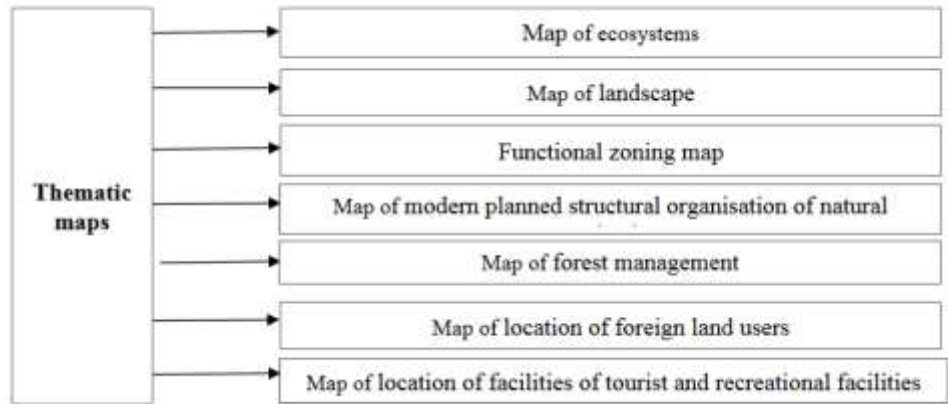
One of the basic technologies which are used in world protected areas is GIS. At present, GIS technologies have become one of the most effective tools in implementation of control and monitoring in various fields, especially in the field of land management. Application of GIS technologies in this field allows to analyze a large amount of thematic maps, as well as to develop new cartographic models. For example, national parks and nature reserves in the territory of Kazakhstan have a great variety of natural-territorial units and their complex spatial

organization (Kamelkhan et al., 2016). Proper functional organization and zoning related to protected areas are one of the criteria for evaluation of scientific based planning and design solutions, choosing protection regimes and the scope of recreational and tourism activities. Structure of protected areas in Kazakhstan is as follows:

- 33 reservations;
- reserves;
- national parks;
- natural parks;
- nature monuments;
- botanical gardens and arboretums;
- therapeutic areas and resorts;
- territories of traditional nature (Gohman V., 2014).

More accessible and interesting is the information transmitted visually, and it is more relevant and informative. They create a series of thematic maps using application of GIS technology and materials of processing of satellite

Figure 7: *The structure of the thematic maps*



Source: Kamelkhan et al., 2016

The next steps in digitalization beside technologies that are used in nature protection are applying digital technologies in tourism-nature correlation. To address the environmental impacts of tourism in protected areas, park managers need to understand the spatial distribution of tourist use (Yang et a., 2014). Standard monitoring measures (tourist surveys and counting and tracking techniques) are not sufficient to accomplish this task, in particular for off-road travel. The good example of this initiative is one of

famous National parks in northwest Yunnan Province of China where there is an increasing concern about potential impacts of unregulated tourist use. New technology patterns provide information that can help park managers develop strategies that are effective for both tourism management and species conservation (Buntaine et al., 2007). National parks, heritage sites, and other protected areas are increasingly important for nature-based tourism. They are the primary places chosen by most people who want to enjoy nature. There is growing evidence that tourism activities have negative impacts on biological resources (as a result of resource extraction, wildlife disturbance, and habitat degradation) and physical environments (as a result of increased soil compaction, water pollution, and fire frequency).

Modern counting equipment, including cameras, infrared sensors, and pressure pads, can collect tourist distribution information accurately and efficiently. However, they are expensive, and their use is usually limited to the main entrances and road and track heads (Xia and Arrowsmith, 2008; Pettebone, 2009). Newly developed tracking techniques, such as cellular phone triangulation and global positioning systems (GPSs), have become attractive options for tourist studies (D'Antonio et al., 2010).

The most used technologies in world protected areas are:

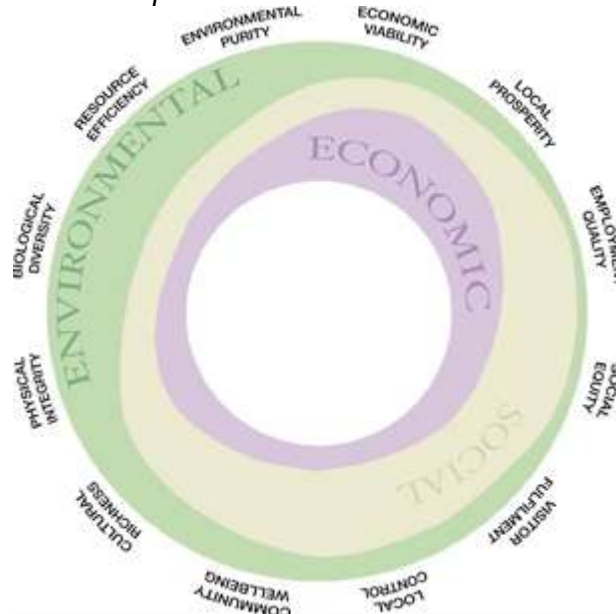
- Carbon calculator
- Community informatics
- Computer simulations
- Destination Management Systems (DMSs)
- Economic impact analysis
- Environmental Management Systems (EMSs)
- Gamification
- Geographic Information Systems (GISs)
- Global Positioning Systems (GPSs)
- Intelligent Transportation Systems (ITSs)
- Location-based services (LBSs)
- Virtual tourism
- Weather and climate change systems

In order to organize sustainable tourism in nature protected areas, it is necessary to respect twelve aims of sustainability. The key elements are Resource Efficiency and IT, Environmental purity and physical integrity, Biological diversity, Virtual Substitute Travel Experiences, Social equity

and community wellbeing, Local control, Cultural richness, Economic viability and local prosperity, Employment quality and capacity building. In this paper our attention is paid to natural resources, and in that context Biological diversity issues related to mentioned technologies are based on three segments (Beckendorff J. P. et al., 2014):

- Citizen scientists: handheld devices can allow tourists to monitor animal and bird species and other environmental phenomenon on their digital devices as they travel.
- Tourist scientist: combining tourism, research, conservation and computers to identify and track flora and fauna (e.g. Earthwatch, Cyber trackers).
- Voluntourists: make meaningful contributions to communities and wildlife in destinations.

Figure 8: *Twelve aims of sustainable tourism*



Source: Beckendorff J. P. et al., 2014.

Monitoring has a quite long tradition in protected areas concentrating mainly on observing and managing the natural environment. But increasing visitor numbers and public accountability lead to implement more and more visitor monitoring systems. With ICT-solutions (one of very used technologies) on the rise, the disadvantages of hand-made counting can be solved and the management of visitor flows can be

organized more effectively (Guide to sustainable tourism in protected areas, 2013).

According to (Arts, K. et al., 2015.) digital technology is changing the nature conservation in increasingly profound ways. We describe this impact and its significance through the concept of ‘digital conservation’, which was found to comprise five pivotal dimensions: data on nature, data on people, data integration and analysis, communication and experience, and participatory governance. Examining digital innovation in nature conservation and addressing how its development, implementation and diffusion may be steered, it warns against hypes, techno-fix thinking, good news narratives and unverified assumptions. Along the way, digital technology may best be reconceptualised by conservationists from something that is either good or bad, to a dual-faced force in need of guidance.

Conclusion

Nature conservation is changing under the influence of digital technology. We have used the concept of digitalization in nature conservation to describe this alteration and to consider its significance. On the basis of websites, scientific and grey literatures and other sources, we analyzed the emerging field and distinguished several areas of application:

- GIS modeling and application in Serbian protected areas
- GIS modeling and application in World protected areas
- Sensor and monitoring data technologies on biological diversity in national protected areas
- Sensor and monitoring data technologies on biological diversity in international protected areas
- Monitoring technologies in Serbian and world’s protected areas

Also, we confirmed that five stages of applying digital or IT depend on data on nature, data on people, data integration and analysis, communication, and participatory governance.

In order to manage natural resources in a sustainable manner, accurate and timely information is needed to timely address the changes in space. For this reason, it is necessary to create a system that will integrate all the relevant data in order to achieve the given goal. It is important to mention that the process of implementing a geographic information system in our national protected areas will contribute, the first of all, more efficient and

long lasting protection of the biodiversity, more efficient management of the national parks, better protection of natural assets, interactive access and management (query, update, delete, add, connect...) with databases-identification and evaluation of natural potentials (park potential), statistical analysis of data, displaying digital maps (displaying maps on the computer screen and printing them), management of forest cadastre, displaying multimedia data (establishing connections between data on the map and photos or films about, for example, certain plant or animal species), analysis and modification of existing data, display and print reports, etc. And finally, related to tourism, fully updated modern technologies point to IT applications in all sectors of the industry including airlines, travel intermediaries, accommodation, foodservice, destinations, attractions, events and entertainment, but are the most important and should be mostly used in the nature protection sector.

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RURAL ENTREPRENEURSHIP IN THE ERA OF DIGITALIZATION: EXAMPLE OF MACEDONIA

Marija Magdincheva-Shopova¹; Tatjana Boshkov²;

Abstract

Tourism is an area that fosters economic development with great influence on other forms of tourism development. The pronounced digitization processes in all segments of the operation cause changes in the rural tourism sector. This paper focuses on influence of digitalization among the enterprises in the field of rural tourism. The research of the paper uses survey questionnaire method and it represents the perception of the representation, information and the need for digitalization in the rural tourism sector. The obtained results of the survey confirmed the basic hypotheses that digitalization has an impact on rural tourism development, as there is a strong need for information and financial support in this sector. In the conclusion, the paper offers guidelines and proposals for the development of rural tourism using the opportunities of digitization, in order to overcome the established situation.

Key Words: rural entrepreneurship, rural tourism, digitization, tourism development, information technology.

JEL classification: Z30

Introduction

The pronounced globalization processes and high degree of digitization have its influence anywhere thus including the tourism sector, too. The framework of tourism sector is around 9 million people from EU Member States, representing 6% of the total number of employees and the tourism sector accounts for 5.5% of GDP (WTO, 1998). Consequently, changes in tourism cause changes in the field of rural tourism as an alternative form

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for tourism development as well. The rural areas occupy 91% of the EU's total territory, and 56% of the total population is living there (Common Agricultural Policy, 2012). The rural areas play an important role in demographic, social and economic processes. Rural tourism is one of the areas that has the greatest potential for generating growth and employment, as an area with undiscovered potential for development. In response to this, rural tourism is being increasingly promoted, versus mass tourism in destinations (Getz, 1998). The supply side of tourism sector can contribute for development and competitiveness of the regions. Due to the potential contributing to the socio-economic progress, many EU countries have included the development of rural tourism in the development strategy agenda of regions and rural areas. The professional literature in this area does not have information on the impact of innovative ways of working, including the digitalization of the operations in the enterprises of rural tourism sector. The representation of the entrepreneurial initiative in the field of rural tourism expresses the entrepreneurs' determination to an innovative way of organizing the work and providing an appropriate tourist offer in the rural areas (Magdinceva-Sopova, Postolov & Elenov, 2017). The application of information technology in operation facilitates and accelerates the process of transmission and exchange of information. The information is shared with many recipients. The possibilities for information exchange are simply unlimited. Also, the costs of distribution are reduced and restrictions are reduced in terms of geographical distribution and distance (Shanker, 2008). Therefore, in today's conditions of operation, information and information technology are key factors for operating and planning the future of business activities. The latest research shows that more than half of people traveling pay online and use the e-sales and booking system when they have an opportunity or option for e-shopping (Henry, 2016). But the impact of digitization in the rural tourism sector is specific. On the one hand, tourists have desires arising from the need to escape of overwhelming daily commitments and dynamic developments. On the other hand, changes in the operation of the enterprises are evident as a result of the application of e-technology in the operation. Taking in consideration the fact that modern tourists are increasingly returning to nature and tradition, the development of rural tourism is associated with improving the quality of life in rural areas, promoting the activities in the agricultural and forestry sector, and increasing the care for environmental protection (Magdinceva-Sopova et al., 2017). The attraction and need to flee from the excessive degree of digitization and industrialization make people choose rural tourism more and more as a way of rest. In the rural

tourism sector, information technology is used in a variety of ways. Tourists use the information-computer technology for: searching information: by category, geography, keyword, travel planning for customers, reservations, weather transport schedules, etc. (Buhalis, 2003). The basis for a successful operation of the enterprises is the continuous introduction of new ways and forms of different activities and improvement of business processes in real. As a result, many enterprises are reluctant to alter rapidly the technical conditions and requirements of consumers through entrepreneurial behavior (Boyadzioski & Blazeska, 2009).

Small enterprises that apply for the concept of modern entrepreneurship provide active support for the sustainability of the economic and social aspects of environment as a key factor for competitive rural destinations, creating new jobs as well preserving natural and cultural beauties. Through the concept of rural entrepreneurship, the process of utilizing natural resources and resources and business ideas of entrepreneurs are encouraged. Working together on the future of European tourism, five basic components for tourism industry development are set up: information, employee training, quality, sustainable development and emerging technologies (WTO, 1998).

Rural tourism characteristics as an alternative form of tourism development

Rural tourism as a term is accepted by European Union and refers to all tourism activities in the rural areas. According to the OECD definition, any area locally populated with an average density of 150 people per square kilometer represents a rural area or environment. At the regional level, geographical units are grouped into three parts: a dominant rural area (15%), to a significant extent a rural area (15-50%) and dominantly urbanized areas (15%) (Methodijeski , 2017).

Since modern tourists are increasingly returning to nature and tradition, the development of rural tourism is associated with the promotion of opportunities for development of rural forms of tourism by improving the quality of life in rural areas, infrastructure improvement, improving the work of enterprises and increasing the care for the environment (Magdinceva-Sopova et al., 2017), Natural beauties, clean environment filled with lakes, mountains, waterfalls, thermal waters, ethno villages, monasteries, as well as local manifestations, traditional food and

hospitality are prerequisites for the creation of an original tourism offer in this sector. The attraction and the need to flee from dynamic life and work make it possible for people to choose rural areas as a place for an ideal holiday. Tourism is defined as a trip for vacation, entertainment, treatment and sightseeing (Mukinović, 1990). Rural tourism is opposite of mass tourism. Mass tourism is characterized by an increased level of participation of tourists and sustainability of natural and cultural values, as well as numerous social and cultural influences that negatively affect the destinations (Duffy, 2002). The alternative nature of rural tourism is associated with the exploitation of the opportunities created by the connection between the tourist guests and host entrepreneurs who offer the i.e. "rural" tourist services. Alternative tourism, is aimed at smaller accommodation facilities, greater participation of the local community, sustainability, a ratio of social and cultural values and greater interaction between hosts and tourists (Wearing & Neil, 2009).

One of the basic characteristics of rural tourism is related to the use of the original opportunities for local economic development and employment of family members by taking advantage of the advantages offered by rural areas. This form of tourism generates a huge impact on the local economy and socio-cultural aspects of rural areas as opportunities for the population that live in rural area (Nitashree, 2012). Basic characteristics of rural tourism are connected with clean, peaceful and healthy environment, absence of noise, home-traditional food, close communication with the hosts i.e. owners of tourist objects-entrepreneurs.

Characteristics of rural entrepreneurship in the digitalization era

Rural entrepreneurship in all forms in which it can be called (village, eco, cultural, monastic, wild sports, ethno-gastronomic, hunting, spa tourism, etc.) is insufficiently developed and not a sufficiently known concept. Through the affirmation of rural entrepreneurship, it contributes to the development of rural tourism. This type of tourism has a huge impact on the local economy and the socio-cultural aspects of rural areas, on the one hand, and the opportunities for the population living in those areas on the other (Nitashree, 2012). Therefore, rural entrepreneurship is a developmental concept and a way of utilizing the opportunities that rural communities possess. Contemporary entrepreneurship includes activities that include novelties in operations, new resources, new customers, new markets or different, new combinations of resources, consumers and markets (Ireland et al., 2009).

New demand trends for travel services and emerging trends alter the needs of tourists and encourage the development of rural entrepreneurship as a process that forces entrepreneurs to think about harnessing the opportunities of rural areas. The application of the concept of rural entrepreneurship depends on the considerations and decisions of the entrepreneurs or the management of the enterprises. Entrepreneurs create a business strategy for their own enterprises and decide what to introduce as a new processes in their work, including digitalization in their work as an opportunity to improve their operations.

Modern entrepreneurial approach to work and original work processes enable adapting on the challenges for the enterprises in contemporary globalization and economic integration. Each enterprise must be able to simultaneously perform three important tasks - to advance, expand and innovate (Drucker, 2005).

The concept of rural entrepreneurship and digitization in this sector promotes rural development. As a result of this process, sustainable development and protection are ensured. The digitization process in rural areas is useful and economically viable only if it provides promotion of natural resources and eco-systems, implementing a policy for environment protection, sustainable management of natural resources and respecting the principles of work - "from man to nature" and "nature for man".

The developmental concept of rural entrepreneurship using the opportunities offered by digitalization consists of: continuous monitoring of the contemporary processes of work through timely sharing of information and opportunities, evaluation of the offer, evaluation of the needs of tourists and meeting the needs of the tourists who visit rural areas at a specific time.

Methodology of the research

In order to perceive the information and the need for digitalization in the work of small enterprises in the field of rural tourism and other alternative forms of tourism, practical research was conducted. By applying the survey questionnaire, which consisted of 10 questions from a judicial aspect, the survey was conducted in 85 entities - small and medium-sized enterprises that carry out a certain business activity in the field of tourism. The research was conducted in the period from September 2017 until the

end of December 2017. The questionnaire was sent to 85 enterprises and 68 of them showed interest and answered the questions from the questionnaire.

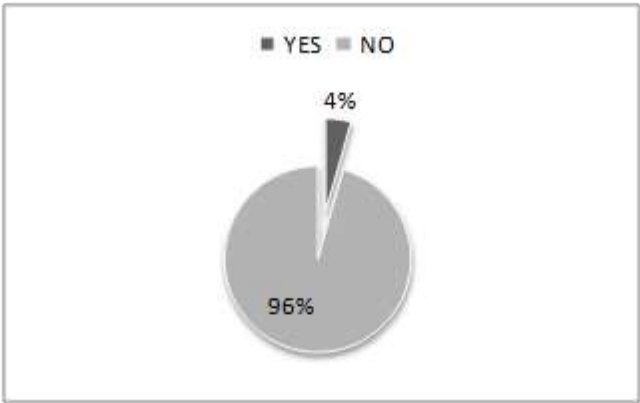
The survey was conducted in order to perceive the real situation as to whether entrepreneurs were informed about the possibilities of digitization in their business in the rural sector. Also, through the answers of the questions, is realized the real need of existing and implementation of the digital ways of working in the field of rural tourism on the territory of Macedonia.

Results of research

According to the received answers to each question, it is concluded that the first question - Are you ready to introduce modern e-technology in the operation?, the majority of the enterprises declared themselves negative, i.e 65 companies declared that they are not ready to introduce modern e-technology in operation and only 3 enterprises are ready to introduce modern e-technology in operation.

The obtained results from the first question are shown in Figure 1.

Figure 1: *Graphs display the results of the question - Are you ready to introduce modern e-technology in operation?*

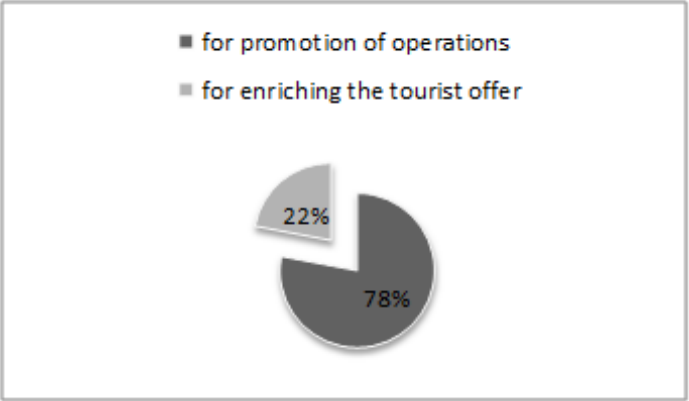


Source: *Own research*

The second question: Are you ready to introduce e-technology to promote business processes or to enrich the tourist offer ?, a large number of surveyed entrepreneurs or 53 entrepreneurs said that they are considering

to introduce new forms of work to promote and improve the tourist offer but not for the digitization of business processes, and 15 entrepreneurs said that they could introduce digitization in both segments. The obtained results are shown in Figure 2.

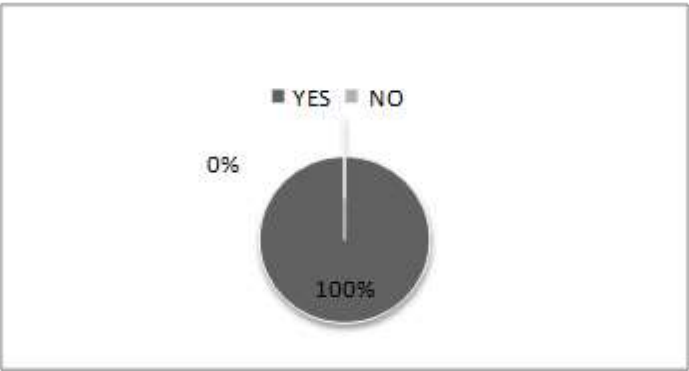
Figure 2: *Graphs display the results of the question - Are you ready to introduce e-technology to promote business processes or to enrich the tourist offer?*



Source: *Own research*

The next question - Do you need support in the process of introducing e-technology?, all surveyed entrepreneurs or 68 enterprises have declared that they need support in the process of introducing e-technology in their operation. Figure 3 shows the obtained results.

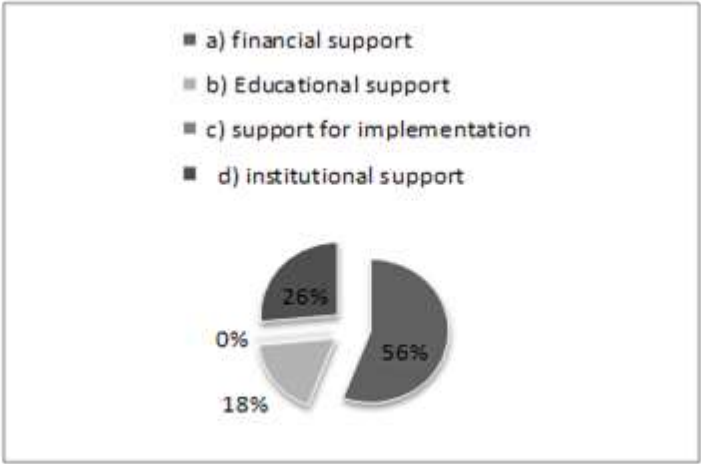
Figure 3: *Graphs display the results of the question - Do you need support in the process of introducing e-technology?*



Source: *Own research*

The next question that concerns the explanation of the surveyed entrepreneurs about the kind of support they most need, i.e. - What type of support do you need - financial support, education, support for implementation or institutional support?, the majority of the surveyed or 38 entrepreneurs stated that they needed financial support, 12 entrepreneurs said they needed education, and 18 entrepreneurs said they needed institutional support. Figure 4 shows the results obtained graphically.

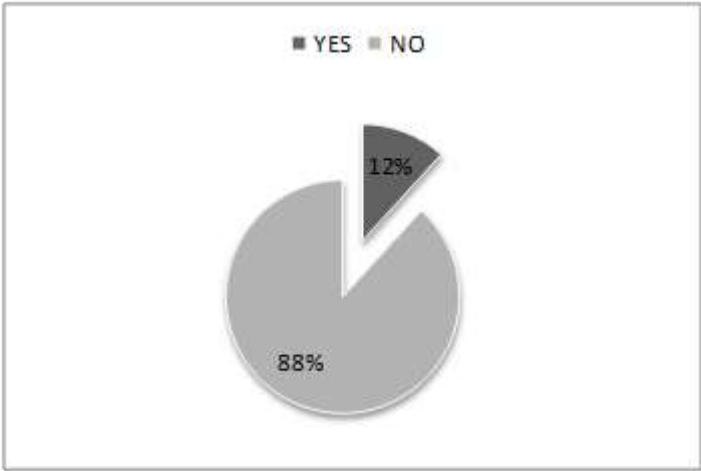
Figure 4: *Graphs display the results of the question - What kind of support do you need - financial support, education, support for implementation or institutional support?*



Source: *Own research*

To the question - Are you informed on what constitutes digitalization in the field of rural tourism? Almost all of the surveyed entrepreneurs or 60 entrepreneurs stated that they need to be informed about the opportunities and advantages of using digital assets and 8 entrepreneurs are informed in part. Figure 5 shows the obtained results.

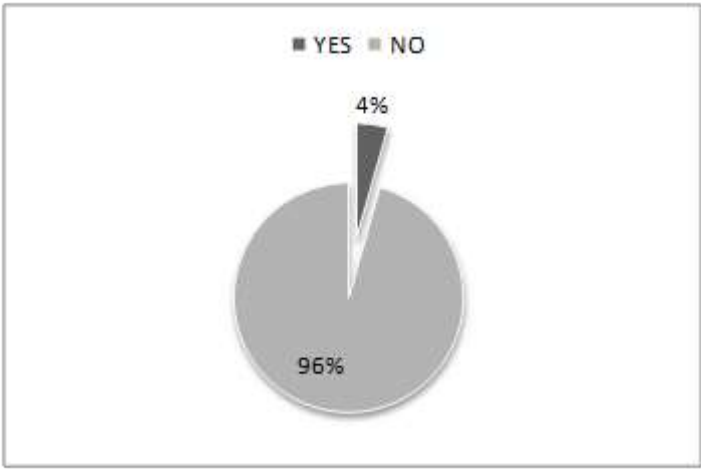
Figure 5: *Graphs display the results of the question - Are you aware of what digitalisation in the field of rural tourism is?*



Source: *Own research*

The sixth question - Are you ready to invest in the field of digitization in the rural sector?, the majority of the entrepreneurs who participated in the survey or 65 respondents are not ready and do not plan to invest in this segment of operation, only 3 respondents answered positively. The following picture shows the observations received on this issue.

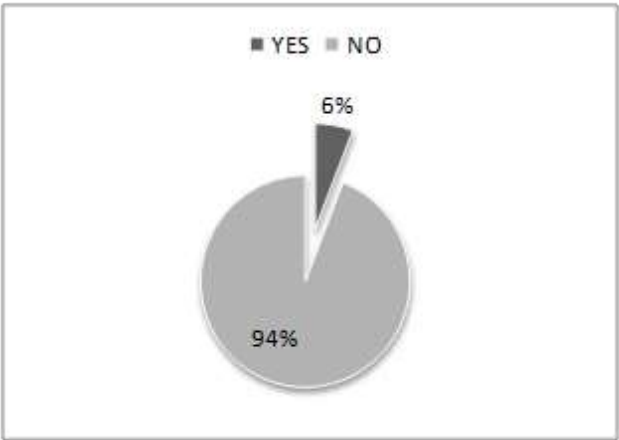
Figure 6: *Graphs display the results of the question - Are you ready to invest in the field of digitization in the rural sector?*



Source: *Own research*

To the question - Do you think there is a need for digitization in the rural sector ?, almost all the companies have declared that they do not need to introduce digital forms of work, or 64 entrepreneurs believe that there is no need for digitization, and only 4 entrepreneurs consider digitization in operation is needed in this sector. Figure 7 gives a graphical overview of the results obtained.

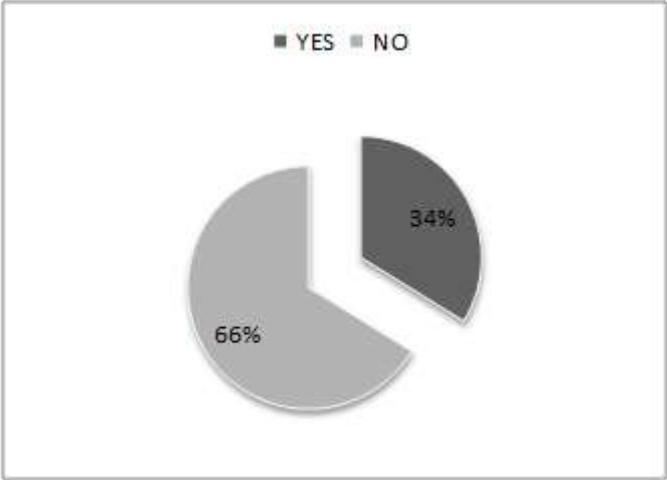
Figure 7: *Graphs display the results of the question - Do you think there is a need for digitization in the rural sector?*



Source: *Own research*

According to the received answers to the question - Are you informed about the possibilities offered by digitalization in the operation ?, we concluded that 45 entrepreneurs are not informed about the effects and opportunities from the application of digitization in the operation, and 23 entrepreneurs think that they are informed about the opportunities that they have in the field of digital forms of operation. The answers received are shown in Figure 8.

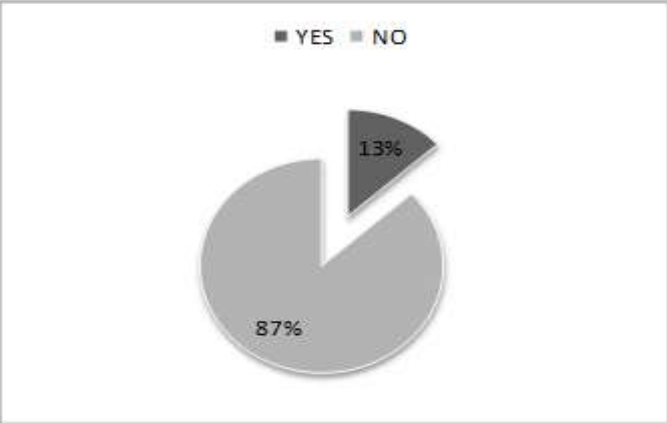
Figure 8: *Graphs display the results of the question - Are you informed about the opportunities offered by digitization in the work?*



Source: Own research

On the penultimate question - Do you use certain digital modes of operation in the work ?, the majority of the respondents or 59 entrepreneurs answered that the previous work is not based on the application of digital ways of working, i.e. digitalization is not present in the operation. Only an insignificant part of the respondents or 9 entrepreneurs stated that they use digital working methods in their work. These results are shown in Figure 9.

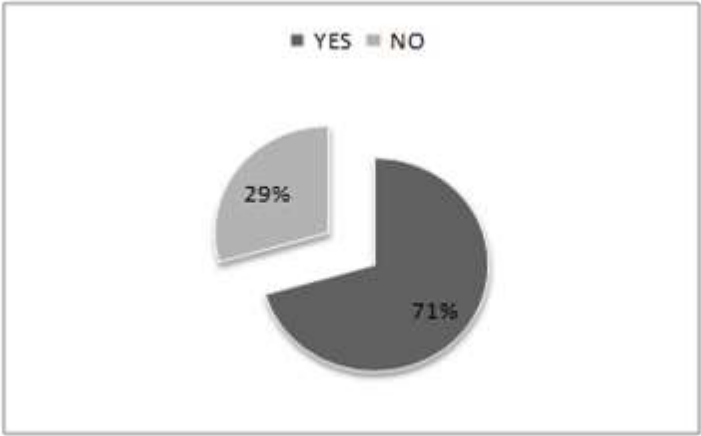
Figure 9: *Graphs display the results of the question - Do you use certain digital modes of operation in your work?*



Source: Own research

To the last question - Do you consider that digitization in the rural sector is a factor in improving the operation? Most of the interviewed 48 entrepreneurs stated that digitalization is a factor for improving the work in the field of rural tourism, and 20 entrepreneurs believe that digitalization in the work does not can contribute to the improvement of operations. The obtained observations of the last question are shown in Figure 10.

Figure 10: *Graphs outline the results of the question - Do you think that digitization in the rural sector is a factor in improving the operation?*



Source: Own research

Table 1 gives an overview of the survey questionnaire and the observations from the obtained answers.

Table 1: *Demonstration of the survey questionnaire and the observations from the conducted research*

Num.	Questions	Answer Yes	Answer No
1.	Are you ready to introduce advanced e-technology in your work?	3	65
2.	Are you ready to introduce e-technology to promote business processes or to enrich the tourist offer?	53 for promotion of operations	15 enriching the tourist offer
3.	Do you need support in the process of introducing e-technology?	68	/
4.	What kind of support do you need? a) financial support	38-financial support	

	b) Educational support c) support for implementation d) institutional support	12 - education 18- institutional support	
5.	Are you aware of what digitalisation is in the field of rural tourism?	8	60
6.	Are you ready to invest in the field of digitization in the rural sector?	3	65
7.	Do you think there is a need for digitization in the rural sector?	4	64
8.	Are you aware of the opportunities offered by digitization in the workplace?	23	45
9.	Do you use certain digital ways of working in your work?	9	59
10.	Do you think digitization in the rural sector is a factor in improving the work?	48	20

Source: *Own research*

Conclusion

New trends in demand for travel services and emerging trends alter the needs of tourists and encourage the development of rural entrepreneurship, which is a process that guides entrepreneurs to think about harnessing the opportunities of rural areas. Basic characteristics of rural tourism are connected with clean, peaceful and healthy environment, absence of noise, home-made traditional food, close communication relations with the hosts i.e. owners of tourist objects-entrepreneurs and acquaintance with the so-called rural things.

The application of information technology in operation facilitates and accelerates the process of transmission and exchange of information. The information is shared with many recipients. Simply, the possibilities for information exchange are unlimited. Therefore, in today's conditions of operation, information and information technology are key factors in the operation and planning of future business activities. But the impact of digitization in the rural tourism sector is specific.

On the one hand, tourists are with their wishes arising from the need to escape from the overwhelming daily obligations and dynamic developments. On the other hand, changes in the operation of the enterprises themselves are evident as a result of the application of e-technology in the operation. Through the findings obtained from the research conducted in this paper as well as on the basis of theoretical review within the framework of labor, it can be concluded that the entrepreneurs working in this sector are not informed about the possibilities that digitization gives and are not ready to invest in this segment. The obtained results of the conducted research confirm the established hypothesis that digitalization has an impact on the development of rural tourism, so there is a strong need for information and financial support in this sector. In order to overcome this situation, a systematic approach for encouraging and supporting the process of introducing modern e-working methods should be applied by introducing incentive financial programs and supporting ways to promote entrepreneurship awareness. The digitization process in rural areas is useful and economically viable only if it provides promotion of rural resources and eco-systems as it implements a policy for environmental protection and sustainable natural resource management.

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CONTEMPORARY TECHNOLOGIES IN SERVICE OF GASTRONOMY

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Abstract

Mass media play an important role in human social life. The messages / advertisements make a strong impression on consumers interested in gastronomy, and television still represents the most powerful media. As an interdisciplinary science, gastronomy is connected with all spheres of life. In the last twenty years cooking has become an interesting topic to watch. Today we witness a large number of shows dedicated to cooking and gastronomy in general. Cable TV operators compete in offering cooking shows to gourmards, and special TV channels are created for broadcasting only gastronomy shows. In this paper we will deal with the connection between television and gastronomy – whether cooking recipes from famous cooking shows can be applied in practice, in which way TV shows about cooking influence the development of gastronomy and whether watching shows about cooking can develop love and desire for being a cook as a profession.

Key Words: *television, gastronomy, gastro brand, consumer*

JEL classification: *Z310, Z320, Z380*

Introduction

Mass media play a very important role in human social life. The influence of mass media on a modern man is enormous. On a daily basis, through different forms of communication, a person receives huge amounts of information from different spheres of social life. The role of media is to expand our knowledge, entertain us, inform us and bring various events closer to us (Stanković & Perišić, 2010). Everything that a person writes,

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says and makes cannot be contained within a single place, but the information is spread further by media (Đorđević & Pešić, 2004). A modern person and the media in the age of digital technologies have become interdependent and necessary to each other.

Historically speaking, the division of media can be seen through several epochs, which are: oral, written, print, electronic and digital (Cambell et al., 2014). Before the first editions of printed media, the form of media presentation was a spoken word, which travelled from the speaker to the listener. Written media have been present since the beginning of the earliest civilizations. The first printed medium was the book, then there were newspapers and magazines. At the beginning of the 19th century, with the introduction of photography, printed media assumed a new dimension in business operations, when texts started to be accompanied by authentic photographs. With the introduction of radio at the beginning of the 20th century and with the invention of television, the era of electronic media of mass communication began and continued with the epoch of the Internet and social networks (Isaković, 2016).

Everything we are surrounded with, even media, has positive and negative effects on life (Knežević, 2016). Text, sound and movement have been integrated into a unique intermedial virtual space, a "cloud" of a comprehensive and ever-present global Internet network. The media, as extensions of our senses, radically transform our environment and us, influencing everything we do (Isaković, 2014). Among the positive effects of media, we distinguish the expansion of knowledge and education, developing imagination and creativity, whereas negative effects include examples showing the decline of moral values and alienation from the society (Stanković & Perišić, 2010).

Media messages through advertisements make a strong impression on the gastronomy consumer, and television still represents the most powerful medium for transmission of messages. Thanks to media, many famous gastronomic brands have become popular worldwide, and consumers can enjoy their magical tastes anywhere. Innovation and creations of gastronomy masters can be seen in any part of the world with one click of a button. Chefs are becoming brand persons and recognizable faces of TV shows.

The emphasis in this work is placed on television and gastronomy. The subject of the research are gastronomic potentials of Serbia presented in

TV shows about cooking. The aim of the paper is to research the influence of television on the development of gastronomy and to see whether what is presented to a wide audience in culinary shows can be applied in everyday life. It is expected that the obtained results will be understood by local and national institutions, in order to improve the development of gastronomic brands and improve education of gastronomic staff.

Television as an important factor of the development of gastronomy

As an interdisciplinary science, gastronomy is connected with all spheres of life, therefore with television as well. Communicologists agree that television is a medium with the largest auditorium and thus plays an important role in forming the social life and habits of individuals (Mek Kvin, 2000). The Internet with its various contents is the main competitor against television in taking over the media space (Car, 2010). The research conducted by the Statistical Office of the Republic of Serbia for 2017 shows us the percentage of the home television presence in Serbia. The result of the research shows that 99.6% homes own a TV, which is a high percentage. Compared to the research of 2016, it is 1.8% more, and compared with 2015, the increase is somewhat smaller and amounts to 0.3%. The same research includes the presence of cable TV. The result of the research shows that cable TV was present in 58.4% households in 2017. In comparison with the research of 2016, it is 1.1% more, and compared to 2015, the percentage growth is somewhat higher and amounts to 4.8%. In 2017, the average television viewing time in Serbia was 313 minutes a day, which is slightly more than 5 hours a day per person. Compared to 2016, it is four minutes less (RTS, 2018). Viewers older than 60 spend the largest number of minutes in front of the TV, 462 minutes a day, while, on the other hand, the young between 15 and 29 years of age spend the least time in front of the TV. They spend 155 minutes a day watching television (RTS, 2018).

In the last twenty years, cooking shows have become interesting to watch (Janjetović, 2013). Cooking has become a popular conversation topic. Through cooking shows, we are getting acquainted with eating habits and customs of different nations. Today we witness an increasing number of TV shows dedicated to cooking and gastronomy in general. Cable operators compete in the best culinary show for passionate gourmands, thus we have TV channels that broadcast only gastronomy contents. Cooking shows are among the most viewed shows in entertainment and

information programmes of national and cable televisions. We will mention here only the most viewed shows such as 'Gastronomad' and 'Kitchen of My Region' on the RTS, then 'The First Chef of Serbia' on the Pink TV, and the shows called 'Hell's Kitchen', 'My Mom Cooks Better than Yours' and 'Come to Dinner' on the Prva TV. In addition to the above-quoted cooking shows which are shown on national televisions, cable television shows are also viewed a lot (RTS, 2018).

Mostly viewed cable culinary televisions are the 24 Kitchen and Kitchen TV. The 24 Kitchen television shows which are mostly viewed are 'Jamie at Home', 'Donna Hay – Simple and Perfect', 'Secret Meat Business', 'Rudolph's Bakery' and 'Market Flavours'. The Kitchen TV shows that have gained great popularity and rating are 'Neša Travka', 'Tito's Kitchen', 'Bread and Tulips', 'Handsome Brka', 'Stevo Karapandža' and 'Traditional Flavours' (RTS, 2018). When it comes to food and cooking, there is no one who is not interested. Everybody cooks. Participants of culinary shows are of different professions, so we meet famous actors, athletes, politicians, TV presenters and ordinary people who cook out of love. Some of them are talented for this kind of profession and they show their gastronomic creations publicly in TV shows, whereas others do it out of curiosity and desire to learn something new, and also to draw attention to themselves. Besides the mentioned participants of culinary shows, professional chefs are in charge and help guests to make a quality gastronomic product by providing advice and guidelines. The dishes which are made in studio kitchens have found a way to our homes and are prepared in everyday life. Television has enabled presentation of traditional dishes of both our and world gastronomies, then modern trends in gastronomy, but also a connection of the modern and the traditional. Thanks to everything that has been shown in TV shows related to gastronomy, being a chef is among the most wanted professions in this country, and professionals who leave the country spread fame and flavours of our gastronomy to other civilizations. The production of gastronomy shows is not cheap, because substantial funds are needed for a studio kitchen, inventory, cooking ingredients and high-quality work equipment. Therefore television and production companies are forced to enter into sponsorship agreements with different trade companies. Mostly, there is one big sponsor and a number of smaller ones who present their products and who acquaint a large number of viewers with their product range. In addition to large trade companies, producers and importers of kitchen equipment, producers of dishes, wine, food, detergents and many others that are related to gastronomy and have benefits from advertizing

are presented. Cooking ingredients that are used to prepare gastronomic delicacies are high-quality/famous national and international brands. Of course, when we put together high-quality ingredients, top masters of gastronomy and high-quality production, the result is an excellent gastronomy show which inspires us to discover gastronomic potentials of our beautiful country and thus participate in its promotion.

Gastronomy as an ambassador of tourism

The image of a nation can be acquired through its gastronomy as well. Every nation, class, caste, even a smaller social group, every epoch, culture and civilization had their own nutrition and gastronomy according to their liking, taste, and very often their need as well. Since its beginning up to now, gastronomy as an interdisciplinary science deals with production, safekeeping, serving, decoration and presentation of gastronomic products in a traditional or a modern way. As part of gastronomy in general, national gastronomy represents a mirror of the material culture of a nation which developed on a certain territory, and the term refers to a collection of all qualities related to nutrition, culture of nutrition, the way of preparing food, all conditioned by the ethnic identity of the nation (Vukić, 2015). The development of gastronomy was strongly influenced by migrations of plants, animals and people. When studying the Apicius's cookbook "De coquinaria", written in 27 BC, the first book about cooking, we can primarily see a large number of seasonings and vegetables brought from the East (Hiršfelder, 2006). Different mixings and foreign influences have not missed any cuisine, ours included. Through our nation's turbulent history, influences of Greek, Bulgarian, Turkish and Austro-Hungarian gastronomic cultures and tradition have remained (Aleksić & Conić, 2017). In this way, we have become richer with new tastes. The basic task of gastronomy is satisfying nutritional needs of the inhabitants and tourists. The development of modern kitchen equipment and the development of gastronomy have influenced the quality of our food. Global modernization of traffic and trade has contributed to a fast transport of goods. Foodstuff that used to travel for months, from one part of the globe to the other, nowadays arrives in a day. It is enough only to access the Internet and fill in the order form. By processing local and global foodstuff with proper technological and thermal processing, quality gastronomic products are made, which are assessed in the gastronomic market by *Mister Consumer* (Kovačević, 2003).

The consumer we mention is a potential tourist, willing to spend money in search of new and unfamiliar tastes. Until recently food was only a part of a tourist arrangement offered by a hotel facility, and now it is an inspiration for visiting tourist destinations. In his paper, Skeledžija (2015) confirms the view of Hu and Ritchie, and after that Rimmington and Yüskel as well "that food is the fourth factor which contributes to the overall pleasure of a tourist after weather, accommodation and ambience"(p.53). Tourism offers new possibilities for enjoying and consuming food. This form of tourism is defined as gastronomic tourism, based on the gastronomic offer and it should be observed as part of the cultural tourism. According to Rabotić (Rabotić, 2003), gastronomic tourism is a recent development, although travellers tasted local food in places they visited in the past. He states that the combination of travelling, food and wine gained popularity at the beginning of the 19th century when the first restaurants were opened. It is of great importance for gastronomic tourism that there is a diverse offer of local, as well as regional and national foodstuff, dishes and drinks, whose authenticity will attract tourists to visit the destination (Cvijanović & Ružić, 2017). Television, as an influential medium, should be used for presentations of gastronomic potentials of destinations.

Traditional destinations of gastronomic tourism in Europe are Italy and France, whose gastronomies have become globally popular. We shall specially highlight the Italian gastronomy specialties. Many dishes have been made in the same way for centuries, and Italy has a special tradition of producing cheese and prosciutto, which it is also famous for around the world. It is enough just to mention Parmigiano-Reggiano, Mozzarella, Gorgonzola, Prosciutto di Parma and numerous types of pasta. Tastes of these products are widely famous and popular. Familiar dishes such as Pizza, Spaghetti Bolognese, Tiramisu and many other dishes have been taken over by gastronomies of other countries. The center of gastronomy is the Emilia Romagna region and the town of Parma, which was declared as one of 47 creative cities in the world in the field of gastronomy, in November 2015 by the UNESCO (UNESCO, 2018). France is one of the most visited tourist destinations in the world, thanks to its natural wealth and cultural heritage. As a cradle of gastronomy, it greatly contributes to the development of gastronomic tourism. France is a leading country in wine and cheese production and regional production is emphasized. The main characteristic of French gastronomy is that its regions have created their own cooking styles. With an obligatory use of local ingredients, top specialties such as the French onion soup, Ratatouille, Quiche Lorraine,

Bouillabaisse, French baguette and many others that have found their way to gastronomies of other nations were created. Apart from the mentioned specialties, we must mention Champagne, French cognac, Bordeaux wines, cheese such as Roquefort, Camembert and many more. According to Gije (2002), the French dream about gastronomy as much as they live with it. As a recognition for the years' long work on preservation and improvement of gastronomy, the UNESCO protected French gastronomy in 2010 and enlisted it as part of the intangible cultural heritage, under the name 'The gastronomic meal of the French' (UNESCO, 2018). In addition to these two mentioned gastronomies, it is also important to mention exotic gastronomies of India, China, Japan, Thailand and Mexico whose cuisine was also listed as a UNESCO intangible cultural heritage in 2010. Serbia covers a small area, but it is rich in gastronomic flavours and tradition. The wealth of Serbian cuisine originates in its geographical, national and cultural diversity, a result of mixing of different nations throughout centuries (Aleksić & Conić, 2017:602). Gastronomic tourism in Serbia has been developing in recent years. There are more and more foreign tourists visiting this country. According to the data of the Statistical Office of the Republic of Serbia, there were 281,610 tourist arrivals in accommodation facilities in Serbia in October 2017, which is by 14.9% more in comparison with the same period in 2016. The number of arrivals of foreign tourists compared to October 2016 is larger by 19.7% (The Statistical Office of the Republic of Serbia, 2017). As Tanjug reports (2018) in the daily newspaper Blic, according to the published data of the Business Registers Agency, there are 1910 registered companies in Serbia and 18,934 entrepreneurs whose business activity includes restaurants and bars.

One of the priorities of a tourist offer should be the national cuisine as an integral part of Serbian culture (Zagorac, 2010). Tourists should not be offered what they have at home, but autochthonous Serbian products and recognizable hospitality. When we move from the north towards the south of Serbia we encounter gastronomic potentials which need to be presented. Vojvodina with its farms is a real tourist attraction where tastes of Hungarian, German, Serbian, Slovakian and Austrian gastronomies are combined. The Central and Western Serbia abound in high-quality meat, milk, fruit, vegetables and their products. Fruit brandies are recognizable products of these parts of Serbia. As an ecologically intact region, eastern Serbia offers high-quality wines that are best presented in traditional wine cellars – "pimnicas". Southern Serbia is famous for its temperament and rich flavours; it abounds in vegetable products such as ajvar and pickled

vegetables and it offers us all charms of the widely known barbecue, which is affectionately called 'skara' by the locals (Jovanov, 2014). Everything that a foreign gastronomic tourist does not have at home is an opportunity and a potential for the development of gastronomic tourism in Serbia.

Gastronomic brand as a recognizable segment of tourist offer

Based on the food, we can see a person's social life. The gastronomic heritage provides a complete image of the identity of a nation or a region. The creation of a national brand is an important factor in the presentation of a country. According to (Aleksić & Conić, 2017), "Food and drink are not only gastronomic products but also brands of a place and should be emphasized by means of marketing" (p.591). The gastronomic offer has an important role in promoting hospitality facilities, but it also has an indirect impact on the image of the tourist destination (Dragičević et al., 2014). The creation of an image of a place that tourists will remember and recognize in comparison with another is branding a destination. The local gastronomy is an important segment of branding a destination (Okumus et al., 2013).

What we can brand and present to potential gastronomic tourists, in order to gain their attention to visit our country is a question that needs to be answered. A good example of this can be seen in Italy, a country which has used all of its cultural, archeological, sports, and gastronomic potentials to attract tourists to visit it. In the territory of the town of Parma, there are a number of museums devoted to traditional products of the Italian gastronomy of the region, created to explain history, production methods, characteristics and flavours of these products, like "*Il Museo del Parmigiano-Reggiano*", "*Il Museo del Prosciutto e dei salumi parmigiani*", "*Il Museo del Salame*" or "*Il Museo del Pomodoro*". A good example of gastronomic tourism is also a visit to a beer festival called the October Fest, which has been held yearly in Munich since the 12th October 1810. During these 16 days of festivities, this greatest beer festival is visited by about 6 million people. When we compare this country with other countries, we can boast that we also have a rich offer of gastronomic manifestations that can be visited by gastronomic tourists who can taste masterpieces of both local and world-famous gastronomes. We primarily highlight a gastronomic manifestation called Leskovac Grill Festival, traditionally held towards the end of August and the beginning of September. In the seven days of the festival, 500,000 visitors from the

country and abroad gather here. The first Grill Festival was held in 1990 and since then it has grown into the largest gastronomic manifestation in the Balkans. It has become a brand of Southern Serbia. We can see how popular the manifestation is by the fact that it has found its place in many leading world media. (Turistička organizacija Leskovac, 2018). Apart from the aforementioned Leskovac Grill Festival, significant gastronomic manifestations in Serbia include Prosciutto Festival in Mackat village in Zlatibor, the Pirot Flattened Sausages Expo, the Bacon Festival in Kacarevo, the Cabbage Festival in Mrcajevc, the Belmuz Festival in Svrlijig and many others of about 150 (Stalna konferencija gradova i opština, 2018). All these gastronomic manifestations have the potential for the development of gastronomic tourism in Serbia with the aim of increasing the number of foreign and national tourist visits and presenting the country as a gastro destination of healthy food.

Consumer as a mobile advertisement

In the food supply chain in modern business conditions, a consumer represents the main factor in determining a gastronomic offer of a hospitality facility. The process of production of a gastronomic product primarily begins with wishes and needs of a consumer (guest). Each consumer has different desires, habits and demands. Therefore, we must carefully approach their needs. We may have dozens of dishes in the menu and advertize our facility in the media, however, in vain if the quality does not come first. A good TV commercial is not worth anything if a guest is not satisfied. Guests (consumer) must feel that they are important and they must feel that they have received attention and honour. The information they receive from the media or directly from the staff has to be honest and unambiguous in order that the consumer should be able to make the right choice when choosing a gastronomic product or a destination. According to Mandarić (2016) "Customers' satisfaction with products and services affects loyalty and contributes to better financial results of a company" (p.55). Profit that a culinary product brings is a key element upon which each manufacturer determines the value of their own products, and makes the final decision about its destiny (Vuksanović et al., 2014). Only a satisfied buyer is the best seller and the best advertisement for promoting a gastronomic destination and a gastronomic product. Today the future belongs to consumers and their needs and wishes that we must constantly be updated with, and our offer and quality must be improved and brought to a higher level.

Methodology

With the aim of researching the influence of television on the development of Serbian gastronomy, a survey, which was done in two directions, was conducted. The first group includes 100 respondents, who study to become cooks, culinary technicians and pastry cooks. Processing of the data received from the first group of respondents produced the following results. Out of 100 respondents, 71% were male, and 29% female. All respondents completed the primary school education and they are all secondary school students.

Table 1: *Sociodemographic characteristics of the first group of respondents*

Gender: Male: 71% Female: 29%	Occupation: Student 100%
Age: ≤20 100%	Place of residence:
Education level:	Belgrade 95%
Primary school 100%	Kragujevac 1%
Secondary school 0%	Lazarevac 1%
Higher education 0%	Mladenovac 1%
Master / Magister 0%	Stara Pazova 1%
	Nova Pazova 1%

Source: *Authors*

The second group includes 50 respondents, most of whom live in Belgrade. They are all employed. The largest number of respondents were women 31 to 40 years of age. Also, the largest number of respondents graduated from higher education institutions.

Table 2: *Sociodemographic characteristics of the second group of respondents*

Gender: Male: 24% Female: 76%	Occupation: Employed 100%
Age:	Place of residence:
≤20 0%	Beograd 96%
21-30 2%	Obrenovac 2%
31-40 42%	Novi Sad 2%
41-50 34%	
51-60 20%	
≥61 2%	
	Education level:
	No education 0%
	Primary school 0%
	Secondary school 22%
	Higher education 42%
	Master / Magister 36%
	PhD 0%

Source: *Authors*

The questionnaires for both groups of respondents contained questions which referred to watching TV programmes. The questions for the first group of respondents referred to the motive for enrolling school, whereas questions for the second group were related to watching TV and practical application of the contents of culinary shows. The result of the research of the former group of respondents, which consisted of students, will be presented first, and the results of the latter group, which consisted of employed adults, will follow.

Paper results and discussion

One of the aims of the research was to determine the motive for enrolling a school for cooks / pastry cooks.

Table 3: *Motive for enrolling a school for cooks / pastry cooks*

I like cooking	40%
I wanted to become a cook	21%
An interesting, creative and well paid job	18%
Love for food	13%
Family tradition	7%
I liked the school	1%

Source: *Authors*

The attitude of the majority of respondents is that they watch TV and most of them stated that they watch television for two hours every day. 11% respondents stated that they do not watch TV. When we look at the results of TV ratings, we come to a conclusion that population up to 20 years of age spends little time watching TV.

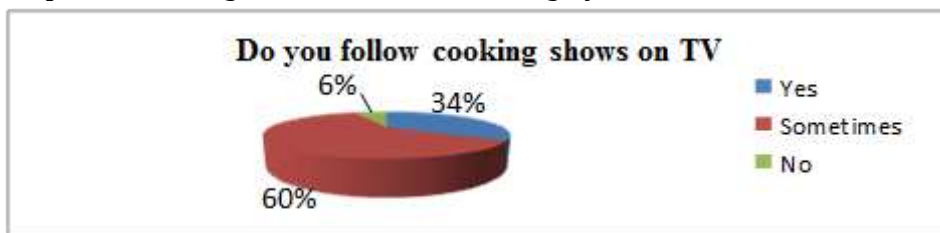
Table 4: *Number of hours of watching television every day*

Up to 1 hour	22%	Up to 6 hours	3%
Up to 2 hours	29%	Up to 10 hours	1%
Up to 3 hours	21%	Up to 12 hours	1%
Up to 4 hours	7%	Almost all day long	2%
Up to 5 hours	3%	I do not watch TV	11%

Source: *Authors*

The prevailing response of 60% of respondents is that they sometimes watch cooking shows on TV, whereas only 6% stated that they do not watch this type of shows.

Graph 1: *Watching TV shows about cooking by students*



Source: *Authors*

Gastronomic shows on the 24 Kitchen TV channel made the greatest impression on viewers with 18.49%, whereas shows “Lonci i poklopci”, then “No Reservations” and the series “Kitchen” made the smallest impression on viewers, with 0.84%.

Table 5: *Gastronomic TV shows with the greatest impression on viewers-students*

Show on 24 Kitchen	18,49%	Moja mama kuva bolje od tvoje	2,52%
Rudolph's Bakery	13,44%	Dođi na večeru	1,68%
Paklena kuhinja	12,60%	Cake Boss	1,68%
Gastromonad	10,08%	Lonci i poklopci	0,84%
Jamie Oliver shows	10,01%	No Reservations	0,84%
Prvi kuvar Srbije	5,88%	series 'Kitchen'	0,84%
Gordon Ramsay shows	5,04%	All of them make an impression	4,2%
None of the shows	11,77%		

Source: *Authors*

The research revealed that the favourite TV chef is Gordon Ramsay, whereas 30.70% respondents answered that they do not have a favourite TV chef. Saša Mišić is their favourite Serbian chef.

Table 6: *Favourite TV chefs*

Gordon Ramsay	27.19%	Andrew Zimmern	0.88%
Jamie Oliver	16.66%	Marco Pierre White	0.88%
Rudolf Van Veen	10.53%	Heston Blumenthal	0.88%
Saša Mišić	7.02%	I do not have a favourite TV chef	30.70%
Nenad Gladić "Lepi Brka"	5.26%		

Source: *Authors*

A high percentage of respondents said that they did not have negative comments about culinary shows, whereas too many commercials were said to be the negative aspect.

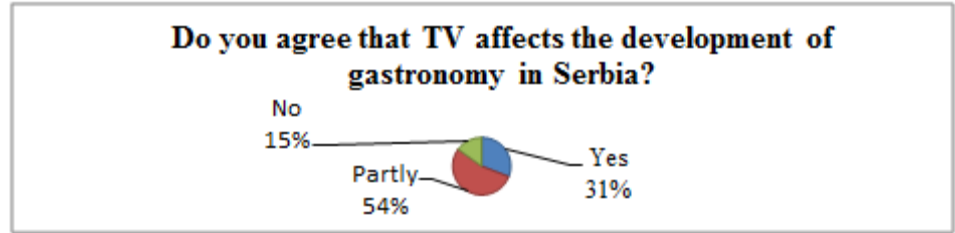
Table 7: *Negative aspects in culinary shows according to the opinion of students*

Too many commercials and a lot of talking in the show	12%
Some ingredients are not available in the Serbian market	9%
The shows create an unreal image about the work and life of chefs	9%
The chefs do not wear uniforms, they are not shaved, they wear jewellery	8%
Irrelevant topics that make the show boring	5%
Expensive dishes (prepared with expensive ingredients)	4%
Some shows do not have normatives or they are incorrect	2%
There are not any negative aspects	51%

Source: *Authors*

Most respondents in the survey think that TV has a partial influence on the development of gastronomy in Serbia, whereas 31% of respondents think that TV influences the development of gastronomy in Serbia.

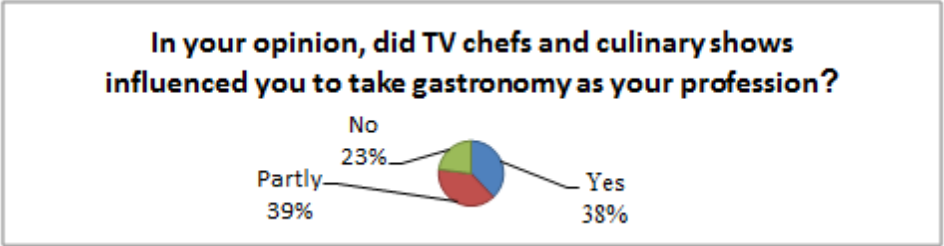
Graph 2: *The influence of TV on the development of gastronomy in Serbia*



Source: *Authors*

Also, most respondents in the survey think that TV chefs and culinary shows have partly influenced them to start practicing gastronomy, and only one percent less said that they have been influenced by the shows.

Graph 3: *The influence of TV chefs and culinary shows on practicing gastronomy*



Source: *Authors*

Processing of the data received from the other group of respondents revealed the following results. The attitude of 90% of respondents was that they watched television and most of the respondents said that they watched TV three hours a day.

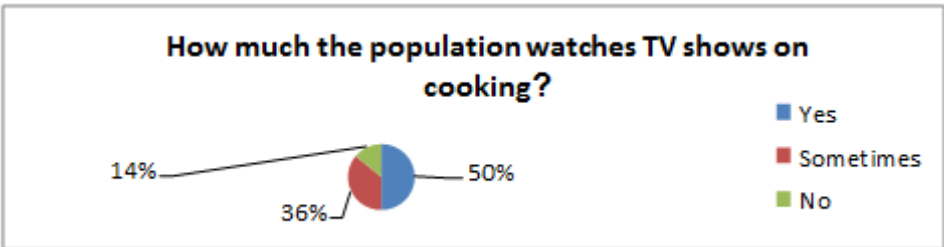
Table 8: *Number of hours of watching television a day by adults*

Up to 1 hour	22%	Up to 5 hours	2%
Up to 2 hours	26%	Up to 6 hours	6%
Up to 3 hours	30%	I do not watch TV	10%
Up to 4 hours	4%		

Source: *Authors*

The prevailing opinion of 50% of respondents is that they sometimes watch culinary shows on television, whereas only 14% of respondents say that they do not watch this type of shows.

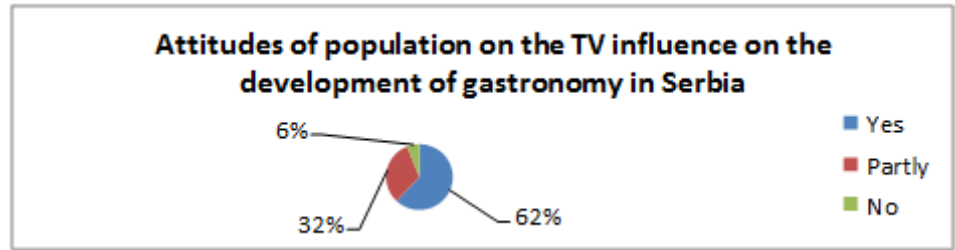
Graph 4: *Watching TV shows about cooking by adults*



Source: *Authors*

The majority of respondents in the survey think that TV affects the development of gastronomy in Serbia, whereas only 6% think that TV does not affect the development of gastronomy in Serbia.

Graph 5: *Attitudes of adults about the TV influence on the development of gastronomy in Serbia*



Source: *Authors*

Gastronomic shows on the 24 Kitchen TV channel made the greatest impression on viewers with 18.49%, whereas the shows such as “Lonci i poklopci”, “No Reservations” and the series “Kitchen” made the smallest impression on viewers with 0.84%.

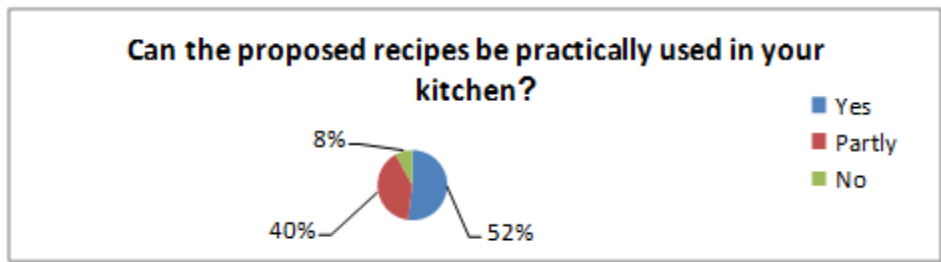
Table 9: *Gastronomic TV shows with the greatest impression on adult population*

Gastromonad-Lepi Brka	21,12%	Cake Boss show	1,41%
24 Kitchen TV show	14,08%	Šefice	1,41%
Jamie Oliver shows	7,04%	Kuhinjica	1,41%
Rudolph's Bakery	5,63%	Lonci i poklopci	1,41%
Paklena kuhinja	5,63%	Kitchen TV shows	1,41%
Gordon Ramsay shows	5,63%	Prvi kuvar Srbije	1,41%
Anthony Bourdain shows	4,23%	Prvi poslastičar Srbije	1,41%
Kuvati srcem	2,82%	Male tajne velikih majstora kuhinje	1,41%
Series 'Kitchen'	2,82%	I do not have a favourite show	19,72%

Source: *Authors*

Most respondents agree that recipes and dishes from TV cooking shows can be prepared in practice, whereas only 8% of respondents claim otherwise.

Graph 6: *Practical preparation of recipes from TV cooking shows*



Source: *Authors*

The prevailing opinion of 66% of respondents is that there are no negative aspects of TV cooking shows, and 13% of respondents said that the biggest negative aspect is that the dishes prepared in TV shows are expensive.

Table 10: *Negative aspects of TV cooking shows according to the opinion of adult population*

There are no negative aspects	66%
Expensive dishes (prepared with expensive ingredients)	13%
Hiring amateurs who do not cook well	6%
Recipes which are too demanding for preparation	5%
Too many commercials in the shows	4%
Some ingredients are not available in the Serbian market	4%
The list of ingredients is displayed for too short a time	2%

Source: *Authors*

Conclusion

Recent research shows that mass media play a very important role in human social life - they inform us, entertain us, expand our knowledge and bring different events closer to us. Television still represents the most powerful medium in data transmission, while the Internet takes more and more of it away from the TV. By using media presentations many a gastronomic brand has become popular worldwide. In the last twenty years, cooking shows have attracted more and more viewers. Innovations and creations of masters of gastronomy have been presented in national and international gastronomic shows. Recipes presented in the shows have found their way to kitchens of national and international gourmards. Chefs are becoming brand celebrities and recognizable faces of TV shows. Many favourite TV chefs, in addition to their love for food and

their occupation, as well as family tradition, have become role models and inspiration for young generations to practice cooking and gastronomy. Through cooking shows, television has affected the development of gastronomy in Serbia, thus enabling a presentation of gastronomic potentials of Serbia. The best example for this is the town of Leskovac, as a leading gastronomic destination in Serbia with its recognizable gastronomic manifestation, the 'Leskovac Grill Festival'. Gastronomic tourists receive information through the media about interesting events in gastronomic destinations. Food is the fourth factor that contributes to the overall pleasure of tourists, following the weather, accommodation and the environment. We only have to be good hosts, because a satisfied guest is the best advertisement in promoting gastronomic potentials of Serbia.

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THE INFLUENCE OF TRADITIONAL AND DIGITAL COMMUNICATION ON THE DECISION TO VISIT SPA DESTINATIONS IN DEVELOPING COUNTRIES – EXAMPLE OF SERBIAN SPAS

Melita Jovanović Tončev¹; Milena Podovac²;

Abstract

Striving to achieve the development of spa resorts in developing countries, market actors in these areas are promoting their spa products in the manner and means to become recognizable on the tourist market. The process of globalization and changes in the supply and demand of spa resorts products have caused changes in the mode of communication between the performers and creators of the spa offerings on the one hand, and users of spa products, on the other hand. Traditional means of promotion are strengthened by digital communication devices that allow for the establishment of continuous and long-term communication. This paper deals with traditional and digital communication in the promotion of spa tourism destinations in developing countries with a special emphasis on spas in Serbia.

Key Words: developing countries, Serbian spas, spa tourism, promotion, traditional communication, digital communication.

JEL classification: L83, M37, O39

Introduction

Developing countries occupy an increasingly important position in the world economy (Hoskisson et al., 2000; Bekaert & Harvey, 1997; Frankel & Rose, 1996). Globalization and the rapid growth of the world economy have conditioned the efforts of the less developed countries to engage their resources and economic policy measures, reach the approximate

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level of development, as well as the most developed economies. In the conditions of strong competition, they were faced with the challenge of providing financial resources to achieve their goals. Despite the concerns expressed in the provision of human, financial and material resources, developing countries represent a significant segment in terms of modern economic development. During the early 1980s, people often used the term "newly industrialized economies" to describe the rapidly growing Asian and Latin American economies, which have adopted liberal policies (The BoA Asia Forum, 2009).

In modern conditions of tourism development, spa tourism takes on growing importance for the economic and marketing strategies of hoteliers, resorts and tourist destinations in order to attract tourists (Azman & Chan, 2010). Although the spa has a long tradition of development (Skowron et al., 2014), its rapid expansion is contributed by the high costs of medical treatment in developed countries, long waiting lists, developed infrastructure of air transport and a favorable exchange rate (Connell et al., 2006). These trends have contributed to directing tourism demand to destinations of spa tourism in developing countries.

In its business, the management of the spa destination communicates with current and potential visitors. Creators of the spa's marketing offer should first understand the behavior of tourists in making the decision on the visit to the destination, as well as the stages of the process of purchase of spa products. Marketing communication and promotion play an important role in informing customers about the destinations on the tourist market and making them interested. In addition to the quality of adequately formulated and integrated spa products, it is necessary to offer a matching destination that contributes to personal requirements of tourists in order to be selected. If spa tourists already have some tourist experience, they will remember the experience and then on the basis of it make a decision about the visit to a destination and in that way contribute to meeting their tourist needs.

However, if a tourist is the user of the spa for the first time, it is necessary to collect information from external sources, which can be personal or marketing. The collection of personal information from friends, family members or someone whose opinion we highly value has a significant influence in deciding the destination of the visit. Marketing word of mouth, as well as the share of the tourist experience through social networks (word of mouse), are for tourists reliable source of information

for potential tourists due to the specific tourist services such as intangibility and the inability to test samples before buying.

Spa tourism in developing countries

In order to complete the analysis of the specifics of spa tourism in developing countries, the paper analyzed Hungary, Serbia, Poland and Romania, which, according to IMF data (according to the level of GDP) are classified into the category of developing countries (IMF, 2016). Spas in Romania are mainly aimed at the domestic market, but some of them have the potential to meet the needs of foreign tourists. Natural potential of Romania lies in the 1300 mineral springs, which represent 30% of the total water in Europe. Nonetheless, spa tourism is relatively poorly developed (Fosztó & Kiss, 2011). The initial impulse for attracting foreign tourists is investments, which would complete the offer of spa tourism in Romania. Although there are resources for the development of spa tourism, the actual situation is much different. The Master Plan for National Tourism Development of Romania (2007) documented the existence of resources (117 locations with therapeutic properties of which 29 were declared spas of national significance and 32 that have been deemed spas of local importance), as well as aggravating circumstances for further development. In Romania, there are three types of spa products: disease health care-treatment, rehabilitation-stimulating recovery, and wellness- fitness and well-being of the entire body. On the other hand, the successful development of spa tourism in Romania is hampered by the image of spas as places for the sick and the elderly, the relatively low share of accommodation facilities in spas in the total accommodation offer, the lack of data on revenues from spa tourism, the fact that people come to the spa for treatment through the state health insurance and poor infrastructure in the spas.

Hungary is an important destination for spa tourism in the European and international market. Hungary is a country with an abundance of thermal waters; healing thermal waters of high abundance can be found at more than 80% of the territory of Hungary (Milićević & Jovanović, 2015). Its position is based on the existence of a variety of mineral and medicinal water sources unique in Central and Eastern Europe. In Hungary, 51 locations were identified as medical spas, while in Budapest there are 7 as separate entities. Hungarian spas are famous owing to the uniqueness of resources, temperature, thermal waters and their different mineral composition. Unlike Romania, Hungary with its equipment meets the

high standards of quality offer, resulting in both domestic and foreign tourists being equally represented on the tourist market (Michalkó & Rátz, 2010). Modern trends point to the necessity to adapt to contemporary Hungarian tourist demand through the use of water resources for the development of sports and recreational and entertainment facilities.

Serbia has a long tradition in the development of spa tourism, which is based on the curative factor in the form of healing thermal mineral water, favorable climatic conditions, mineral mud and favourable conditions for rest and recreation. However, despite the existence of objective conditions for a successful development, quality of spa tourism is inadequate. Due to the political situation and the bad image of Serbia as a country, spa tourism has lagged behind other developing countries, which have successfully developed this form of tourism. The rise of spa tourism was particularly expressed in the first decades after World War II, when the government encouraged social policy, and the legal status of the spas as natural sanatoriums was granted to them. Strengthening of market relations in the economy at the end of the 1960s, the focus of tourism development in Serbia was transferred to the mountain resorts and larger cities, and from then on, the spa tourism recorded stagnation and decline in the total tourism in our country. After a major crisis in the last decade of the 20th century, spa tourism in the first years of the 21st century achieved some progress, but it was realized at a slower pace compared to the mountain and city tourism (Jovičić, 2008). Serbia has a limited growth potential of spa tourism in the global market. Accordingly, the Serbian spa tourism products have not been sufficiently commercialized in the international market, and its future development is based on domestic guests (Šušić & Spasojević, 2011). Similarly to the situation in Serbia, the political climate affected the development of spa tourism in Poland. The socio-economic transformation that took place after 1989 had an impact on changes in the management of the economy at the micro and macro level. A significant problem of spa tourism in Poland is unused water potential. Although 80% of Poland lies on thermal springs, no spas in this country use the wealth of this resource even though the positive impact of water on health treatments has been proved (Szromek & Romaniuk, 2014).

Spas in developing countries have a long tradition in the development of this form of tourism thanks to natural healing factor. On the other hand, their entry into the international tourist market was slowed down due to

insufficient investment in the development and promotion of tourist offer. In order to adapt to the modern tourist demand and occupy a competitive position on the tourism market, countries in Central and Eastern Europe have recently invested significant funds in the development and promotion of traditional medical spas. Through social and health policy, the state still provides significant subsidies for medical treatment and travel. In many countries of Central and Eastern Europe, spa tourism is considered to be the dominant form of social tourism and provides traveling for treatment in the last 40 to 50 years (Puczkó & Bachvarov, 2006). Trend development of spa tourism as a form of tourism financed by the state for the members of all social classes shows the lack of the economic viability of operations of the spas in developing countries. In order to improve their offer and attract the rich and sophisticated tourist demand, it is necessary to differentiate the product, which is offered to people who come for treatment through the health insurance fund and tourists, who go to spas mainly for leisure and relaxation.

The influence of traditional and digital communication on the purchase of spa tourism products

During the process of making a decision about visiting spa destinations, potential tourists gather information to help them to choose between several alternatives. Visitors make the decision on the specific destination based on promotional activities of the spa management's destination. Until the mid-20th century and the advent of television, the impact of traditional media was more significant, and the development of the Internet in the late 20th century made it possible for tourists to gather information in a faster, simpler and more efficient way. The resort spa and destination spa users usually resort to the Internet for information about the spa offer or price information (Johnson & Redman, 2008). By creating easily accessible information and providing travel for tourists in line with technological advances, spa destinations can achieve a competitive advantage over their competitors (Okech, 2014).

The term Web 2.0, which has been used since 2004 (also known as "social web"), describes the use of digital technology. Since then, mobile digital devices, such as smart phones, tablet computers and other devices that can connect to the Internet from any location, have become widely deployed and user-oriented. Also, social networks such as Twitter, Facebook and Instagram are becoming more developed enabling content creation and sharing of users' personal information. Web 2.0 is

characterized by activity that is now able to act as users and creators of social networks. (Ritzer et al., 2012). The future of the Web represents Web 3.0, when the exchange of data between devices without human intervention will be enabled (Miorandi et al., 2012). Most companies in the tourist sector mostly use the Web 2.0 technologies. In Serbia, we can still talk about Web 1.0 stage with the use of static websites and sporadic use of social networking (Web 2.0) in the promotion of spa resorts. Many tourist companies use websites, but not in a meaningful way (Stankov et al., 2009).

An increasing number of marketing messages sent to visitors through traditional and digital means of promotion result in the fact that users cannot select among a huge number of advertisements and messages that surround them every day. For this reason, the consumer is inclined to respect the recommendations of friends (word of mouth) or recommendations through social media (word of mouse). Authors Munz and Sergiunaite (2012), Salzman et al., (2004), define the transfer of information between users through social networks as the exchange of information in a spontaneous and frequent manner. According to Steffes and Burger (2009), there is an exchange of information between the user and spa services both through traditional "WOM" and on-line "WOM", which takes place on the Internet.

The correct choice between traditional and digital marketing communications and content is determined by the message that is being marketed, a budget that has a frequency of planned actions (campaigns or individual stocks), the type of product being offered, product lifecycle and destinations, the characteristics of the target segment. Successful management of promotional activities implies the process of carefully analyzing the spa destination opportunities, the objectives to be achieved by a communication action, and making decisions that are complex and require a detailed analysis of the current situation. The final outcome of the process is the decision-making that represents a specific solution to the problem. Marketing plan and plan of communication activities consist of a series of actions that must be carefully planned, organized and implemented to get the message out to potential tourists in order to produce the desired effect.

Decisions about promotional mix, instruments, and tools that will be used to communicate with the target market, always involve a lot of information and interaction between the destination management and

potential tourists. The dynamism of the process is huge because it concerns decision making and choices at every stage of the process. If spa destinations want to become recognizable in the world of the tourist market, its promotional activity via social networks should be planned strategically, and the measures controlled and corrected. It is necessary to manage online marketing activities, as well as the integration with offline promotional activities (Jovanović & Jovanović Tončev, 2015).

The conceptual model

Investigation of the influence of traditional and digital communications to the decision-making process of visiting the spa destination was conducted in the period from 07/01/2016 to 17/08/2016. The data was collected by personal interviews and sending the questionnaire to the email address of visitors to spa resorts, as well as potential beneficiaries of the tourist sites. The questionnaire, completed by the respondents, comprised 3 parts.

In the first part, the respondents provided basic demographic data: gender, age, the level of education. In the second part, respondents were asked questions about visited spa destinations in Serbia and the region.

The third part was devoted to answering the questions about how the individual resources of traditional and digital communications influenced making a decision to visit a destination. The respondents were offered answers in the form of Likert intensity scale from 1 (not affected) to 5 (very much affected), in order to measure the degree of influence of individual means when deciding to visit a destination. By applying the *Spearman's* correlation coefficient, as well as checking the results by *Mann-Whitney* and *Kruskal-Wallis* test, the authors have tried to establish the relationship between demographic characteristics of respondents and income structures and motifs for going to a spa destination, and analyzed the impact of means of communication in the decision-making process.

The influence of gender, age and educational structure were analyzed respectively in order to determine the purpose and motives for travel destination (health resort or wellness), and the ratio of the aforementioned demographic and income factors and the impact of certain means of communication. By using these tests, the answer to the question of whether there is a statistically significant correlation between the observed variables was sought. The starting basic hypothesis was:

H0: Instead of choosing between traditional and digital marketing communication, the optimal solution is their combination in order to contribute to making a decision on the visit to a spa tourist destinations.

It will be operationalized through three specific (X1, X2 and X3), which will be proven by the individual (X1a, X1b, X1c, X1d, X1e, X2a, X2b, X2c)

H1: Traditional communications contribute to making a decision on the visit to spa destinations.

H1 (a): Advertising on television contributes to making a decision on the visit to spa destinations.

H1(b): Advertising on radio contributes to making a decision on the visit to spa destinations.

H1(c): Advertising through newspapers contributes to making a decision on visit to spa destinations.

H1(d): Advertising through magazine contributes to making a decision on visit to spa destinations.

H1(e): *Word of mouth* marketing or recommendations of friends or doctors contribute to making a decision on the visit to spa destinations.

H2: Digital communications contribute to making a decision on the visit to spa destinations

H2(a): Promoting destinations via website contributes to making a decision on the visit to spa destinations.

H2(b): Promoting destinations via banners contributes to making a decision on the visit to spa destinations.

H2(c): The combination of advertising through social networks *Facebook*, *Twitter*, *Instagram*, and *Pinterest* contributes to the recognition of marketing destinations and decision-making on the visit to spa destinations.

H3: Digital communication affects traditional communication in the process of decision-making of Serbian visitors to spa resorts.

The research results

The demographic profile of respondents can be described by the representation of 168 surveyed female respondents and 132 male respondents. The ratio of male and female respondents was tailored to the actual ratio and amounted to 44% of men versus 56% of female respondents. With the analysis of the age structure of the population, it was found that older population dominated with 39.7% of respondents, in other words 119 respondents were 60 years old or older.

Table 1: *Demographic characteristics of the respondents*

		Frequency	Percentage (%)	Mean	Standard deviation
Gender	Male	132	44	1.56	.497
	Female	168	56		
Age	15-25	15	5.0	3.81	1.183
	26-36	22	7.3		
	36-45	87	29.0		
	46-60	57	19.0		
	60 and more	119	39.7		
Level of education	High school	177	59	1.87	1.166
	College	26	8.7		
	University degree	66	22		
	Master	22	7.3		
	Phd	9	3.0		
Level of income	Up to 150 euros	10	3.3	2.67	.842
	151-300	141	47		
	301-500	86	28.7		
	More than 500 euros	63	21		

Source: *Research results*

The educational structure of respondents varies with the dominant share (59%) of the population that has secondary education. The educational structure is dominated by respondents with secondary education (59%). The least represented are the respondents who have completed master's (7.3%) and Ph.D. (3%) studies. 5% of respondents are young people between 15 and 25 years, with the least visits to spa destinations. The answers to the Likert scale questions that determine how traditional communication influenced the decision on visiting spa destinations were such that 10% of respondents said that TV had not at all influenced the decision on visiting them. Percentage of respondents who answered that the TV influenced a lot and very much amounted to 70% observing these aforementioned variables.

Table 2: *The impact of traditional communications on a decision on the visit destination*

		Frequency	Percentage (%)	Mean	Standard deviation
TV	Did not influence	30	10.0	3.98	1.394
	Had a little influence	24	8		
	Had a medium influence	42	14		
	Had a medium influence	31	10.3		
	Had a very big influence	173	57.7		
Radio	Did not influence	276	92	1.14	.567
	Had a little influence	15	5		
	Had a medium influence	3	1		
	Had a medium influence	3	1		
	Had a very big influence	3	1		
Newspapers	Did not influence	162	54	1.88	1.163
	Had a little influence	58	19.3		
	Had a medium influence	51	17		
	Had a medium influence	13	4.3		
	Had a very big influence	16	5.3		
Journals	Did not influence	192	64	1.76	1.579
	Had a little influence	45	15		
	Had a medium influence	23	7.7		
	Had a medium influence	22	7.3		
	Had a very big influence	18	6		

Recommendation of friends	Did not influence	60	20.0	3.22	1.525
	Had a little influence	50	16.7		
	Had a medium influence	46	15.3		
	Had a medium influence	52	17.3		
	Had a very big influence	92	30.7		
Recommendation of doctor	Did not influence	167	55.7	2.37	1.579
	Had a little influence	4	1.3		
	Had a medium influence	4	1.3		
	Had a medium influence	102	34		
	Had a very big influence	23	7.7		

Source: *Research results*

Examining the impact of traditional communications, when deciding on visiting the destination, we have found that when the TV is concerned, only 10% of respondents said that the promotion on television very much influenced their choice of a particular destination. A very large percentage (over 50%) of respondents said that TV did not affect their decisions at all. The ratio of respondents who have made a decision based on the impact of radio advertising and responded that this kind of advertising had not had an impact is even more significant. In fact, more than 90% of respondents said that radio was not even relevant when making decisions, while only 1% of respondents declared that the radio had influenced them a lot. The print media, newspapers and magazines, are very much influential to only 5.3%, or 6% of respondents. In order to examine the influence of other means of promoting the adoption of a decision on the visit to a destination, the respondents were given the option to auto-fill empty field. Others, more than 7% of the surveyed responded that a doctor's recommendation had influenced their decision very much, while 20% of respondents thought that the recommendation of friends had a lot of influence. The obtained data testifies to the importance of word of mouth marketing to make a decision about a visit.

Table 3: *The impact of digital communications on the decision about the visit destination*

		Frequency	Percentage (%)	Mean	Standard deviation
Web presentation	Did not influence	203	67.7	1.84	1.337
	Had little influence	16	5.3		
	Had a medium influence	25	8.3		
	Had a medium influence	38	12.7		
	Had a very big influence	18	6		
Banners	Did not influence	250	83.3	1.37	.954
	Had little influence	18	6		
	Had a medium influence	11	3.7		
	Had a medium influence	12	4		
	Had a very big influence	9	3		
Facebook	Did not influence	190	63.3	2.08	1.562
	Had little influence	18	6		
	Had a medium influence	14	4.7		
	Had a medium influence	35	11.7		
	Had a very big influence	43	14.3		
Twitter	Did not influence	270	90	1.23	.788
	Had little influence	10	3.3		
	Had a medium influence	6	2		
	Had a medium influence	8	2.7		
	Had a very big influence	6	2		

Instagram	Did not influence	284	94.7	1.10	.490
	Had little influence	7	2.3		
	Had a medium influence	4	1.3		
	Had a medium influence	4	1.3		
	Had a very big influence	1	0,3		

Source: *Research results*

Examining the impact of the web presentation on the process of making a decision about the visit to a spa resort, we found that 67,7% of respondents answered that web sites did not make an impact on them at all, while 6% of respondents answered that they were very much affected. It is significant to mention the fact that 12% of respondents answered that the contents of the destination presented on the web site influenced decision-making to a great extent.

Communication with potential visitors through banners, Twitter and Instagram is not significant, because over 80% of respondents answered that these social networks have not influenced their decision. The impact of *Facebook* is more significant because more than 14% of respondents said that *Facebook* had a great deal of influence on them. If we consider that the 11% of respondents stated that *Facebook* had much more influence on them, we arrive at the data that 25% of respondents thought that this social network had a lot of influence on the decision-making process. Analysing the data, we concluded that *word of mouth marketing* (*e-word of mouth marketing*) plays an important role in making decisions about a spa visit to a particular destination. To determine the impact and interconnectedness of traditional and digital communications and decisions taken on the visit were used Spearman's correlation coefficient. The data obtained in this analysis are shown in Table 4.

Table 4: *Spearman correlation coefficient traditional and digital communications and decisions taken on the visit to the spa destinations*

The analyzed variables	Spearman coefficient value
TV and the decision to visit the spa destination	0.000
Radio and the decision to visit to the	0.223

spa destination	
Newspapers and the decision to visit the spa destination	0.181
Newspapers and the decision to visit the spa destination	0.005
Word of mouth marketing and the decision to visit the spa destination	0.000
Doctor's recommendations and the decision to visit the spa destination	0.000
Recommendations of friends and the decision to visit the spa destination	0.000
Web presentations and the decision to visit the spa destination	0.000
Banners and the decision to visit the spa destination	0.004
Facebook and the decision to visit the spa destination	0.004
Twitter and the decision to visit the spa destination	0.400
Instagram and the decision to visit the spa destination	0.066
Pinterest and the decision to visit the spa destination	0.005

Source: *Research results*

Values of Spearman's security correlation coefficient between the TV and the decisions made on the visit to spa destination is .000, which is less than 0,005, and we can say that there is a statistically significant correlation between the analyzed variables and that the TV had significantly influenced deciding to visit the destination, and the first individual hypothesis can be **accepted**. Values of Spearman's correlation coefficient between the radio and the decision is greater than 0.05, and we can say that between the observed phenomena there is no statistically significant correlation, and **reject** the hypothesis about the influence of advertising in deciding to visit the spa destination of Serbia. Values of security correlation between the newspaper and the decision to visit a destination are 0,181, which is greater than 0.05, so it can be concluded that the link between the observed phenomenon is not statistically significant and that the hypothesis is **rejected**. The value of Spearman's correlation coefficient between the magazine and the decision is 0.05, so

we can conclude that there is a relatively significant correlation between the analyzed variables, and that hypothesis is **partly accepted**. The value of Spearman's coefficient is less than 0.05, and we can conclude that there is a statistically significant correlation between the observed variables, and that friends' recommendations affect the decision on the visit to the destination, and that the hypothesis can be **accepted**. The same value of Spearman's coefficient relates to doctor's recommendations and decisions on the visit of the place, so it can be concluded that there is a statistically significant correlation between doctor's recommendations and decisions on the visit, and this single hypothesis can be **accepted**. Identical Spearman's coefficient values are calculated when determining the correlation of banners and Facebook and their impact on the decision to visit, and these amount to 0.004 which is less than 0.005, but it can be concluded that there is a statistically significant correlation between advertising through banners and Facebook and visiting the destination, and this individual hypothesis can be **accepted**. Values of Spearman's correlation coefficient is .066, which is greater than .05, and it can be concluded that there is no statistically significant correlation between the analyzed variables and that the hypothesis is **rejected**.

On the basis of Spearman's correlation test that is applied during the investigation of the two variables whose data is not characterized by a normal distribution, it can be concluded that decisions on the visit to spa destinations correlate statistically to a significant degree with advertising on TV, in magazines, friends' recommendations and doctor's recommendations (as well as traditional means of promotion) and advertising via web presentations, banners, Facebook, Twitter. This leads to the conclusion that both traditional and digital promotional means contribute to decision-making on the visit destination, which confirms the basic hypothesis of the influence of both ways of promoting the process of making a decision on the visit to a spa destination.

Based on Applied nonparametric tests and analysis of the obtained results, it can be concluded that traditional communication still has considerable influence in deciding to visit a spa destination. Whether it is a recommendation of a friend, a doctor or one's own experience, potential visitors of spa destinations are drawn to a specific destination by traditional means of communication. With an adequate choice of promotional mix, a potential visitor gets prompted to act, or search additional information about the destination through the new digital communications. So viewed, it can be concluded that both traditional and

modern communication have a role and influence tourist demand when making decisions on visiting spa destinations.

Conclusion

The social contribution of this work is in pointing out the necessity of introducing new analysis methods and practices in modern and more efficient business destination management by using new forms of communication and the development of promotional mix intended for attracting more tourists. This should not affect significantly the improvement of overall business in the field of spa tourism. Creators of marketing activities in developing countries should understand the advantages of traditional communications in targeting specific target groups, but also the opportunities that modern, digital communications give in attracting the younger age population of developing countries who are expecting an integrated product that can meet their individual demand. Future research of traditional and digital communications should investigate the contribution of different forms of communication, promotion, and creation of a positive image of spa destinations.

The research results show a significant influence of TV, friends' and doctors' recommendations, but also *Facebook*, *Twitter* and web presentations. Values of *Spearman's* correlation coefficient when investigating the impact of TV on the 0.005, then the value of the Spearman's coefficient when it examined the impact of friends' and doctors' recommendations and the decisions taken on the visit to a spa destination from security 0.000, shows a statistically significant relationship, then the values of security from 0.040 to explain the impact of Twitter and from 0.004 showing the correlation between messages sent via Facebook and decisions taken on the visit to a spa.

The study aimed to investigate the effect and significance of traditional and digital means of communication on the decision to visit a destination, as well as to show that the funds have a greater impact on tourists when deciding to undertake the journey. As a result of the age structure of visitors, we came to the conclusion that TV, friends' and doctors' recommendations have a more significant effect on the decision to visit a spa resort than a digital means of communication. During the formulation of spa products intended for this age, it is necessary to adopt a promotional plan upon which the spa destinations rest and promote their products via traditional means of promotion.

However, if the spas in developing countries want to follow the examples of good practice and develop their product by accepting the standard of wellness and wellbeing, it is necessary to formulate a spa product designed for the target market which is the largest user of these services. Modern development of tourism is characterized by changes in the behavior of tourism demand (Podovac, 2017). Visitors of spa destinations are no longer older and sick people, but the younger and business people who want relaxation, active holiday and are eager to relax and escape from everyday life (Jovanović Tončev & Podovac, 2016). A middle-aged visitors and income structure is in question here. These are tourists who start their journeys by searching information on the Internet. Therefore, the destination management should communicate with their potential visitors through digital means of communication. Research has shown that when it comes to Serbia, it should be through Facebook, Twitter and web presentations. Examination of the interrelationship between Pinterest and Instagram and the decision to visit the destination has shown that there is no statistically significant relationship.

Depending on the criteria of selection of traditional and digital communication, destination management and marketing activities creators of spa destinations in developing countries should form the promotional mix in a way that it comprises both traditional and digital communications, because only in this way will they be able to act quickly, efficiently, achieve targeting potential visitors, satisfy their needs with the realization of social responsibility and establish a long-term relationships with tourists, and fight for their loyalty.

Through the analyzed data it can be concluded that the basic hypothesis that opens this paper, which is that instead of choosing between traditional and digital marketing communications, the optimal solution is a combination which contributes to making a decision on the visit to spa tourist destinations, was also confirmed. Furthermore, depending on the criteria of selection of traditional and digital communication, the destination management and creators of marketing activities of spa destinations in developing countries should form the promotional mix in a way that it combines both traditional and digital communications, because only in this way will they be able to act quickly, efficiently, achieve targeting potential visitors, satisfy their needs with the realization of social responsibility and establish a long-term relationships with tourists, and fight for their loyalty.

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BIG DATA - THE IMPACT ON HEALTH TOURISM AND SUSTAINABILITY

Marina Jovanović Milenković¹; Nataša Petrović²

Abstract

The healthcare industry has historically generated large amounts of data, driven by record keeping, compliance and regulatory requirements, and patient care. While most data is stored in a hard copy form, the current trend is towards rapid digitization of these large amounts of data. The combination of health and tourism is a relatively new type of tourism that records high rates of growth, and today the value of the health tourism market is over 100 billion dollars. The growth trend will continue in the future, and its sustainability is influenced by environmental factors. The potential of health tourism and sustainability is just in big data technologies. Big data will be a major challenge to health tourism and sustainability in the next decade.

Key Words: *healthcare, big data, health tourism, sustainability*

JEL classification: *I190*

Introduction

The health system and its development directions are the subject of the interests of numerous international organizations, agencies and other institutions, such as the World Health Organization, the World Bank, the International Committee of the Red Cross, and others. Health, or public health, deals with the general health of the community based on health analysis of the population (Milenković et al., 2012; Jovanović Milenković et al., 2016b). “Tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host community” (World Tourism Organization UNWTO, 2018). It involves travel for all purposes,

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including recreation and business. The combination of health and tourism is a relatively new type of tourism that records high rates of growth, and today the value of the health tourism market is over \$ 100 billion (Medical Tourism Magazine, 2014-2015).

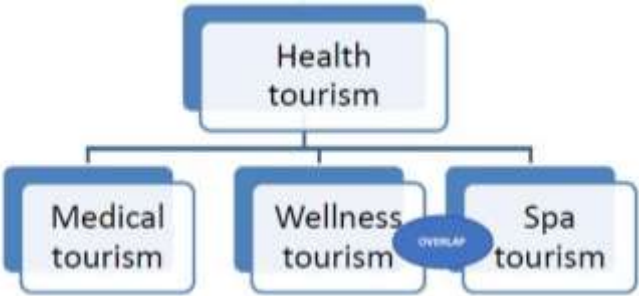
Considering the importance of health tourism and the sustainability of each country, the state implements a number of measures in planning and managing this system in order to ensure stable financing and a quality health care system. The environmental sustainability has a task “... to create and maintain the conditions under which humans and nature can exist in productive harmony to support present and future generations” (EPA, 2018). Further on, “big data is playing a transformative role in the sectors: tourism, sustainability and healthcare” (Keeso, 2014).

Health tourism

In the book *Tourism*, Dragutin Alfier points to the connection between health and tourism: “... health in fact is one of the oldest, lasting and strongest motives for tourism, and that tourism in all its forms always carries out a health function” (Alfier, 1994). In determining health tourism it is necessary to start from the individual’s psychological and physical abilities, needs and aspirations for the recovery of health, in other words goals that can be achieved by enjoying healing water through specific activities and treatments that meet the tourist demand.

Health tourism represents a sector under general tourism and includes wellness, spa and medical tourism (Figure 1).

Figure 1: *Structure of Health tourism*



Source: Mainil et al., 2017

Medical tourism includes people travelling in order to have access to medical treatment. People who travel for wellness want to maintain or improve their health and well-being. Spa tourism involves healing, relaxing or beautifying the body that is in its nature preventative and/or curative (Mainil et al., 2017).

Meler talks about healthcare hardware and healthcare software, where healthcare software is presented with the necessary infrastructure (specialized hospitals, health centers, specialized institutes ...). “Healthcare software is presented to the natural conditions of a specific destination, i.e. climate, thermo mineral and other natural healing factors of the tourist destination” (Meler, 2000). On the Figure 2 we can see types of health tourism.

Figure 2: *Types of health tourism*

Types of Health Tourism				
Wellness			Medical	
Holistic	Leisure & Recreation	Medical Wellness	Medical	Medical
Spiritual	Beauty treatments	Therapeutic Recreation	Rehabilitation (Illness related)	Cosmetic surgery
Yoga & Meditation	Sport & Fitness	Rehabilitation (Lifestyle related)	Healing & Recuperation	Dentistry
New Age	Pampering	Occupational wellness		Operations
			Thalassotherapy	
			Nutritional & Detox programs	

Source: *Smith, Puczkó, 2009*

Because of the fact that the data usually gathered is unreliable and often fragmented, as well as the fact that health tourism’s definition and components vary, it is difficult to calculate the size and growth of it as a market. Within the European Union 28.56 million domestic and 5.1 million international travels were made in 2014 and the share of the market health tourism takes 4.3% - 5.8% of domestic arrivals and 1.1% of international arrivals. France, Italy, Sweden, Germany and Poland represent important destinations for health tourism when it comes to economy. Bulgaria, Germany, Spain, Finland and Ireland have a high

number of wellness and accommodation facilities, while most of health and wellness facilities can be found in Central and Eastern Europe and the Spanish and southern Baltic coasts. Large possible markets for health tourism are Germany, France and Sweden. When it comes to over-night trips, health tourism in the European Union takes up 233.7 million guest nights for domestic trips and 16.7 million international trips, with a total of 250.4 million (Mainil et al., 2017).

It is difficult to differentiate the size of the three markets of health tourism (that is medical, wellness and spa) in the European Union, because of the limited and fragmented data available and since the definitions of this tourism vary greatly depending on the sources and statistical bureaus. An Austrian study estimated the size of the market on the number of businesses/facilities per each market segment, but treated the invasive medical tourism separately. Wellness tourism was dominant in Austria in 2014 taking up 76% share of health tourism, spa tourism came second with 13% share, medical tourism took 9% share and minimally invasive/aesthetic medical tourism took 2% share (Donau-Universität Krems, 2014).

Sustainability

The concept of sustainability has now become widely accepted as a condition of survival and progress of the population. This concept is in close connection with sustainable development which is defined as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (WCED, 1987). “A rising interest in sustainable development is a result of the perception of current actual conditions of the global human environment, which is largely unsatisfying and worrying, and demands urgent reaction of all members of the society, focused on long term environment protection and maintenance of biological stability” (Petrović, 2012; Savić et al., 2016a; Savić et al., 2016b).

The definition of the term ‘sustainability’ actually represents the study of how natural systems function, remain diverse and produce everything they need for the overall Planet ecology to remain in balance. It also acknowledges that human civilization takes resources to sustain our modern way of life. There are countless examples throughout human history where a civilization has damaged its own environment and seriously affected its own survival chances. Sustainability takes into

account how we might live in harmony with the natural world around us, protecting it from damage and destruction (Environmental Science, 2018; Meadowcroft, 2000).

It is evident that in this day and age, people consume a lot of natural resources each day. It is estimated that each year, humanity uses around 40% more resources than it can replenish, and this fact needs to change. Sustainable development and sustainability itself focus on the balance between competing two needs (Hopwood et al., 2005; Jovanovic Milenkovic et al., 2014):

1. The first is our need to move forward technologically and economically.

The second need is to protect the environments we live in.

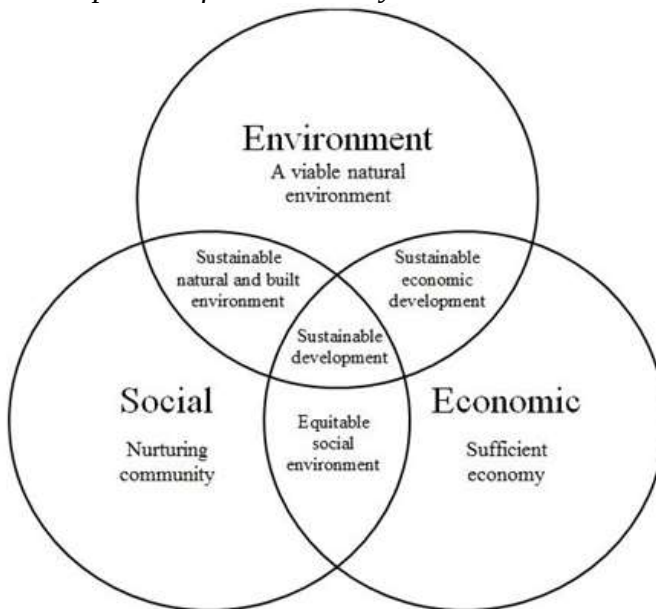
There are three pillars of sustainability (Summit, 2002; Waas et al., 2011):

- Economic Development - economic growth as an engine for long-term welfare creation to satisfy essential needs for jobs, income, food, energy, water, sanitation, social security, and consumption opportunities;
- Social Development - social justice to achieve an equal distribution of welfare, equal access to natural resources and equal opportunities between people (gender, social groups, etc.),
- Environmental Protection - environmental protection to conserve and enhance the resource base and to keep within the Earth's environmental limits for a long term perspective.

Three pillars of the sustainability “do not exclude each other, but even can accent each other” (UN, 2005; Savić et al., 2016b). Three pillars of sustainable development and sustainability are given in Figure 3.

It is evident that sustainability is not just the environment, it's also about health of people and the planet. When it comes to environment it must be noted that currently there are many environmental projects that promote living sustainably – both on local, national and global levels. Maintaining the health of the environment is crucial in ensuring that the future generations can go green and live healthy lives on a healthy planet. Our individual environmental projects can include carrying out our own environmental impact assessment to ensure we use energy and water efficiently and make sure our food, furniture and clothing is from sustainable sources (Environmental Science, 2018).

Figure 3: *Three pillars of Sustainability*



Source: *Pittsburg State University, 2014*

We can conclude that the connection between health tourism and the environment is high having in mind that health tourism depends on a clean environment, but has an impact on the environment (e.g. wellness and spa tourism depend to a large extent on clean water, clean air and attractive ecosystem).

Big data

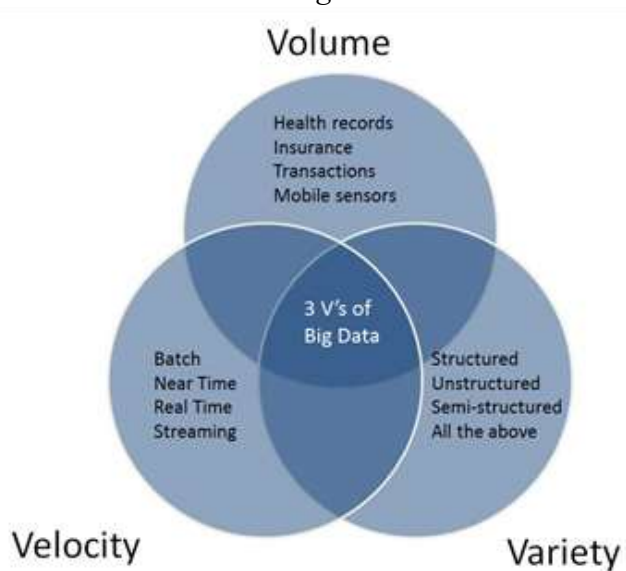
The massive amount of data that was collected at each step led to evolution of ways of storing, processing, manipulating and analyzing data. As large IT companies realized that the collection, purification, and analysis of these large amounts of data lead to valuable insights into how business endeavors can be improved, they were followed up. Today, almost every branch of industry, starting with banks, through large retail chains to health organizations use Big Data Technology to improve performance (Banjac et al., 2017). In 2010, Apache Hadoop defined big data as “datasets which could not be captured, managed, and processed by general computers within an acceptable scope.” On the basis of this definition, in May 2011, McKinsey & Company, a global consulting agency announced Big Data as the next frontier for innovation, competition, and productivity. Big data refer to such datasets that could

not be acquired, stored, and managed by classic database software (Chen et al., 2014). Doug Laney, an analyst of META (presently Gartner) defined challenges and opportunities brought about by increased data with a 3Vs model, i.e., the increase of Volume, Velocity, and Variety, in a research report (Laney, 2001). Gartner and many other enterprises, used the “3Vs” model to describe big data (Beyer, 2011). In the “3Vs” model (Jovanovic Milenkovic, 2016a) (Figure 4)

Volume means that with both generation and collection of data masses, the data scale is in turn becoming increasingly big:

- Velocity implies that the timeliness of big data, moreover, data collection and analysis, etc. must be rapidly and timely conducted, so as to utilize the commercial value of big data to the maximum.
- Variety indicates the various types of data, which can include semi-structured and unstructured data such as audio, video, webpage, and text, as well as traditional structured data (Chen et al., 2014).

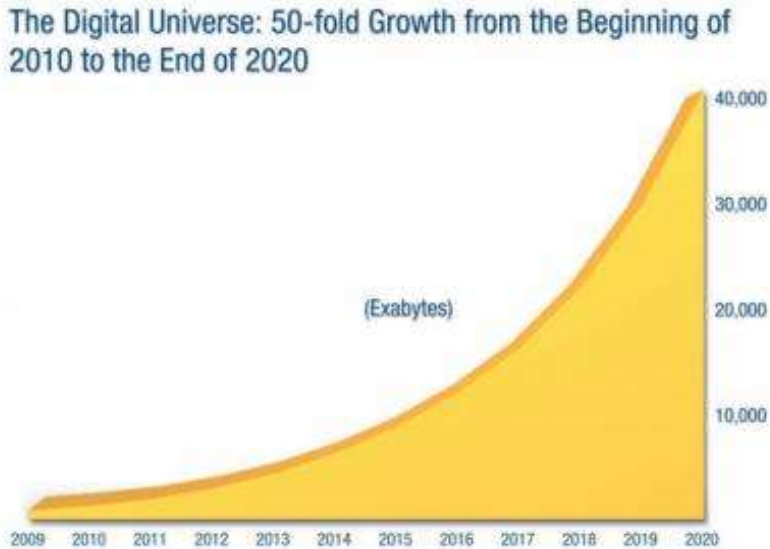
Figure 4: “3Vs” model to describe big data



Source: Austin & Kusumoto, 2016

IDC (International Data Corporation), one of the world's leading providers of market information, advisory services and events for IT, telecommunications and the market for consumer technology, predicts that the world's data will be duplicated every two years and will reach 44 zeta bits in 2020 (1,021 bytes) (Gantz & Reinsel, 2012) (Figure 5).

Figure 5: *Increase in the amount of data 2009-2020*



Source: *Gantz & Reinsel, 2012*

The fact that Facebook has more users than the country of China has people is fascinating. By 2015, its users posted around 250 billion photographs and post an additional 350 million every day. In 2016, users on YouTube posted 300 hours of videos YouTube Company Statistics, 2017), an average of 58 million tweets were posted daily on Twitter (Twitter Company Statistics, 2017), while Facebook generates 4 petabytes (1015 bytes) of new data per day, and its users 4 million likes every minute (Marketing: 47 Facebook Statistics, 2017). However, over 80 percent of the data collected are unstructured data, which means they can not be analyzed in their current form. These are usually videos, photos, audio files, text documents, and many other types of business documents. Semi-structured data make up about 10 percent of the data collected. Finally, structured data constitutes only 5 to 10 percent of the data collected.

Big data - the impact on health tourism and sustainability

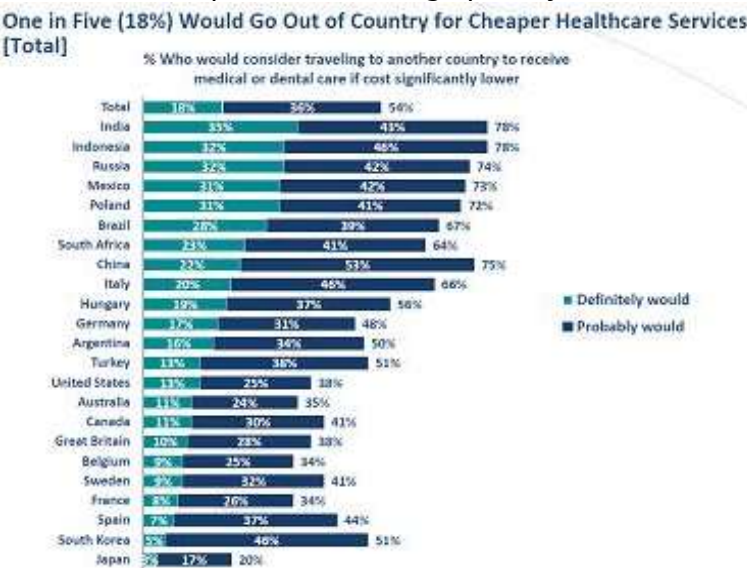
Health tourism, sustainability and big data are concepts that are mutually dependent. More precisely, everything around us today is affected by big data. The phenomenon took shape earlier in this decade and there are now growing numbers of compelling ways in which big data analytics is applied to solve real-world problems. The correlation between health

tourism and sustainability comes from interweaving a large number of data. Big data's potential impact on sustainability hinges on three facts:

- Sustainability of both the business world and the natural world;
- The business world is very complicated, with many interactions between consumers, companies, suppliers and markets;
- The natural world is even more complicated, with lots of interactions between people and resources and ecosystems and climate.

The increment of journeys for health purposes encouraged countries to invest in their healthcare infrastructure (Figure 6). In Figure 6 we can see who considers traveling to another country to receive medical or dental care if the cost was significantly lower. It is no longer rare that leading hospitals are advertised on the international market, directly or through agencies that create special programs that combine medical services and tourist experiences. When defining medical tourists, different methodological interpretations of this problem arise. It's mostly about people who travel to another country looking for medical treatment or health care. The following chart shows a survey of which percentage of the population would travel for the purpose of cheaper health care services.

Figure 6: *Who could consider traveling to another country to receive medical or dental care if the cost were significantly lower*



Source: Ipsos, 2012

Of course, ICT technologies have greatly facilitated the finding of health care that offers the desired value for money outside the place of residence. There is an increasing number of medical services prices, that is, portals specializing in medical tourism, which allow the exchange of offers and contacts between clients and service providers. The ultimate goal is to connect patients with reliable doctors - specialists.

The connection of big data, health tourism and sustainability implies much potential. Data gathering is becoming advanced and it is our ability to analyze and understand the abundant amounts of it. Better computational strength and enhanced connectivity are driving the information revolution. According to an estimate by IBM, by 2020 there will be 300 times more information than we had in 2005. There are, of course, huge opportunities that arise from proper use of these data and sustainability is one of them. Examples that can provide insight into the enormous potential are:

- Energy consumption related to street light in Oslo decreased by 62% with smart solutions (Echelon, 2014).
- The General Hospital in the State of Massachusetts has introduced QPID (Queriable Patient Inference Dossier). It is a system that allows doctors to oversee key information about patients when receiving and treating them. This system also provides operational risk for each patient, which allows each patient to get the best possible treatment and care (Bresnick, 2014).
- Paul Rogers, GE's chief development officer expressed his thoughts in the IGEL conference about the potential of Big Data to optimize performance in the business world. According to the facts presented by him, a "meager 1% improvement in efficiency in five major industrial sectors including healthcare, aviation, rail, power and oil and gas can save \$276 billion in the next 15 years." This amount is a reflection of the kind of profit that companies involved can earn while causing a lesser impact on the environment (The Wharton School, 2015).
- The analysis of blogs and traveler reviews represents a relatively new research method for tourism scholars. Tourist behavioral patterns and behaviors can be observed, recorded, and analyzed (Girardin et al., 2008) through these data. Landmarks, travel routes, and places frequently used by tourists can be identified. Research using data uploaded by tourists on social media is at different geographic levels. At a global level, Hawelka et al. (2014) used Twitter data to explore international tourist travel behavior (Hawelka et al., 2014).

- According to the nearly one billion tweets in 2012, these researchers investigated the mobility of tourists in different countries, characteristics of tourist flows, radii of rotation, diversity of destinations, and balance of capital inflows and outflows (Shao et al., 2017)
- “Big data’s potential impact on sustainability rests on its power to present a clear picture of the complete impact their operations are having on the natural world” (DATAFLOQ, 2018). Earlier this information was disbursed across different formats, locations and sites. However, now businesses are trying to make out the end-to-end impact of their operations throughout the value chain. This includes things that are outside their direct control, including raw material sourcing, employee travels, product disposal, and likewise.
- Other ways in which big data is helping environment sustainability is by helping us to understand the demand for energy and food as the world population increases and at the same time, climate change reduces these resources by every passing year.

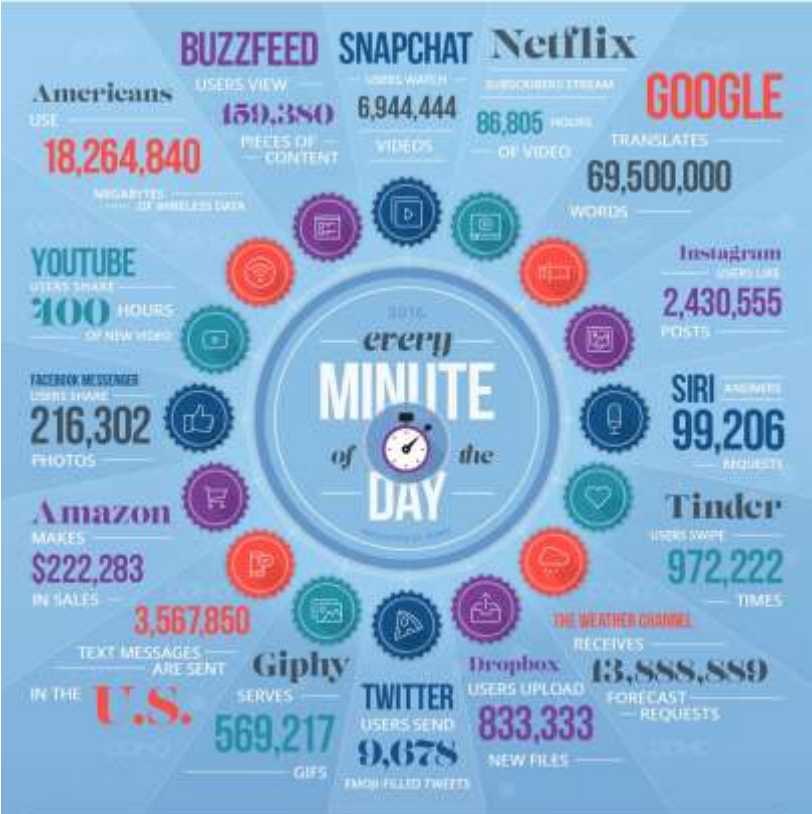
Big data has the power to transform how large businesses – the ones with biggest environmental impacts, but access to large amounts of information as well – can take action on sustainable development and sustainability. Also, strive for data collection can also incentivize smaller suppliers in being more responsible in their own businesses, creating a domino effect. Big data can also be integrated into government policies in ensuring a better environmental regulation. Governments can today implement the newest sensor technology and adopt real-time reporting of environmental quality data. This data can be used to monitor the emissions of large utility facilities and, if required, put some regulatory framework in place to regularize the emissions. Firms are given complete freedom to experiment and chose the best possible means of achieving the required result.

Keeping a complete track of how various business operations have an impact on the natural world gives way to new and innovative ways for bringing sustainability in an organization’s structure also. In the business world, big data is actively helping create a change, cut costs and boost long-term profitability in a resource-constrained world. That’s the real objective that every corporate should be aiming towards.

Josh James, the founder and general manager of the software company Domo, which provides Business Intelligence and Data Visualization

services in 2016, gave his review of the amount of data collected over one minute on the Internet, which can serve as a clear example of the 3V characteristic Big Data (James, 2016) (Figure 7).

Figure 7: *How much data is generated every minute*



Source: *James, 2016*

Conclusion

In this paper we pointed out the connection between health tourism, sustainability and big data. In determining health tourism it is necessary to start from the individual's psychological and physical abilities, needs and aspirations for the recovery of health, in other words goals that can be achieved by enjoying healing water through specific activities and treatments that meet the tourist demand.

Further on, "it has been widely recognized that sustainable development and public health are intricately connected" (Adshead et al., 2006; Dooris,

& Baybutt, 2009). The reasons for this lie in these facts (Seke et al., 2013):

- Achieving sustainability depends on a health of population.
- Health represents precondition and outcome of sustainability.
- Health is closely interrelated with sustainability.
- Both health and sustainability emphasize the need for long term thinking and integrating environmental, social, and economic factors into decision making.

In addition “statements have been made that call for a reinvigorated effort to address matters of environmental sustainability in light of the new forms of analytics and insight that big data could generate” (Keeso, 2014). The connection of big data, health tourism and sustainability implies much potential. Earlier this information was disbursed across different formats, locations and sites.

However, now businesses are trying to make the end-to-end impact of their operations throughout the value chain. This includes things that are outside their direct control, including raw material sourcing, employee travels, product disposal, and likewise. Other ways in which Big Data is helping environment sustainability is by helping us to understand the demand for energy and food as the world population increases and at the same time, climate change reduces these resources by every passing year.

Having in mind that “tourism has a major impact on natural and built environments and on the wellbeing and culture of host populations, and these effects can be positive or negative” (Ministry of Tourism and Environment of Montenegro, 2007), as well as a growing belief that tourism can play a significant role in sustainable development, The World Tourism Organization, in its capacity as Specialized Agency of the United Nations, encourages all countries to ensure that their policies and actions for the development and management of tourism fully embrace the principles of sustainability. In this context, UNWTO has increasingly been putting the concern for sustainability in the center of its activities, undertaking research and capacity building activities on different aspects regarding tourism policies, and its development, management, regulation, and similar issues of public concern. The paper shows that health tourism and sustainability project more and more data to be collected and analyzed in order to better manage the health care of the population.

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REMARKS ON DIGITAL FINAL EXAMS FOR MANAGEMENT STUDENTS

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Abstract

For a long time question about best students final exam modality is present in teaching. Judging by literature and experience there is no best answer to this question. Oral exam has many advantages, written test has its advantages as well. In recent years digital exams are present. Although this type of exam is more similar to written test, depending on software used for exam, there are many interesting features that can be incorporated in it. This study provides a brief overview of this subject, as well as several practical remarks.

Key Words: *exam, digital test, online test, exam web platform*

JEL classification: *I20*

Introduction

From the dawn of humankind education had a key role. Contemporary scientists believe that one of the main advantages in dominance of homo sapiens over the neandertal in early history of humans is ability to transfer the knowledge more adequately (Kadowaki, 2013). Thus in order to be effective by itself education is ever changing. Although this fact was known for a long time, we are witnessing drastic changes in education in last decades due to impact of contemporary information and communication technologies (Kraguljac & Milašinović, 2016; Kraguljac & Milašinović, 2017a).

Judging by the survey from Gartner (2017), higher education chief information officers (CIOs) believe that main priorities are enrollment

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and student success. They miss to use innovations in the field of the top technologies to highlight their organization. A majority of them (59 percent) think that the business model will change due to digital transformation. Despite that higher education CIOs ranked digital transformation as the fifth most strategic business priority, their institutions investing in digitization and digital marketing as only eighth technology. In others industries, this is the second most important technology. This is one of the most important reasons why higher education is among the least digitized industries (Kraguljac & Milašinović, 2017b).

Process of education should not be equated with schools and faculties by default. There is always some form of training and education within corporate organizations. It could either be learning about the job and ways of performing various tasks, or the form of managing relationships between colleagues. Whatever form it takes, it would always influence business environment of the company (Faherty, 2003). Recent studies have shown plan that 60% of all new jobs in the US will require skills that only 20% of the workforce is in possession of (U.S. Chamber of Commerce Foundation's (USCCF) Education and Workforce), and it is known that most of the trends initially developed in the US soon become worldwide accepted. Thus the new business environment has forced companies to recruit, retain and continually work to improve the employees' skills and knowledge. Because of this, employees must provide the ongoing development of these skills and upgrade education to keep up with the changes and competitors in the market. With e-learning and modern technologies as tools to achieve this goal, corporate training can be organized at a higher level than ever before (Marinkovic & Milasinovic, 2013).

The modern teaching must follow the rule "to learn the most in the shortest possible time". One of the best ways to observe this rule is to establish how to apply modern ICTs in the context of subject areas, because only in this way we shall come to the most suitable quality of teaching and effective learning. Of course, with introduction of ICTs in the teaching process it is necessary to consider individual differences, then allow capable individuals and those with more prior knowledge to have faster progress (Vasovic & Milasinovic, 2014).

So the main points of education are the same, but the modalities applied to contemporary learning process differs much from classical one. There

is no reason to think that in all aspects of education teachers should change modus operandi, but in many of them modern information and communication technologies are beneficial.

In our teaching practice, for several years at Faculty of hotel management and tourism in Vrnjačka Banja, we incorporated usage of digital exams for students of first and fourth year of academic studies. This type of exam is applied to two academic subjects. For both of these academic subjects students have rich and well defined literature as well as useful teaching practices. There are two colloquiums and one seminar for each of these academic subjects, and the points structure is appropriately made for all of these tasks. Thus students have clear situation, and we have opinion that usage of digital exams for these academic subjects is beneficial. In this study a brief overview of our approach to student final exams is given.

Teaching material and its availability

The main idea behind this study is to give a brief overview of digital exam approach to management students. Beside theoretical viewpoints, this study provides our experiences with this modality of the exam. However very important point in education (and any type of exam) is teaching material.

Informatics from perspective of modern manager is well defined, and list of things in this field that one manager should know and understand is mostly clear. Thus teaching courses on various types of institutions that educate managers are usually very similar (if not the same). Although the this list is well known, and student with ease could use various public Internet sources to learn, students in general have tendency to use books, or other teaching materials that are provided by the teachers. On one hand this is good, because in provided sources all the teaching material is (or at least should be) logically sorted, and hand picked by the teacher, but on the other in that manner students have not much research enthusiasm.

Our viewpoint on above mentioned issues is that students must have all the necessary teaching materials provided by the teachers in paper, as well as online. Thus our students have opportunity to use books and scripts in paper printed form distributed by faculty library. Digital materials that is provided by the teachers is stored in cloud storage (so that we are sure of its availability) and includes presentations, video

materials, and online practical education via CMS (eng. content management system) platform.

Naturally beside given teaching materials students are encouraged to use anything that they found interesting. Only downside of these materials that we found is that in these case they must be aware of its veracity. Usually only the best students have affinity to search for teaching materials on their own, thus interaction with teachers in that issue is recommended.

With this approach to teaching material, and its availability we feel confident to use digital type of exam, because all the necessary data is provided to students as it should be.

Methods of exams

A classic exam is conducted in one of two well-known ways - in oral or written form.

The good side of the oral form is that the complete process is completely under the control of the examiners. He or she leads each student individually through the examination process. This allows the highest degree of customization for an individual student. On the other hand, this also means that objectivity, i.e. the uniformity of criteria for students, inevitably decreases. It is customary for subjectivity to be avoided when choosing a question by the student randomly pulling out several questions from a larger set of questions. The subjectivity of evaluating the answers to these questions is much more difficult to avoid. An additional problem that can arise here is that some students experience this form in a very stressful way.

In written form, all students respond to the same or very similar questions. This mostly leads them to an equal position. Problems occur again during the evaluation of tests, because it is not so easy to maintain a uniform criterion.

Both methods are very demanding as far as teacher engagement is concerned. Engaging resources is minimal - this is especially true for oral examination.

In the digital form of the exam, the engagement of teachers is greatest in the preparation phase. Later, the examination process is not particularly demanding. With the selection of the appropriate testing software, a very uniform criterion is achieved for all students. Of course, in this case, the technical preconditions for testing are the most prominent.

Digital exam software

Below we will list several different software. They will include commercial and free ones, those that run on a local computer and those who work online.

Moodle (Moodle)

Moodle is a complete Learning Management System (LMS), which also has a module for testing and automated grading. The teacher is able to design and build exams consisting of a large variety of question types, including multiple choice, true-false, short answer and drag and drop images and text.

Moodle's huge numbers of users across both academic and enterprise level usage makes it the world's most widely used learning platform, which contributes to the absence of linguistic constraints. It's also important that Moodle is provided freely as Open Source software.

Figure 1: A typical look of the Moodle user interface

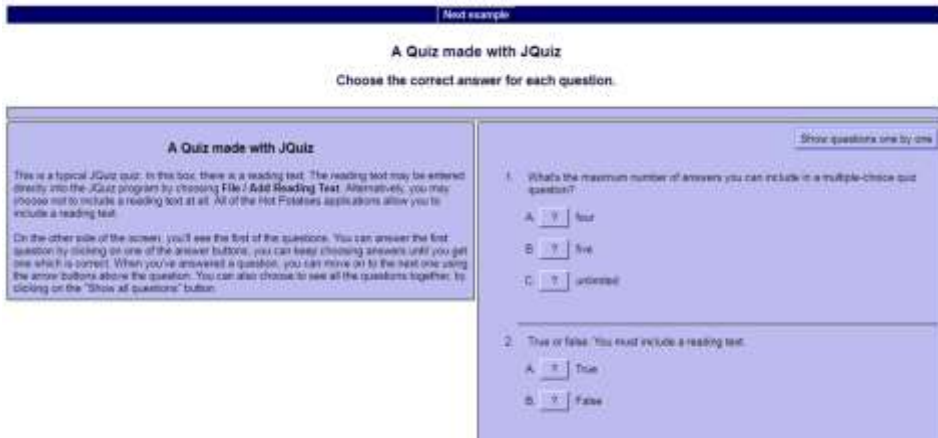


Source: <https://leanpub.com/> (13. March 2018)

Hot Potatoes (Hot Potatoes)

According to the author, The Hot Potatoes suite includes six applications, enabling to create interactive multiple-choice, short-answer, jumbled-sentence, crossword, matching/ordering and gap-fill exercises for the World Wide Web. Hot Potatoes is freeware, but it is not open-source.

Figure 2: A typical look of the Hot Potatoes user interface



Source: <https://hotpot.uvic.ca/> (13. March 2018)

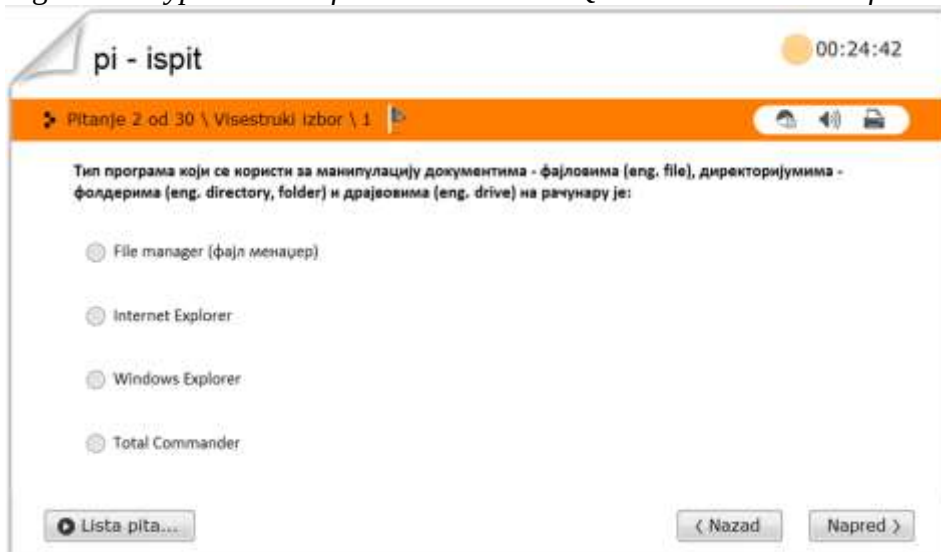
Wondershare QuizCreator (Wondershare)

QuizCreator is typical commercial software by Wondershare Technology, a key member of the National Planning Software Enterprises of China. This is commercial product, but there is substantial discount for usage in educational purposes.

This program is full of features - it is possible to choose between 18 question types, including Multiple Choice, Fill in the Blank, Matching, Likert Scale & Short Essay. In addition, there are possibilities to enhance questions with images, Flash video and audio, including voice-over, text-to-speech, etc. and to insert math and science symbols with the equation editor to create quizzes for Math, Physics, and Chemistry. It is very easy to quickly design an assessment and publish it online, and then track the quiz results and receive insightful reports. Special benefit is ability to make a quiz more challenging with time limits, randomization of the questions, and branching quiz takers to different questions based on their responses.

Finally, there are a bunch of options to use quizzes - upload the published Flash quiz to the web, generate a SCORM quiz package for using in some LMS, produce stand-alone EXE file for CD/DVD usage, or export to Word or Excel files for paper-based testing.

Figure 3: A typical look of the Wondershare QuizCreator user interface



Source: Printscreen from the test in the subject Business Informatics

Google Forms (Google)

We mention Google Forms here as one of all-accessible free solutions. Especially for those who already use other Google products such as Mail, Documents, Drive, YouTube, etc.

Google forms are primarily designed to create classic surveys, but you can easily add an option to automatically evaluate true/false responses. Like in other here mentioned solutions, in Google Forms is possible to select from multiple question types, drag-and-drop to reorder questions and customize values. Responses appear in real time and teacher can also access the raw data and analyze it with Google Sheets or other software.

Real-time collaboration between colleagues helps to create a quiz faster and analyze results together without having to send around multiple versions of the file.

Figure 4: A typical look of the Google Forms user interface

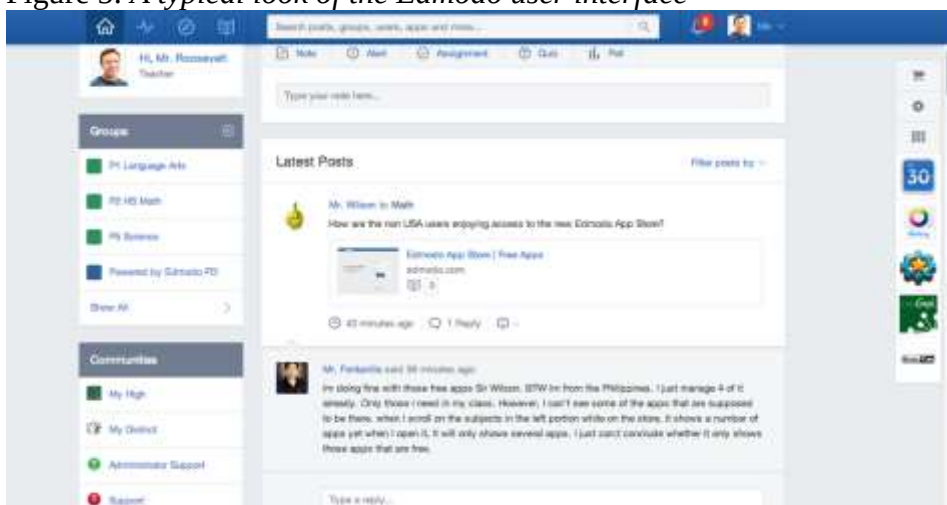


Source: Questionnaire printscreen, the Faculty of Hotel Management and Tourism in Vrnjačka Banja

Edmodo (Edmodo)

Edmodo is the biggest free social learning network in the world which connects teachers, students, and parents. It is designed to touch all aspects of learning in a way that is adapted to the moment in which we live. So it is possible to make digital tests and to perform their automatic evaluation. A special value is the ability to comment on the individual achievement of each student.

Figure 5: A typical look of the Edmodo user interface



Source: <https://blog.edmodo.com/> (13. March 2018)

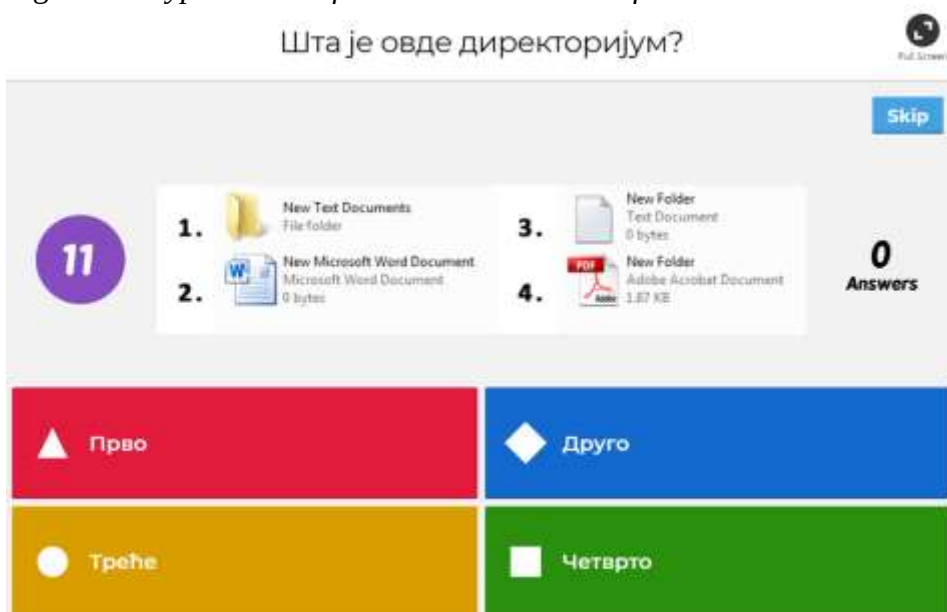
Kahoot! (Kahoot)

Kahoot! is a free game-based learning platform and it is not intended for organizing classical exams, but it is very convenient for short tests of understanding of some matter.

Basic type of questions is multiple choice and it is possible to add videos, images and diagrams to amplify engagement. Students answer the questions on their own devices, while questions are displayed on a shared screen. This kind of a social learning promotes discussion and pedagogical impact.

Beside of this usage in classroom, teacher can assign kahoots as homework. Students play kahoots on their phones for revision and reinforcement. In homework challenges, questions and answers will appear on their phone screens.

Figure 5: A typical look of the Kahoot! user interface



Source: Printscreen from the test in the subject Business Informatics

Open source software - a possible solution?

The question is what type is the most appropriate solution for use in educational institutions. In spite of ongoing technical challenges, digital

exams promise a lot. Open source software offers one of the possible approaches to solving technical problems in providing the optimal way for their realization.

Numerous characteristics of the open source software give it an advantage over the classic closed, ie proprietary, software. Some of the more important are that distribution is not burdened by payment; the program code is available, so the changes that may be needed to adjust to the specific purposes are easily feasible; there are no implementation restrictions, that is, use in any area and for any purpose is possible; there is no obligation for using any other software...

Open source software in education already covers the broadest possible range of levels - from individual learning materials, through established courses and complete portals, to virtual universities.

In addition, according to the already published opinions, the European Commission will further increase the role of open source software for many key ICT services and software solutions. Its latest, expanded strategy places a special emphasis on providing support for wider use of open source software (European Commission).

And UNESCO believes that the free and open source software model provides interesting tools and processes that can be used to effectively pursue the Millennium Development Goals (UNESCO).

On the other hand, there are numerous factors that affect the quality reduction in the use of information and communication technologies in education. Some of them are the lack of financial resources for their acquisition, insufficient level of training of teaching staff for their adequate use, which often additionally entails a lack of motivation.

The use of open source software introduces some additional difficulties. What counts in one of the main advantages of this software can also be one of its flaws. The availability of a source code that, if necessary, allows it to upgrade and adapt to the needs of users simultaneously means that people with evil intentions can easily detect its security vulnerabilities.

With open source software, there are not enough strong guarantees that the development of a particular software will not end before achieving

satisfactory functionality. Even if this does not happen, there is no guarantee that there will be support in the future for correcting the detected deficiencies or for developing new features. This possible lack of further support, along with a potential lack of security, is probably one of the biggest problems this movement encounters.

It is important to keep in mind that in case the open source project financing ends, the educational institutions should support its further development in order to preserve the functionality of teaching. They need to quickly turn to other sources of funding, such as various state funds and the like, which is not always possible and easily feasible.

From the perspective of security, it is important to note that open source software is run by trained users who can optimally extract the maximum in all respects. This does not mean that only engineers should use such software, but that it can be used by all educated users at the user or editorial level, but that for the administration is, however, required engagement of the professionals.

Our experiences

After last three and a half years of using digital tests on colloquiums in two IT subjects and two years of their use in final examinations, we can already draw some observations. Observing students' achievements before and after the introduction of digital exams, we concluded that they did not introduce a significant deviation (Table 1 and Table 2).

Table 1: *Results at the academic subject Business Informatics*

Academic year	Pre-exam obligations	Final exam
2011/2012	59.19	15.17
2012/2013	56.34	19.55
2013/2014	52.89	20.09
2014/2015	56.61	17.81
2015/2016	50.99	19.27
2016/2017	47.78	20.38
2017/2018	46.50	18.41

Source: *Results of the colloquiums and the exams for the subject Business Informatics, 2011-2018*

Table 2: *Results at the academic subject Information and Communication Technologies in Hotel Management and Tourism*

Academic year	Pre-exam obligations	Final exam
2014/2015	48.45	21.59
2015/2016	51.37	19.66
2016/2017	47.97	18.53

Source: *Results of the colloquiums and the exams for the subject ICT in Hotel Management and Tourism, 2014-2017*

Testing is done by the professor and teaching assistant independently pass the test with all the questions involved. The goal is to achieve 100% correctness of the response. This way a significantly higher degree of accuracy is achieved than in any written test. Our tests run on a server on the Internet, but we always have a ready-made variant with the server in the local network in case there is a problem with the Internet connection. The results of the test for each individual student are sent to at least two different email addresses, but as an additional level of security, the teaching assistant records the achieved score on the spot.

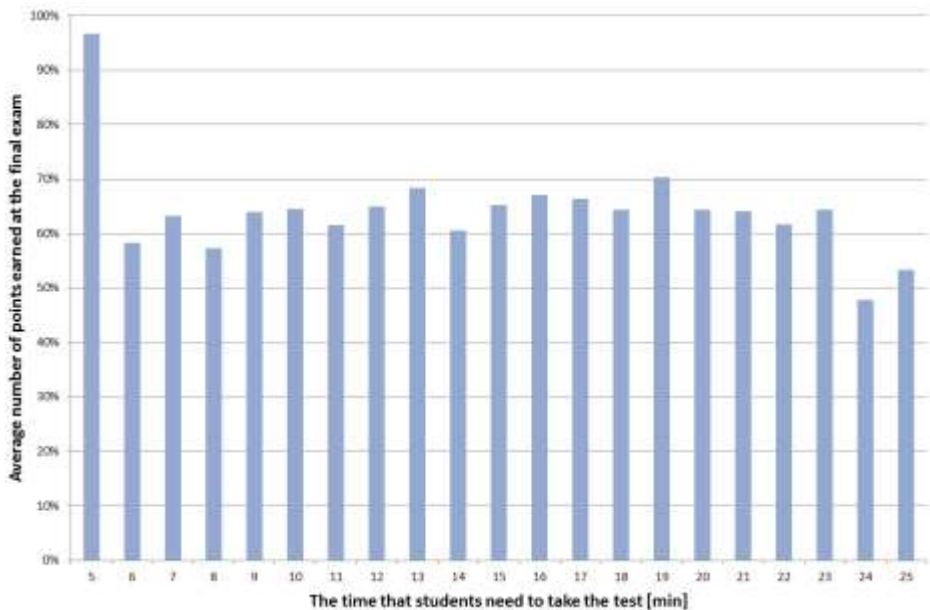
Since we teach two computer science subjects, we have at our disposal a computer cabinet and complete infrastructure required, so there are no additional costs for the realization of digital testing. Although at first glance it might be expected that the main point for exam, when done in this (digital) way, is that students have good ability for reproduction of learned materials, it is not the case. One portion of the exam questions are definitions, and similar theoretical material and we could classify that portion of exam as a part where students should reproduce what they have learned.

On the other hand there are many questions that are related to first group, but are given in such manner that students must use their knowledge and creativity to provide correct answer. Usually those are some sort of problem situations. One example would be that student should pick the computer with IP address that is not in their local subnet from given list of computers (IP addresses), and given subnet mask. So for this question student should show his/hers knowledge and (well organized) understanding of several portions of teaching materials concerning basic computer networks (Milašinović & Kraguljac, 2016).

At the end of this section, we also need to look at the measures we take to prevent cheating on the exam. To begin with, the set of questions consists of three groups of 30-40 questions from three different areas of teaching material. Each student receives ten randomly selected questions from each of these groups. For questions that have the answers offered, these answers appear for each student in a different way, i.e. in the random order. So, students get a little bit different questions in random order, and when they get the same question, the offered answers are mixed up. An additional measure to reduce the chances of cheating is that the test is time-limited. We set the time allowed for testing so that after passing through all the tasks, students do not have much time to use for trying to communicate and cheat. Of course, the teaching assistant is present during the course of the test and he takes care that the students do not communicate with each other and do not use some other forbidden means.

We also examined the average number of points earned at the final exam according to the time that students need to take the test. The results are shown in Figure 7.

Figure 7: *Average number of points earned at the final exam according to the time that students need to take the test*



Source: *Results of the exams for the subject Business Informatics, january/february 2018*

According to these data, we can notice that there is no clear correlation between the points and the time spent. It is interesting to note that students who are best prepared and who achieve the best results generally need the least time. From this we conclude that the questions are well selected and that the teaching field is adequately covered by lectures, exercises and available teaching materials.

On the other hand, students who achieve the worst results need the most time. This could mean that the total testing time is well adjusted, because according to the graph shown, similar achievement would be that the total time was set to 23 minutes instead of the current 25.

Several advantages and downsides of digital exam

By no means there is no ideal formula when student exams are issue. There are good and bad points in any type of exam. Although the absence of oral exam means that there is no way that teacher can use his/hers intuition to pick the questions and check student's knowledge, and (more importantly) understanding - and that is the main downside of this system for sure, there are several important advantages that can be very versatile if used adequately:

- Due to involvement of technology, rather than teacher digital tests and exams can be performed often. In that manner students can be driven to learn in continuity rather than to learn to pass final exam. Even with tests that are not hard, in this case students must constantly refresh learned materials during the teaching course.
- Time consumption for digital tests is minimal. If tuned adequately teacher can perform these tests on weekly basis, as a standard part of regular teaching classes. That is because students have limited time for test (and can be very short and effective enough), and computer check all the tests by itself, so instantly students and the teacher is informed about the points (so no time is spend for verification of the test).
- For each digital test, teacher has all the data for each student. In that way teacher is able very easily to track every single student while the teaching course last, and to timely act if any student needs intervention or suggestion.
- If digital exams are performed, all failures that may be caused by human (teacher) are avoided. Thus there is no subjectiveness of a teacher, with large number of given questions effect of luck (in picking questions) is minimised, and even in case of student any

psychological stress that can be caused directly/indirectly by the teacher is avoided.

- In general contemporary students seems to be more familiar with digital devices overall, thus their reaction to digital exam is usually positive. We have opinion that this attitude of the students is boosted by the fact that in primary and high school they constantly had oral and written exams.
- In case of informatics digital exam often is considered to be more natural than the classic one by the students. This is probably due to the fact that many digital tools informatics teacher and his/hers students employes in education in general.

Conclusion

It seems that no matter of aspirations and intentions of one person or his/hers attitudes towards work and development - time goes on by itself. Information and communication technologies influenced all spheres of our work and everyday life for several decades, thus digitalization seems to be inevitable in various fields. If that is the case - and it seems that it is, the best approach would be to adapt to contemporary methods. In that manner teachers should take advantage on this digital development, rather than to let their modus operandi suffer its consequences.

If we try to be objective as much as possible, it seems that there is bad and the good side of the coin in this case. Although for several years we tried to find enough reasons to dismiss idea of digitalization of final exams at our Faculty, for each downside we found an advantage. All in all we have no formula ideale, so as a conclusion in this case we have to treat legitimate digital exam in the same way as classical one. This conclusion derives from the fact that in this study we tried to observe effects of digital exam in teaching subjects that are in field of informatics and that our students are future managers (so all informatics education is adjusted to suit their profile).

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TRADING IN BITCOIN AND OTHER CRYPTOCURRENCIES – A RISKY BUT LUCRATIVE BUSINESS FOR NOW

*Anđa Skakavac*¹

Abstract

Cryptocurrencies have made a big impact on the world financial scene. Today, there are over two thousand different cryptocurrencies in use. The most well-known of all is certainly bitcoin, which we will dedicate most of our attention to in this paper. Although to the wider community, the emergence of this virtual currency represented a risky, unreliable and fleeting innovation, for now it continues to secure extra income for its owners. There is little doubt that cryptocurrencies, and in particular bitcoin as the strongest currency among them, have drawn great attention from all international and national financial institutions. Although experience in the application of bitcoin and other cryptocurrencies is divided, experts estimate that bitcoin, as well as some other cryptocurrencies, will continue to record a growth. For this reason, an increasing number of countries is seriously considering its legalization and inclusion in regular financial flows. The aim of this paper is to, through an analysis of past experiences, draw attention to some important characteristics of cryptocurrencies, in particular bitcoin, and its treatment in modern financial flows.

Key Words: *cryptocurrencies, bitcoin, ethereum, electronic money, mining, digital wallet.*

JEL classification: *G15*

Introduction

In recent years, the world has become increasingly aware of new types of currencies that are making a very intriguing entrance onto the global financial stage, attracting the attention of, not only, financial experts, but also the wider population. What is in question are various types of cryptocurrencies, whose numbers are increasing by the day, and which

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are becoming more and more popular among the Internet and technology proponents and various adventurers. Previous experience in understanding, accepting and applying bitcoin and other cryptocurrencies gives rise to serious dilemmas and controversies, and even divided opinions, which makes their future rather debatable. In addition, this currency is being seriously looked at by the authorities of the world's most powerful countries, and the FBI and some other security structures warn of potential crime-related misconduct, especially money laundering. For instance, certain cases have been recorded when bitcoins were used to purchase drugs on the Internet (Manchin.senate.gov, 2011).

Despite the high volatility, many world financial experts estimate that existing currencies will be replaced by various cryptocurrencies in the following decades. Cryptocurrencies, also called electronic money, digital money, digital cryptocurrencies, etc., are something we know little of in our country. Of the many types of cryptocurrencies, the public is most familiar with bitcoin, which is the most popular and most talked about cryptocurrency, especially in financial and banking circles.

However, it is less known that bitcoin is just one of over 1,000 different cryptocurrencies that can be read about on the Internet. That which most cryptocurrencies have in common is that they are obtained by so-called "mining" or "digging", and that there is a limited series of units (coins) whose value in time jumps or falls (Ivković, 2017).

However, experts still estimate that bitcoin, as well as some other cryptocurrencies, will continue to record growth in the future, which is why more and more countries are seriously considering the possibility of their legalization and inclusion into regular financial flows. What specifically promotes them is the fact that they enable direct transactions, the purchase of goods and services, and the exchange of money without banks, credit cards and third parties. For these reasons even criminals have begun to use some of these currencies, above all bitcoins.

Although bitcoin is the most talked, currently 1,337 different cryptocurrencies are traded all over the world, some of which such as "litecoin", "ethereum", "zcash", "monero", "dash", "ripple", have reached values of several hundred dollars. A number of cryptocurrencies are directly connected to bitcoin, but there are those created in completely separate and independent systems. Almost all of these currencies are merged by cryptocurrency exchanges, where their comparative value, and

an exchange course for conventional currencies, is listed. For a particular fee, all types of transactions and exchanges can be made, and there are currently over 7,200 of these websites on the Internet.

According to data from the coinmarketcap.com website, the daily volume of transactions in cryptocurrencies is about \$30 billion, of which 60 percent, or \$16.9 billion is conducted in bitcoins, and the remainder in the other cryptocurrencies. What speaks to the sheer volume of money being trade is the fact that more banks are opening bitcoin accounts, regardless of opposition from the world banking lobby, the biggest opponent of cryptocurrencies.

Although the bitcoin system is still largely outside existing financial and legal frameworks, it is possible to buy virtually anything you want with it, from computer equipment to real estate, while most of the big Internet shops have long been quoting in bitcoins (Perković, 2017).

The most important present-day cryptocurrencies

Bitcoin is by far the most famous cryptocurrency of today, created in 2009 as a form of unregulated digital money that is neither issued nor guaranteed by a central bank. Bitcoin is a decentralized cryptocurrency not managed by any country in the world. It is created by a special process in which hundreds of computers "mine" bitcoin, taking several months to create one bitcoin. Bitcoin does not exist in physical form, regardless of which it can be used as real money².

The trust in bitcoins depends on the fair functioning of most mining computers in the network (Barber et al., 2012). Foreign exchange rate of bitcoins, just like in the case of any other currency, is determined at the stock exchange, based on the supply and demand of the concerned currency (Dinić, 2014).

The idea behind Bitcoin was developed in 2009 by someone using the pseudonym *Satoshi Nakamoto*, with the publishing of a document explaining how this virtual currency would function. Thus far, various versions have become public about the mysterious author of this cryptocurrency. At the beginning of March 2014, a man named *Dorian*

² When bitcoin is written in capital letters, it refers to software or network, and when it is written with a small initial letter it refers to the digital currency.

Prentis Satoshi Nakamoto (64) was discovered, but according to *Newsweek*, he has denied being the creator of the digital currency bitcoin. In an exclusive interview with *The Associated Press*, *Nakamoto*, originally from Beppu, Japan and now living in the United States, denied having anything to do with the digital currency).

In early May 2016, Australian entrepreneur *Craig Wright* publicly declared himself to be the inventor of Bitcoin. *Wright* reinforced his claim by using coins known to be owned by the digital money's creator. The distinguished members of the Bitcoin Association also confirmed his claim. His identity was revealed to three media houses: *the BBC*, *the Economist* and *GQ* (B. M, 2016). However, some time later, *Craig Wright* personally denied being the creator of bitcoin.

In the third version, in November 2017, *Sahil Gupta*, a former employee of *SpaceX* wrote a blog in which he claims that *Elon Musk* is probably the inventor of the cryptocurrency bitcoin. *Gupta*, a former intern at Musk's company, claims that *Musk* was probably behind that digital currency because he "has a deep understanding of economics and cryptography." Although *Gupta* provided some evidence on bitcoin's creator, *Musk* denied the allegations.

The price of one bitcoin varies and depends on demand, but in the last few months of 2017, with occasional falls, it has recorded unexpected growth (Bitkoin,2017). It is very difficult to say how many people in the world possess bitcoins, mostly due to the very complicated technology. Bitcoin, as the most famous cryptocurrency, experienced a real explosion at the end of 2017 when it over exceeded even the greatest expectations of an unimaginable limit of nearly \$20,000. Although there were occasional short-term falls in the previous year, bitcoin mainly recorded a growth in the previous year. All indicators more than obviously indicate that the Bitcoin monetary system will continue to develop despite attempts to suppress or even ban it (Perković, 2017).

These statements dominated up until the end of 2017; however, this year the situation significantly changed for bitcoin, in a negative sense. After all, the author of this paper finds it very difficult to give judgment and draw any high-quality conclusions, since this cryptocurrency has exhibited great instability during 2018. Namely, at the time of abstract submission, there was a completely different situation than the one that will be presented in the final version of this paper. This year saw the

collapse of this cryptocurrency. On January 8, 2018, bitcoin was traded at \$15,370, and at the end of January, its value fell below \$12,000, while on February 6, it was worth just \$6,320. Interestingly enough, on February 16, after almost two months, the cryptocurrency experienced a serious rise, as its value jumped to \$10,044 for one bitcoin. This will be the last value that the author will present in this paper, however its instability is expected, according to the "up and down" system, in the coming period. According to some opinions, the expansionary monetary policy of many central banks after 2008 with a view to mitigating the adverse effects of the crisis and the fear of inflation was one of the most significant factors impacting the relatively high demand for bitcoins (Christin, Moore, 2013).

At the beginning of August 2017, Bitcoin software was split to create a clone of this virtual currency, called "*bitcoin cash*". The initiative was launched by a small group of so-called "bitcoin miners", mainly from China, who were paid in this currency for contributing to the digital power of the Bitcoin network and who were not satisfied with the proposed improvements in the technology behind the currency. The group launched a so-called "fork", where the blockchain, the public register of all bitcoin transactions, is divided into two potential paths. It is said that "forking" can create a new competitor for bitcoin, which still remains the oldest and most valuable digital currency. If this happens, all those who owned bitcoins before the forking will have access to the same amount of "bitcoin cash" for free, and they will be able to change it for other digital currencies (M.I.M, 2017).

Ether or ethereum, like bitcoin, is a blockchain platform on which applications and programs are made. The cryptocurrency used on this blockchain system is the ether. It was created in 2013 by Russian information genius *Vitalik Buterin*, by upgrading the way bitcoin originated. Buterin raised \$18 million through "crowdfunding", which is the public presentation of the project and ideas with the aim of raising funds and began to develop this "blockchains". As Ethereum is a new platform for program running, many companies have begun to run pilot projects in this system. Even Microsoft introduced three Ethereum projects. The basis of the "blockchain" infrastructure is a database with a unique feature. Once data is entered it cannot be deleted. Existing databases are protected by access codes in order to control entry, in the meantime the "blockchain" database is public - anyone can access it but no one can change data once it has been entered. Once every participant in

the system has a copy of the database, it is extremely difficult to destroy the data. This kind of infrastructure could be applied in many spheres of society - monetary transactions, cadastral records, individual medical records, but also the exercise of copyrights in the music or video industry (Ivković, 2017).

At the beginning of May 2016, the cryptocurrency ether had a value of \$100 and has continued to record a serious increase. It is used only to run applications and programs, and you arrive at it in several ways. The easiest way to get the cryptocurrency ether is to buy it on online stock exchanges. If one wants to be a "digger" in the Ethereum network and invests in the right hardware, he/she can always connect and start earning money from ether (Ivković, 2017). According to some estimates from mid-2017, ethereum could exceed bitcoin in value by the end of 2018. It is a cryptocurrency spreading faster than bitcoin, as of late. Some large industries, such as financial and health institutions, have shown an interest in ethereum, and its advocates consider that in the future ethereum could become the main means of payment, as its technology allows for more complex transactions than bitcoin. Although the value of ethereum is only one-tenth of that of bitcoin, it has taken a quarter of the cryptocurrency market over the past year with bitcoin's share dropping from 90 percent down to just over 50 percent (Čizmić, 2017). Ethereum co-founder, Charles Hoskinson, believes the cryptocurrency market will undergo a catastrophe, but that it will stabilize. In the first week of January 2018, this digital currency crossed the \$1,000 limit for the first time in history.

Litecoin is technically very similar to bitcoin, and as is the case with ripple, provides transactions at almost no additional costs. Litecoin is believed to be the fourth largest cryptocurrency, and it was launched in 2011 by a former Google employee Charlie Lee. In May 2017, one litecoin cost about \$10, which is not the highest value it has achieved. Like other cryptocurrencies, it has also had its ups and downs, its maximum price rising to \$29.7 (Ivković, 2017).

Ripple is both the name and the cryptocurrency for an open payment network for that currency. The goal and motive for its creation is to "break down networks", like financial institutions, that charge fees for transactions and foreign exchange transactions. The idea of *ripple coin*'s founder was for "money to flow freely". As in the case of bitcoin, there is a limited number of units of this currency. In May of last year, its value

was about \$ 0.1, but its growth has been predicted. Ripple differs significantly from bitcoin, both philosophically and structurally. If bitcoin is described as a decentralized P2P (peer to peer) network developed to serve as an alternative financial system, *ripple* can be explained as a protocol structured to improve the current global financial system. This is where the company that created ripple comes in and which, in partnership with big banks, simplifies and secures the system (Ivković, 2017).

Dash is an open network offering instant and private transactions, launched in 2014, with a total emission of an estimated 19 million coins. As with bitcoin and other currencies, it is obtained by "mining", that is by executing extremely complex mathematical operations, and if the solution is correct, a "blockchain" is added and in turn you get a "dash". It can also be purchased on online stock exchanges, and one dash in May 2017 cost about \$100 (in July 2016 it was \$10) (Ivković, 2017).

Monero is the sixth largest cryptocurrency launched in 2014 as a bitmonero. Its main emission was 18.4 million coins which will be "dug" up until 2022. As its privacy improved so did its number of users, growing 40 times in 2016. In July 2016 it was worth \$1.47, in October \$13, and by October 2017 it was worth \$30.91 (Ivković, 2017).

According to some new predictions, *metronome* is the new digital currency threatening to take bitcoin's glory. Namely, metronome is the first cryptocurrency which can be used between multiple blockchains, thus solving the problem of users who want to move from one blockchain (say bitcoin) to another. *Jeff Garzik*, one of the few key developers who helped build Bitcoin's basic software, known as blockchain, saw its shortcomings and decided to make a better digital currency. And so metronom was created which *Garzik* says is going to be the first digital currency to be used between several blockchains. Mobility indicates the possibility that if a blockchain "dies out", as a result of a conflict between programmers or poor use, the owners of metronomes can move their warehouse to another location. It should help digital currency maintain its value and ensure its longevity (Bloomberg, 2017).

Dogecoin is a cryptocurrency that first appeared in 2013, as a joke created out of a joke, and its value has been rising ever since. As of January 7, 2018, it's worth nearly \$2 billion, although on January 5, 2018 it was worth \$1.1 billion. What is interesting is that its founder, Jackson Palmer, is one of the few out of that sphere openly showing skepticism. He wrote

on his Twitter account that he thinks that the current value of the cryptocurrency is a bubble, although it is difficult to predict how much it will inflate before the inevitable burst. Dogecoin is a cryptocurrency created out of an Internet meme with a picture of the Shiba Inu dog breed. Although the current value of this joke cryptocurrency is nothing compared to how much bitcoin is worth, it is being talked about more since many have recently been using it to give so-called "Internet tips"

The movement of bitcoin prices - its ups and downs

Up until the present, bitcoin has experienced serious instability, from incredible growth to a dramatic plummet. As incredible as it may sound, from January 3, 2009, when the Bitcoin system was launched, all the way until 2011, the price of bitcoin remained below one dollar. Throughout 2012 and during the first half of 2013, the price rose to \$300 dollars, ballooning to a record \$1,240 in November 2013. The following year there was a drop in the price of bitcoin which in mid-2014 sold for about \$600, dropping to a mere \$266 in January 2015. For the next year and a half, it remained stable at around \$400. While 2017 has proven to be the most fruitful year for the value of bitcoin.

In early 2017, the value of bitcoin once again started to increase reaching a new record of \$1,270, and in March 2017 it had, for the first time, exceeded the value for one ounce of gold. On March 03, 2017, one bitcoin was worth \$1,268 while an ounce of gold was \$1,233. This was largely fueled by China's growing demand for bitcoin, whose authorities warned that the digital currency was being used to withdraw money from the country. On June 6, 2017, bitcoin reached a value of \$2,911 (Bitcoin, 2017).

Out of all the other cryptocurrencies, bitcoin today records the fastest and highest growth. Although it has experienced occasional sudden drops, more frequent are incredible rises, within very short periods of time. For example, in November 2016, this currency was worth \$726 dollars, by the beginning of May 2017, in just a few months, its value had ballooned 100%. In October 2017, bitcoin broke the \$6,000 (Ivković, 2017), on November 1, it had grown 3.7% to \$6,616 in London trading, and as early as November 17, 2017, the value of bitcoin reached the limit of \$8,000 for a new record to be reached on November 25, 2017 when its value was \$8,500, a boost of 850%.

However, despite public criticism from important figures, bitcoin has kept growing at an unprecedented pace in the last few weeks, at such a rate that it has surprised even the greatest optimists. On Friday, December 1, 2017 it was at \$10,700, on Tuesday, December 5, it exceeded \$11,500, and on December 6, 2017 it exceeded, for the first time, the value of \$12,500, reaching the price of \$12,600.

The increase in the value of bitcoin was most likely caused by an increase in buyers' activity due to holiday discount season which was slowly starting to pick up pace. The highest value it has attained thus far happened on December 17, when it was worth \$19,783.

However, this year witnessed a collapse of this cryptocurrency. On January 8, 2018, bitcoin was being traded at \$15,370, and at the end of January, its value had fallen to below \$12,000, on February 6, it was worth just \$6,320. Interestingly enough, on February 16, after almost two months, the cryptocurrency experienced a more serious growth when its value jumped to \$10,044 per bitcoin. This will be the last value that the author will record in this paper, its instability being expected in the upcoming period as well, according to the "up and down" system.

Advantages and risks of using bitcoin

Regarding the acceptance or non-acceptance of cryptocurrencies for financial trading, there is no uniform, globally-accepted practice. The attitude of countries towards cryptocurrencies could be divided into three groups:

1. Countries that have, in a manner of speaking, legally and officially accepted bitcoin as a legal means of payment. In many countries such as the United States, Australia, Austria, Canada, Japan, Switzerland, Great Britain, Germany, Sweden, Greece, Latvia, China, India, *etc.*, bitcoin is legally and officially accepted.

Countries in which bitcoin is officially banned as a means of payment, such as Bangladesh, Bolivia, Ecuador, Israel, South Korea, *etc.*

Countries that are considering introducing their own cryptocurrencies, such as Russia, Venezuela, Ecuador, the UAE, for example.

Bitcoin has many advantages over traditional payment methods and following is a list of the most important ones (Skakavac, 2017).

1. *Transaction speed.* Bitcoin transactions are fast, that is, instantaneous, versus banking, which takes some time. For example,

paying a check through a bank can take a day or more. Also, international transfers through banks require some time.

Minimal fee. Bitcoin transactions are conducted for a minimal fee, or even without a fee, which makes it cheap in contrast to banking products where a significant amount is paid on behalf of a fee.

Decentralized currency and impossibility of confiscation. Central authorities cannot take away bitcoin with their instruments, which is not the case with money. Let's recall March 2013, when the Central Bank of Cyprus wanted to take all uninsured deposits exceeding \$100,000 in order to increase its share capital, which undermined confidence in the Greek banking system. Such a possibility does not exist with bitcoin because it is a decentralized currency and no central government controls it.

Anonymity given to transactional actors, which supposedly raises its value.

Market transparency and bitcoin transactions. Bitcoin proponents, unlike their opponents, think that the market and transactions are actually transparent, that market analysis clearly shows what is being paid with bitcoins and that the abuse is much higher with transactions involving traditional currency (Perković, 2017).

Reliability and security of the cryptocurrency itself. Bitcoin has met the highest standards on this plan, due to complicated confirmation procedures that a certain bitcoin is really what it is, it is practically impossible to forge it, and there has never been a case of forging, with the current technology in place.

Inability to deceive. Once a bitcoin has been sent, there are no more. The sender of the bitcoin cannot return it without the recipient's consent. Although there have been attempts, this feature makes it difficult for various scams, common with credit cards, for example.

They do not require secret user data. They are safer for this reason, unlike credit cards where this data is required. In online credit card trade, their numbers are stolen in order to misuse them.

Resistance to inflation. As opposed to traditional currencies, bitcoin is resistant to inflation. The number of bitcoins is limited and is created at 21 million. A government's traditional currency can be printed as much as they like, and they do it often for the purpose of covering the national debt, which leads to inflation.

The bitcoin user adjusts privacy control to his/her own discretion. Namely, bitcoin has as much privacy as his/her user desires.

Its user can respect his or her desire so that others don't know what's been purchased. In addition, it is not known who holds a specific

bitcoin address. This means that everyone can look at it without knowing whose it is.

It does not require anybody's trust. As bitcoin is decentralized, it is not necessary to trust anyone while using it. The trader does not have to know who the user is, unless the user wants to tell him/her. On the contrary, we must believe the traditional banking system will manage our money in a worthwhile manner.

Ineligibility of ownership. Own ownership of bitcoins with a private code and a public key that makes the bitcoin address, is inalienable and no one can take it unless the user loses it. All other forms of the electronic cash system have an account owned by someone else.

Possibility to print your own money. It's possible to print your own money with bitcoins. Namely, bitcoins can be bought over a free market, but it is possible to "mine" your own with a lot of computer power. After a reimbursement of the initial investment (equipment and electricity costs), bitcoin mining is simply leaving a computer turned on and the software running.

Trading usability on specialized stock exchanges. Therefore, bitcoin is also useful for trading on specialized stock exchanges, which allows additional earnings on the sales difference (Skakavac, 2017).

In addition to the aforementioned advantages over traditional payment methods, there are certain risks and shortcomings in its use. The specifics of the bitcoin present a major challenge for detecting and preventing illegal activities. As bitcoin does not have a central institution that controls it and reports on suspicious activities in the field of money laundering prevention, it is suitable for illegal activities. Thus, the FBI (2014), as major shortcomings to a decentralized payment system, point to the following (Skakavac, 2017)

1. *Lack of software to identify suspicious templates that occur during money laundering;*

Lack of data on real account owners and their locations;

Lack of records and transaction history with real participants in transactions;

Difficulty in identifying payment sources in relation to other types of online money.

In addition, the following features are also mentioned to boost unpopularity in this currency and its weaknesses (Skakavac, 2017).

1. Instability of the price of bitcoin.

2. Requires an enviable level of computer knowledge and Internet use;

3. Legal uncertainty;
4. Anonymity provided to transaction participants;
5. Unreliable, non-transparent, subject to speculation and illegal activities;
6. Does not have the support of significant countries and global financial institutions.

Conclusion

In recent years, a number of cryptocurrencies have emerged on the global financial scene, causing great attention from financial experts and experts of various profiles. Among these cryptocurrencies, the most famous at the moment is bitcoin, which shook the world financial scene at the end of 2017, primarily because of its dizzying growth.

However, it has experienced serious oscillations in its development so far, from a steep rise to a steep decline, with oscillations, occurring even in a single day. Although no central bank stands behind it, it is still present, with a serious tendency to increase in value. It has a number of advantages over conventional means of payment, but there are certain risks and shortcomings in its use. Its current specificities are a major challenge for detecting and preventing illegal activities.

As bitcoin does not have a central institution that controls it and reports on suspicious activities in the field of money laundering prevention, it is suitable for illegal activities. Experts believe that bitcoin will not only be a transient phenomenon and will be accepted on the Internet as a regular means of payment. With its further development and the growing interest in its use, it is certain that the problems and risks associated with it will be eliminated in the future.

Despite all the criticisms and controversies that accompany bitcoin, it is clear that its appearance and the nine years it has managed to last on the market are the beginning of a new chapter in the digital and financial world.

The National Bank of Serbia states that virtual currencies are not regulated in Serbia and are not a means of payment. The attitude of our relevant financial institutions is that trading in these currencies is the same as the trade of any other goods, but that it certainly is not a foreign exchange transaction. The National Bank of Serbia does not issue a

license for trading in virtual currencies, nor for setting up devices for trading and selling. The National Bank of Serbia also states that it will consider some kind of regulatory framework for this field.

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CRYPTOCURRENCIES – OPPORTUNITY, ADVANTAGE OR FINANCIAL BLUNDER AND IMPACT ON TOURISM DEVELOPMENT – AT GLANCE

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Abstract

Globalization and the changes that have affected the world economy conditioned the development of new models of thinking, investing, trading and payment methods in the world economy. The end of XX and beginning of the XXI century was marked by rapid technological progress, which has not bypassed any economic sector, and all households have experienced the change. Cryptocurrencies represent a new model of trade and payments, but also a way of making some form of earnings. It is a form of property that is used as a digital asset exchange using cryptographic algorithms for "mining" new values, but also as a way of ensuring the security of transactions in a given system. It is still early for assessments. However, the future might show what kind of impact would this kind of payment have, as well as its impact on tourism development.

Key Words: economic development, finances, cryptocurrencies, informatics development, investing

JEL classification: E22, E42, E44, F31, O33.

Introduction

A world economy without borders is undoubtedly the dream of almost all developed countries in the world. Here we are talking about the desire and the possibility that the world's largest global powers will manage global financial and global processes (Kocić, 2010, pp.146).

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The cyclical movement of the economy has been processed and explained in detail. Cyclical capital movement leads to periodic ups and downs of the economy in individual countries which in turn leads to financial disturbances locally. Due to globalization, shocks are not local and cause far more complex global consequences (World Economic Crisis 1929-33, 1970-1971, 2001, etc.) (Erić, 2003). These phenomena are related to the cyclical movement of capital that led to changes in our social lives. We are ready to accept any explanation of the present crisis in our civilization except the one that the present state of the world may be the result of our own mistake (Hajek, 1944, pp.13), which is the desire for rapid wealth.

The desire of all imperial countries of the world is to influence and control world trade, current events, goods and services with their monetary instruments and currency. The influence of the United States on financial flows in the 20th and 21st centuries was dominant and historically, instability was reflected in the fact that money, prices and production were most affected, where the most dramatic periods were between wars (1920-1921, 1929-1933, 1937-1938) (Fridman, 2002, pp. 56).

Economic crises that occur periodically but frequently undoubtedly lead to large macroeconomic shocks which are widespread globally. In order to explain the topic at hand, it is necessary to point out the fact that when the biggest economic crisis began it was called The Great Depression 1929-1933. (Fridman, 1963).

Due to the dramatic character, the crash of the stock market in October 1929 is often considered the beginning of the financial crisis. However, this is not true, the collapse was caused primarily by the individual's willingness to spend, which led to the subsequent collapse of the stock market. This triggered numerous measures that were reflected in the harsh economic conditions aimed at curbing "speculation" (Fridman, 2002).

The economic crises that have shaken the world economy periodically every 10 years will undoubtedly continue with the authors predicting the next one, which will be according to economic indicators as well as large oscillations in the stock market and global economy most likely in the next two years. The next crisis will not lead to distortions in the goods and services market but in the financial sector, i.e. the banking sector that is currently experiencing shocks due to speculation especially in cryptocurrency trading.

Globalization and global processes

From the onset, it is necessary to explain the basics that have largely shaped social processes in the last 40 years of the 20th and 21st centuries which have changed the world economy and thinking in general.

The notion of globalization is derived from the word "global", which means totality, and globalism is a way of looking at global events. Globalization would therefore imply a social process that seeks to comprehend the uniqueness of the world (Turek, 1999, pp. 159). When it comes to globalism, there is also an expanded theory that interprets globalism with the inclusion of arguments of the modern microelectronic revolution (Rodin, 1999, pp. 83-100).

The concept of globalization can be understood and defined in different ways. One way defines globalization as a positive and optimistic process that brings technology development, market expansion, higher profits, a more comfortable life, developmental progress, the breakdown of dictatorial regimes and increased consumer spending. The other interpretation of globalization is that of a necessary evil through the dominance of economics, politics, science and culture which acts as a form of colonialism and imperialism over small nations (Martin & Schumann, 1997).

As a result of globalization relationships between people and countries are intensifying where people are beginning to think globally as a whole and to view the world in a new light. Globalization has certain requirements - continuous investment in knowledge, technology, research and development. Whoever starts to lag behind in the process of globalization or does not get involved in modern processes will be left significantly behind. Today's world is increasingly open and hence a well-known reference to the world as a "global village" has been created. Globalization as an idea refers to "reducing" the world, but also to raising awareness about the world as a whole (Robertson & Milardović, 1999).

Globalization can be deemed as a result of developing knowledge, modern technology, markets and democracy. Globalization has enabled the free movement of capital, goods, information and people through the spread and elimination of borders. The ecological, cultural and social side of globalization is often neglected in relation to its politics and economics. The theory of globalization was devised in the eighties and

nineties of the twentieth century by Ronald Robertson. On the basis of this theory, he could describe the phenomena of a supranational and worldly meaning (Stanišić, 2000, pp.918-927).

The emergence of the globalization process was favorable for the post-World War II situation in Europe. The European countries, some of which were completely destroyed, but financially supported by the United States (Stanišić, 2000, pp.918-927), began the process of interconnection. The goal and basic aspiration was to create a Europe without borders, where goods, people and capital would circulate freely (Todorović, 2007). Such an aspiration allowed Europe to expand and influenced the trend that helped create a world without borders. When it comes to Globalization as a process, it is necessary to mention the role played by GATT (General Agreement on Tariffs and Trade) as well as its influence and effect, i.e. the free flow of goods and services. GATT was founded in 1947 and was based on idea of the greatest mutual benefits. It sets out three fundamental principles: the principle of reciprocity, the principle of liberalization and the principle of non-discrimination (Kocić, 2011, pp.224-238). The principle of reciprocity refers to the fact that trade facilitation granted by GATT signatories to one another must be the same for both parties. Later this principle was mitigated for the benefit of developing countries. The principle of liberalization implies a gradual reduction of customs duties and other restrictions, and the principle of non-discrimination meaning that for double taxation between two signatories must apply to all GATT members. Customs rates should also not be increased unilaterally (Natek & Natak, 2000). In the year of establishment, GATT was joined by 23 countries, and this number has been consistently increasing ever since. On December 8, 1994, GATT was renamed the WTO (World Trade Organization) at the end of the Uruguay Round negotiations and the ministerial conference in Marrakesh. The WTO began operating in 1995 and is funded by the signatories' contributions to their share in trade among its 134 members. Another notion that is increasingly in use with globalization is the concept of trans-nationalization. The growing and economic significance of transnational corporations and transnational flows of goods, capital, information and knowledge in the global market and in the economic environment is the most important feature of trans-nationalization (Kocić, 2011).

However, at the end of the 20th century, a downward trend in global inequality was witnessed. It is a characteristic of the declining distribution

in the income levels of the middle and lower social classes in developing countries, both in relative and absolute terms, as shown in Table 1.

Table 1: *Global economic distribution from 1960 to 1990*

Year	Percentage of global income that goes to 20% of the richest	Percentage of global income that goes to 20% of the poorest	The relationship between the richest and the poorest
1960	70,2	2,3	30 : 1
1970	73,9	2,3	32 : 1
1980	76,2	1,7	45 : 1
1990	82,8	1,3	64 : 1

Source: *Brown and Kane, The Globalization of World Politics, Oxford University Press, Oxford, 1997, pg. 456.*

What we can present today as a consequence of Globalization is also reflected in the financial world, including financial transactions involving the creation and enabling of payments by supranational currencies. The topic of this paper is the creation, purchase, sale, disposal and trading of alternative forms and methods of payment. The work itself will also present the thoughts of authors who consider this to be a trade that may introduce another cyclical problem of global financial ratios.

The technology of Cryptocurrency

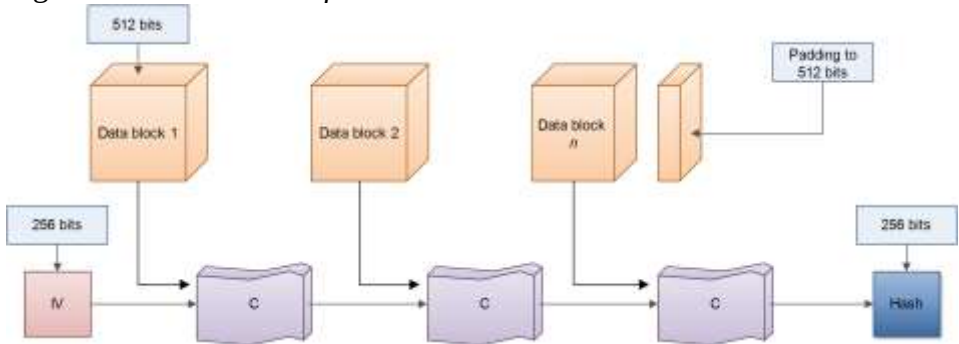
Over the past years, a faster integration of information and communication technologies has influenced many aspects of our lives (Popovic et al., 2016).

When it comes to cryptocurrency, it is impossible not to talk about Bitcoin. Bitcoin (Nakamoto, 2008) represents the first, and at the same time the most popular, cryptocurrency. It was created in 2008 and 2009 in the form of open source software – cryptographic digital monetary and payment systems that exist online. They are based on decentralized, distributed networks, which include a common data transfer technology called blockchain. The network data transfer relies on security data encryption (Hayes, 2017, pp.1308-1321).

The cryptocurrencies are generally based on Hash functions. Cryptographic Hash function is a mathematical function that takes any value, of any size, and creates data blocks of fixed sizes. With Bitcoin, as

well as all other cryptocurrencies based on Bitcoin technology, the block size is 256 bits.

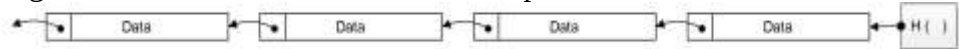
Figure 1: *SHA-256 hash function*



Thus, using the cryptographic algorithm SHA-256 (Gallagher & Director, 1995), anonymity in data transmission is achieved, specifically the anonymity of transactions.

The data structures used in these crypts are based on Hash Pointers. The pointer shows the place where certain data and cryptographic data are stored, which validates the original data.

Figure 2: *Data structures based on hash pointers*



If we have a hash pointer, we can use it to get the data points and to verify that these data have not been changed.

Furthermore, for additional protection, hex pointers can be digitally signed. Digital signatures use public and secret key technology. Bitcoin uses an ECDSA-based digital signature scheme (Pornin, 2013) algorithm. In this way, the cursor is digitally signed, as well as the entire data structure that the cursor points to.

With the cryptocurrency, the public key is used as an identity in transactions. Identities in transactions are addresses where a certain amount of cryptocurrency can be found.

In order for the transaction to be fully valid, it is necessary for all diggers in the network to confirm the transaction. This type of confirmation at

Bitcoin is also known as Nakamoto Consensus (Bonneau et al., 2015, pp. 104–121). This is considered to be the most important innovation in Bitcoin and probably the key part of the technology for which Bitcoin is successful. Therefore, any network participant can try to complement the chain by collecting valid pending transactions and forming a block. The key part is to use a computer "puzzle" to determine which block will be the next blockchain. These computer puzzles are called "proof-of-work" (Aspnes et al., 2005). The first block that is announced in the network, with the correct solution, is considered the next blockchain. If the proposed block contains transactions that are not valid, other participants discard that block and continue calculating until they find a solution for their valid block. In the event that there are two valid solutions that were created almost simultaneously in the network, a temporary engagement (eng. fork) in the blockchain occurs at that time. Which of the blocks will be included in the longest blockchain, and which is rejected largely depends on the nature of the protocol itself. In practice, most Bitcoin clients require 6 transaction certificates before accepting a newly created situation that a transaction has been posted.

By confirming the transaction by consensus, the security and accuracy of each transaction in the system are guaranteed. The disadvantage of this kind of work consists in waiting for transaction processing. The amount of time required to process depends on the number and strength of the diggers in the network, as well as the total number of pending transactions.

Hence, data mining calculates the function, processing transactions, which are placed in blocks. More blocks form a blockchain of data, thus creating the history of transactions since the creation of the currency to date.

Since there is no centralized control system, transaction data is shared by all diggers in such a P2P network. By this publication and alignment of all blockchain data, in fact, it achieves complete consistency and avoids possible fraud in the transfer of currencies, as well as the possibility of double consumption of the same unit of currency (double-spending attack). The weight of the puzzles to be counted is calibrated so that the new block is found once every 10 minutes. For this system to be sustainable, the weight is adjusted once in 2016 blocks, approximately every two weeks, using the deterministic timestamp function in the previous 2016 blocks (Bahack, 2013).

Award system

In order for the system to be sustainable, it is essential that participants in the network receive a certain prize.

In this case, the award consists of a cryptocurrencies wave assigned to a miner who initiates the creation of a new block. Which participant will be selected to create a new block depends on the amount of computer power with which it participates in the system. At Bitcoin, the amount of currency to which the diggers are rewarded is fixed at 50 BTC in the first 4 years of operation, 25 BTC over the next 4 years, 12.5 during the third period of 4 years, etc. The maximum number of currency units is programmed to 21 million. In addition to this award, diggers additionally charge transaction costs, which currently amount to 0.0007 BTC per transaction. In order to keep the system viable, the authors believe that the transaction costs will constantly increase, as in time the amount of units excavated decreases.

In addition to Bitcoin, there are hundreds of other currencies that have come out of this or similar technologies. These currencies are called Altcoin. They differ from each other according to the protocols they use, the amount of currency that is found and can be found in the circulation, and the speed of transactions being processed. Some of the most famous Altcoin currencies are Ethereum, Litecoin, Bitcoin Cash, Dash, Monero... There are currencies that operate within certain systems, such as Ripple, which is designed as an exchange currency and a payment system. Such a currency is not released into the mining circulation, since it is a transactional network that allows the exchange of any currency between the two participants.

Similar to cryptocurrency, the Ripple wallet is initialized with a private and public key pair. The wallet is then marked with an encrypted public keyhole. The owner of the wallet with a private key sign each transaction it initiates and includes the public key in the transaction. In case the private key is stolen, full access to the money in the wallet can be passed to other banknotes.

By implementing some various security algorithms and models, a problem of energy consumption arises (Popović, 2016, pp.69) As the volume of stored data grows, so will the share of energy consumption grow, as well as the security of data being stored. These security models

cannot be designed independently, so when designing a system, a significant part should be dedicated to security components that need to be energy efficient (Popović et al., 2016, pp. 412-420).

Economic aspect of the financial market – cryptocurrency trading

Some of the authors note the following fact. Bank circles the world's financial markets-the bubble of cryptocurrencies. All the forces of bankrupt neoliberal capitalism closed their eyes and tacitly allow them to evolve on all sides of the hidden currency. Today there are over two thousands of them and new ones are opening each day. The question arises, what is this about? What are the cryptocurrencies? Is this another in a series of neoliberal scams, or is it really a revolutionary invention that will change the finances of the world? (Dragaš, 2018)

2017 represents the most important trading period for virtual currencies. Many of them experienced real expansion and tremendous growth at 1000% per year. The end of 2017 was the height of cryptocurrency, especially bitcoins, and represented a great opportunity for citizens to make a quick return. The value of bitcoin was at an time high of \$19,099 at the beginning of 2018 and now its worth under \$ 10,000. It is, however, necessary to point out that its value only a year ago was only \$ 1,000, which means that bitcoin rose 1909% in one year. Because profit rates in real economy are 10-15% per annum (for example: Real US growth of 2.8% and Real India growth of 7.2% in 2017 (IMF, 2017), the abnormal yield on one of the cryptocurrencies can only serve to mislead the citizens of the world who do not know how to either save their money, receive very low interest rates from the commercial banks or, in some instances, banks are paid to hold their money.

The first sections of the paper dealt with the technique of creating, buying and selling cryptocurrencies but also the very essence of the cryptocurrencies and the historical conditions in which they appeared. Are cryptocurrencies a scam or not? It is necessary for these conclusions to suggest the facts that the authors plan to arrive at valid conclusions. Hence, we must have at least basic knowledge of the history of money, which, unfortunately, has never been fundamentally studied. Is that a coincidence?

No coincidence in the history of money development. Money and money transactions were always covered by a veil of mystery and secrets.

Bankers hide to show which money from alchemy creates new money. The English National Bank was founded in 1694, but its founders were private individuals. The FED is the US Central Bank whose founders on 24.12.1913 were the richest individuals. They were from the families of the founders of the ENB (English National Bank). Individuals had been given a monopoly to print money and lend money to the states. Amchel Meyer Rothschild openly and frankly stated: "Let me print and control the flow of money in one nation, and I do not care who rules the law and who has the strongest army." (Hern, 2018)

In the history of the United States, all the presidents have been killed, from Lincoln to Kennedy, who have tried to take the printing of the dollars from the privileged rich people and put them under the control of a legally elected government, parliament and citizens. Wars have begun and millions of innocent and naive people lost their life in order to keep the monopoly of printing the dollar.

In 1971, during the rule of Nixon, the decision was made that it did not need any cover for printing dollars, gold was a cover for printed paper, then we entered an era of the world's biggest fraud and falsification of cash without cover, which has led us today a complete collapse of neoliberal capitalism.

According to calculations and listed in the world's leading newspapers, the US debt is not \$ 20 trillion, as it is officially shown, but approximately \$ 400 trillion (Hern, 2018).

Today, over 2 quadrillion worth of worthless securities are circulating on the world markets. The financial bubble is so overcrowded, as already stated in the author's opinion, that it is ready to burst and completely sink the world's finances.

A large number of authors spoke and wrote about it, but until the last economic crisis on August 19, 2007, which broke out after the collapse of overdue and false mortgage loans, there was confidence in the regulation of market mechanisms (Kocić, 2010). In addition to state interethnicism, neoliberal capitalism can be saved from total collapse by the following: (1) World War, which will not be conducted in US territory. (2) new technology or new goods, which will pervade the whole world (3) the discovery of new energy from the universe, (4) hyperinflation that needs to erase all accumulated debts and to restart the financial system with the

new currency and (5) the end of neoliberalism and the building of a new national capitalism.

What happened in the years behind us? The attempt by Wall Street to challenge the world by war has failed. The tension and the stabilization of the situation in Europe have led to a calming down of the situation. Then next thing that is started is the launch - cryptocurrencies!

By controlling the world's financial flows, where they are not allowed to enter bond trading, they have enslaved the world's central banks under the false banner of the independence of central banks. Central banks of most countries responded only to the IMF; therefore, they were allowed to encrypt, trade on stock exchanges, enter into payment transactions and experience such growth that it appears extremely suspicious.

What happened to permit the decentralization of monetary transactions and allow the occurrence of cryptocurrencies? The logical explanation is that in fact the owners of these cryptocurrencies are the most powerful countries in the world. Everything is well thought out and done to find a new world game that brings big profits and which will, at least temporarily, buy precious time for neoliberal capitalism to weaken the pressure from central banks which print full-blown coins in cash.

When bitcoin grows 1.909% in one year, while the developed world's economy develops at a rate of barely 3%, this therefore is proof that crypto currency waves are a new way to new bait citizens, in way that does not raise concerns around the endangered totalitarian system, but enticing people to higher than usual returns (Dragaš, 2018).

Where does such an annual profit come from? You can find the answer to this question in the previous section.

What is behind this cryptocurrency?

A mathematical algorithm that allows you to dig bitcoin with special computing devices. Those devices have huge electricity consumption. Mining is more popular in countries where there are low electricity prices. In developed countries, electricity is too expensive and not profitable for computers to last 24 hours without stopping. Dure to the nature of algorithm, mining is getting harder with time, thus less and less bitcoins are being dug.

How is the price of a cryptocurrency determined?

Based on supply and demand. The supply is small, while the demand is high, which is why the price is constantly growing. On the offer page we have the information that 16.742.575 BTC has been mined. A total of 21 million bitcoins have been determined by mathematical algorithm and this will be mined by the year 2040. So, the creator of the bitcoin planned to keep the cryptocurrency.

Why is the big demand for cryptocurrency?

The demand is risen by three characteristics of cryptocurrencies: anonymity, low cost and fast transfers. In the electronic age, the transmission speed is very important and the cryptocurrencies are transmitted within a few seconds. The money transfer price of the cryptocurrency is very low, it is only a few cents, which significantly increases the interest of companies and citizens to use cryptocurrency. The annual commission of all world transfers is about 22 trillion dollars. That's the annual GDP of America itself. Transferable income allows banks and companies like the Western Union to make significant financial gains, but this kind of transfer is outdated to financial lobbyists who's main goal is to ban banks from the financial services market. What brought enormous popularity to the cryptocurrency was anonymity and freedom in the process of transfers.

The problem of anonymity and the checking of all payments is very complicated in banks, no matter the amount. Abuse talk (when you take advantage of something or someone) and the so-called money laundering used to finance terrorism is to a great extent just an excuse to subdue ordinary people. All major transactions as well as so-called money laundering go through the FED and several of the world's largest banks. In this way the business environment is becoming increasingly difficult for genuine businessmen, while on the other hand giving the opportunity to all those so called merchant brokers to wash money and to use the cryptocurrency to transfer their "dirty" money from illegal activities all over the world. Since there is so much money, therefore there has been a huge demand for cryptocurrency, which has led to an abnormal jump in the prices of certain of those currencies, especially bitcoin.

Is it possible to track the cryptocurrencies?

The propaganda story that the cryptocurrencies are decentralized and no one controls them is a complete lie. The use of blockchain technology can be openly monitored by the transaction data, which cannot be falsified, and any change is permanently recorded and can be verified on computers around the world. So each transaction is recorded and permanently stays on a digital network.

What does this mean? The freedom given to cryptocurrencies is controlled. Who will know when someone can come to mind to start reviewing long-term transactions? At the same time, the blockchain allows control and monitoring.

The current freedom of cryptocurrencies is tendentiously allowed for humanity to ignite and incur large profits, which do not exist in the real economy. Fun for indebted and unemployed citizens, who listen to stories of great earnings. The advantages of cryptocurrency are constantly emphasized, which does not deny work, but when you look at currency promoters, they always emphasize that there are no guarantees for cryptocurrencies and that you do everything on your own responsibility. It is criticized for printing money without cover, but there is also no answer for what is exactly behind the cryptocurrencies. The answer is known and hidden - there is nothing behind the cryptocurrencies. The platform at which transfers are made are based on the supply and demand in theory, while there is no foothold in the real economy on the ground in reality as there are no pillars that carry it.

The best example is the next one we will propose?

What is capital? Paper money? Digital Bitcoin? When it comes to war, earthquake or major catastrophes, what is your capital? Capital is just what you have in your head and what you have in your pockets. What you have in your head is the knowledge and skills that belong to you only, for which you are only responsible, which allow you not only to survive, but also to re-create wealth. What you have in your pockets must be something that is concrete and tangible and has a lasting value. It's certainly not paper money. Investment in gold in terms of several grams is a safe item that you can change for all goods, especially food. There are countless testimonies from the past.

The cryptocurrency is a bait for the complete introduction of cashless money. We are also aware of the need to pay for cash payments, although the subjective opinion is that some form of savings is good because of the freedom to dispose of it. However, today there are so many demands from the most advanced countries to abolish cash. All transactions will be on the digital network and they will be able, through blockchain, to control everything. The story of speed, efficiency and modernization of cash flows is inaccurate at the time of the technological revolution, and big profits are just a bait for naïve eager quick returns.

Today, with the cryptocurrency trade, high yields are made, but from the point of view of the economy, such profits cannot be realized in the long run. We can still conclude that the transfer of money around the world has to be digitized and accelerated, it is not controversial, and the cryptocurrencies show that all this is possible, but first we have to see - what is the real money? The cryptocurrencies is not.

The question is at the very end of the work, what to do? We are all wondering whether machines should make money for us? Do we gamble? If you love the risks and you like to gamble, enter with a small portion of your free resources into cryptocurrencies. All you make is then turned into real goods: investment gold and silver, houses and apartments, agricultural land, water sources, forests, production or ore fields with rich finds.

Get your capital in your hands! Join and control the jobs! The second wave of the crisis, the financial tsunami, arrives, and it will wipe out all the fake currencies. Work on yourself and acquire knowledge and work habits. Nobody can take it away from you. Everything in your hands and pocket belongs only to you. You do not give it to anyone. All that is not in your hands and your pocket is not yours. The rebellion of indebted slaves is only possible after all this is understood.

Possibilities of application and cryptocurrency blockchain technologies in tourism

Cryptocurrency and blockchain technology can be used in different ways in tourism. At a time when the popularity cryptocurrency reaches its peak, the very promotion of certain services that can be paid by cryptocurrencies can attract a lot of attention. Cryptocurrency can be used now to pay for travel, and accommodation cost in hotels and other

facilities. Blockchain technology, on the other hand, can provide operators a system for sharing information about the availability of accommodation and the like. For the purpose of tourism and services, some companies give circulated own cryptocurrency which can make payments. JIO cryptocurrency is used to pay for various packages and membership fees at travel agencies TamTamTravel (<http://tamtamtravels.com/>). In addition to this, the Agency accepts other currencies of payment, such as Bitcoin, Ethereum, Litecoin, etc. BitAir (<https://bitair.io/>) is another blockchain technology that allows payment of airline tickets and accommodation bookings. Another interesting idea is cryptocurrency Lif announced by the Lufthansa Group (<http://lufthansagroup.com/>). Their idea is to use online market, based on technology blockchain, skip mediators in booking accommodation and transportation. In addition to these, there are many more examples of how the current popularity of cryptocurrency and blockchain technology can be used for the purpose of popularization of tourism and tourist destinations, as well as how costs can be reduced in business.

Conclusion

Globalization is a process that has significantly changed the way of production, distribution, consumption, and investing in the today's world. Former methods of payments and universal currencies that served as a means of exchanging slowly begin to lose their dominant role. The global distribution of income shows that today there are more and more poor in the world, and that the wealth of the rich is increased by 3 times in the 20th century. Based on the parts detailed in the paper itself, we can conclude the following: virtual currencies do not meet the basic criteria that one currency should have. Banks call it "poor goods and bad money" (JP Morgan, 2018).

Perhaps in the future it will make sense for some investors to incorporate digital currencies into their portfolios via hedge, however, we believe that no cryptocurrencies will be recognized as a legitimate competitor in sovereign currencies.

From the point of view of banks, the cryptocurrencies do not meet the criteria of cash, and they should continue to take a great path to become a national currency. Bankers think that the only area on which cryptocurrencies with national currencies can compete is the black market. We have seen that the development, broadcasting and trading of

cryptocurrency so far only at the level of trade in individual markets, and that supply and demand significantly influence their value. On the other hand, there are proposals to form a cyber-crypto-initiative. The Russian Federation has proposed a cyber-initiative to form a new currency that would connect developing countries to markets in Asia, Eastern Europe, Africa and South America, through blockchain and smart technology, which would be collectively adopted by the BRIC countries and members of the Eurasian Economic Union. If this proposal was adopted and implemented, the first multinational cryptocurrencies could be used by more than 40 percent of the world's population. This could improve trade efficiency among member states and create a trade bloc that could transform global trade and the economy through a blockchain of intelligent technology.

However, in order for this initiative to succeed, the transnational legislation of the Member States to which it refers should be updated, as there are currently significant differences between Member States' legislation regarding cryptocurrencies. Activities such as mining and trade in cryptocurrencies are not yet regulated in the legislation of most countries in the world although it is being worked. Developing countries (China, India, Russia,) are working to regulate the cryptocurrencies markets to be under control. However, it is not yet certain whether Member States will follow an EU-like approach when it comes to formulating an appropriate transnational tax policy for new multinational crypto-transactions.

We can also conclude that today the currency market is very unstable. Today, the most famous and definitely most traded cryptocurrency is under great oscillations. As we have already noted in the work itself, due to market failure, inadequate institutional protection, underpinning of speculative changes, cryptocurrencies and cryptocurrency markets today are a bad choice for individual investors. In the opinion of the author and the monitoring of the current financial trends, as well as various initiatives of the most important countries in the world on the prohibition of trading, we can say that the new financial crisis will be a crisis caused by investment in cryptocurrencies, and losses can even be measured in the billions of dollars.

We believe that the economic collapse will be very fast, as people try to enrich themselves from the fictitious increase in price."The speculators buy and sell their own investments in order to manipulate the market in

this way," Rubini claims. According to his estimates, many will stick to bitcoin until it collapses, and when it comes to that, then the value of bitcoin will be zero, because that is, in fact, the real value of cryptocurrency (Krugman, 2013). Based on experience and work elements, the matter of influence of cryptocurrencies on the growth and development of tourism will be especially dealt with in the future, impact on investments, as well as the speed and dynamics of payments. Based on the data obtained, only individual data can be found in the region on the offer of real estate and cryptocurrencies. While the future of most cryptocurrencies is quite uncertain, on the other hand a wider use of blockchain technology can be expected, both in tourism and in other business segments.

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INFLUENCE OF SOCIO DEMOGRAPHIC CHARACTERISTICS OF CONSUMERS OF MEDICAL TOURISM SERVICES IN SERBIA

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Abstract

The subject of the research is to determine whether and to what extent in a process of making a decision on choosing a medical treatment in Serbia consumers' demographic characteristics influence the valuation of certain parameters. The findings on whether there are differences in consumer behavior when making a decision on treatment in Serbia, depending on sex, education, and amount of income, are very important in creating an offer for medical tourism. Medical tourism service providers are able to identify the social demographic profiles of their current and potential consumers, and then accordingly create their marketing strategy, within the strategy of promoting Serbia as a tourist destination. In this paper, a survey method was used on a sample of 365 respondents. In conclusion, the authors have analyzed the influence of each socio-demographic characteristic of consumers in regard to the differences in their behavior in the decision-making process of choosing the medical treatment in Serbia.

Key Words: *medical treatment in Serbia, medical tourism*

JEL classification: *I15, L83, Z32*

Introduction

From a demand aspect medical tourism including patient/consumer characteristics and profiles or decision models based on types of information such as hard data (performance and quality) and soft (recommendation, information provided by websites, internet) has not been extensively scholarly researched (Lunt & Carrera, 2010; Gan &

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Frederick, 2013). The study that relates consumers' attitudes toward medical tourism including consumer characteristics (age, education, income, and insurance status) of 289 consumers from the USA resulted in three attitude-related factors: economic, treatment-related, and travel-related as the major findings reveal that the uninsured and low-income consumers are more sensitive to economic factors than the insured and the middle-income consumers; that 51- to 64-year-olds are less motivated by economic factors than young adults; the better one's health, the more one is motivated by treatment-related factors (Gan & Frederick, 2013). In a subsequent study, a principal components analysis has outlined three factors – risk, social-related, and vacation as the authors found that the middle-income earners and recipients of the federal health insurance program for the elderly, are more motivated by risk-related factors to travel for care, but the middle-aged and older, and the married are more motivated by social-related factors to travel for care (Gan & Frederick, 2015). The exploratory study of Guy et al (2015) tried to identify characteristics and factors U.S. citizens willing to participate in medical tourism from those who are not including several variables: the nature of the medical condition for which treatment is sought (life threatening, serious but not life threatening, medically optional, or life enhancing); respondents' reasons to consider or rule out medical tourism; (c) demographics (age, gender, marital status, education, income, and health insurance coverage); (d) risk aversion; and countries most and least likely to be considered for healthcare services.

Qualitative research on Canadian medical tourists has shown that the key factors in the process of deciding on medical treatment abroad are reliable information about the surgeon's reputation abroad as well as the testimonies of other patients who stayed in the hospital. Access to this type of information is bound to increase confidence in consumers' decision-making (Crooks et al, 2012). Still, little is known about the profile of the consumer of medical tourism services, taking into account the socio-demographic status, age, sex, state of health. It is also important to consider the factors that direct consumer not to use the services of local providers and/or to attract them to foreign providers. Generally, synthesis of existing evidence indicates that the following factors shape "willingness to travel" (WTT) for the use of medical services outside the country (Exworthy & Peckham, 2006): specialist health care is associated with higher WTT; a good reputation increases WTT especially among groups with higher incomes; emergencies associated with higher WTT; frequent users of the service may exhibit lower WTT; men show higher

WTT than women; older people (over 60 years) are associated with lower WTT; high status (especially income) is associated with a higher WTT; parents or guardians of minors are associated with lower WTT; connection is poor or lower WTT is associated with some minority ethnic groups; and limited comparative evidence WTT in rural and urban areas. Smith & Forgione (2007) have defined the factors of medical tourism that act on a wider scale than the US market that play a major role in the presentation of medical tourism in the world market. Several factors are defined that influence patients to choose medical tourism as replacement for a classic medical service. For example, patients from America are willing to travel across the ocean in search of medical services that match their budget. In his work, Palvia (2007) divided these factors into two groups: external and internal. The influence of each of the factors individually cannot be fully responsible for the patient's decision. Therefore, these factors are divided into two groups: the choice of country/location and the selection of a medical institution. The first group includes external factors, such as economic stability, political stability, social behavior and regulatory standards. Internal factors are another group of factors, as costs, accreditation, quality of care and doctors' training. A key driver for the UK individuals to seek health care abroad is low-cost medical care and after care services, followed by desire to avoid long waiting times for certain medical procedures, or to consume a particular medical treatment for which are not eligible in their home country (Lunt et al, 2013). Krajnović et al (2013) have pointed out to the importance of establishing a system monitoring and control monitoring quality at national level in all countries that have developed medical tourism, as well as a system of destination management level for tourist destinations on the principles of IQM (Integrated Quality Management). Medical tourism as a major component of international trade in health care attracts the attention of many actors of the medical profession, the agency for the promotion of tourism, health analysts and policy makers. As the services are offered in developing countries the slogan "first-class treatment at Third World prices" may be emphasized (Čavlin & Ignjatijević, 2014). In the Strategy of Tourism Development of the Republic of Serbia for period 2016 - 2025, medical tourism has been outlined as one of the promising strategic tourism products (Strategy of Tourism Development of the Republic of Serbia for period 2016 – 2025). The assistance of international expert bodies in developing a Strategy of medical tourism would be highly recommended. The internet sites and web-based portals in Serbia need to be developed professionally having in mind the good practices of countries with developed medical tourism, in

line with the recommendations of OECD, European Commission and criteria of the Health on the Net Foundation, which can serve as precious guidelines (Vapa-Tankosić & Ignjatijević, 2017). Based on the previous research, the majority of respondents, in addition to medical services, came to Serbia and visit a friend or relatives and decided to use medical services in Serbia at the recommendation of friends and relatives, while the rest was decided on the basis of internet updates (Ignjatijević et al, 2017).

Methodology of research

The research was conducted in several cities on the territory of Vojvodina. The survey sample was presented by 365 respondents - patients who stayed in Vojvodina in order to receive the appropriate medical service. The research was carefully prepared. The treatment of the respondents is clearly and precisely defined. Clear, accurate and sufficiently detailed instructions were prepared for respondents and associates in the examination. The survey was modeled on various existing literature.

The survey was conducted using the survey method created in Google questionnaire so respondents responded directly to the questionnaire. All entered data in the Google questionnaire is automatically recorded in a unique excel table, making it easier to process data. The poll was anonymous. A list of specially formulated questions was prepared for the survey in accordance with the set goal of the research. The first questions were supposed to serve to see whether patients - users of medical tourism services had come to Serbia earlier, whether they went to other countries and how they decided now. The second part of the question concerned the basic geographical, demographic, economic and sociological characteristics of consumers. The questions were open and closed, depending on the degree of precision of the information we wanted to obtain. After the survey was completed, a questionnaire analysis was performed. In Google questionnaire, no question can be skipped and that all questions have to be filled in according to the instructions set, therefore there was no need for editing, or for rejecting individual questionnaires because all responses were automatically entered correctly and all the questionnaires were filled in correctly.

Google questionnaire enabled automatic data entry into a unique excel table, which enabled the use of the SPSS program for statistical data

processing. Furthermore, we tried to assess the parameters that respondents evaluated when making a decision on treatment in Serbia. We asked them 15 questions, which were supposed to give a grade of 1-5, depending on the importance of choosing a destination for medical tourism services. We calculated the mean values for each analyzed factor and standard deviation as an indicator of how much values deviate from the mean value. We classified the values in the following way: Less important factors (from 0 to 3.5), Very important factors (from 4.5 to 5) and Moderately important factors (from 3.5 to 4.5).

Research results

Below we list all the questions, i.e. the analyzed factors: Stable political situation and a healthy legal system, High standard of hospital accommodation, High quality of care, Accreditation of the institution, Confidentiality and privacy guaranteed, Recommendation of doctors, Good infrastructure (proximity to bigger towns, highways, airports), Secured travel safety, After treatment assistance provided, Treatment speed abroad, Cost saving, Cultural similarity, Nontraditional treatment, Availability of a place of rest (places for rest and relaxation), Treatment of persons with special needs (disabled). The ranking of the respondents is presented in Table 1.

Table 1: *Assessment of the significance of individual factors*

Assessment of the significance of individual factors	Mean	Std. Dev.
13. Nontraditional treatment	3.63	1.093
15. Treatment of persons with special needs (disabled)	3.84	1.022
1. A stable political situation and a healthy legal system	3.9	1.136
7. Good infrastructure (close to major cities, highways, airports)	3,95	1.050
12. The similarity of culture	3,97	1.021
14. Availability of a place for rest (places for rest and relaxation)	4	1.008
8. Secured travel safety	4.25	0.858
2. A high standard of hospital accommodation	4.33	0.772
4. Accreditation of the institution	4.42	0.793
5. Confidentiality and privacy guaranteed	4.42	0.902
10. Treatment speed abroad	4.52	0.665
6. Doctor's Recommendation	4.55	0.813

9. After treatment assistance	4.59	0.738
3. High quality care	4.6	0.658
11. Cost savings	4.6	0.736

Source: *Authors' calculations*

In the following text, a socio-economic character of respondents of medical tourism services users is given.

The first factor analyzed is the **Stable Political Situation**. Based on the previously presented classification, the respondents considered this factor less significant, with the mean value 3.88 and standard deviation of 1.136. Of the total number of respondents, 37% rated this factor with grade 5; 30% with grade 4 and 21.9% with grade 3, which accounts for the 89% of respondents. Only 11% of respondents rated the Stable Political situation with grades 1 and 2. The obtained value indicates that respondents value the most the quality of the service. On the other hand, providers, travel agencies or doctors who organize patient departures, medical tourism service providers, have concluded contracts with clinics in countries where the stability of the state and the political system is not in question. Thus, patients pay less attention to this factor and direct their attention to the medical service itself. The crosstab analysis of the analyzed factor with variables of gender, income and education has been performed and the following values were obtained:

a) In the sample of 365 examinees, 50.7% were female respondents (185). Of this number, 37.8% rated this factor with grade 5 and for them this factor is considered to be the most significant, 29.7% rated with grade 4 and 18.9% rated with grade 3. We conclude that women rated this factor with grade 3.86. When it comes to men, 36.1% rated this factor with grade 5, 30.6% with grade 4 and 25% with grade 3. Finally, men rated this factor with grade 3.89. The Hi 2 test was carried out to determine the existence of a statistically significant difference in respondents' responses. Hi 2 has the value of 6,368 (df = 4), and $p = 0,173$, which indicates that there is no significant difference in the attitude of the respondents regarding this factor. **Therefore, men and women do not differ by the evaluation of this factor.** b) In the sample of 365 respondents, 41.1% has an income from 2000 to 4000 euros; 32.9% between 4001-6000 euros; 13.7% less than 2000 euros and 12.1% more than 6000 euros. The category of respondents with income from 2000 to 4000 euros rated with grade 3.67 this factor; respondents with a salary of 4001-6000 euros with grade 4.04; respondents with incomes less than 2,000 euros with grade of

4.2 and finally respondents with income of more than 6000 euros rated the significance of this factor with grade 4.10. The Hi2 test shows that there is a statistically significant difference between the subjects: $Hi2 = 39.92$ ($df = 16$), at $p = 0.001$. ***We conclude that the category of respondents with the lowest and highest income have evaluated the significance of this factor with the highest grade when choosing a destination for a medical tourism service.*** c) Of the total number of respondents, 12.3% have finished college or a higher school; 30.1% bachelor's degree; 34% bachelor's degree; 10.95% have master's degree or PhD and 15.1% of respondents have finished primary school. Respondents with a college or a higher school rated this factor with grade 3.89; respondents with a bachelor's degree with 3.72; high school respondents with 3.76; master's degree or PhD with 4.20. Finally, respondents with primary school graded this factor with 3.36. The Hi 2 test showed that respondents differ statistically in their grades. $Hi2 = 66.458$ ($df = 20$) and $p = 0.000$. ***We conclude that respondents with the highest level of education evaluated the significance of this factor with the highest grade.***

The second factor analyzed is the **High standard of hospital accommodation**. Based on the previously presented classification, the respondents considered this factor as less significant, with mean value of 4.30 and standard deviation of 0.772. Of the total number of respondents, 49.3% rated this factor with grade 5; 31.5% with grade 4 and 19.2% with grade 3. The obtained value confirms the hypothesis that the respondents value the quality of the service most. As we have shown in the previous analysis the political situation is less important, but the accommodation is especially important, that is, patients pay more attention to this factor and direct their attention to the medical service itself. The crosstab analysis of the analyzed factor with variables of gender, income and education has been performed and the following values were obtained:

a) In the sample of 365 examinees, 50.7% were female respondents (185). Of this number, 45.9% rated this factor with grade 5 and considered this factor the most significant, 32.4% grade 4, and 21.6% rated it with grade 3. We conclude that women rated this factor with grade 4.24. When it comes to men, 52.8% rated this factor with grade 5, 30.6% with grade 4 and 16.7% with grade 3. Finally, the men rated the significance of this factor with grade 4.36. $Hi2$ test has the value of 2,133 ($df = 2$), and $p = 0,344$, which indicates that there is no significant difference in the attitude of the respondents regarding this factor. ***Therefore, men and women do not differ in the evaluation of this factor, but its significance is highly***

appreciated. b) The category of respondents with income from 2000 to 4000 euros rated this factor with grade 4.33; respondents with a salary of 4001-6000 euros with grade 4; respondents with incomes less than 2,000 euros rated this factor with grade 4.4 and finally respondents with incomes greater than 6000 euros rated this factor with grade 4.01. The Hi2 test shows that there is a statistically significant difference between the subjects: $Hi2 = 41.68$ ($df = 8$), at $p = 0.000$. ***We conclude that the categories of respondents with the lowest income of <2000 euros and the next group of 2000-4000 euros have evaluated the significance of this factor with the highest grade when choosing a destination for medical tourism service.*** c) Respondents with a college or a higher school rated this factor with grade 4.33; respondents with a bachelor's degree with grade 4.14; respondents with bachelor's degree with grade 3.88; master's degree or PhD with grade 4.33. Finally, respondents with primary school rated this factor with 4.45. The Hi2 test showed that respondents differ statistically in their grades. $Hi2 = 49.126$ ($df = 10$) and $p = 0.000$. We conclude that there is a statistically significant difference in the attitude of the respondents regarding the importance of this factor. We conclude that respondents with the lowest level of education and the highest grade have evaluated the significance of this factor with the highest grade, which is in correlation with the earlier crosstab analysis. The low level of income is also conditioned by very high expectations when it comes to the quality of hospital accommodation. They expect the top service in response to the allocated funds (and the share of allocations of funds for this purpose in their income is high, given the low incomes).

The third factor analyzed is **High quality of care**. Based on the previously presented classification, this factor was considered very significant by the respondents, with a mean value of 4.60 and a standard deviation of 0.658. Of the total number of respondents, 69.9% rated this factor with grade 5; 20.5% with a grade 4 and 9.6% with grade 3. The crosstab analysis of the analyzed factor with variables of gender, income and education has been performed and the following values were obtained:

a) In the sample of 365 examinees, 50.7% were female respondents (185). Of these, 73% rated this factor with grade 5, 16.2% with grade 4, and 10.8% with grade 3. We conclude that women rated this factor with grade 4.62. When it comes to men, 66.7% rated this factor with grade 5, 25% with grade 4 and 8.3% with grade 3. Finally, men rated this factor with grade 4.43. Hi2 test has the value of 4,529 ($df = 2$), and $p = 0,104$, which indicates that there is no significant difference in the attitude of the

respondents regarding this factor. ***Therefore, men and women do not differ in the evaluation of this factor, but its significance is highly appreciated.*** b) The category of respondents with income of 2000 to 4000 euros rated this factor with grade 4.66; respondents with a salary of 4001-6000 euros with grade 4.67; respondents with incomes of less than 2,000 euros with grade 4.4 and finally respondents with incomes greater than 6000 euros with grade 4.43. The Hi2 test shows that there is a statistically significant difference between the subjects: $Hi2 = 50,009$, $df = 8$), at $p = 0,000$. ***We conclude that the categories of respondents with incomes of 2000-4000 and 4001-6000 euros have evaluated the significance of this factor with the highest grade when choosing a destination for medical tourism service.*** c) Respondents with a college or a higher school rated this factor with grade 4.33; respondents with a bachelor's degree with grade 4.63; respondents with a high school with grade 3.53; master's degree or PhD with grade 4,67. Finally, respondents with primary school rated this factor with grade 4.55. The Hi 2 test showed that respondents differ statistically in their grades. $Hi2 = 54,046$ ($df = 10$) and $p = 0,000$. We conclude that there is a statistically significant difference in the attitude of the respondents regarding the importance of this factor. ***The low level of income is also conditioned by very high expectations when it comes to the quality of hospital accommodation. They expect the top service in response to the allocated funds.***

The fourth factor analyzed is **Secured travel safety**. Based on the previously presented classification, this factor was graded as the one with moderate significance with a mean value of 4.25 and a standard deviation of 0.858. Of the total number of respondents, 47.9% rated this factor with grade 5; 31.5% with grade 4; 19.2% with grade 3 and 1.4% with grade 1. The crosstab analysis of the analyzed factor with variables of gender, income and education has been performed and the following values were obtained:

a) In the sample of 365 examinees, 50.7% were female respondents (185). Of these, 56.8% rated this factor with grade 5, 29.7% with grade 4, and 13.5% with grade 3. We conclude that women rated this factor with grade 4.43. When it comes to men, 38.9% rated this factor with grade 5; 33.3% with grade 4 and 25% with grade 3. Finally, men rated the importance of this factor with a grade of 4.03. Hi2 test has the value of 17,876 ($df = 3$), and $p = 0,00$, indicating that there are significant differences in the attitude of the respondents regarding this factor. ***Therefore, men and women differ according to the evaluation of this factor, i.e. women attach greater importance to this factor.*** b) The category of

respondents with income of 2000-4000 euros rated this factor with grade 4.30; respondents with income of 4001-6000 euros with grade 4.29; respondents with incomes less than 2,000 euros with grade 4.10 and finally respondents with income of more than 6000 euros with grade 4.01. The Hi2 test shows that there is a statistically significant difference between the subjects: $Hi2 = 59,732$, $df = 12$), at $p = 0,000$. ***We conclude that the categories of respondents with incomes of 2000-4000 and 4001-6000 euros have evaluated the significance of this factor with the highest grade.*** c) Respondents with a college or a higher school rated this factor with grade 4.44; respondents with a bachelor's degree with grade 4.41; respondents with a high school with grade 4; master's degree or PhD with grade 4.50.; respondents with primary school with grade 4.27. The Hi2 test showed that respondents differ statistically in their grades. $Hi2 = 39.168$ ($df = 15$) and $p = 0.001$. ***We conclude that there is a statistically significant difference in the attitude of the respondents regarding the importance of this factor. We conclude that the significance of the given factor is also higher as the level of education increases.***

The fifth factor analyzed is **Confidentiality and privacy guaranteed**. Based on the previously presented classification, the respondents considered this factor as of moderate significance, with a mean value of 4.38 and a standard deviation of 0.902. Of the total number of respondents, 60.3% rated this factor with grade 5; 23.3% with grade 4; 12.3% with grade 3 and 4.1% with grades 1 and 2. The crosstab analysis of the analyzed factor with variables of gender, income and education has been performed and the following values were obtained:

a) In the sample of 365 examinees, 50.7% were female respondents (185). Of this number, 56.8% rated this factor with grade 5, 29.7% with grade 4 and 13.5% with grade 3. We conclude that women rated this factor with grade 4.51. When it comes to men, 38.9% rated this factor with grade 5; 33.3% with grade 4 and 25% with grade 3. Finally, men rated the importance of this factor with grade 4.25. The Hi2 test has a value of 12.227 ($df = 3$) and $p = 0.000$, indicating that there is a statistically significant difference. b) The category of respondents with income of 2000-4000 euros rated this factor with grade 4.47; respondents with a salary of 4001-6000 euros with a grade 4.46; respondents with incomes of less than 2,000 euros with grade 4 and with incomes over 6,000 euros with grade 4.32. The Hi2 test shows that there is a statistically significant difference between the subjects: $Hi2 = 61,340$, $df = 16$), at $p = 0,000$. ***We conclude that the categories of respondents with incomes of 2000-4000***

and 4001-6000 euros evaluated the significance of this factor with the highest grade when choosing a destination for medical tourism service.

c) Respondents with a college or a higher school rated this factor with grade 4.44; respondents with a bachelor's degree with grade 4.9; respondents with high school with grade 4.28; master's degree or PhD with grade 4.50; respondents with primary school with grade 4.27. The Hi2 test showed that respondents differ statistically in their grades. $Hi2 = 39.168$ ($df = 15$) and $p = 0.001$. ***We conclude that the significance of the given factor is also higher as the level of education increases.***

The sixth factor analyzed is **Accreditation of the institution**. Based on the previously presented classification, the respondents considered this factor as of moderate significance, with a mean value of 4.42 and a standard deviation of 0.793. Of the total number of respondents, 57.5% rated this factor with grade 5; 30.1% with grade 4; 11% of respondents with grade 3. The crosstab analysis of the analyzed factor with variables of gender, income and education has been performed and the following values were obtained:

a) In the sample of 365 examinees, 50.7% were female respondents (185). Of this number, 64.9% rated this factor with grade 5, 21.6% with grade 4 and 10.8% with grade 3. We conclude that women rated this factor with grade 4.46. When it comes to men, 50% rated this factor with grade 5; 38.9% with grade 4 and 11.1% with grade 3. Finally, men rated this factor with grade 4.39. The Hi2 test has a value of 17.402 ($df = 3$) and $p = 0.001$, indicating that there is a statistically significant difference. b) The category of respondents with an income of 2000-4000 euro rated this factor with grade 4.50; respondents with a salary of 4001-6000 euros with grade 4.46; respondents with incomes less than 2,000 euros with grade 3.3 and finally respondents with incomes over 6,000 euros with grade 4.20. The Hi2 test shows that there is a statistically significant difference between the subjects: $Hi2 = 34.883$, $df = 12$), at $p = 0.000$. ***We conclude that the categories of respondents with incomes of 2000-4000 and 4001-6000 euros evaluated the significance of this factor with the highest grade when choosing a destination for medical tourism service.*** c) Respondents with a college or a higher school rated this factor with grade 3.22; respondents with a bachelor's degree with grade 4.45; high school respondents with grade 4.4; master's degree or PhD with grade 4.67; respondents with primary school with grade 4.55. The Hi 2 test showed that respondents differ statistically in their grades. $Hi2 = 82.002$ ($df = 15$) and $p = 0.000$. ***We conclude that the significance of the given factor is also higher as the level of education increases.***

The seventh factor analyzed is the **Doctor's Recommendation**. Based on the previously presented classification, the respondents considered this factor as highly significant, with a value of 4.38 and a standard deviation of 0.813. Of the total number of respondents, 68.5% rated this factor with grade 5; 20.5% with grade 4; 8.2% with grade 3. The crosstab analysis of the analyzed factor with variables of gender, income and education has been performed and the following values were obtained:

c) In the sample of 365 examinees, 50.7% were female respondents (185). Of this number, 70.3% rated this factor with grade 5, 18.9% with grade 4 and 10.9% with grade 3. We conclude that women rated this factor with grade 4.59. When it comes to men, 66.7% rated this factor with grade 5; 22.2% with grade 4 and 5.6% with grade 3. Finally, men rated this factor with grade 4.47. The Hi2 test has a value of 14.001 ($df = 4$) and $p = 0.007$, indicating that there is a statistically significant difference. b) The category of respondents with income of 2000-4000 euros rated this factor with grade 4.27; respondents with a salary of 4001-6000 euros with grade 4.54; respondents with incomes less than 2,000 euros with grade 4.7 and finally respondents with income over 6,000 euros with grade 4.09 significance of this factor. The Hi2 test shows that there is a statistically significant difference between the subjects: $Hi2 = 41,110$, $df = 16$), at $p = 0.001$. ***We conclude that the categories of respondents with income of 4001-6000 euros and those with less than 2000 euros evaluated the significance of this factor with the highest grade when choosing a destination for medical tourism service.*** c) Respondents with a college or a higher school rated this factor with grade 4.67; respondents with a bachelor's degree with grade 4.59; respondents with high school with grade 4.36; master's degree or PhD with grade 4.50 and primary school respondents with grade 4.73. The Hi2 test showed that respondents differ statistically in their grades. $Hi2 = 73.222$ ($df = 20$) and $p = 0.001$. ***We conclude that students with high school and primary school tend to listen more to the advice of their doctor.***

The eighth analyzed factor is **Good Infrastructure**. Based on the previously presented classification, this factor was assessed by the respondents as less significant, with a value of 3.9 and a standard deviation of 1.05. Of the total number of respondents, 37% rated this factor with grade 5; 28.8% with grade 4; 23.3% with grade 3 and 11% with grades 1 and 2. The crosstab analysis of the analyzed factor with variables of gender, income and education has been performed and the following values were obtained:

a) In a sample of 365 respondents, women rated this factor with grade 4.05. Finally, men rated the importance of this factor with grade 3.75. The Hi2 test has a value of 12.105 (df = 4) and $p = 0.017$, indicating that there is a statistically significant difference. b) The category of respondents with income of 2000-4000 euros rated this factor with grade 3.93; respondents with a salary of 4001-6000 euros with grade 3.92; respondents with incomes less than 2,000 euros with grade 3.9 and finally respondents with income of more than 6,000 euros with grade 3.8. The Hi2 test shows that there is a statistically significant difference between the subjects: $Hi2 = 62.674$, (df = 16), at $p = 0.000$. ***We conclude that all categories of respondents rated the significance of this factor with a low grade.*** c) Respondents with a college or a higher school rated this factor with grade 4; respondents with a bachelor's degree with grade 3.9; respondents with a high school with grade 3.84; master's degree or PhD with grade 4; primary school respondents with grade 3.91. The Hi 2 test showed that respondents differ statistically in their grades. $Hi2 = 82.02$ (df = 15) and $p = 0.000$. ***We conclude that there is a statistically significant difference in the attitudes of the respondents regarding the importance of this factor, although all the respondents assessed the significance of this factor with very low grades.***

Nine analyzed factor is the **Speed of treatment abroad**. Based on the previously presented classification, the respondents considered this factor as highly significant, with a mean value of 4.52 and a standard deviation of 0.665. Of the total number of respondents, 60.3% rated this factor with grade 5; 32.9 with grade 4; 6.9% with grades 2 and 3. The crosstab analysis of the analyzed factor with variables of gender, income and education has been performed and the following values were obtained:

a) In a sample of 365 respondents, women rated this factor with grade 4.46. Finally, men rated this factor with grade 4.58. The Hi 2 test was carried out to determine the existence of a statistically significant difference in respondents' responses. The Hi2 test has a value of 10,767 (df = 3) and $p = 0,013$, indicating that there is a statistically significant difference. b) The category of respondents with income of 2000-4000 euro rated this factor with grade 4.50; respondents with income of 4001-6000 euros with grade 4.58; respondents with incomes less than 2,000 euros with grade 4.20 and finally respondents with more than 6,000 euros with grade 4.32. The Hi2 test shows that there is a statistically significant difference between the subjects: $Hi2 = 46,237$, (df = 12), at $p = 0,000$. ***We conclude that the categories of respondents with incomes of 2000-4000 and 4001-6000 euros evaluated the significance of this factor with the***

highest grade when choosing a destination for medical tourism service.

c) Respondents with a college or a higher school rated this factor with grade 4.67; respondents with a bachelor's degree with grade 4.55; respondents with a high school with grade 4.56; master's degree or PhD with grade 3.83; primary school respondents with grade 4.64. The Hi 2 test showed that respondents differ statistically in their grades. $Hi2 = 107,300$ ($df = 15$) and $p = 0,000$. ***We conclude that there is a statistically significant difference in the attitude of the respondents regarding the importance of this factor. Contrary to expectations, respondents with lower levels of education evaluated the significance of this factor with the higher grade.***

The tenth factor analyzed is the **Similarity of Culture**. Based on the previously presented classification, this factor was assessed by the respondents as having small significance, with a mean value of 3.97 and a standard deviation of 1.021. Of the total number of respondents, 41.1% rated this factor with grade 5; 24.7% with grade 4; 24.7% with grade 3 and 9.6% with grade 2. The crosstab analysis of the analyzed factor with variables of gender, income and education has been performed and the following values were obtained:

a) In a sample of 365 subjects, women rated this factor with grade 3.89 while men with grade 4.06. The Hi2 test has a value of 24,015 ($df = 3$) and $p = 0,000$, indicating that there is a statistically significant difference.

b) The category of respondents with income of 2000-4000 euros rated this factor with grade 4.07; respondents with a salary of 4001-6000 euros with grade 3.83; respondents with incomes less than 2000 euros with grade 4.7 and respondents with incomes greater than 6000 euros with grade 3.45. The Hi2 test shows that there is a statistically significant difference between the subjects: $Hi2 = 70,949$, ($df = 12$), at $p = 0,000$. ***We conclude that the categories of respondents with incomes less than 2000 evaluated the significance of this factor with the highest grade when choosing a destination for a medical tourism service.***

c) Respondents with a college or a higher school rated this factor with grade 4.56; respondents with a bachelor's degree with grade 3.73; respondents with high school with grade 4.08; master's degree or PhD with grade 3.33; primary school respondents with grade 4.09. The Hi2 test showed that respondents differ statistically in their grades. $Hi2 = 133.142$ ($df = 15$) and $p = 0.00$. ***We conclude that the significance of this factor decreases among those with higher education.***

Eleven analyzed factor is **Nontraditional Treatment**. Based on the previously presented classification, the respondents considered this factor less significant, with an average value of 3.63 and a standard deviation of 1.093. Of the total number of respondents, 27.7% rated this factor with grade 5; 34.7% with grade 4; 35.6% with grade 3 and 12.3% with grades 1 and 2. The crosstab analysis of the analyzed factor with variables of gender, income and education has been performed and the following values were obtained:

a) In a sample of 365 respondents, women rated this factor with grade 3.59 while men rated the importance of this factor with grade 3.67. The Hi2 test has a value of 20.380 (df = 4) and $p = 0.000$, indicating that there is a statistically significant difference. b) The category of respondents with income from 2000 to 4000 euros rated this factor with grade 3.63; respondents with income of 4001-6000 euros with grade 3.54; respondents with incomes of less than 2,000 euros with grade 4.2 and finally respondents with incomes above 6000 euros with grade 3.11. Hi2 test shows that there is a statistically significant difference between the subjects: $Hi2 = 78,344$, $df = 16$), at $p = 0,000$. ***We conclude that the categories of respondents with incomes less than 2000 evaluated the significance of this factor with the highest grade when choosing a destination for a medical tourism service.*** c) Respondents with a college or a higher school rated this factor with grade 4.11; respondents with a bachelor's degree with grade of 3.5; respondents with a high school with grade 3.64; master's degree or PhD with grade 2,83; primary school respondents with grade 3.91. The Hi 2 test showed that respondents differ statistically in their grades. $Hi2 = 131.409$ (df = 20) and $p = 0.000$. We conclude that there is a statistically significant difference in the attitude of the respondents regarding the importance of this factor. We conclude that all subjects evaluated this factor as not significant.

The twelfth analyzed factor is the **Availability of a place to rest**. Based on the previously presented classification, the respondents considered this factor as moderate, with mean value 4 and standard deviation of 1.008. Of the total number of respondents, 38.4% rated this factor with grade 5; 34.2% with grade 4; 17.8% with grade 3 and 9.5% with grades 1 and 2. The crosstab analysis of the analyzed factor with variables of gender, income and education has been performed and the following values were obtained:

a) In a sample of 365 women rated this factor with grade 3.84 and men with grade 4.17. The Hi2 test has a value of 11.709 (df = 4) and $p = 0.02$, indicating that there is a statistically significant difference. b) The

category of respondents with income of 2000-4000 euros rated this factor with grade 4.03; respondents with a salary of 4001-6000 euros with grade 3.96; respondents with incomes of less than 2,000 euros with grade 4.30 and finally respondents with incomes above 6000 euros with grade 3.56. The Hi2 test shows that there is a statistically significant difference between the subjects: $Hi2 = 103,753$, $df = 16$), at $p = 0,000$. ***We conclude that the categories of respondents with income of more than 4001-6000 euros assessed with the lowest grade the significance of this factor when choosing a destination for the medical tourism service. The value obtained indicates that the respondents are consuming a medical service, and for tourism purposes they choose other destinations, regardless of this stay.*** c) Respondents with a college or a higher school rated this factor with grade 4.33; respondents with a bachelor's degree with grade 4.82; respondents with a high school with grade 3.92; master's degree or PhD with grade 3; primary school respondents with grade 4.45. The Hi 2 test showed that respondents differ statistically in their grades. $Hi2 = 138.275$ ($df = 20$) and $p = 0.000$. ***We conclude that with the higher level of education, there is growing indifference towards this factor and it would certainly not be decisive when deciding on the use of medical tourism services in a country.***

Thirteen analyzed factor is **Treatment of persons with special needs**. Based on the previously presented classification, the respondents considered this factor less significant, with a mean value of 3.84 and a standard deviation of 1.022. Of the total number of respondents, 30.1% rated this factor with grade 5; 35.6% with grade 4; 24.7% with grade 3 and 9.5% with grades 1 and 2. The crosstab analysis of the analyzed factor with variables of gender, income and education has been performed and the following values were obtained:

a) In a sample of 365 respondents, 50.7% were female respondents (185). We conclude that women rated this factor with grade 3.68 and men with grade 4. The Hi2 test has a value of 32.972 ($df = 4$) and $p = 0.000$, indicating that there is a statistically significant difference. b) The respondent category with income of 2000 to 4000 euros rated this factor with grade 3.63; respondents with a salary of 4001-6000 euros with grade 4.04; respondents with incomes less than 2,000 euros with grade 4.20 and finally respondents with income over 6000 euros with grade 3.46. The Hi2 test shows that there is a statistically significant difference between the subjects: $Hi2 = 74,024$, $df = 16$), at $p = 0,000$. ***We conclude that the categories of respondents with income from 2000-4000 and those with more than 6,000 euros assessed with the lowest grade the significance***

of this factor when choosing a destination for the medical tourism service. c) Respondents with a college or a higher school degree rated this factor with grade 4.22; respondents with a bachelor's degree with grade 3.59; respondents with a high school grade with grade 3.96; master's degree or PhD with grade 2.50; primary school respondents with grade 4.45. The Hi 2 test showed that respondents differ statistically in their grades. $Hi^2 = 146.596$ ($df = 20$) and $p = 0.001$. ***We conclude that as the level of education increases, the significance of the analyzed factor decreases.***

The fourteenth factor analyzed is **After treatment assistance**. Based on the previously presented classification, this factor was assessed by the respondents as very significant, with a mean value of 4.59 and a standard deviation of 0.738. Of the total number of subjects, 69.93% rated this factor with grade 5; 21.9% with grade 4; 6.8% with grade 3. The crosstab analysis of the analyzed factor with variables of gender, income and education has been performed and the following values were obtained:

a) In a sample of 365 respondents, 50.7% were female respondents (185). We conclude that women rated this factor with grade 4.62 and men with grade 4.56. The Hi^2 test has a value of 6,031 ($df = 3$) and $p = 0,1100$, indicating that there is no statistically significant difference. b) The category of respondents with income of 2000-4000 euros rated this factor with grade 4.67; respondents with a salary of 4001-6000 euros with grade 4.67; respondents with incomes of less than 2000 euros with grade 4.6, and finally respondents with a salary above 6000 euros with grade 4.33 significance of this factor. The Hi^2 test shows that there is a statistically significant difference between the subjects: $Hi^2 = 60,372$, ($df = 12$), at $p = 0,000$. ***We conclude that the categories of respondents with income from 2000-4000 and 4001-6000 euros and those with a higher income of 6000 euros evaluated the significance of this factor with the highest grade when choosing a destination for a medical tourism service.*** c) Respondents with a college or a higher school degree rated this factor with grade 4.56; respondents with a bachelor's degree with grade 4.59; respondents with high school with grade 4.52; master's degree or PhD with grade 4,67; primary school respondents with grade 4.73. The Hi 2 test showed that respondents differ statistically in their grades. $Hi^2 = 40.659$ ($df = 15$) and $p = 0.00$. ***We conclude that all categories of respondents value this factor highly.***

The fifteenth factor analyzed is **Cost savings**. Based on the previously presented classification, the respondents considered this factor as very

significant, with the median value of 4.6 and the standard deviation of 0.736. Of the total number of respondents, 71.2% rated this factor with grade 5; 20.5% with grade 4; 8.2% with grades 3 and 1. The crosstab analysis of the analyzed factor with variables of gender, income and education has been performed and the following values were obtained: a) In a sample of 365 respondents, women rated this factor with grade 4.61 and men with grade 4.61. The Hi2 test has a value of 6.651 ($df = 3$) and $p = 0.084$, indicating that there is no statistically significant difference. b) The category of respondents with income of 2000-4000 euros rated this factor with grade 4.60; respondents with a salary of 4001-6000 euros with grade 4.75; respondents with incomes less than 2,000 euros with grade 4.30 and finally respondents with incomes above 6000 euros with grade 4.44. The Hi2 test shows that there is a statistically significant difference between the subjects: $Hi2 = 43,299$, $df = 12$), at $p = 0,000$. ***We conclude that the categories of respondents with incomes of 2000-4000 and 4001-6000 euros evaluated the significance of this factor with the highest grade when choosing a destination for a medical tourism service.*** c) Respondents with a college or a higher school degree rated this factor with 4.; respondents with a bachelor's degree with grade 4.73; respondents with a high school with grade 4.72; master's degree or PhD with grade 3.17; primary school respondents with grade 4.64. The Hi 2 test showed that respondents differ statistically in their grades. $Hi2 = 162.064$ ($df = 15$) and $p = 0.00$. ***We conclude that respondents with the highest level of education evaluated the importance of the given factor with the lowest grade.***

Conclusion

There is no doubt that medical tourism attracts particular attention in the countries of Eastern Europe as one aspect of additional income in GDP. It is still developing as a separate branch in tourism with a surprising trend of growth and development in the world due to demographic changes and the emergence of an increasingly elderly population in developed countries, which creates the demand for health tourism services. Although health tourism relates exclusively to the elderly, more and more young people are using these services, especially in the area of medical tourism (aesthetic surgery and sex change). As a rapidly growing branch of tourism, countries with medical tourism potential must respond quickly and adopt development strategies and laws that will regulate this highly sensitive activity. The Republic of Serbia does not have the clearest vision in the development of medical tourism. For now, due to the low

prices of hospital and medical services in Serbia, health tourism is developing and in the last couple of years it has registered positive results. The results of the research show that respondents highly value the institution itself and the medical service. Thus, for the selection of a country or institution for medical services these are the most important factors: High standard of hospital accommodation (4.30); Accreditation of the institution (4.42); Confidentiality and privacy guaranteed (4.38); Treatment speed abroad (4.52); Doctor's Recommendation (4.53); After treatment assistance provided (4.59); High quality care (4.6) and Cost savings (4.6). The answers provided indicate that culture, infrastructure, good rest, or non-medical content were not so important to patients. The results of the research show that the respondents have graded with the lowest rating the following facts: Nontraditional treatment, Treatment of persons with special needs (disabled), Stable political situation and healthy legal system, Good infrastructure (proximity to major cities, highways, airports ...) and Similarity of culture. Factors that the respondents considered most important were: Doctor's Recommendation, After treatment assistance, High quality care and Cost saving. We conclude that the most important thing in the decision making process is the quality of the service that the patients can receive at the best possible price. Cross section analysis of all analyzed questions with sex, level of education and income of the respondents was performed. It is interesting that medical tourism is a mix of tourism and medicine, and according to respondents, we can conclude that the country-related parameters play a very small role in deciding on the destination of the service. The state-of-the-art medical services are offered in the larger cities of Serbia and Vojvodina, but at prices that are considerably below the prices in the country of origin of service users. All this confirms the thesis that the medical service is "a premium quality service at the third world countries' prices". The above answers indicate that users of these services are consumers with a more significant patient orientation than that of tourists. Patients stay briefly, tourist facilities are less important to them, they come for the intervention itself, the quality of service and prices are important to them.

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TRENDS IN ENGAGEMENT OF WORKERS IN TOURISM - REGISTERED AND EMPLOYMENT (PERSONS IN EMPLOYMENT)

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Abstract

The employment policy must be in line with economic potential, but also must be the driver of the economic development of a country. This is particularly important in tourism where human resources are treated as the most important factor of growth and development. In addition to the quality of human resources, the development of tourism is also influenced by the way in which workers are engaged, since the quality of the service can be directly dependent on it. Significant fluctuation of employees in tourism in Serbia and the departure of a large number of skilled workers abroad require a different approach in the employment policy and the engagement of workers in this field. The authors of this paper, through available researches and official statistical data, analyze the trends in this field and compare it with the situation in other countries, and attempted to come to conclusions that will reduce the gap between the so-called employment (persons in employment) and registered employment of workers in tourism.

Key Words: *employment policy, persons in employment and registered employment in tourism, labor management*

JEL classification: *J08, K31, M54*

Introduction

It is a known fact that people are a key factor of success in all areas of the economy of a country. Only good coordination and mutual complementation of the so-called material and personal substrate can give good results in business. These claims were not influenced neither by the

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industrialization, nor in all likelihood it will be influenced by the informatics and digital era in which we live and which has taken great care in all spheres of business, but also of private life. Therefore, human resources, respectively personnel and their quality, make one branch of the economy more or less successful, apropos, quality or less quality. Exactly the same situation is in tourism and the competitiveness of Serbian tourism depends to a large extent on the people employed in this activity and on the quality of their work.

Although, as an industry, tourism has no significant share in the total gross domestic product of Serbia (Škorić & Jovanović, 2017), in the official statistical reports, there was a tendency for the growth of employed persons in this activity (Statistical Office of the Republic of Serbia). In a country like Serbia, with a high unemployment rate, any trend towards an increase in employment, however negligible, is important for taking appropriate measures by the state to maintain such a tendency. In theory, significant potential for the development of tourism in Serbia in rural areas is highlighted, where can be additionally launched organic production of food with an authentic note of the areas from which it is produced, branding autochthonous types of products, etc. (Bulatović, Škorić & Jovanović, 2016).

However, the quality of employees in tourism, in addition to their formal qualifications, such as vocational secondary schools and faculties in the relevant fields (tourism, catering, hotel management, etc.) and informal qualifications, such as, for example, knowledge of a particular foreign language, and etc., also affects the way in which those employees are engaged with their employers. In other words, productivity of employees, regardless their eventual potential and quality, is directly related to their working status - registered or employment (persons in employment), work in or outside the scope of employment, for example, temporary and periodical jobs, employment for indefinite or definite period of time until the end of the season or some work, overtime work and especially how much income is received for each of the listed types of engagement.

Modalities of working engagement in the Republic of Serbia

The modalities of working engagement, with or without employment, can be numerous and very different, depending on the legal solutions and the needs of employers and employees (Kulić & Škorić, 2016). In the Republic of Serbia, the principle of unified labor relations has been

adopted, which means that the provisions of the Labor Law (“Official Herald of the Republic of Serbia“, Nos. 24/2005, 61/2005, 54/2009, 32/2013, 75/2014 and 13/2017 - decision of the CC) apply to all employees who work in the territory of the Republic of Serbia with a national or foreign employer, unless otherwise specified by the law. According to the principle *lex specialis derogat legi generali* (a special law derogates application of a general law), to the employees in the government agencies, territorial autonomy and local self-government agencies and public services (in the fields of education, child and social protection, health care, etc.) and other appropriate associations in which special laws are applied, the provisions of the Labor Law apply only in respect of the rights, obligations and responsibilities not specifically regulated by those laws (Kulić, 2005). Therefore, in accordance with the above mentioned principle, the provisions of the Labor Law apply to tourism employees, for which, at least for now, still does not exist specific regulation that would otherwise solve the working engagement in this activity.

According to the provisions of the applicable Labor Law, employees can be engaged in one of the following ways:

1. Work in the Scope of Employment:

- 1) Employment for an indefinite period of time
- 2) Employment for a definite period of time
- 3) Employment with part-time working hours
- 4) Multiple employment
- 5) Employment at high-risk jobs
- 6) Employment in performing jobs outside employer's premises
- 7) Employing household help.

2. Work outside the Scope of Employment:

- 1) Work performed under the contract of performing temporary and periodical jobs
- 2) Work performed under the contract for the supply of services
- 3) Work performed under the contract of vocational training and improvement
- 4) Supplementary work
- 5) Work through youth or student cooperative
- 6) Factual working relationship (Kulić & Škorić, 2016).

In theory and practice there are different classifications of all the modalities of the above, so they are often grouped as:

1. Registered employment includes all persons who concluded a working relationship with an employer for a definite or indefinite period of time and persons who work outside the scope of employment on the basis of a contract for the supply of services or on the basis of a contract of temporary and periodical jobs, then persons who perform independent activities or are founders of economic societies or entrepreneurial shops, as well as persons who perform agricultural activities who are up to 65 years of age, and are located on the records of CROSO

2. Employment (persons in employment), in accordance with the definition of Eurostat and the International Labor Organization, comprise all persons who, at least one hour during the observed week, performed some paid work (in cash or in nature), as well as persons who had a job, but who were in that week absent from work. Persons who are considered working are persons working for an employer, persons performing self-employed activities or founding companies or entrepreneurial shops and helping members of the household.

Employment (persons in employment) further implies:

1) Formal employment which includes persons who concluded a working relationship with an employer for a definite or indefinite period of time and persons who work outside the scope of employment on the basis of a contract for the supply of services or on the basis of a contract of performing temporary and periodical jobs, then persons who perform independent activities or are founders of economic societies or entrepreneurial shops, as well as persons who perform registered agricultural activities.

2) Informal employment which includes employed workers in unregistered companies or in registered companies, but without a formal employment contract, persons performing independent activities in unregistered ownership, as well as the work of assisting members in family business (Statistical Office of the Republic of Serbia). Informal employment could be equated with factual work (Kulić & Škorić, 2016) or so called “underground” work.

In the last fifteen years, another form has emerged, ie. the way of engaging workers, so called **labor leasing**, which is increasingly being polemic, while the law or at least the amendments to the laws that would regulate it would in no way reach the National Assembly.

Many employers define themselves in practice to hire workers by leasing, ie. rent workers in order to circumvent the rather strict and restrictive provisions of the Labor Law, and in particular those relating to the cancelling of employment contracts. Rented employees practically conclude a contract of employment with the Agency for Temporary Employment while they work in the premises of another employer who rent them from the Agency. The Agency for temporary employment, as a formal employer, has full responsibility for the hired employee, including responsibility for cancelling of employment contracts (except for obligations related to safety and health at work for which the employer is hiring employees). Therefore, given the generally high percentage of employees' success in labor disputes, employers are increasingly choosing to hire workers through leasing, in order to avoid these and other risks. Since employee renting is not per se, employers and agencies usually regulate their relationships in one of the following ways:

1. by concluding a contract on business cooperation on the basis of which the employer engages the agency to find and conclude an employment relationship with employees, and
2. by concluding an employment contract between the agency and the employee, which provides that the place of work of the employee will be in the premises of the employer who is renting them. The agencies then, on the basis of a business cooperation agreement, invoice their services to employers on a monthly basis to compensate for the costs of salaries paid to rented employees.

In practice, in order to regulate and enforce institute of "renting employees" different types of contracts are concluded. The best approach for an employer who is hiring an employee is that the business cooperation contract concluded with the temporary employment agency provides that the agency, at the request of the employer, removes the rented employee from his premises without delay and takes responsibility for the cancelling of the employment contract with employee. According to unofficial data, more than 60 temporary employment agencies provide leasing services to employees, and more than 10,000 workers are engaged in this way (Zdravković, 2014)

The difference between work and work engagement and flexibility of workflow

The Labor Law of the Republic of Serbia and all its provisions support the so-called. permanent employment or, legally, the modality of work

through the establishment of an employment relationship for an indefinite period, because the employees are more secure, as well as their earnings, but also the existence of their family (Kulić & Škorić, 2016). And such a situation is somewhat achievable where the employer is state, therefore for the public sector. However, as far as the private sector is concerned, this vision of ideally set work processes became utopia long time ago. Even the aforementioned Labor Law has announced this by distinguishing between the term "employment relationship" and the term "working engagement", where working engagement is understood as a wider term and it covers all persons working, hence it in employment relationship and outside the scope of employment, although this term is not defined further (Article 5 and Article 35). Determining the concept of "work engagement" was only established in the Law on Protection of the an Exciter from 2014 ("Official Gazette of the Republic of Serbia " No. 128/2014) lists what it means: "labor engagement" is employment relationship, work outside the scope of employment, volunteering, performing functions, as well as any other factual work for the employer"(Article 2).

Therefore, on the basis of all of the foregoing, the conclusion is drawn that the flexibility of the work process and all possible forms of flexible labor, as they affected the world and European labor markets, they have long ago affected Serbia as well. And what does flexibility represent and imply? It represents a complex process that is not easy to explain, and it includes several characteristics of work, such as: working hours (part-time and defined), the way of working engagement (temporary and periodical jobs), the presence of fluctuations (movements and changes) among employees, both between different employers in the same business, so in different activities, etc. (Hodžić, 2005). Previously meant that it was understood that people could work beyond the employment monopoly, so the flexibility of the work process, apart from the negative consequences for the employees (employees) which are first emphasized, has positive effects, such as the protection provided by labor legislation for persons who are engaged on any basis, and whose work has characteristics of employment relationship, regardless of the manner of its establishment and regulation (Jašarević, 2015). That is precisely why all the discussions and all efforts are directed to get work outside the scope of employment, especially in certain areas (such as agriculture, but also tourism) where seasonal jobs and work on the principle of temporality and interdependence are present, into so-called. legal flows and that these same categories of workers are given the same protection as employed

persons or at least adequate protection. Therefore, for some time in the public domain has been announced the Law on Temporary Engagement in Seasonal Jobs (<http://rts.rs/>), where the accent is placed on seasonal workers in agriculture, although there are announcements that it will relate to other activities, especially highlighting workers in tourism. However, the announced draft law, even after a year, is not available to the public nor can its content be known. The whole story of registering seasonal workers is reduced, if it is to be trusted with newsletters, on an electronic application that will be implemented through the Project of the German Development Agency and the Ministry of Agriculture, Forestry and Water Management (<http://mondo.rs/>). Therefore, from the draft of the Law and to the coverage of all seasonal workers, regardless of the activity they are engaged, the implementation of the international project was realized, and the protection of seasonal workers in only one activity - agriculture.

The state of working engagement in tourism in Serbia

In order to start with the initial position in the view of the state of engagement in tourism, where all related activities are concerned, it is necessary to determine how many of the total number of employees work in tourism. According to the data of the Republic Institute for Statistics from 2009 and 2015, it was received the data on the tendency of an increase in the number of employees. Although this increase is not high, with the simultaneous analysis of the Tourism Development Strategy of the Republic of Serbia for the period from 2016 to 2025, or its part concerning labor and personnel in tourism, the authors of this paper could draw some conclusions.

Table 1: *Employees by activities, 2009. godine,*

Employees by activities	TOTAL
TOTAL	1,396,792
Agriculture, forestry and water works supply	45,091
Fishing	1,038
Mining and quarrying	22,287
Manufacturing	339,428
Electricity, gas and water supply	45,817
Construction	78,936
Wholesale and retail trade, repair	193,065
Hotels and restaurants	22,520
Transport, storage and communication	106,739

Financial Intermediation	36,670
Real estate, renting activities	79,783
Public administration and social security	71,222
Education	134,795
Health and social work	162,369
Other community, social and personal service activities	57,035

Source: <http://pod2.stat.gov.rs/ObjavljenePublikacije/G2010/pdf/G20102002.pdf>, p. 90-91; Blagojević & Redžić, 2009, p.254

Table 2: *Employees by activities, 2015.godine*

Employees by activities	TOTAL
TOTAL	1,896,295
Agriculture, forestry an fishing	36,700
Mining and quarrying	22,384
Manufacturing	380,325
Electricity, gas, steam and air conditioning supply	31,356
Water supply; sewerage, waste mamagment and remediation activities	38,117
Construction	88,131
Wholesale and retail trade; repair of motor vehicles and motorcycles	315,010
Transportation and storage	117,083
Accomodation and food service activities	65,368
Information and communication	53,885
Financial and insurance activities	45,818
Real estate activities	5,061
Professional, scientific and technical activities	90,010
Administrative and support service activities	76,884
Public administration and defence; compulsory social security	161,156
Education	132,986
Human health and social work activities	166,456
Arts, entertainment and recreation	31,900
Other service activities	37,669
Employees in hotel industry and tourism	TOTAL
TOTAL	65,368
Accommodation	13,068
Food and beverage service activities	52,301

Source: <http://pod2.stat.gov.rs/ObjavljenePublikacije/G2016/pdf/G20162019.pdf>, p. 62-63

In addition to the changes in the names of certain activities, their separation, merger, etc., it was noticed that the introduction of new activities, such as, for example, "Arts, Entertainment and Recreation", where it could be conditionally considered that this activity could be related to the tourist activity. Also, tourism activity is recognized in statistical data processing when it comes to the number of tourist, etc., while from the aspect of employees, this activity is characterized as catering, or according to the table from 2015 - "Employees in hotel industry and tourism", and separated into "Accommodation" I "Food and beverage service activities". In the Statistical Yearbook of 2010, the activity is referred to as "Hotels and restaurants" and the number of employees is much lower than it appears in 2015. In the literature, for this year (2009), data on employees in tourist activity were found, therefore, apart from hotel and restaurant employees:

Table 3: *Employees in hotel industry and tourism, 2009*

Employees in hotel industry and tourism	TOTAL
TOTAL	61,707
In catering firms	26,034
In catering stores	35,673

Source: *Blagojević & Redžić, 2009, p. 254*

If this figure is compared with the number of employees in 2015, it is noticeable that this number is increasing, but also the different separation of the given activity.

Therefore, employment and work engagement in tourism can be observed considerably wider, so the figures from the previous tables would be higher. If added to it the fact that all the data from the table included only registered employment, without work and work engagement on a different basis, apart from the employment contract, then the relativism of statistics in this field is obvious.

If from the general observation of tourism as a business activity and the number of employees, we turn to the structure of employees, i.e. the professional qualifications of the tourism staff, there are still more differences that exist in this area. Thus, for example, the working status of the top management of an employed person in tourism with the working status of an unqualified person, or a qualified cadres with a secondary vocational training (waiters, cooks, receptionists, etc.) is not equal.

There are claims by some authors that the basic problems concerning tourism staff are the following:

1. The lack of necessary number of managers and professional staff with international experience at the middle and higher level, competent for managing hotel operations, especially in newly built facilities according to international standards that have been raised in the country in recent years.
2. Modernization of the work of higher education institutions in Serbia dealing with education for tourism and hotel business, which should, in a modern way, be classified as student practice in hotel industry, the linkage of the curriculum for all students, as well as the ever-expanding practice that employees pass the training system ("training") through seminars, conference, exchange of experience with foreign managers, interactive training, etc., will result in a significant change in the situation in a positive sense in the next few years.
3. Review of existing curricula at secondary, high-level and university level from the aspect of the labor market, analysis of educational institutions for occupations in tourism and hotel industry, needs analysis for new programs, orientations and occupations, and analysis of staffing needs in the next decade considering the assumption of Serbia's admission in EU (Blagojević & Redžić, 2009).

If it is previously linked to the legal aspect of engaging tourism employees, the main issues may include the large presence of persons in employment, informal employment (underground work), and seasonal employment that is not yet regulated by a promulgated law, which would specify and appropriately solved the rights of seasonal workers.

Analyzing the Tourism Development Strategy of the Republic of Serbia for the period 2016-2025 ("Official Gazette of the Republic of Serbia" No. 98/2016), it was noticed that the problem of employment and human resources in tourism was recognized in the SWOT analysis as a weakness characterized by insufficient quality of labor in tourism and hotel industry. In the later text of the Strategy, human resources are mentioned even in the part relating to the "Tourism Visa in Serbia", where the idea of modernizing, accepting and assuming global standards and models of business and management in tourism is promoted, where he would become a desirable sector for employment career development, especially for young people. With the chapter "Development Goals", the need to increase the number of direct employees in tourism by at least 50% and

increase the number of employees in tourism and complementary activities up to three times is emphasized. Finally, in the section "Models of growth", the need for introducing modern quality standards in the field of accommodation, preparation and serving of food and beverages, raising the level of professionalism and training of staff, as well as education of employees in tourism was emphasized. However, there are no concrete measures to be found, which will be achieved in terms of raising the quality of human resources in tourism, as well as measures that will lead to an increase in employment in this activity. In the light of the above, the authors tried to find this type of measure in other strategic documents, but measures that would apply exclusively to tourism and related activities were not found. The long-term employment policy in the Republic of Serbia is aimed at increasing employment, encouraging employment, fostering self-employment through entrepreneurial activity, and by observing the employment policy as part of economic policy, and not exclusively as a social basis of employment, etc. (Munitlak Ivanović, Vučenov & Andrejević, 2011). However, the current employment policy in Serbia is general, without further concretization towards activities, which each have their own specificities and require special analysis, proposing measures, etc. The capital law for this area - the Law on Tourism ("Official Gazette of the Republic of Serbia" No. 36/2009, 88/2010, 99/2011 - other law, 93/2012 and 84/2015), contains clarification of basic concepts, but not contains provisions of a working-legal character.

The state of working engagement in tourism in Europe

In the European Union, over 12 million people are engaged in tourism and in tourism-related activities. Of course, there are differences between Member States, so Malta is the leading in number of employees in tourism, where one in six people in the country are employed in tourism or in some tourism-related activity. Then, there are Great Britain, Germany, Italy, Spain and France and these five member states employ 68.5% of the total number of tourism workers.

Despite the great world economic crisis in 2008, the 2013 statistics show the potential of tourism activity that has recorded growth and has had a positive impact on other economic activities associated with it.

As for neighboring Croatia, tourism in this EU Member State accounts for 15-20% of total gross product and about 12% of total employment (Sabol

Opačić & Bogdan, 2010). The table below shows the data on the number of employees in tourism in the EU in 2013, as well as the number of employees depending on the tourist activity, because the data and activities related to tourism are processed.

Table 3: *Number of persons employed, by economic activity, 2013*

	Total non-financial business economy ^(*)	Services ^(*)	Tourism industries (total) ^(*)	Transport (total) ^(*)	Accommodation (scope of Reg. 692/2011) ^(*)	Food and beverage (total) ^(*)	Car and other rental (total) ^(*)	Travel agency, tour operators (total) ^(*)	Selected tourism industries ^(*)
EU-28	133 076 972	55 244 131	12 043 560	1 988 400	2 364 233	6 960 025	199 664	492 426	3 252 701
Belgium	2 709 917	1 210 008	:	:	22 245	131 927	4 134	8 773	36 394
Bulgaria	1 864 690	606 534	:	:	39 349	90 996	1 947	5 946	48 301
Czech Republic	3 486 702	1 071 154	186 473	27 288	30 074	115 165	2 060	11 885	47 486
Denmark	1 601 015	639 217	:	:	16 973	41 923	1 532	6 304	32 468
Germany	26 468 059	10 823 695	2 076 514	273 320	499 935	1 176 844	28 804	97 611	662 078
Estonia	400 718	150 405	:	:	6 090	13 060	698	1 766	8 160
Ireland	1 097 444	543 723	:	:	54 145	91 445	1 727	4 602	66 624
Greece	2 198 983	853 200	:	:	74 102	196 549	3 797	11 604	88 143
Spain	10 574 716	4 748 975	1 324 118	:	241 857	841 933	14 863	50 277	325 378
France	15 295 948	6 825 778	1 323 076	398 351	193 283	662 794	27 476	41 172	302 761
Croatia	996 631	347 568	112 055	14 343	30 936	59 714	1 311	5 751	:
Italy	14 407 907	5 545 722	1 404 906	157 048	256 365	932 266	13 535	45 692	325 172
Cyprus	207 254	92 970	:	:	16 778	17 338	638	1 565	19 352
Latvia	584 281	229 221	36 939	6 598	6 089	20 793	1 339	2 120	9 563
Lithuania	869 398	299 795	45 837	5 866	7 446	27 975	1 646	2 904	10 854
Luxembourg	243 372	116 843	:	:	3 437	12 391	404	:	:
Hungary	2 393 877	924 340	152 050	32 599	23 300	87 116	3 387	5 688	31 073
Malta	121 972	57 440	20 258	:	7 790	6 962	:	1 596	:
Netherlands	5 343 971	2 677 890	:	:	75 937	279 782	9 035	22 356	123 379
Austria	2 707 211	1 105 638	333 704	46 328	109 690	162 209	3 697	11 780	129 370
Poland	8 205 480	2 436 109	334 938	100 377	66 066	143 465	7 250	17 770	89 731
Portugal	2 853 849	1 136 541	:	:	54 277	192 533	4 383	9 675	74 832
Romania	3 835 627	1 174 306	215 042	59 617	40 115	102 817	2 638	9 855	59 542
Slovenia	573 850	190 031	:	:	10 135	21 186	359	1 944	13 204
Slovakia	1 401 847	435 793	66 943	12 734	11 976	37 098	1 989	3 146	18 819
Finland	1 457 598	475 170	:	:	8 899	33 601	1 087	4 822	17 007
Sweden	3 027 838	1 326 564	249 989	60 109	45 959	128 391	2 978	12 550	68 139
United Kingdom	18 146 817	9 199 501	2 125 821	232 831	410 985	1 331 752	56 960	93 292	580 731
Norway	1 540 190	625 508	135 389	45 461	29 190	53 238	1 538	5 962	42 804
Switzerland	2 744 454	1 102 948	:	:	66 611	124 138	1 348	15 957	95 189

Note: Tourism aggregates estimated using available data and including 2012 data for some countries. Due to unreliable data at country level, the use of 2012 data instead, and rounding, deviations can occur between total and subtotals.

(*) NACE sections: B-N, S95_X_K (Total business economy; repair of computers, personal and household goods; except financial and insurance activities). IE, EL and FI: 2012 data.

(*) NACE sections: H-J, L-N and NACE division S95.

(*) NACE classes: H401, H4932, H4939, H501, H503, H511, H511, H512, H513, H516, H563, N771, N7721 and division N79.

(*) NACE classes: H401, H4932, H4939, H501, H503 and H511. LT: 2012 data.

(*) NACE classes: H511, H512 and H513. IE: 2012 data. EE, IE, LU and NL including NACE class H559.

(*) NACE classes: H511 and H563. IE: 2012 data.

(*) NACE classes: N771 and N7721. EU-28 estimate not including MT. IE: 2012 data. DK, EE, IE, ES and CH: not including class N7721.

(*) NACE division N79. EU-28 estimate not including LU, IE and FI: 2012 data.

(*) NACE divisions: H51, H55 and N79. FR and SE include class H511 instead of division H51.

Note: Full description of economic activities covered, see under "Data sources and availability".

**: Aggregate not available due to one or more unreliable components at NACE 3 or 4 digit level.

Source: <http://ec.europa.eu/eurostat>

Based on the data from the table, it can be clearly seen that tourism as an economic activity is not equally developed in all member states, and the

indicator of this is definitely the number of employees in that area. Therefore, it can be concluded that tourism as an economic branch is the most developed in the countries that employ most people in tourism. It must also be guided and accounted for by the state and how much employment in tourism is involved in total employment.

Basic characteristics of work in tourism in the European Union

The basic characteristics of working engagement in tourism and tourism related activities in the European Union are as follows:

1. Tourism opens new jobs for women, which the collected data from the table below confirms.

Table 4: *Characteristics of employment in tourism, EU-28, 2014(%)*



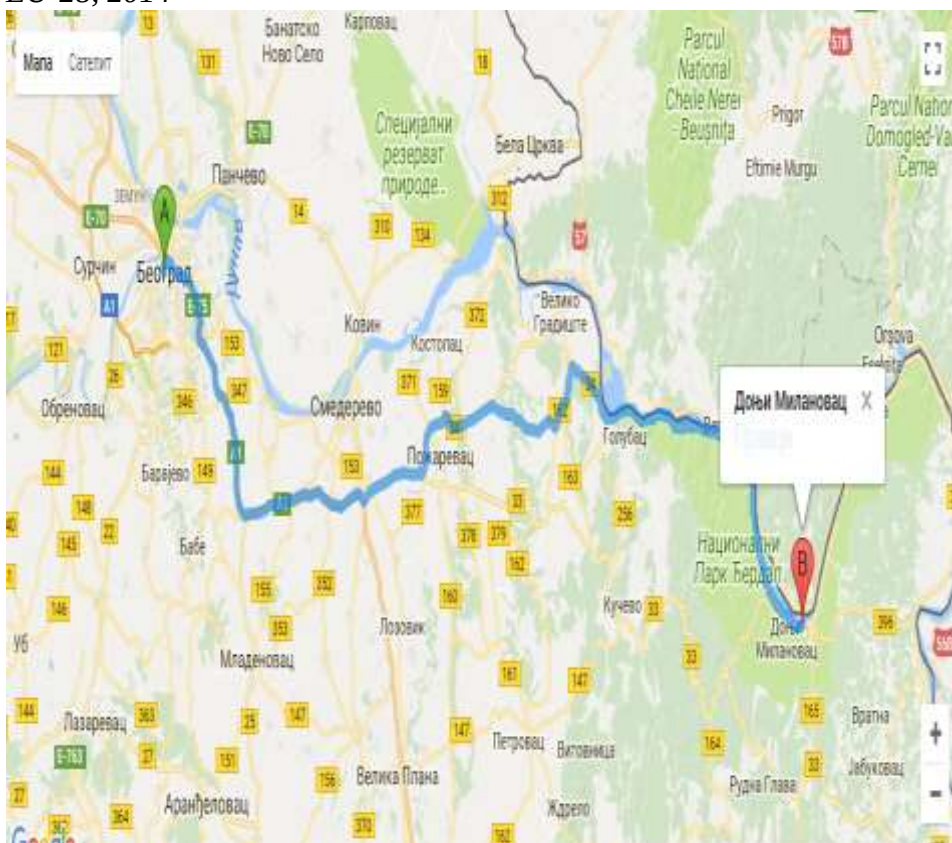
Source: <http://ec.europa.eu/eurostat>

For tourism in the European Union, it is considered that it is the activity that employs the most women, i.e. 58% of all tourism employees are women. However, this percentage is not the same in all Member States, and is slightly lower, for example, in Belgium, Luxembourg and Malta. And here there is a large percentage of working engagement that is less than full-time and is of a temporary nature, but the classical full-time work continues to be the highest percentage of work engagement.

However, seasonal engagement is generally more common in tourism than in other economic sectors. Thus, for example, in the Czech Republic and Sweden, out-of-work employment and engagement is shorter than full-time, almost twice as high as in any other economic activity in these countries (<http://ec.europa.eu/eurostat>).

2. Tourism is an attractive activity for young workers

Table 5: *Share of persons employed by economic activity and age group, EU-28, 2014*



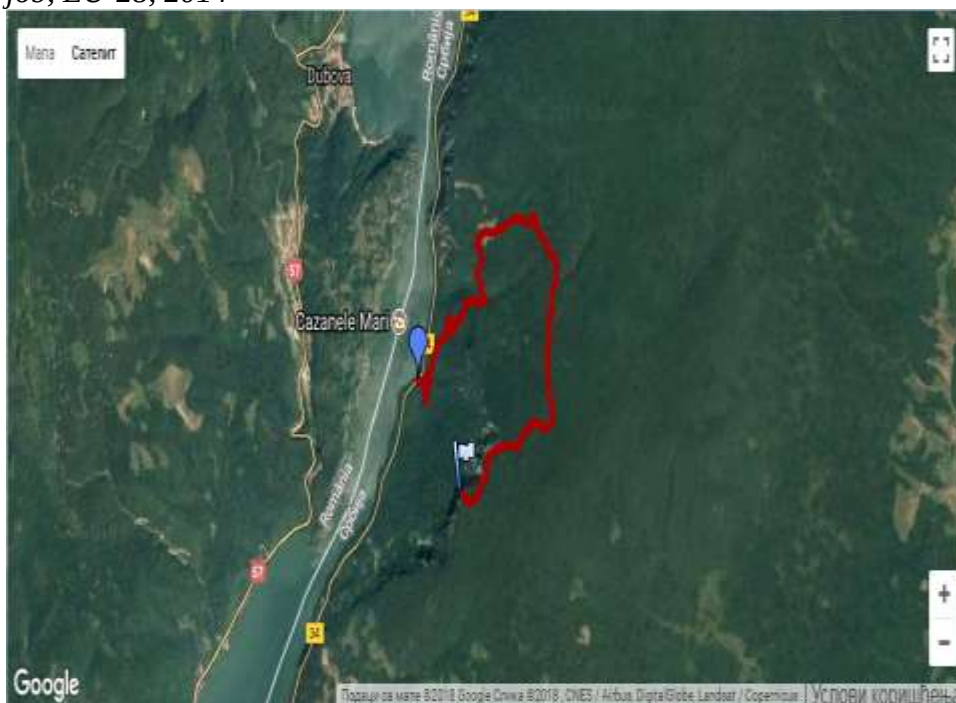
Source: <http://ec.europa.eu/eurostat>

The previous table clearly confirms that tourism as a business attracts young workers, and the reason is that in this activity it is not difficult to find a job, especially for unskilled workers, with a lower professional qualification.

Another characteristic, or sub-characteristic, might be that there are many employed foreigners in this activity (<http://ec.europa.eu/eurostat>).

3. Jobs and employment in tourism are less stable than in other sectors of the economy. This characteristic is confirmed by comparable data with other activities, where tourism is convincingly leading in the percentage of job interval, even less than a year at work in tourist activity.

Table 6: *Share of employees by economic activity and permanency of the job, EU-28, 2014*

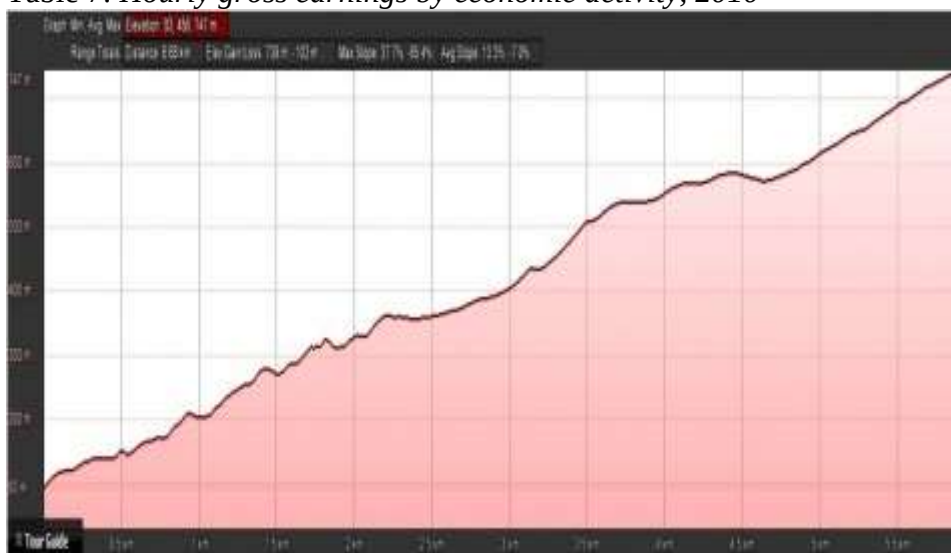


Source: <http://ec.europa.eu/eurostat>

4. The seasonal nature of tourism as a business activity also affects employment in tourism. This impact is greatest on those workers who are hired less than full-time, and therefore in the months that apply to the so-called. out of season, they remain unemployed or change jobs (<http://ec.europa.eu/eurostat>).

5. Daily salaries of employees in tourism are on average lower than daily earnings in other economic activities. In addition to the percentage of employment, job permanence etc. this is another very important feature of tourism business. However, this is not the same in all EU Member States, so the earnings are the highest in the Scandinavian countries and Luxembourg, and the lowest in Bulgaria and Romania.

Table 7: *Hourly gross earnings by economic activity, 2010*



Source: <http://ec.europa.eu/eurostat>

Looking at the table above, it can be noticed that earnings in tourism mostly track the level of earnings and the development of the overall economy of the country, except in the case of Ireland, Iceland, Switzerland and Montenegro.

Conclusion

After analyzing the available statistical data in Europe and Serbia, legal regulations, strategic documents and theoretical discussions on the topic of human resources in tourism, and the ways in which the personnel can be engaged, the authors conclude the following:

1. It is currently impossible to determine the exact number of employees in tourism and related activities in Serbia, as there are indications of a high degree of so-called "employment or persons in employment", and especially of its work, which is called informal employment or underground work. Consequently, all discussions about the methods of engagement are useless, if there are a large number of workers who work on a daily basis, they stick to the determination of working hours and the rules of the work process, receive certain profits for their work in cash or "on hands", but there is no legal basis (any contract) by which they are engaged. In other words, it means that such workers can hardly or not at all protect their

rights from work engagement, because they do not have adequate ways to prove it.

2. There is no clear policy of the state related to the increase of employment (registered or employment – persons in employment) by economic activity, where all the specifics of tourism and related activities could be taken into account (high percentage of women and young people, high percentage of temporary work due to seasonal nature of activity, high percentage of workers fluctuation, etc.). Therefore, in particular, the tourism industry must establish a policy in the education of the necessary cadres in tourism, as well as to encourage the career development of this area, work on their quality (formal and informal).
3. Analyzing the work, there is a close connection between the overall development of tourism as an activity and the improvement of the earnings and work engagement of workers in this activity, and it is necessary to improve tourism and the use of natural potentials in which Serbia is not missing and waiting for them to be fully exploited and used to the general wellbeing of the whole society.

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CONNECTION OF TOURISM COMPANIES WITH THE DEVELOPMENT OF DUAL SYSTEM IN HIGHER EDUCATION

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Abstract

Modern tourism and hospitality companies have less and less time and money to spend on long-term training in order to find adequate staff. Such trends in their business have led to the increasing harmonization of these companies with secondary vocational and higher education institutions, when it comes to the knowledge and skills that future employees should possess. Although in most developed countries Vocational Education and Training (VET) is based on the principle of dual education, in our country only a small number of higher education institutions use this model. The aim of this paper is to analyze the program of dual vocational training in our higher education system in the hospitality and tourism field. A comparative analysis of higher education institutions is conducted, where the subject of the analysis was the number of working hours, as well as the number of countries that these educational institutions have international cooperation with.

Key Words: dual education, higher education, tourism industry, internship, Serbia

JEL classification: I21, Z32, L83

Introduction

Service sector is experiencing expansion which is a result of globalization, deregulation as well as new information technologies. Final result of the accelerated growth of service sector does not only include the growth of the overall service offer, but also the growth of the diversity of services offered that is mostly reflected on the imposing growth of service activities in GDP of the countries all around the world (Table 1) (Bateson

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& Hoffman, 2013). Forecasts of the American Statistical office for labour market expected that in the period of 2002 to 2012, more than 96% of new work places would be made in the service sector (Bateson & Hoffman, 2013). The expectations were exceeded, with the same scenario unfolded in most of the world. Sectoral changes of the labour force are also experiencing crucial changes in the Republic of Serbia, where the greatest number of workers is in the service sector (56.6%), then in the industry sector (25.6%), while it is decreasing in the agricultural sector (17.8%). GDP involvement is greatest in the service sector and the lowest in agricultural sector, which can be seen in Table 1.

Table 1: *GDP structure of labour force in Serbia based on sectors*

	Serbia		
	Agriculture	Industry	Service
GDP - composition, by sector of origin (%) 2016:	9.8%	41.1%	49.1% (2017 est.)
Labor force - by occupation (%) 2016:	17.8%	25.6%	56.6% (2016 est.)

Source: CIA, *The World Factbook 2016-17* (<https://www.cia.gov>)

Service related fields such as tourism, hospitality, leisure, sport and events, are a major category of world's international trade in service. Tourism as a part of service sector takes significant place in the economy of many countries, which can be concluded from the various direct and indirect impacts on national economy. (Vukic & Kuzmanovic, 2016). The travel and tourism sector is very important for the economic growth of both developed and developing countries. Demographic changes affect many aspects of tourism, mainly the strength and type of tourism demand, as well as the tourism job market. (Vukić et al., 2014). Given that competition in the tourist sector is becoming ever more severe, the development of effective competitive strategies is constantly gaining importance. (Vukić et al., 2013). International tourism also generated US\$ 216 billion in exports through international passenger transport services rendered to non-residents in 2016, bringing the total value of tourism exports up to US\$ 1.4 trillion, or US\$ 4 billion a day on average. International tourism represents 7% of the world's exports in goods and services, after increasing one percentage point from 6% in 2015. Tourism has grown faster than world trade for the past five years. As a worldwide export category, tourism ranks third after chemicals and fuels and ahead of automotive products and food (UNWTO, 2017).

As for the Republic of Serbia, the direct contribution of travel and tourism to GDP was 2.3% of total GDP in 2016 and was forecast to rise by 1.9% in 2017. In 2016, the total contribution of Travel & Tourism to employment, including jobs indirectly supported by the industry was 5.0% of total employment (99,500 jobs). This is expected to fall by 2.3% in 2017 to 97,000 jobs and rise by 0.9% pa to 106,000 jobs in 2027 (5.4% of total) (WTTC, 2017).

It is necessary to take a series of measures to achieve success in increasing revenue from tourism (Tešanović et al., 2013). One of these measures that could help the Republic of Serbia to take a position in the global and regional tourist market is investment in professional training and education of work force as well as good connection of school system with the market labour. In the last three decades dual education has become increasingly important worldwide and its growth is impressive. Dual education in tourism and hospitality is frequently perceived as the solution to improve the opportunities to have labour force with an excellent know-how, good general and specialized knowledge as well as additional soft skills. According to Moore et al. (2015) benefits of this approach of education is that graduates are work-ready with the skills and attributes they require for success in their chosen careers. Schools in the higher vocational education system provide a long-term and intensive practicum for students. Through this experience, students can combine theory with practice, as well as earn a modest salary (Chang & Hsu, 2010). Curriculum design of vocational higher education affects the experience of students with different training framings, attempting to result in optimal combination of practice and theoretical knowledge. Higher education intership, placement, cooperative (dual) education, practicum and vocational training are a variety of terms that describe such a student experience.

The theories and concepts associated with learning through experience date back many years, with the first formal dual education program launched at the University of Cincinnati, USA at the turn of the twentieth century (Kraft & Sakofs, 1986). Dual education is not confined to science and engineering and it also occurs in the leisure studies, hospitality and sport studies (Göhringer, 2002). High impact learning practices encourage students to be more engaged with their education via facilitated experiences that develop their characteristics as a learner. These may include, but aren't limited to, the development of their problem solving and research skills, collaborative work assignments with peers, reflective

learning practices, and the application of theory to real-world situations (Stansbie et al., 2016). The principle of dual education within Vocational Education and Training is known worldwide for its ability to provide the labour market with highly qualified labour which is able to adjust to new and changing conditions and introduction of new technology (Koudahl, 2010).

Internships have been included in many higher education curricula. Non-university higher education is more focused on direct employability and short-term revenues and it includes internships earlier in its curricula (Calvo & D'Amato, 2015). Internships have always existed as a punctual activity of students, frequently in non-lectures periods, like in summer stages. The way Vocational Education and Training systems are organised differs in every country. Basically, there are three different models: market model, State controlled model and cooperative model. These models differ relative to the manner they are controlled, regulated and administered (Green et al., 2000; Greinert, 2005). Market model which is found in United Kingdom is characterised by very little direct involvement by the State. Training is placed at a firm or enterprise and the content of the training is determined by the specific task of the enterprise. Advantages of this model are: company trains the students for their own needs and number of training places fit with the number of future employee. Disadvantages are: narrow qualification of students; inability to work in another company that demands a different qualification profile; small degree of mobility; impossibility to acquire new competences in the field of technology and loss of work if his/her qualifications are not needed anymore. State controlled model, found in France, has the main advantage that students can shift between practical or academic education during studies. Disadvantage are: model tends to become elitist and exclusive because it requires academic qualifications that the students with practical approach to educational services are not inclined to; qualifications gained during training is not demanded by the labour market; there is not necessarily a match between the number of trained labour and the demand of the labour market. Cooperative or dual model, found in Denmark, Germany and a number of other countries, is organised on the basis of the principle of dual education, which implies that students would spend one part of their education and training at a vocational school and another part in a company. This model is very popular in vocational schools because it provides skills and qualifications based on the need of the labour market, it creates broadly qualified future

workers who have an ability to work in different companies as well as to have a smooth transition from school to work.

The purpose of this paper is to indicate the importance of dual education in higher education in the Republic of Serbia through comparative analyses of tourism and hospitality internship programmes. Also, the goal is to point out that tight collaboration between main stakeholders is the most important for development of tourism education and curriculum design.

Literature review

Although the terminology used to describe linkages between workplace knowledge and the academic curricula varies, they all are trying to describe transition of students from classroom-based to workplace-based forms of learning. Term that describes transfer of academic knowledge to labour market in widest manner is the term Work Integrated Learning (WIL). Work Integrated Learning (WIL) is an umbrella term encompassing a vast assortment of approaches and strategies focused on offering experience and linking theory and practice to deliver work-ready graduates, including practicums, cooperative education, work placement, internships, cadetships, apprenticeships and many others (Patrick et al. 2008). In this context, the dual system of education that is called cooperative education in professional and scientific terminology represents only one of the methods of how academic and workplace practices play a role in regard to the readiness of graduates to enter the world of work.

The use of dual education in tourism and hospitality is greatly widespread, as much in developed countries as in the undeveloped ones. In the last thirty years, great number of researches investigated this subject by analyzing various aspects of dual education. The common conclusion of most authors is a necessity to innovate and coordinate tourism and hospitality curricula in such a way as to meet the needs of industry to determine clear and realistic expectations of students (Chi & Gursoy 2009). Unlike the great number of papers that have been dealing with dual education in secondary vocational education, not so great number of authors investigated dual system in higher education.

Author Axel Göhringer (2002) describes that the German model of cooperative education in higher education, which is one of the cornerstones of success and competitiveness of their economy, enables

the great competitiveness of graduate. The research suggests that graduates are in demand because they are able to do responsible tasks soon after graduation without the need for further training. Author Koudahl (2010) analyzes the dual education in times of global economic crises, pointing out the fact that the companies are less motivated to provide the necessary number of training places for the apprentices. This situation provides problems for businesses and enterprises because there will be a shortage of skilled labour in the future. Author states the example of practise in the Netherlands and Austria, where the work labour from companies, training centres or school based VET have the same chance on the labour market. On the other hand, in Germany and Denmark only the company based VET is found to have the highest status on the labour market. Baethge and Wolter (2015) make a parallel among medium-skilled and high education by analyzing the impact which the dual education has on the labour market and social structure. They are analyzing the relation of supply and demand on the labour market ascertaining that large number of university students is a result of individual education interest rather than economic demand, which is contrary to the development in the dual VET system. Especially, the incongruence between the qualification requirements of the economy and the curricula in higher education is a great issue. Regardless of the disbalance of supply and demand, the shift in young peoples' educational careers towards higher education will occur in the following period, while the integration of low-qualified youth into VET and the labour market will become more precarious than in the past. Ruhanen et al., (2013) conducted a qualitative study of undergraduate tourism, hospitality and event students who had participated in Tourism Regional Immersion Program (TRIP) an alternative model of dual education which is different from more traditional ones. The TRIP model is an internship, where students are immersed (living, working, socialising, etc.) in a destination for a period of up to 10 days. The most important benefit from this model is the positive engagement in the social aspects that are rare in the modern education system as well as broader education experiences of students. In the paper of Reinhard and Pogrzeba (2016) dual system in Asia is known for offering limited levels of practical experience, as part of the higher education curricula. Asian countries such as Thailand have a lack of skilled graduates, and the aim of this study is to give some recommendations in order to meet the needs of industry using German Duale Hochschule Baden-Wuerttemberg (DHBW) study model. The manner in which students elect potential hospitality and tourism organizations when selecting their cooperative education is described in

the paper by Wood and Roberts (2017). These two authors present an Industry Placement Classification (IPC) framework, which is an extended standard categorization system for the classification of industry placements. This system provides students with valuable information concerning the activities of potential placement organizations and is a useful tool for institutions that seek to support students in their decision-making process.

As it can be seen from the review of the literature on dual system in higher education, small number of papers have been dealing with dual system in tourism and hospitality. Those that explored this topic in tourism and hospitality area mostly have been dealing with intership issues (Kim & Park, 2013; Tse, 2010; Zoplaits, 2007). The body part should be logically structured, whereas the number of subtitles depends on the organization of the subject matter.

Dual education system in Serbia

In order to understand the development of dual system in the education system of Serbia, it is necessary to consider its development in secondary vocational education. The reform of secondary vocational education in Serbia started in 2002 and its process was through two great projects under the patronage of Assistance for Reconstruction, Development and Stabilisation (CARDS) and German Organization for international cooperation (GIZ).

The first project through several phases has been started on the initiative of the Ministry of education and sport in partnership with European agency for reconstruction. 20 million euros have been invested in the reform of the secondary vocational education in the initial phase, owing to the financial support from the Community Assistance for Reconstruction, Development and Stabilisation (CARDS) allocated for the Program of reforming secondary vocational education. Program was achieved through several core areas with the aim to develop the modern system of vocational education based on the partnership with economy, permanent professional improvement of staff in education (on every level from schools to ministries), achievement of new teaching programs, securing high-quality trainings for adults, constant innovations in teaching process and to modernize the school infrastructure (new equipment and teaching mediums). (www.mpn.gov.rs). The Ministry for education, science and technological development of Serbia with the cooperation of

German organization for international cooperation (GIZ) has been conducting the second reform project of the secondary vocational education from 2013, and it is predicted to last until 2019. The law on dual education that applies only to the secondary vocational education and establishing educational profiles lasting three, respectively four years and also specialized education was stipulated in 2017.

Based on the data of the Republic Institute for Statistics, 13,916 graduates were enrolled in higher vocational schools in 2016/17, which makes up only 27,1% of the overall number of graduates who continued the education in higher educated institutions (<http://www.stat.gov.rs>).

As for the reform of higher education, it started in the year 2003 by signing the Bologna Declaration, by which Serbia joined the rest of Europe in creating the common higher education space. Some argue that Bologna Declaration has intensified the 'blurring of boundaries' between vocational training, universities, and high-level professional preparation (Witte et al., 2008). Bologna Declaration is marked with specific characteristics as (<https://webgate.ec.europa.eu>):

- European Credit Transfer and Accumulation System (ECTS);
- Three-cycle system of study and
- Diploma supplement
- Higher education system in Serbia has two types of studies:
- Academic studies organized at universities and
- Vocational studies organized either at colleges of applied studies or at universities.

Academic studies include:

- Bachelor and undergraduate studies (lasting 3-4 years and carrying 180-240 ECTS);
- Master and specialised studies (lasting 1-2 years with 60 to 120 ECTS) and
- PhD studies with minimum of three years of study or 180 ECTS.

Vocational studies comprise two levels:

- Colleges of Applied Studies, last three years and have 180 ECTS and
- Specialised Colleges of Applied Studies, carry 60 ECTS and last one year.

Above mentioned characteristics of the Bologna Declaration in Serbia were accepted by the Law on high education from 2005, while the first accreditation of program for higher educated institutions was conducted in 2007. Amendments of the law on high education followed in 2010, 2014 and 2017 and the Education Development Strategy in Serbia by 2020 was adopted in 2012. The HERE (Higher Education Reform Experts Team) expert team for the reform of high education was formed on the initiative of the European Commission in 2008, and its task, beside the implementation of the Bologna system, is also to encourage the cooperation with economic organizations (<http://erasmusplus.rs>).

In order to improve the employment opportunities and increase the competitiveness, Ministry of Education Science and Technological Development cooperates with numerous foundations and programs, among which are TEMPUS, CEPUS, ERASMUS +, IPA. However, despite the numerous incentives for students to gain practical experience, there is still no precise strategy for the development of dual education in the higher education of the Republic of Serbia. This may be noticed on the bases of analyses of the high-educated institutions curricula where some of them make vocational training a compulsory subject for undergraduates and integrate it in curriculum, while others leave the students to choose if they want in-company experience through the different types of internship.

As in every field, dual education represents a great challenge for higher education in Serbia, and this is the case in the field of tourism and hospitality as well. With the rapid economic development and globalization, there has been a dramatic increasing need for students with higher education in the world (Brookes & Becket, 2007). Given the number of graduate students from higher education institution has been doubled, reliance only on the university degree does not represent any guarantee in respect of employment. On the other hand, the tourism and hospitality industries are complaining that they can not find appropriate work force from college and university graduates which represents significant incentive for introducing and advancing of dual education in higher education of Serbia. In favor of such cooperation between the labor market and academic institutions, there are also data on the high unemployment rate among the younger population in Serbia.

According to the questionnaire on work force in the third quarter of 2017, the unemployment rate of population between 15 and 24 years amounted

to 34,9 %, and the rate of inactivity was 54,6% (<http://beta.stat.gov.rs>). According to the National employment service (<http://www.nsz.gov.rs>), the largest number of the unemployed has completed the fourth degree of professional skills – four grades of secondary school (29,22%), and four grades of elementary school (29.56%) or three grades of secondary school (22.51%), while those unemployed with the 7th degree of professional education amount to 9,15 %. The problem of high youth unemployment rate is recognized in the framework of strategic documents, among which the National Employment Strategy for the period of 2011-2020. Also, the National Youth Strategy for the period 2015-2025, as well as the accompanying action plan, as a strategic goal, is foreseen to improve the employability and employment of young people (<http://www.nsz.gov.rs>). Given the above data, one can conclude that one of the causes of a high unemployment rate is the incompatibility of youth's competences and the needs of the labor market. A survey conducted by the Union of Employers of Serbia in 2014 showed that only 4.12% of young people think that they possess the knowledge and skills needed for concrete work, while 86% of young people stated that they lack practical knowledge. According to a recent study by the Association of Employers of Serbia in 2017, 70% of young people said they would be eligible to apply for professional practice even if they were not paid because they think they would get an experience they could not get during their education. On the other hand, 57% of employers are ready to hire at least one practitioner after the practice (<http://www.poslodavci.rs>).

In other words, if young people who graduate from secondary vocational schools and higher education institutions leave without practical skills and knowledge, their chances of finding employment are significantly reduced both in domestic and foreign labor market. Therefore, it can be assumed that the acquisition of practical knowledge and skills in the higher education system is conditioned by the scope, quality and manner of organizing professional practice as part of regular curriculum. As for the data related to the number of students studying in the field of services, according to the data of the Republic Institute for Statistics in 2016/17, 19,877 students were studying in the field of services, which represents only 7.6% of the total number of students enrolled both in private and at the state faculties and high schools in Serbia. Almost 30% of students of the number above enrolled in state colleges, while 53% enrolled in state universities (<http://www.stat.gov.rs>). From this it can be concluded that in the field of services education, state universities and colleges dominate.

Tourism and hospitality internship programs in higher education in Serbia

In order to analyze the application of dual education in the higher education of the Republic of Serbia, a desktop survey was conducted in January 2018. The subject of the analysis was professional internship and five state higher education institutions where the number of ESP points, working hours, the existence of mentors in charge of working with students and whether the practice was paid was analyzed (Table 2). These schools were selected on the basis of the publication of the Higher Education published by the Statistical Office of the Republic of Serbia (<http://www.stat.gov.rs>), which, according to the author's knowledge, has some of the study programs in the field of tourism and hospitality. Several conclusions could be retrieved from this review of internship programs in higher education. From the five above mentioned higher vocational schools all five have the integrated practice in curricula, with the fact that two colleges do not have practice in every year of study.

Table 2: Characteristics of intership in tourism and hospitality colleges

<i>Higher education institution</i>	<i>Study program</i>	<i>ECTS Credits; Working Hours; supervision; Paid or not paid</i>	<i>Degree title</i>
The College of Hotel Management	Hotel Management	12 ECTS; 520h; supervised; paid	Bachelor (appl.) in Hotel Management
	Restaurant Management	12 ECTS; 520h; supervised; paid 12	Bachelor (appl.) in Reastaurant Management
	Gastronomy Management	12 ECTS; 520h; supervised; paid	Bachelor (appl.) in Gastronomy Management
Higher Business School Leskovac	Management technology of food and gastronomy	I and II year 4 ECTS; III year 2 ECTS; 15 days (120h approx.); supervised; not paid	Bachelor (appl.) in Management Engineering
	Tourism and hospitality	I and II year 4 ECTS; III year 3 ECTS; 15 days (120h approx.); supervised; not paid	Beachelor of economics
College of Applied Studies, Arandjelovac	Management in tourism and hospitality	III year 2 ECTS; 30h; supervised; not paid	Bachelor (appl.) in Tourism and Hospitality

	Food technology and gastronomy	I year; 2 ECTS; III year; 4 ECTS; 30h; supervised, not paid	Bachelor (appl.) in Technology Engineering
The high technological school of vocational studies, Šabac	Gastronomy	I year 3 ECTS; II and III year 2 ECTS; 160h, supervised; not paid	Bachelor (appl.) manager of Gastronomy
The Business and Technical College of Applied Sciences, Užice	Tourism	II and III year 4 ECTS; 15 days (120h approx.); supervised Not paid	Bachelor (appl.) manager of Tourism

Source: <https://www.vhs.edu.rs/>; <https://vpsle.edu.rs/>; <https://vsar.edu.rs/>; <http://www.vtssa.edu.rs/>; <http://www.vpts.edu.rs>

Concerning the working hours as well as ECTS credits, the higher education institutions are very different. The number of ECTS credits in higher education varies from 2 to 12 points or expressed in hours from 30 to 520 hours. It can also be noted that the same number of ECTS credits in different high schools carries a different number of hours. For example, 2 ECTS credits cover 30 and 160 hours of practical teaching, while 3 ECTS credits also cover 160 working hours. According to the Law on Higher Education ECTS credits represent the burden of the student in mastering a particular subject or in this case professional practice (<http://www.mpn.gov.rs>). The student's load is the number of hours worked and the amount of work needed to complete all planned learning activities, such as attending classes, seminars, consultations, independent research and learning, project preparation, exams, practical lessons, etc. Total student workload is the foundation for determination of the European Credit Transfer and Accumulation System units and one ECTS credit corresponds to between 25 and 30 hours of student activities. What remains unclear when it comes to number of ECTS credits of internship is how to accurately measure the student's workload, because the number of working hours as well as the amount of work required to acquire the outcomes of training is often a highly subjective category. These opinions are consistent with the findings of Kember (2006), as well as Nosaira and Hamdy (2017) who stated that student perception of workload does not correlate with the actual workload in terms of hours. These findings can give important guidance to the Ministry of Education, Science and Technological Development in the launch of a uniform system for establishing more measurable criteria for awarding ECTS credits. A large number of working hours does not guarantee good preparation for the labor market. When implementing the internship, the important thing is

not only the presence of a supervisor appointed by the school, but also a supervisor who will work with students in hospitality and tourist companies. From Table 2 it can be seen that all the above higher vocational schools have a specific supervisor in charge of the practice. Regarding the supervisors from the industry, there are no precise standards in terms of their knowledge, skills and pedagogical experience, so their different qualifications level can lead to a situation that information communicated to students is not always current which leads to a students' subsequent discreditation of supervisors.

When introducing dual education in the higher education system of Serbia, it is necessary to take in account the possibilities of gaining international experience. This particular aspect of the curricula allows students to actively engage in a foreign culture; having the opportunity to grow their skills in a new and unfamiliar environment and exposing themselves to a range of other employers, employees and guests than they might have otherwise experienced (Ruhanen et al., 2013). This provides international students with an opportunity to completely understand and appreciate the scope of host-guest relations, as well as differing culture and norms between countries (Toncar & Cudmore, 2000). Gaining such skills and experiences can set these students apart from their peers, particularly when seeking employment in the tourism and hospitality industry (Toncar & Cudmore, 2000; Van Hoof, 2000).

Data that can be found on official websites show that The College of hotel management can have their internship done in the following countries: Montenegro, Greece, Germany, USA, China, France, Spain, Malta, Slovakia, Poland, Slovenia, Italy, Bosnia and Herzegovina. College of Applied Studies, Arandjelovac has cooperation with hotels in Malta and Montenegro. Higher Business School Leskovac cooperates with Slovenia, Montenegro, Spain and Greece. The Business and Technical College of Applied Sciences in Užice as well as the High Technological School of Vocational Studies in Šabac have no information on their website. Such scarce cooperation with foreign countries raises the question to what extent curriculum of these schools is in line with foreign curricula and to what extent it allows our students to switch to foreign universities and the ability to practice internationally. Therefore, the introduction of dual education in higher education can be a significant opportunity for the Republic of Serbia to position itself on the world education market. Creating competitive curricula would also attract foreign students to study in Serbia. With this in mind, at the beginning of 2018, some measures of

the Ministry of Education and Technological Development were undertaken through the launch of the "Study in Serbia" program, which aims to create a catalogue of study programs in English (<http://www.mpn.gov.rs>). In order to embark on the realization of this program it is necessary that higher education institutions accredit their programs in English as soon as possible, thus opening the space for establishing partnerships with similar schools abroad that they would align their programs with, so that recognition of diploma and cooperation becomes much simpler. In order to meet expectations of all stakeholders, not only tourism and hospitality companies but also academic institutions, it is necessary to explore the preferences of students themselves, both in terms of internship and the quality of education. These evaluations are important as feedback to students, teachers, departments, university administrators, government policymakers, and researchers, with the aim of improving higher education (Kuzmanović et al., 2013).

Conclusion

Dual education represents the need and practice of modern tourism market and its intensive development. One of the main advantages of dual education is that employers recruit and select potential candidates who are familiar with the operations of their company. In order to achieve the most efficient coordination of the needs of the industry and the school system, it is necessary for tourism companies to participate intensively in the curriculum creation. The smaller the investment of the industry in training of the potentially employed is, the greater would be the level of cooperation between the industry and the school institutions. Research conducted by the Union of Employers of Serbia has shown that there is a great willingness of employers in our country to engage students who have done their internship in their companies. So, it can be said that an initiative by the industry exists. What needs to be taken into consideration is the fact that there are no precise standards regarding the qualification of a supervisor in the tourism and hospitality companies. One of the measures that can help overcome these weaknesses is the organization of trainings for supervisors in order to provide a certificate for working with students. An important aspect of dual education is the establishment of partnership relations with foreign schools, so that the accreditation of English-language programs would increase the competitiveness of our higher education system. Although a large number of high vocational schools as well as some universities show initiative for the inclusion of their students in the labour market, the most important step in the

development of dual education in higher education is to audit curricula and contents of teaching subjects and internship in order to ensure vertical and horizontal mobility as well as attracting high quality employers.

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BRAND AS A FACTOR OF BUSINESS SUCCESS OF TOURIST ORGANIZATIONS

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Abstract

In the modern market conditions brands are becoming significant factor of business success. The subject of this paper is the importance of the brands and the branding process of tourist organizations. The aim of this paper is to comprehend branding factors and the quality of marketing activities from the theoretical point of view, which is the basis for empirical research carried out on a sample of 96 service providing organizations. The collected data were processed by the applicative system SPSS using descriptive and comparative statistics; in this process we have used the Wilcoxon signed-rank test, the ANOVA test, the dual factor analysis of the variance, and the Spearman correlation coefficient. The paper confirms that the branding of services depends on many factors inside and outside the organization and that the quality of marketing activities significantly affects the service branding, which is a factor of business success of an organization.

Key Words: *marketing, brand, brand equity, branding of the tourist organizations, business success*

JEL classification: *Z33, M21*

Introduction

In the past, the notion “brand” was exclusively related to the labeling of physical products, but today it is a term that covers many more areas – from physically tangible products such as agriculture (Cvijanović et al., 2016), through various types of services, including tourism, sports (Brzaković et al., 2016a), persons, destinations and entire nations (Starčević, 2016). Nowadays, in the modern market conditions, brands are

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becoming a significant factor of business success. Fichter and Jonas (2008) define brand image as “the stereotype held toward a brand”. Brands are often viewed from different angles and different meanings are being attached to them. Keller (2013) considers that the brand is a set of mental associations in the minds of consumers that add value to products or services. Some branding experts believe that for some people certain brands have even some sort of religious role, that they are a substitute for religious rituals, which helps them to strengthen self-esteem (Shachar et al., 2011). Brands have social and emotional value for users. Brand communicates with the users through its own personality (Kotler and Gertner, 2002). Also, the cultural influence of the brand is enormous and in recent years there has been a significant interest for understanding mutual influence of the consumer and brand culture (McCracken, 2009).

Brand is becoming one of the most important resources of an organization (Normann & Ramirez, 1994). It has the potential to be, if managed properly, one of the most important strategic assets able to provide true competitive advantage in the market, sustainable development (Brzaković et al., 2017) and financial profits. In the tourism market, competition occurs between "equal" with similar preferences of demand and comparable products (Vukotić & Maksimović, 2017). Brands enable users to choose between different products; consumers endow products that inspire unique associations. Brands represent a sign of a certain quality level. In order to be successful, a brand must ensure that the consumers' needs match the brand's values and attributes. A brand, in order to make success, must create an emotional relationship with the consumer (Baker & Cameron, 2008). Therefore, a brand's goal is to create a dialogue with consumers and consequently inspire trust, purchase consistency and brand loyalty. The primary task of brand management is to build a strong brand (Brzaković et al., 2016c). A definition of a strong brand would be “a brand with high brand equity resulting in a superior and steady profit flow” (Rossiter, 1994). Brand equity has been defined in many different ways and it has many different purposes. No matter how it is used or measured, the value of a brand in the market, as well as its equity, must at the end derive from consumers words and actions related to brand (Hoeffler et al., 2003). Brand equity can be created by making products impressionable, easily recognizable and superior in quality and reliability (Page & Herr, 2002).

The aim of this paper is to highlight the importance of brand and branding process for a service providing organization, especially in the field of

tourism. The aim is to discuss, from the theoretical point of view, branding factors and the quality of marketing activities, as the theoretical basis for empirical research carried out in order to obtain data to confirm or reject pre-set hypotheses. This paper is divided into three major parts: the first one is the Literature review, in the second we will present Methodology, in the third Results of the research with discussion, and at the end Conclusions and References.

Literature review

In the marketing literature, the most important studies about branding that have to be mentioned were proposed by David Aaker (1996), Jean-Noel Kapferer (2004) and Kevin Keller (2003). Beside them, it was necessary to consult other authors in order to get comprehensive knowledge, not only about branding itself, but about marketing aimed to promote tourist products/services. Unlike products, services are less tangible and their quality, as a rule, varies more depending on the person or the persons providing them. Therefore, branding is very important to service providers such as tourist organizations. An important aspect in the process of branding tourist organizations is the branding of geographical locations (destinations). The purpose of the destination branding is to make people aware of the location, in order to create a favorable image of the place to attract visitors and businesses (Baker & Cameron, 2008). According to Varghese (Varghese et al., 2013), it is clear that destination branding includes image building. In the conditions of global competition, tourist destinations have become highly replaceable (Morgan et al., 2003). As well as product brands, tourist destinations also consist of a number of tangible and intangible attributes (e.g. tourist attractions, hotels, people, environment, etc.) that are related to certain values, destination history, events and feelings (Ekinici & Hosany, 2006). According to Marphy (2000), “a tourist destination can be seen as a mixture of products and experiences, the combination of which is created by the so-called *total experience of destination*”. Researches show that images in tourism are more important than any tangible characteristic, because the factor that motivates consumers to act or not to act is perception, rather than reality (Gallarza et al., 2002). A powerful image of a destination gives it a competitive advantage in the market (Mykletun et al., 2001).

Morgan and Pritchard (2004) identify five successive phases in the process of the destination brand building: market investigation, analysis and strategic recommendations; brand identity; development of the brand

launch, introduction and launching of the brand; brand implementation and monitoring; evaluation and review. There are three essential factors that help building an image of the destination: word-of-mouth by the tourists (if the tourist spread positive impressions then it is easy to build a strong image of a destination); creation of the image in media; government's policies and interest related to the destination. A brand is priceless if it can hasten and simplify consumers' decisions, reduce purchase risk, create and deliver expectations. Using a number of methods to estimate and reduce risk, the brand reduces the possibility to make wrong decision (Brzaković et al., 2016b). Clarke (2000) has identified six positive effects that branding can bring to the tourist products: branding helps in the selection between more choices; branding helps in reducing the impact of intangibility; branding ensures consistency through time and multiple offer; branding can reduce the risk factor related to decision making process, when choosing holiday; branding facilitates precise market segmentation; branding helps people to work towards the same goal and keeps producers' efforts focused on the joint goal. Brand can guide and integrate all the business activities of a company. This kind of strategy is called brand orientation (Urde et al., 2011). It is estimated that in the future marketing and brand management will be critical factors for the success of a company (Kotler and Pfoertsch, 2007).

Methodology

The first part of the paper presents a theoretical framework in which the bibliographic speculative method was used, supported by a large number of sources from domestic and foreign literature. Research work involves the use of various methods: analytical (method of analysis, abstraction, and deductive method) and synthetic methods (method of synthesis, concretization, generalization and inductive method). The empirical research was carried out based on the sample of 96 respondents. The survey was conducted by questionnaires, which were distributed personally, as well as via email. The collected data were processed by the application SPSS system using descriptive and comparative statistics. Comparative statistics will be presented using ANOVA test, two-factor analysis of variance and correlation.

The questionnaire consists of two groups of questions:

1. Importance of individual factors for branding;
2. Quality of the organization's marketing activities.

Each of 20 offered factors, related to the importance of individual branding factors, were rated by the respondents on a scale from 1 (insignificant) to 5 (very significant). The factors involved, as well as their average ratings, are shown in Table 1.

Table 1: Singular evaluations of the importance of branding factors

	N	Mean	Std. Dev.
1. Time period of the organization's business	94	4.3723	1.06745
2. Previous reputation	93	4.3548	.97407
3. Traditional marketing (TV, radio, promotion with flyers, billboards and similar)	93	3.6774	1.35262
4. Online marketing (Facebook, websites, Twitter and similar)	93	3.5806	1.44706
5. Good trademark (logo)	94	4.1383	1.18776
6. Used colors	94	3.8723	1.22899
7. Trademark different from competition	93	4.0538	1.18290
8. Good name	95	4.4105	1.00525
9. Good promotional slogan	92	3.8696	1.41590
10. Origin country of product/service	94	3.5319	1.47890
11. Quality of product/service	92	4.3043	1.08677
12. Business culture of the organization	93	4.2043	1.05870
13. Sophistication of consumers	94	3.7340	1.20193
14. Price of products	94	3.9787	1.25277
15. The ability of employees to promote the brand in an adequate way	95	3.9263	1.26527
16. Support of the state/local governments in the brand promotion	93	3.2903	1.55046
17. Competition and its activities	95	3.6737	1.22424
18. Who are the buyers and the users?	93	3.9247	1.21795
19. The economy branch in which the organization operates	92	3.9457	1.21677
20. Social and cultural environment	92	3.8043	1.20657

Source: *Authors' calculations*

All factors are ranked above average median values, which imply that respondents consider each of these factors significant or very significant for branding. Among all the factors, those related to the characteristics of the organization (time period, reputation, product quality) are the most important, and the least significant are those related to the external nature (state support, competition's activities). It is interesting to note that

marketing, both traditional and online, has a relatively small value in relation to some other characteristics.

The respondents' attitudes about the quality of marketing activities (marketing activities include employees) are examined by a group of 11 questions; modalities of the answers to the first three questions has the nominal nature, while in the remaining questions the modalities of the responses are ordinal. Promotion of the brand through promotional films (Table 2) and promotion through mobile marketing (Table 3) are moderately and equally represented. Slightly less than half of interviewed organizations use them: film promotion is used about 46%, and promotion through mobile marketing about 47%.

Table 2: *In your organization promotional movies are periodically and/or regularly posted on YouTube in order to promote the brand*

		Frequency	Percent	Valid Percent	Cum. Percent
Valid	yes	44	45.8	47.8	47.8
	no	47	49	51.1	98.9
	I do not now	1	1	1.1	100
	Total	92	95.8	100	
Missing	4	4	4.2		
Total		96	100		

Source: *Authors' calculations*

Table 3: *Your organization uses some form of mobile marketing (mobile applications, SMS marketing) to promote the brand*

		Frequency	Percent	Valid Percent	Cum. Percent
Valid	yes	45	46.9	48.4	48.4
	no	48	50	51.6	100
	Total	93	96.9	100	
Missing	3	3	3.1		
Total		96	100		

Source: *Authors' calculations*

In relation to promotional films and mobile marketing, promotion of the brand via Internet and other media is significantly more prominent – about 73% of the interviewed organizations are practicing this promotion system (Table 4). Such relation between film promotion and mobile marketing is expected, as the creation of films and mobile applications is more complex type of promotion and consequently requires higher implementation costs.

Table 4: *Your organization occasionally and/or regularly advertises on the Internet and other media in order to promote its brand*

		Frequency	Percent	Valid Percent	Cum. Percent
Valid	yes	70	72.9	75.3	75.3
	no	23	24	24.7	100
	Total	93	96.9	100	
Missing	3	3	3.1		
Total		96	100		

Source: *Authors' calculations*

The evaluations of the marketing activities quality aimed at promoting the brand, based on the remaining questions, are shown in Table 5. It is noticeable that there are no significant differences in the evaluations of the quality of marketing activities (cover by the survey questionnaire), which are about 3 on a scale from 1 (weakest) to 5 (excellent); the dispersion of rating is also equal. Organizational independence in promoting the brand stands out with an average of 3.8. On the opposite side, there are digital communications in the brand promotion, as well as team work in the brand formation process, with an average of less than 3.42.

In this paper we have tested one general (H0) and one specific hypothesis (H1):

- H0: Branding depends on many factors, inside and outside the organization.
- H1: The quality of marketing activities significantly affects the branding of products/services.

Table 5: *Descriptive statistics of the quality of marketing activities*

	N	Mean	Std. Deviation
Your organization monitors (checks) the business of other organizations of the same or similar field, especially brand quality of competitors' organizations.	92	3.4348	1.49214
Your organization works independently on the brand promotion.	91	3.7802	1.48176
Marketing activities (market research and promotion) are regularly performed in your organization in order to improve brand quality.	93	3.4839	1.48626
Your organization regularly works on educating people on branding.	92	3.4239	1.49162

A team of people, not just one person, works on the creation of the brand (name, trademark) and its promotion.	92	3.4022	1.6645
Marketing activities in your organization have become more cost-effective and efficient by using digital (internet) communications to promote the brand.	91	3.4176	1.48373
In your organization, there is a special attention paid to the content of the message aimed to the target group, as well as to the selection of the communication channel for the brand presentation.	92	3.6522	1.4783

Source: *Authors' calculations*

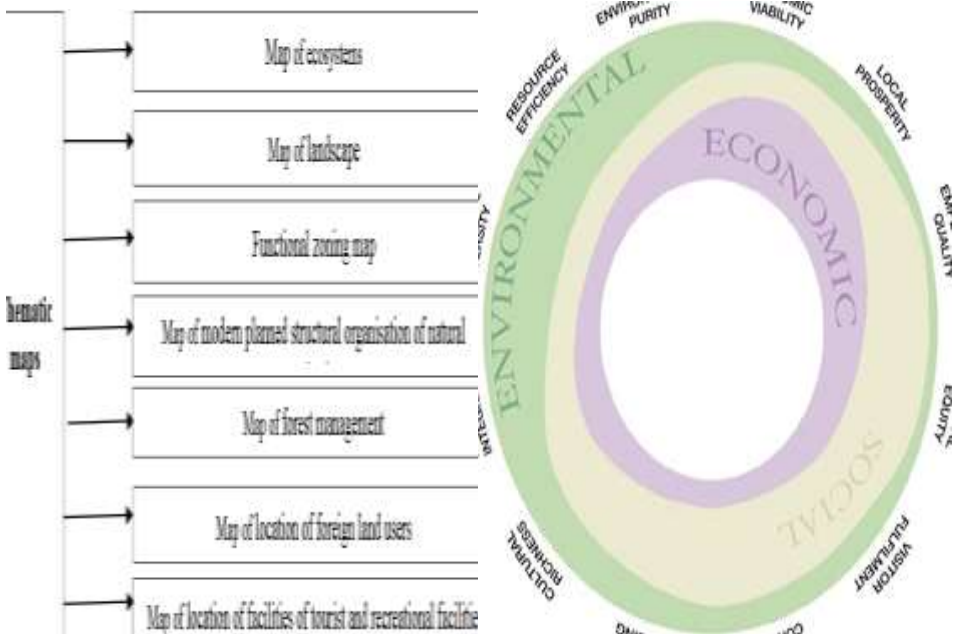
Results and discussion

The first step in the H0 hypothesis testing is the analysis of the attitudes of respondents on the general significance of factors that are listed in the questionnaire segment “Importance of individual factors for branding”. The attitudes of the respondents are graded on the scale from 1 (insignificant), 2 (minor significant), 3 (moderately significant), 4 (significant) to 5 (very significant), and the median value is 3 – moderately significant. The descriptive analysis indicates that the average values of the significance are greater than the median, but in order to draw this conclusion from the sample level to the population level, a formal statistical test should be carried out. If respondents consider that the mentioned factors are more than moderately relevant for branding services, in that case the median of the significance evaluation of the factor will be statistically higher than 3.

In the case of data with a continuous measurement scale and a preferred normal distribution, the testing of this hypothesis should be accomplished using a standard t-test (in the case of normal distribution the average and the median are the same). However, in our case, the evaluations of the significance are ordinal, without previously known distribution, and as such they are unfit for parametric statistical tests. Therefore, the hypothesis was tested by a non-parametric alternative to the t-test, known as the Wilcoxon signed-rank test, which is much more effective in statistical conclusion than the t-test, when the assumption of normality is disrupted. The zero hypothesis of this test is that, at the level of the

population, the median is equal to some predetermined value. The results of the Wilcoxon signed-rank test are shown in Table 6.

Table 6: Results of the Wilcoxon signed-rank test



Source: Authors' calculations

The first column of the table “Null Hypothesis” defines zero hypotheses of the form “the median of the given factor is equal to 3”. The Sig column shows the p-values of the Wilcoxon signed-rank test, based on which were made recommendations for whether the null hypothesis should be discarded. In 19 out of 20 cases, the Wilcoxon signed-rank test suggested the median inequality to the hypothetical value 3 and the rejection of the zero hypothesis. The zero hypothesis was not rejected only for the factor “State or local government support”, which implies that respondents averagely consider that this factor is not important for promoting the brand. It should be noted that the Wilcoxon signed-rank test is two-sided, which implies that the rejection of the equality median hypothesis does not automatically mean that the median sample is significantly higher than the hypothetical value, but in combination with the average scores from descriptive statistics, which are all over 3, we can conclude that respondents consider that the factors are (very) important for the service branding, which makes this testing segment of the general hypothesis confirmed.

In the second step, the hypothesis about the significance of branding factors was reduced from the general attitudes level to the level of importance in the context of branding of the organizations in which the respondents are employed. If the respondent considers that a factor is significant, he will make a general assessment of the brand of his organization, among other things, taking into account how much the given factor affects the branding process. This hypothetically results in the association between the brand quality assessment of the organization and the assessment of the branding factor, which can be measured by the coefficient of correlation. Considering that the previous analysis indicates that the respondents consider each of the offered factors significant (except the support of the state or local government), it is expected that the analysis will indicate the existence of a positive correlation. Correlation analysis typically uses two measurements of the correlation, Pearson's and Spearman's correlation coefficient. Pearson's correlation is a parametric test that is, therefore, much more reliable for continuous variables with normal distribution. For this reason, the Spearman's correlation was used in this correlation analysis, which is non-parametric. Spearman's correlation does not operate directly with the data, but with the ranges of data based on which the correlation coefficient is calculated, and thus it is more suitable for ordinal variables with deviant distributions.

The following three characteristics have been selected as key dependent variables describing brand quality at the organization level:

- Brand quality of your organization?
- Quality of the logo design for your products/services?
- Recognisability of your products/services beyond the borders of our country?

Table 7: *Spearman's correlation coefficient*

		Brand quality of your organization	Quality of the logo design for your products/services	Recognisability of your products/services beyond the borders of our country	Total of important correlations
Time period of organization's business	Corr. Coeff.	0.111	0.082	0.201	0
	Sig.(2-tailed)	0.289	0.433	0.053	
	N	94	94	93	
Previous reputation	Corr. Coeff.	0.182	0.201	0.179	0
	Sig.(2-tailed)	0.08	0.053	0.086	
	N	93	93	93	
Traditional marketing (TV, radio, flyer promotions,	Corr.Coeff.	.407**	.549**	.281**	3
	Sig.(2-tailed)	0	0	0.007	

billboards and similar)	N	93	93	92	
Online marketing (Facebook, website, Twitter and similar)	Corr. Coeff.	.473**	.459**	0.141	2
	Sig.(2-tailed)	0	0	0.178	
	N	93	93	93	
Good trademark (logo)	Corr. Coeff.	.452**	.574**	.361**	3
	Sig.(2-tailed)	0	0	0	
	N	94	94	93	
Used colors	Corr. Coeff.	.503**	.696**	.282**	3
	Sig.(2-tailed)	0	0	0.006	
	N	94	94	93	
Trademark different from competition	Corr. Coeff.	.398**	.529**	.235*	3
	Sig.(2-tailed)	0	0	0.024	
	N	93	93	92	
Good name	Corr. Coeff.	.316**	.383**	.250*	3
	Sig.(2-tailed)	0.002	0	0.016	
	N	94	94	93	
Good promotional slogan	Corr. Coeff.	.449**	.572**	.243*	3
	Sig.(2-tailed)	0	0	0.02	
	N	92	92	91	
Origin country of product/service	Corr. Coeff.	.381**	.582**	.294**	3
	Sig.(2-tailed)	0	0	0.004	
	N	93	93	92	
Quality of product/service	Corr. Coeff.	.387**	.398**	0.206	2
	Sig.(2-tailed)	0	0	0.052	
	N	91	91	90	
Business culture of the organization	Corr. Coeff.	.341**	.374**	.207*	3
	Sig.(2-tailed)	0.001	0	0.05	
	N	92	92	91	
Sophistication of consumers	Corr. Coefficient	.362**	.477**	.290**	3
	Sig. (2-tailed)	0	0	0.005	
	N	94	94	93	
Price of products	Corr. Coeff.	.393**	.415**	0.19	2
	Sig.(2-tailed)	0	0	0.07	
	N	93	93	92	
Ability of employees to promote brand in an adequate way	Corr. Coeff.	.492**	.420**	.333**	3
	Sig.(2-tailed)	0	0	0.001	
	N	94	94	93	
Support of the state/local government in the promotion of the brand	Corr.Coeff.	.251*	.288**	0.197	2
	Sig.(2-tailed)	0.016	0.005	0.061	
	N	92	92	91	
Competition and its activities	Corr. Coeff.	.369**	.392**	.213*	3
	Sig.(2-tailed)	0	0	0.041	
	N	94	94	93	
Who are the buyers and the users?	Corr. Coeff.	.394**	.411**	0.195	2
	Sig.(2-tailed)	0	0	0.064	
	N	92	92	91	
The economy branch in which the organization operates	Corr. Coeff.	.366**	.453**	0.206	2
	Sig.(2-tailed)	0	0	0.05	
	N	92	92	91	
Social and cultural environment	Corr. Coeff.	.352**	.420**	.211*	3
	Sig.(2-tailed)	0.001	0	0.046	
	N	91	91	90	
Total of important correlations		18	18	12	

Source: *Authors' calculations*

Note: ** significant for 0.01%, *significant for 0.05%

In Table 7 the evaluations of the organization's brand are crossed with evaluations of the importance of individual factors, so three fields for each combination of crossings are shown: the value of the correlation coefficient, the p-value, and the number of observations (generally in the range of 91 to 95). At the end of the right side and at the bottom of the table it is summarized how many correlation coefficients statistical significance is confirmed for.

Generally speaking, the greatest number of correlations is statistically significant. Some factors, such as a good trademark (logo) or the ability of employees to promote the brand, have a very robust association with all the evaluations of the organization's brand quality. The evaluation of the factor's importance is more related to the quality of the organization's brand and the quality of the trademark design (18 of 20 coefficients are significant), and less with the brand's recognisability (12 are significant). On the other hand, the association of the significance evaluation of some factors with the brand has not been confirmed in any case, which includes the time period of the organization's business and previous reputation. The conclusion is that these factors are less important for respondents when they value the brand of their organization. But, despite these two cases of unconfirmed connection, for 48 of the possible 60 correlation coefficients, statistical significance was confirmed. Taking into account the results of both analyzes, it can be concluded that the hypothesis about the significance of numerous factors for service branding has been confirmed.

Unlike the H0 hypothesis that examines the existence of a connection between the two groups of variables, in the case of hypothesis H1 we have a causal relationship that implies that marketing activities affect the service branding. Analysis of causal relations in cases where the independent numerical and continuous variable is typically carried out by regression modeling and when an independent variable is nominal or ordinal, we have used variance analysis (ANOVA). ANOVA aims to determine whether there are differences in intergroup intersections of dependent variables (branding products/services), where the basis of the grouping is the modality of an independent variable (the quality of marketing activities). The zero hypothesis that follows the ANOVA analysis assumes that all group averages at the population level are the same. The rejection of the zero hypothesis indicates that at least two of them are different from one another, thus confirming the influence of an independent variable on the dependent variable. The quality of marketing

activities includes the variables described in the “Quality of the organization's marketing activities” section, and they figure as independent variables. On the other hand, to the variables that describe the quality of the organization's brand we have added two above-mentioned questions from the section “Quality of organization's marketing activities” with nominal modalities of response. The results of the ANOVA analysis are shown in Table 8.

Table 8: ANOVA analysis

Code	Your organization has branded products/services	Products/services of your organization has the trademark	Quality of the brand of your organization	Quality of the design of your products'/services' logo	Recognisability of your products/services beyond the borders of our country
q6.6a	20.766***	12.613***	9.777***	8.622***	41.777***
q6.7a	22.643***	16.509***	26.243***	16.611***	15.344***
q6.8a	34.663***	15.592***	39.404***	53.706***	22.872***
q6.9	5.312***	1.516	10.952***	12.277***	3.102**
q6.10	10.101***	3.549***	16.239***	10.968***	8.442***
q6.11	8.578***	5.321***	18.026***	19.342***	8.566***
q6.12	8.693***	4.217***	17.465***	16.67***	11.531***
q6.13	13.523***	7.489***	21.955***	24.053***	15.552***
q6.19	11.132***	5.833***	18.084***	14.599***	8.557***
q6.20	8.597***	6.477***	24.238***	23.98***	11.35***
Code	Marketing activity				
q6.6a	In your organization, promotional movies are periodically and/or regularly posted on YouTube in order to promote the brand.				
q6.7a	Your organization uses some form of mobile marketing (mobile applications, SMS marketing) to promote the brand.				
q6.8a	Your organization occasionally and/or regularly advertises on the Internet and other media in order to promote its brand.				
q6.9	Your organization monitors (checks) the business of other organizations of the same or similar field, especially the brand quality of competitor's organizations.				
q6.10	Your organization works independently on the brand promotion.				
q6.11	Marketing activities (market research and promotion) are regularly performed in your organization in order to improve brand quality.				
q6.12	Your organization regularly works on educating people on branding.				
q6.13	A team of people, not just one person, works on creating the brand (name, trademark) and its promotion.				
q6.19	In your organization every employee has an access to Internet.				
q6.20	Your organization has a blog.				

Source: *Authors' calculations*

Note: **significant for 0.01%, *significant for 0.05%

Table 8 summarizes all ANOVA analyzes. Columns show the characteristics of the organization's brand as dependent variables, and the rows show marketing activities as independent variables (factors). The cells in the table contain only F statistics that are used to test the zero hypothesis, and the asteriks is used to mark level of significance for rejecting zero hypothesis. In just one case, out of the 50 analyzed impacts, it was not confirmed that there was a statistically significant causality, which implies that the H1 hypothesis was confirmed.

Conclusions

In the modern market conditions, brands are becoming a significant factor in business success. Brands differentiate products/services and they represent a promise of value. Building a strong, recognizable, well-positioned brand in the market is one of the basic functions of marketing. Brands have become more and more important to organizations, because they have the potential to be, if managed properly, one of the few strategic assets to provide true competitive advantage and financial profits. Unlike products, services are less descriptive and their quality, as a rule, varies more and depends on the persons who provide them, which is why the branding of tourist organizations is especially important.

A significant aspect of tourist organizations branding is the branding of geographical locations (destinations), which implies the need to create a well-known “name” of the destination, such as countries, regions, tourist zones, settlements, etc. The process of the image building of the destination begins with the choice of one or more brand elements (slogans, logos, celebrities to represent it, etc.), which identify the destination in a different way; it all makes possible for strong and consistent associations to be created, which reflect the cognitive, affective and conative component of the brand image.

A strong destination image gives competitive advantage in the market. In this paper we have discussed the importance of branding, as well as branding factors and the quality of marketing activities of an organization in the field of tourist service activities. It was discovered that 19 out of 20 factors are very important for service branding, which confirmed the general hypothesis. Also, it was confirmed that the quality of marketing activities significantly influences the branding of tourist organization services.

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CAPITAL AND INVESTMENTS IN COMPANIES IN TOURISM AND HOSPITALITY IN THE REPUBLIC OF MACEDONIA

Risto Gogoski¹; Kliment Naumov²;

Abstract

When talking about economic growth, economists emphasize the need to increase equity. The neoclassical model theory explains that capital stock is very important. In the case of the Republic of Macedonia, due to a number of statistical and methodological issues, capital and investments will be presented with the part of the companies classified as accommodation and food service activities. The first thing analyzed is the significance of capital goods for tourism and food service companies. Additionally, the investments in fixed capital of the accommodation and food service companies in Macedonia are being explored. Lastly, the situation and trends in bank loans given to accommodation and food service companies are analyzed. There is an attempt to make proposals for improvement of the conditions of investments and commercial loans in the tourism and hospitality activities. They are a potential opportunity for capital and technological improvement of companies' business, their growth, development, employment and productivity and indirectly GDP growth of the Republic of Macedonia.

Key Words: accommodation and food services activities, capital, gross fixed capital formation, credit exposure, investment, financing.

JEL classification: D25, G21, L66, Z33

Introduction

According to the United Nations World Tourism Organization (UNWTO) "Tourism comprises the activities of persons traveling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes." During the period of

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absence from the domestic environment the traveler needs to eat, drink and sleep. Here is where the accommodation and food service activities come into the picture. This part of a country's economy is crucial for the basic satisfaction of the needs of the tourist.

According to the Organization for Economic Cooperation and Development (OECD)/Eurostat (2014) the accommodation and food service activities are closely linked to the development of the tourism economy and makes a considerable contribution to economic growth, employment, enterprise demography and to development in rural, peripheral or less developed areas.

The accommodation division mainly comprises the provision of short-term accommodation, typically on a daily or weekly basis, for visitors and other travellers by hotels, motels, guesthouse, holiday homes, bed and breakfast etc. It also includes the supply of short-term accommodation services by camping grounds, parks as well as the provision of space and facilities for recreational vehicles and the provision of temporary or longer-term accommodation in single or shared rooms or dormitories for students, migrant and seasonal workers and other individuals. In most countries, the provision of short-term accommodation by hotels is the main focus. In the Republic of Macedonia, accommodation objects are focused on longer stays or in other words higher number of overnights.

The food and beverage service activities division, according to the UK Standard Industrial Classification of Economic Activities (2007), comprises the provision of meals and/or drinks fit for immediate consumption whether in bars, restaurants, cafeterias, or from take away restaurants. The division also includes the provision of meals by event and industrial catering and canteens based on contractual arrangements with the customers, for a specific period of time and/or for a specific event.

According to Potdar M. (2013) tourism is one of the largest and dynamically developing fields of external economic activities. Its high growth and development rates, considerable volumes of foreign currency inflows, infrastructure development, and introduction of new management and educational experience actively affect various sectors of economy, which positively contribute to the social and economic development of the country as a whole. Most highly developed western countries, such as Switzerland, Austria, and France have accumulated a big amount of their

social and economic welfare on profits from tourism. According to recent statistics, tourism provides about 10% of the world's income and employs almost one tenth of the world's work force. All considered, tourism's actual and potential economic impact is astounding.

When we consider the tourism development and in that sense economic growth of the Republic of Macedonia the situation is very different compared to the western tourism developed countries (Naumov K. 2014).

Even after more than two decades, the economy in the Republic of Macedonia failed to noticeably improve the capital equipment, accumulation, savings and economic growth rates. This is especially true in the tourism and hospitality industry, that is, the sector - accommodation and food service activities, as they are officially kept in the system of national accounts in the Republic of Macedonia after 2010. After more than two decades of independence, the tourism and hospitality activities face little participation in the creation of GDP in the Republic of Macedonia, inefficient models of capacity transformation (the privatization process), as well as inefficient business policies and strategies of the companies' management.

The consequences of this are weak output increase, weak accumulation (savings), weak credit support from financial institutions and national and international funds, insignificant share in the capital market, etc.

In the absence of funds, the financing of tourism and hospitality enterprises in the Republic of Macedonia, as well as other activities, is mainly aimed at commercial banks. In this regard, all efforts for investments in fixed assets require support from the commercial banks' credit activity.

In order to elaborate on the foregoing, the paper is conceptualized in two parts. The first part considers the state of capital investments in the tourism and catering companies, respectively capital goods, form of ownership of investments, the technical structure of investments, direct and portfolio investments. The second part of the paper analyzes the relations between the companies in the tourism and hospitality activity with the commercial banks in the Republic of Macedonia, that is, the credit exposure towards the banks, the currency structure of the loans taken from the commercial banks, as well as the risk treatment of credit exposure to the enterprises in the activity of the accommodation and food

service activities. Finally, in the conclusive observations, some suggestions in terms of improvement of the current situation are given.

It is known that the tourism development requires many components such as qualified personnel, financial resources, local involvement and authorities in charge. In many developing countries, there is highly a centralised control. It is evident that there is a gap in implementing policies and regulations especially in developing countries where there is poverty, bureaucracy and corruption.

Capital investments in tourism and hospitality companies

A demand for production factors comes from the basic microeconomic unit - the tourist firm. Tourist firms need production factors to produce services in tourist industry. A tourist firm's demand for factors is called a derived demand, because its demand for factors to use in creating tourist product is derived from the demand for the tourist firm's products.

If a demand for a tourist firm's outputs increases, so will, on the whole, its demand for all inputs. Tourist's demand for specific services and products stimulates entrepreneurship and provides additional local employment and income. Tourist firms also translate consumer's demands into a demand for factors of tourist production (Gogoski R., 2005).

According to theory, capital funds cover all material, non-material and human resources. However, the capital of enterprises can be placed in two basic forms - monetary capital and physical capital. Physical capital consists of tangible, visible (administered records) items, mainly ranked as construction objects, equipment etc. This form of capital is the point of interest in this paper.

The neoclassical model explains that the capital by itself is very important, together with the technological improvement (Gogoski R. 2012).

Widely observed, the capital fond includes all possible material, nonmaterial and human inputs. In a narrow sense, a company's capital may appear in two forms, money and real capital. The real capital consists of tangible, visible capital goods, from their physical forms- buildings, equipment etc. that are used in business. Companies in the tourism

activities are not an exception, the same statements apply to them too. Economic theory and practice shows that intensive investment in physical capital is an essential precondition for economic growth of all countries in the world. The higher the level of capital, the greater will be the level of output (Real GDP). However, while there is a statistical association between capital accumulation and economic growth, economic theory plays an important role in our understanding of this apparent relationship (Sloman & Garratt 2016)

Table 1: *Basic determinants of the long term companies' development*

Increase of	Determines production, expenditure and capital per employee to be	Reason
Savings rate	Increased	Higher savings rates enable higher investments and higher level of capital.
Productivity	Increased	Higher productivity directly increases the production; income growth increases savings and capital level.

In accounting terms, the capital of each tourism and hospitality company is a net asset that is a stock of temporarily acquired funds of the enterprise. Capital is a stock, while investments throughout the year are flow. Capital in physical terms is a condition of the quantities of buildings, equipment and supplies at a certain point.

Contrary, the investments of the tourism and catering enterprises are a process of adding new elements of the capital fund, in case of positive net investments, or subtracting in negative net investments (disinvestment).

So it is important for companies to invest. The source of investment is in austerity rates, which increase the level of investment, and the level of capital goods. Investments, by definition, also make qualitative changes, in the sense that lead to technical and technological changes and not only a quantitative increase in capital equipment. This should be the model for long-term development of tourism and hospitality companies.

Table 2: *Investment in fixed assets in the industry of "accommodation and food service activities" in Macedonia, according to the purpose*
In millions of denars

Year	Total	Construction	Machinery and equipment	Research and development	Other
2000	673	507	165	-	1
2001	916	696	219	-	1
2002	1 214	963	251	-	0
2003	897	672	224	-	1
2012	1 165	889	238	-	38
2014	1 786	1 442	322	1	6

Source: *State Statistical Office, Working Materials 2003, Fixed Capital Investments, SSO of the RM, Working Material 2003; Statistical Review no. 3.4.14.03 / 791* <http://www.stat.gov.mk/Publikacii/3.4.14.03.pdf> ; *Statistical yearbook of the Republic of Macedonia, 2017 pages 413-414* <http://www.stat.gov.mk/Publikacii/SG2017/09-NacEk-NatEc.pdf>

Table no. 2 shows that there is an increase in capacities through positive investment from year to year and that is a potential opportunity for quality services in the activity of accommodation and food service activities.

Table 3: *Gross fixed capital formation in the field of "accommodation and food service activities" by to the type of ownership*
In millions of denars

Year	Type of ownership			
	Total	State	Private	Other
2000	673	7	634	32
2001	916	0	862	54
2002	1 214	1	1 104	109
2003	897	2	832	63
2012	1 165	3	1 161	-
2013	2 424	6	2 418	-
2014	1.786	15	1.771	-
2015	2.829	-	-	-

Source: *State Statistical Office, Working Materials 2003, Fixed Capital Investments, SSO of the RM, Working Material 2003; Statistical Review no. 3.4.14.03 / 791* <http://www.stat.gov.mk/Publikacii/3.4.14.03.pdf> ; *Statistical yearbook of the Republic of Macedonia, 2017 pages 413-414* <http://www.stat.gov.mk/Publikacii/SG2017/09-NacEk-NatEc.pdf>

Table no. 3 shows the structure of the investment according to the form of ownership. The data show that technological equipment is dominant in companies of private ownership. This means that private profit oriented companies in the field of accommodation and food service activities have to make efforts to technically and technologically improve their operations.

Table 4: *Stock of direct investments in the Republic of Macedonia in millions of euros*

	Total		Accommodation and food service activities		Total services		Insurance, reinsurance and pension funding		Production	
Year	Value	%	Value	%	Value	%	Value	%	Value	%
2009	3141.4	100	47.7	1.5	1722.4	54.8	62.8	2.0	953.4	30.3
2010	3256	100	55.9	1.7	1678	51.5	64.9	2.0	1053	32.3
2011	3615.1	100	54.9	1.5	1726.3	47.8	71.8	2.0	1308.8	36.2
2012	3685.5	100	41.5	1.1	1722.2	48.1	68	1.8	1281.5	34.8
2013	3980	100	35.4	0.9	1885.5	47.4	73.6	1.9	1388.9	34.9
2014	4023.6	100	32.8	0.8	1830.6	45.5	80.6	2.0	1435.8	35.7
2015	4400.1	100	43.9	1.0	2109.3	47.9	86.2	2.0	1563.7	35.5
2016	4657.3	100	42	0.9	2100.3	45.1	88.2	1.9	1685.6	36.2

Source: *National Bank of the Republic of Macedonia (NBRM). Banking system Reports, annex, different years* http://www.nbrm.mk/izvieshtai_zabankarskiot_sistiem_na_riepublika_makiedonija7b8cb632.nsp

Table no. 4 gives a comparative overview of the direct investments in the Republic of Macedonia for some of the activities in the service sector. The data shows that the share of accommodation and food service activities has a relatively small share in the total investments and the total investment for the services sector. The service activities have greater participation in investment from the production sector, but the trend of movement is in line with the movement for the entire sector of services.

It is important to have an idea about the origin of capital in the field of accommodation and food service activities, as shown in table 5. It is about the coverage of assets with liabilities of companies that are in different types of ownership. In that sense, the share of capital in the form of portfolio investments in companies from the tourism and catering

industries is relatively small, implicitly indicating that the companies are not directed towards the capital market.

Table 5: *Direct investment in the Republic of Macedonia for the activity of "accommodation and food service activities" in millions of euros*

Year	Total direct investments in the country	Equity	Debt instruments	Portfolio investments
	1 = 2 + 3	2	3	4
2010	55.93	23.04	32.89	1.59
2011	54.90	22.48	32.42	0.75
2012	41.53	15.28	26.25	1.74
2013	35.45	9.59	25.86	1.40
2014	32.80	8.60	24.20	1.50
2015	43.90	20.40	23.50	1.6
2016	42.00	18.2	23.8	-

Source: *Banking system Reports, annex, different years*
http://www.nbrm.mk/izvieshtai_za_bankarskiot_sistem_na_riepublika_makedonija7b8cb632.nsp

On the other hand, the share of debt instruments (mainly loans) is with higher share of the own capital acquired from its own accumulation, by itself indicating that the companies from the tourism and hospitality services are directed towards the use of financial institutions, or to unsettled obligations to creditors.

Credit exposure of banks towards tourism and food service companies

Table no. 6 shows us the flows of payments of fixed assets in the field of accommodation and food service activities in the Republic of Macedonia. The current (at the end of the year) acquired fixed assets in the activity of accommodation and food service activities dominantly consist of their own funds, and relatively few consist of financial credits. This can be taken as a positive trend, because these companies try to cover their relatively small share in the financing of the payments for fixed assets at the level of the economy of the Republic of Macedonia, mostly with funds derived from their operations. Below, we will see that perhaps the reason for this is the low interest of the banks in Macedonia for crediting the activity of accommodation and food service activities.

An additional problem for observing the facts is that the official statistics in the Republic of Macedonia have not published structural data after 2012. It remains a task for future research in this area to calculate these data from the system of national accounts.

Table 6: *Financing of gross fixed capital formation in the activity of "accommodation and food service activities" in the Republic of Macedonia in millions of denars*

Year	Financing of gross fixed capital			
	Own financial assets	Joint assets	Financial loans	Total
2000	629	-	34	645
2001	296	-	10	306
2002	521	-	57	578
2003	320	-	22	342
2012	194	-	34	228
2013	-	-	-	815
2014	-	-	-	884
2015	-	-	-	947

Source: *Financing of gross fixed capital*, Statistical Review no. 3.4.14.03 / 791 <http://www.stat.gov.mk/Publikacii/3.4.14.03.pdf> ; *Statistical yearbook of the Republic of Macedonia, 2017* pages 413-414 <http://www.stat.gov.mk/Publikacii/SG2017/09-NacEk-NatEc.pdf>

Table no. 7 shows the credit exposure of the banks towards the activity of accommodation and food service activities, in absolute numbers and percentage share in the total credit exposure of the banks. In doing so, a comparison was made with certain activities in the services sector. Credit exposure to tourism and hospitality firms is insignificant and does not exceed 1 percent of the total banks' exposure. The volume of crediting of the activity of accommodation and food service activities are on the absolute increase, but the dynamics of the increase in loans from other service activities is more prominent. Below, we will see that this marginal value of loans approved in the activities of tourism and hospitality contributed to NBRM to give up special monitoring of the assets of the banks that relate to this activity, in other words it is totally left out from the official statistics. Thus, the latest official data for the sector structure for companies in this field is for 2014. Again, it is a challenge for future researchers to extract these data from the national accounts system.

It can be noted that the expectations for the commencement of an intensive investment cycle did not come true after 2007. They were based upon the entry of famous foreign brands both in banking and tourism and hospitality industry in the Republic of Macedonia (Gogoski R. 2007). As an example we can state the purchase of Ohridska Banka by Société Générale Group.

Table 7: *Banks' Credit exposure by activity in millions of denars*

	31.12.2013		31.12.2014		31.12.2015		31.12.2016	
	Amount	%	Amount	%	Amount	%	Amount	%
Total credit exposure in all activities	389953	100	423575	100	459658	100	469675	100
Accommodation and food service activities	3210	0.82	3480	0.82	4288	0.93	3922	0.84
Financial activities and insurance	74753	19.17	88258	20.84	88798	19.32	97106	20.68
Information and communication	2349	0.60	2786	0.66	2797	0.61	2573	0.55

Source: *NBRM, Banking system Reports, annex, different years*
http://www.nbrm.mk/izvieshtai_za_bankarskiot_sistiem_na_riepublika_makedonija7b8cb632.nsp

The indicators for the currency structure of the credit portfolio in the banks for the activity of accommodation and food service activities are given in the table No.8. The percentage participation only confirms the marginal significance of the activity in the credit portfolio of the banks for all types of loans. The data show that there is a uniform division of credits in the national currency and loans in foreign currencies, or in denars with foreign currency clause. The further researches should confirm this, but the impression remains that the credits in denars are long-term loans that were approved in the initial period of the monetary independence of the Republic of Macedonia, from certain national and international development funds. Foreign currency loans are most likely to be assigned to the economy of the Republic of Macedonia by certain credit lines of foreign institutions.

Table 8: *Currency structure of the banks' credits exposure towards the activity of "accommodation and food service activities" in millions of denars (at the end of the year)*

	2014	2015	2016
Credits in denars	1647	2119	2151
% share in the total credits in denars allowed by banks	0.72	0.82	0.81
Credit in denars with FX clause	688	912	896
% share in the total credits with FX clause allowed by banks	0.93	1.17	1.07
Credit in foreign currencies	1145	1257	875
% share in the total credits in foreign currencies approved by banks	0.95	1.01	0.73
Total credits for the activity of accommodation and food service activities	3480	4288	3922
% share in the total credits allowed by banks	0.82	0.93	0.83

Source: *NBRM, Banking system Reports, annex, different years*
http://www.nbrm.mk/izvieshtai_za_bankarskiot_sistiem_na_riepublika_makedonija7b8cb632.nsp

Also, it is important to mention the data for delay of the amount repayable irregularly to the commercial banks in the Republic of Macedonia from the analysis of the National Bank of the Republic of Macedonia, as given in table no. 9.

The numbers indicate that the activity of accommodation and food service activities has the highest participation at the time of the repayment of both the loan equity and the calculated interest. From the banks' point of view, the data shows that the credit risk of the activity is high for accommodation and food service activities, but the risk is relativized with the small share of the crediting assets of the banks.

On the other hand, from the tourism and hospitality companies' point of view, it can be identified that the poor financial position of these companies, their low profitability, weak cash flows and illiquidity make them uninteresting for the banks in terms of business.

Table 9: *Duration of average delay of the amount repayable irregularly to the banks by type of credit exposure and activity as of 31 December 2016 in years*

	Type of credit exposure			
	Loan	Interest	Other claims	Total credit exposure
Total for all activities	1.5	1.8	1.1	1.5
Accommodation and food service activities	2.0	1.7	2.4	2.0
Financial and insurance activities	0.9	0.8	1.1	1.1
Information and communication	1.2	0.7	1.6	1.2
Construction	1.8	1.0	1.2	1.7
Transport and storage	1.6	1.5	2.4	1.6

Source: NBRM, *Banking system Reports, annex, different years*
http://www.nbrm.mk/izvieshtai_za_bankarskiot_sistiem_na_riepublika_makedonija7b8cb632.nsp.

Conclusion

Nowadays, tourism and hospitality activities are flourishing world wide. The advantages of tourism and hospitality include employment opportunity, growth of service sector, foreign exchange earning, opportunity for recreation, economic growth, cultural exchange, better international relations, enjoyment, better health and wellness. Services sector in the developed destinations engaged in the field of tourism and hospitality get the most out of tourism sector. A large number of business engaged in service sector such as airlines, hotel, surface transportation etc. grow with the growth of tourism and hospitality.

Contrary in Macedonia the growth of tourism and hospitality is not in pace with the tourism growth compared with the developed destinations and one of the reasons is the lack of investment and the low interest of the banks in issuing loans to companies in the field of accommodation and food service activities. One of the reasons is the low level of political stability that negatively affects the visitor's arrivals in the Republic of Macedonia. Unfortunately tourism and hospitality is mostly based in the capital with a high level of amortization, in other terms most of the accommodation and food service capacities are very old and there is not

a great interest in the construction of the new ones because of various reasons. The most present ones are the bureaucratic obstacles and political issues.

The predictions that after 2007 there would be a new, intensive wave of investment in tourism and hospitality companies, primarily in the form of foreign direct investments from famous world brands, did not come true. Contrary, also in the last years we have a slow growth of investments, investors and creditors. In a word - there are no noticeable and qualitative changes and improvements.

The companies in the field of tourism and hospitality are not the subject of a special interest of the banks in the Republic of Macedonia. This leads to a state of mutual indifference on both sides in the process of financial intermediation in provision of resources for capital investment. Neither the tourism and hospitality companies have what it takes to offer to the banks in terms of business, nor are the banks interested to risk investing in them. The final result is a slowdown of the growth rate in the tourism industry in the frame of the Macedonian national economy.

The private and institutional investors remove the activities in tourism and hospitality from their focus because of their bad performance.

Investments in accommodation and food service activities in the Republic of Macedonia are dominant in tangible fixed assets and within that they are in the form of buildings and other constructions, which is in accordance with the service character of the activity. From intangible fixed assets there is a trend of increase in investment in computer software.

Investments in fixed assets are almost excluded from privately-owned enterprises, and investments of state-owned enterprises are almost lost. However, the dynamics of private sector investment growth has not been drastically increased, and it is not possible to talk about the main destination of the investors of the industry of accommodation and catering services. Hence, it is not surprising that the situation with the direct investments in accommodation and catering does not exceed 1.7% in the total investments, and there is at least a small but stable positive growth.

The share of portfolio investments in the activity of accommodation and food service activities in the total investments in fixed assets is small, i.e.

the direct investments in the activity are dominant. The previously told points to the fact that the tourism and hospitality companies have not recognized the capital market as a source for financing of their capital investments, and at this point they are similar to the companies from other industries. In the area of direct investments, capital and debt instruments are main and evenly distributed among companies in the activity of tourism and food services. But given the share in banks' credit exposure to these activities with a percentage lower than one, it drives the companies to put pressure on their own meager funds, in other words they use little finance loans. The conclusion is that the orientation towards its own low accumulation slows down the development of these activities.

This paper showed us that the enterprises in the industry of accommodation and catering services are not companies of business interest to the banks in the Republic of Macedonia. This leads to a very bad combination of the mutual indifference on both sides in the process of financial intermediation in providing capital investment resources. Enterprises in the industry of tourism and catering services, although relatively small in the banks' credits, are among the most risky entities due to bad balance sheets. So the companies have nothing to offer, nor are banks interested in risking. The end result is a slowdown in the growth of the tourist industry in the economy of the Republic of Macedonia. Such performances remove the activities of tourism and catering from the focus of interest, also at foreign private or institutional investors.

Can the situation be improved in the future? It may, but for this, some preconditions need to be met:

1. The companies in the sector of tourism and catering services should receive institutional support from the state. The Government of the Republic of Macedonia can in practice confirm the strategy for tourism development through financial support. For example, for a start, it is good for the enterprises from this sector to receive special treatment at the Macedonian Bank for Support and Development;
2. Participation in guarantees and co-financing in the withdrawal of funds from foreign credit lines or funds;
3. Tax incentives, professional assistance, financial and business training, which should aim to qualitatively improve the management of companies and their more aggressive performance with the influence of increasing the competitiveness of the market. This can be very helpful for the trainings and improvements offered by a range of foreign programs and projects funded by other countries.

Although the Macedonian economy has already reached its maturity within the Republic of Macedonia as an independent country, if the state considers tourism as a sector of significant growth and development, it must continue to be treated as a competitively protected activity, struggling to overcome the primal problems. This is especially necessary in the part of the finances.

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THE COMPETITIVENESS OF TOURISM IN SERBIA AND THE ROLE OF INSURANCE IN TOURISM

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Abstract

In developing countries, tourism is one of the potential generators of economic growth and development. Multiple factors that make a tourist destination competitive also affect the development of tourism and a multidisciplinary approach to tourism management. The competitiveness of tourism in Serbia and other countries of the world is defined by the aggregate Travel and Tourism Competitiveness Index (TTCI) of the World Economic Forum, whose relevance is also the subject of research. The paper presents various models of competitiveness of a tourist destination and a quantitative analysis of the competitiveness index of Serbia and selected countries with corresponding key indicators of tourism activity. The aim is to examine the correlation between indicators of the competitiveness of tourist destination and the indicators of the actual tourist demand. Also, a special review was made on the business analysis of tourist organizations in Serbia and the role of insurance and risk management in tourism.

Key Words: competitiveness, tourist destination, insurance in tourism

JEL classification: G21

Introduction

Competitiveness is a subject traditionally related to industry and national economy. Many reputable economic theorists have elaborated the subject and concept of competitiveness taking into account different perspectives. Michael Porter (1990) established a new approach in defining crucial factors of competitive advantage of the nations that are sublimated in a

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model symbolically called the “diamond of national competitiveness”. The model identifies four groups of determinants for national competitive advantage: factor conditions, demand conditions, firm strategy, structure and rivalry and related and supporting industries. Porter stated that national prosperity is created, not inherited (Porter, 1990). National competitiveness relies on productivity, innovations, technology and knowledge with the ability of companies to apply a strategic approach to maximizing profits. With the growing importance of tourism and tourist activity, the topic of competitiveness of tourist destination has emerged. Tourism’s contribution to national wealth has a great potential, considering the fact that tourism is a principal export for 83% of developing countries (Richardson, 2010). Developing countries’ share of international tourist arrivals more than doubled from 1973 to 2000 (UNWTO, 2002). Different interpretations and models of competitiveness of the tourist destination have been developed, and many of them are based or derived from Porter's theory of national competitiveness. What can be concluded is that there is no generally accepted interpretation of (tourist) destination competitiveness and factors which determinates it. Ritchie & Crouch defined destination competitiveness as the ability of one country to create additional values and thus increase the national wealth by managing assets and processes, attractiveness, aggressiveness and proximity and by integrating these relationships within an economic and social model that takes into account a destination’s natural capital and its preservation for future generations (Ritchie & Crouch, 2003). On the other hand, Heath focuses on specific indicators of destination competitiveness and points out that they include objectively measured variables such as visitor numbers, market share, tourist expenditure, employment, value added by the tourism industry, as well as subjectively measured variables such as ‘richness of culture and heritage’ and ‘quality of the tourism experience’ (Heath, 2003). The practical importance of defining factors and indicators of destination competitiveness lies in the establishment of tourist benchmarking, the improvement of tourism management tools and the creation of best practice in tourism development. Applying measurable indicators of tourism development enables efficient and comprehensive decision-making in the process of defining incentive tourism policies. According to the methodology of Organization for Economic Co-operation and Development (Dupeyras, A. & N. MacCallum, 2013), indicators of tourism performance represent one of the core tourist development indicators, which include: tourism contribution to GDP, level of inbound tourism, contribution of tourism to exports and employment in tourism. The most used indicator for

benchmarking and comparison of national tourism competitiveness is the aggregate Travel and Tourism Competitiveness Index (TTCI), published for more than 130 countries in Travel and Tourism Competitiveness Report, starting from 2007. Developed by the World Economic Forum (WEF), it measures the set of factors and policies that enable the sustainable development of the travel and tourism sector, which in turn, contributes to the development and competitiveness of a country (WEF, 2017). The Travel and Tourism Competitiveness Index (TTCI) combine four sub-indexes that are explained and measured within 14 methodologically identified pillars, and the index value ranges from 1 to 7. One of the main disadvantages is that it always uses the simple arithmetic mean, which is why all the individual indicators (pillars) take part with the same weighting in the production of the sub-index, and all the sub-indexes with the same weighting in the construction of the index (Pablo – Romero et al, 2016). Also, it is considered that a major shortcoming of TTCI is that it allows a country to be considered competitive for tourism, although it has some very poorly valued indicators (Paulido-Fernandez, Rodriguez-Diaz, 2016). Croes and Kubickova address their critique on TTCI and state that it “seems more a systematic collection (comprehensive notwithstanding) of data than a model that reveals clear testable association among variables thereby facilitating inferential analysis” (Croes & Kubickova, 2013). Considering different point of views in the interpretation of TTCI, authors have conducted an analysis in order to determine the correlation between the TTCI and the actual indicators of tourist demand and the performance of tourism activities in Serbia and selected countries. The aim of this paper is to examine whether the values of aggregated TTCI correspond to the following tourism performance indicators: participation of inbound tourism, foreign exchange inflows from tourism, participation of tourism in GDP and share of tourism in total employment. A correlation analysis was conducted in order to prove the following hypotheses - values of travel and tourism competitiveness index are not in line with the performance indicators of the tourist destination.

In Serbia, tourism has a growing potential, with a great performance in the growth of inbound tourism and corresponding foreign exchange inflow (more than 50%, from 2009 to 2017). According to SWOT analysis of Serbian tourism, in The Strategy of tourism development of Republic of Serbia for period 2016 – 2025, the greatest weakness of Serbian tourism is "failure to recognize the importance of tourism as essential factor of economic growth, more uniform regional development

and employment growth" (Ministry of Trade, Tourism and Telecommunication, 2016). Despite of inefficient tourism policies, different areas of tourism have been identified as a source of tourism and economic development of Serbia: rural tourism, spa and wellness tourism (Dimitrovski & Todorović, 2015), mountain tourism (Stankov et al, 2011), wine tourism (Sekulić et al, 2016). In Travel and Tourism Competitiveness Report for 2017, Serbia was ranked at 95th place among 136 countries with total score 3.38 out of 7. In this paper, a special review was made on the state and potential of Serbian tourism and the role of insurance in tourist organizations and tourism management.

Models of tourism destination competitiveness

As mentioned in the introduction section, many authors of tourism destination competitiveness literature have developed models that are based on Porter's theory of national competitiveness. The model which represents one of the most important frameworks in tourism destination management and adopts Porters concept of comparative advantage is Ritchies and Crouch's Conceptual Model of Destination Competitiveness. Complexity of Ritchies and Crouch's model is based not only on identifying the indicators and factors of competitiveness of the destination, but also on determining the mutual relations between these variables. Conceptual model of destination competitiveness consists out of the following components: competitive (micro) environment, global (macro) environment, core resources and attractors, supporting factors and resources, destination management and qualifying determinants (Ritchie & Crouch, 2003). Groups of global forces are categorized in levels according to the criterion of stability and predictability of anticipation and forecast. In the model, groups of global forces are identified, which are so pervasive that their influence extends well beyond tourism into all aspects of the economy and society (Ritchie and Crouch, 2003). Mazurek argues that "despite the complexity and content richness, the model seems to be too complicated and not easily understood by some tourism policy representatives" (Mazurek, 2014). According to Dwyer and Kim, model focuses only on the supply side and provides an incomplete picture of the competitiveness of tourist destinations (Dwyer and Kim, 2003). This critique is based on the fact that model doesn't take into account indicators of tourism performance and demand in evaluating destination competitiveness.

Dwyer and Kim created the Integrated model of destination competitiveness, which included a major part of Ritchie's and Crouch model components and summarizes following main determinants of destination competitiveness: inherited resources, supporting resources, created resources, situational conditions, destination management and demand condition (Dwyer and Kim, 2003). Tsai and associates argue "that the model explicitly recognizes demand conditions as an important determinant of destination competitiveness, which was not mentioned by Crouch and Ritchie" (Tsai et al, 2009). Integrated model distinguishes factors that are influenced by or have influence on the destinations competitiveness, with underlined importance of contribution of tourism activity on socioeconomic prosperity. Dwyer and Kim's model has a major impact on the inclusion of indicators of tourism demand and performance in the destination competitiveness theory. In addition to the above-mentioned conceptual frameworks for destination competitiveness, numerous researches have been conducted with focus on emphasizing the importance of different factors such as tourist preferences and satisfaction (Vavra, 1997), ecology (Poon, 1993), prices (Dwyer et al, 2000), government policies and strategies (Gooroochurn & Sugiyarto, 2005). Gooroochurn and Sugiyarto identified eight indicators of tourism destination competitiveness in their model: price competitiveness, infrastructure, technology, environmental conditions, openness for tourism, social development, human resources (Gooroochurn and Sugiyarto, 2005). All indicators are presented in a form of aggregate index published within Competitiveness Monitor of World Travel and Tourism Council. This model is also derived from Ritchie and Crouch's framework and enables the comparison and benchmarking within the tourist destinations. In general, two disadvantages are attributed to it: 1) the index does not use all the indicators available due to the deficit of statistical information on them, many countries being excluded from the global calculation; and 2), each index is obtained as a simple sum of the standardized indicators, without the indicators having been weighted in the calculation of the aggregate indices (Pablo-Romero et al, 2016). TTCI is also an internationally accepted indicator of tourism destination competitiveness, based on the methodology that consists out of 14 pillars aggregated under four sub-indexes. Index totally includes 90 individual indicators that can be divided into hard data - official statistical data from different international organizations and soft data - results of Executive Opinion Survey of travel and tourism experts. According to World Economic Forum TTCI "takes a global approach through the analysis of industry trends and offers the unique perspectives of global leaders from

industry, international organizations and government on critical issues to address to ensure the long term travel & tourism competitiveness" (WEF, 2017). In spite of the large number of variables that are taken into account, TTCI is characterized by its simplicity and giving an equal importance to all indicators, regardless of the individual conditions and competitiveness factors characteristic of each of the observed countries. Also, it is a useful tool in comparing different aspects of the tourist competitiveness of countries.

Table 1: *The best and worst-ranked aspects of the competitiveness of the tourist destination for the top ten most competitive countries in 2017*

Country	Rank	Score	Pillar with the lowest value		Pillar with the highest value	
			Value (1-7)	Pillar	Value (1-7)	Pillar
Spain	1	5,43	3,90	International Openness	6,90	Cultural Resources and Business Travel
France	2	5,32	4,10	Price competitiveness	6,70	Cultural Resources and Business Travel
Germany	3	5,28	4,00	Natural Resources	6,90	Health and Hygiene
Japan	4	5,26	4,31	Natural Resources	6,53	Cultural Resources and Business Travel
United Kingdom	5	5,20	2,80	Price competitiveness	6,20	Tourist Service Infrastructure
United States	6	5,12	3,65	Environmental Sustainability	6,59	Tourist Service Infrastructure
Australia	7	5,10	3,57	Ground and port infrastructure	6,14	Health and Hygiene
Italy	8	4,99	3,90	Business Environment	6,50	Cultural Resources and Business Travel
Canada	9	4,97	3,32	International Openness	6,79	Air Transport Infrastructure
Switzerland	10	4,94	2,80	Price competitiveness	6,50	Health and Hygiene

Source: WEF (2017)

In Table 1 are presented top 10 most competitive tourist destinations, according to Travel and Tourism Competitiveness Report for 2017, with related minimum and maximum values of 14 pillars. Four out of ten most competitive destinations (Spain, France, Japan and Italy) have maximum values for 14th pillar – Cultural Resources and Business Travel, which is calculated from UNESCO World Heritage List data and includes number of World Heritage cultural sites, oral and intangible cultural heritage expressions, number of large sports stadiums, number of international association meetings and number of online searches index. Cultural resources play an incentive for the competitiveness of the tourist destination, since they could result in the number of tourist visits and better performance of the tourist destination. However, this relationship cannot be adopted globally for all the countries observed and measured by TTCI. According to research conducted by Dugulan and associates (2010) on contribution of cultural resources to the competitiveness and tourist performance for selected Central and Eastern European countries, it has been concluded that "cultural resources contribute, surprisingly, in a very poor measure to the overall competitiveness of the considered countries" (Dugulan et al, 2010). The most prominent pillars, observing the minimum index values for the 10 most competitive destinations, are price competitiveness and international openness. These indicators also affect the performance of the tourist destination and "considering the price sensitivity of the demand for travel, destinations need to monitor their price competitiveness relative to alternate locations" (Dwyer et al, 2001).

Competitiveness of tourism in Serbia

Serbia has significant potential in improving tourism and tourism competitiveness, with a special focus on the contribution of tourism to the national economy. Exceptional geolocation, natural resources, rich cultural and historical heritage make Serbia a great tourist potential, despite the great political and economic constraints that have contributed to the performance of Serbian tourism not reaching its maximum. In the transition process, privatization of a large number of hotels and resorts was carried out, which resulted in the termination of facilities with more than 2,700 beds. Also, the limiting factor for the monitoring and development of tourism is the representation of the grey economy, which is estimated to account for 69% of tourist inflows (Ministry of trade, tourism and telecommunication, 2016). The incidence of grey economy and employees, and undeclared workers, endangers the potential effects of all activities envisioned by national strategies and official statistics that

represent a platform for their implementation (Vojinović et al, 2016). Also, the grey economy directly affects the illegal cash flows (Vojinović et al, 2017), which consequently leads to difficulties in applying any systematic incentive for tourist activity. As mentioned in the introduction section, many authors have emphasized the importance of following areas of tourism as a potential for fostering tourism performance: rural tourism, spa and wellness tourism, mountain tourism, wine tourism. The overall contribution of tourism amounts in total 6,5% of GDP in 2015, and direct contribution of tourism in 2017 makes up for 2,2% of GDP. Number of employees in tourism and related activities accounts for 3,7% of total employment in Serbia. Taking into account that the world average of tourism participation in GDP is 10.2% and employment of 9.6% in total employment, it can be concluded that Serbia does not follow the pace of tourism development in the world. In Table 2 the main performance indicators in Serbian tourism are shown. In the observed period, positive trends were registered in the number of foreign tourist arrivals and related revenues, with the number of hotels increased by 38%. On the other hand, the participation of employees in tourism in total employment in Serbia was reduced by 0.7%. TTCI score shows that, despite these positive trends in tourism performance, the competitiveness of Serbian tourism has decreased from 3.9 score in 2011 to 3.34 in 2017. The notable inconsistency of the performance indicators of Serbian tourism with the TTCI indicator is the subject of the analysis in the continuation of the research.

Table 2. Performance indicators in Serbian tourism and TTCI values

Year	Domestic tourist arrivals (in 000)	Foreign tourist arrivals (in 000)	Income of tourism (mil EUR)	Number of hotels	% of employees in tourism	TTCI
2009.	1376	645	617	246	4,8%	3,70
2010.	1318	683	605	251	4,6%	-
2011.	1304	764	710	262	4,5%	3,90
2012.	1270	810	708	297	4,3%	-
2013.	1271	922	792	301	4,8%	3,78
2014.	1160	1029	863	328	4,1%	-
2015.	1305	1132	945	339	3,7%	3,34

Source: WEF (2017) & Statistical Office of the Republic of Serbia (2018)

Much research has been conducted on the topic of competitiveness of Serbia as a tourist destination. Armenski and associates applied Integrated

model of destination competitiveness by Dwyer and established that Serbia is more competitive in its natural, cultural and created resources than in destination management and is less competitive in demand conditions (Armenski et al, 2011). Popesku and Pavlović applied the same model and identified destination management as the least competitive factor in Serbian tourism (Popesku & Pavlović, 2015). They also noted deviations in the results of applying the Integrated Model in relation to results - indexes of identical factors expressed through TTCI. Spasić & Pavlović emphasize the role of destination management and argue that activities of destination management contribute to the quality of the products offered in the destination and to the destination competitiveness at the international market (Spasić & Pavlović, 2015).

The role of insurance in tourism destination management

Different aspects and participants are covered by the methodological framework of risk in tourism - tourists and their behavior, tourist organizations and their business, as well as the countries - tourist destination whose competitiveness are impacted by security and safety, and the ability to provide tourist adequate insurance protection. The last area of research includes the impact of perceptions of the risk of tourists on the choice of a tourist destination. These circumstances imply the necessity of implementing risk management in tourism organizations, especially at the macro level of governments, associations of tourist organizations and other institutional participants. Effective and efficient risk management in the tourism industry is based on adequate identification and risks analysis, planning and implementation process – all aiming at preventing or mitigating the occurrence of risks (Stojanović & Ilić, 2016). Risk management in tourism should be conducted unified at the international level, given the international character of the tourist activity. World Tourism Organization (UNWTO) is a key international authority in improving tourism competitiveness in the area of risk and crisis management in tourism. Through various programs, UNWTO includes tourist stakeholders at all levels in the activities of creating plans for identification and risk mitigation and communication in cases of risk occurrence (natural disasters, terrorist attacks, etc). Tourism organizations are the essential participants in the risk management in tourism. One of the most comprehensive conceptual frameworks in risk management and insurance in tourism is Robertson Guide to Managing crises in Tourism (Robertson et al, 2006). Framework represents a process in risk management in tourism and includes following stages: establish the

context, identify the risks, risk analysis, risk evaluation, treatment of risks (Robertson et al, 2006). Tourism stakeholders, especially tourist organizations and operators, should focus on implementing on-going activities of communication and consultation and monitoring and review, in comprehensive process of risk management of tourism destination. The application of risk management framework in tourism destination management process enables tourism policymakers and stakeholders in anticipating and mitigating risks that can affect the competitiveness of a tourist destination. Different risk frameworks are empirically investigated in the area of tourism destination management, including the Integrated Risk Management approach (IRM), developed by COSO (COSO, 2004). Mikulić and associates (Mikulić et al, 2016) have applied IRM framework in assessing short-term risks of Croatian tourism. The IRM approach consists out of following activities: defining destination objectives, analysis of external and internal environment, risk identification, risk assessment, risk mapping, risk management decisions, continuous monitoring and reviewing (Mikulić et al, 2016). The advantage of applying these theoretical frameworks is the opportunity for defining the specific risks that are immanent to a particular tourist destination. On the other hand, many authors have defined the overall types of risk which are correlated to tourism destination and tourist activity, such as: health, political instability and terrorism (Sonmez & Graefe, 1998); war and political instability, health, crime and terrorism (Poon & Adams, 2000); internal business risk, environmental risk, competitiveness risk, economic risk, political factors, infrastructure, circumstantial risk, business insufficiencies, specific (local) risk (Oroian & Gheres, 2012). Taking into account the identified threats in SWOT analysis of Serbian tourism, the following risks can be highlighted in particular: economic risks, terrorism and safety risk and political risks. Unfortunately, there is no developed and regulated institutional approach to risk management in Serbian tourism. The Law on Tourism stipulates that tourist organizations perform advocacy activities in insurance of passengers and luggage in accordance with the law regulating insurance. In 2018, 3 legal entities and 9.638 personal entities were registered for representation in the sale of insurance of drivers and passengers from the consequences of an accident. The accident insurance premium, which includes, inter alia, compulsory insurance (such as insurance of passengers in public transport and insurance of employees from occupational injuries and occupational diseases), in 2017 has a share of 3.8%. In Table 3 are presented performance indicators in business of 27 tourist organizations in Serbia. The premium is the price in the direct dependence on the insurance

amount that is paid by the insured, and which should be sufficient to cover the risk in a certain period of time and on a large enough number of insured to diversify risk (Birovljev et al, 2015). The average participation of insurance premiums in total expenditures of included entities amounts only 0.25%. These figures indicate the need to attach greater importance to insurance in the business of tourism organizations and to regulate the protection of tourists from all potential risks. This approach will consequently lead to a larger volume of business in the tourism industry and greater competitiveness of Serbia as a tourist destination.

Table 3: *Indicators of Serbian tourist organization business in 2016*

Average capital funds (in 000 RSD)	Average total income (in 000 RSD)	Average total expenditures (in 000 RSD)	Average net profits (in 000 RSD)	Average participation of insurance premiums in total expenditures
10.299	77.434	75.123	1.122	0,25%

Source: *The authors, based on research*

Methodology, data and hypothesis of the research

In order to test the credibility of the TTCI index, a correlation analysis was carried out using the Pearson coefficient in relation to the data on tourist activity performance and demand for the period from 2009 to 2017 for the following countries: Serbia, Bosnia & Herzegovina, Macedonia, Croatia, Montenegro, Hungary, Romania, Slovak Republic, Slovenia and Bulgaria. The following indicators of tourism demand for the observed countries have been taken into account: share of inbound tourism, foreign exchange inflow from inbound tourism, contribution of tourism in GDP, participation of tourism employment. Statistical processing was conducted using IBM SPSS 23.0 software and TIBCO Statistica 13.0 software in order to perform following statistical methods: descriptive statistics (mean, median, mode, standard deviation) and Pearson's correlation coefficient. The values of the Pearson's coefficient are calculated in relation to the significance level of 0.01. The data from The Travel & Tourism Competitiveness Report and official statistical publications of the observed countries were used. Data used for analysis of Serbian tourism performance indicators are presented in Table 2. The analysis was carried out in order to prove the hypothesis of the research: there is no statistically significant correlation between the TTCI index and the variables that represent the indicators of tourist demand.

Results and discussion

Taking into account the hypothesis of the research, a descriptive analysis and analysis of the Pearson coefficient of correlation of the rank was performed and presented in following tables. Table 4 shows the descriptive analysis of data for Serbia. The data collected correspond to the application of the correlation analysis and the two tailed Pearson's correlation coefficient, which is presented in Table 5, for data of Serbian tourism. With a value of Pearson's r correlation coefficient at level of -0.751, a negative moderate correlation between the TTCI index and the indicators of the participation of inbound tourism in the total number of tourists can be identified. Also, there is a negative insignificant correlation in the movement of the TTCI index and the share of tourism in GDP. On the other hand, there is a positive statistically significant correlation between the TTCI index and the participation of employees in tourism in total employment – the value of Pearson's r coefficient is 0.875. If the correlation between tourists demand indicators is observed, a positive and statistically significant correlation between share of inbound tourism and foreign exchange inflow of inbound tourism can be identified, considering the value of r correlation coefficient at level of 0.974.

Table 4: *Descriptive statistics for Serbia*

Indicator	TTCI	% of inbound tourism	FE inflow - inbound tourism	% of tourism in GDP	% of tourism employment
Mean	3.62	0.4120	930.600	0.0176	0.0428
Median	3.70	0.4200	992.000	0.0190	0.0450
Mode	3.34	0.32	696.	0.01	0.05
Std. Deviation	0.248	0.06760	151.353	0.00462	0.00589
Minimum	3.34	0.32	696	0.01	0.04
Maximum	3.90	0.48	1.052	0.02	0.05

Source: *The authors, based on research*

The analysis of the correlation of the rank was also conducted for the data of other countries involved in the research. Table 6 shows the Pearson correlation coefficients of the TTCI index of the observed countries and the indicators of tourist demand for the period from 2009 to 2017. The obtained values indicate the lack of statistically significant correlation of the TTCI index and indicators of tourist demand, with a confidence level

of 0.01. The exceptions are in cases of Slovenia and Bulgaria, where the results imply that there is negative significant correlation between their TTCI index and share of inbound tourism and foreign exchange inflows from inbound tourism, respectively.

Table 5: *Correlation analysis of TTCI values and tourist demand indicators for Serbia*

Pearson Correlation Sig. (2 – tailed)	TTCI	% of inbound tourism	FE inflow - inbound tourism	% of tourism in GDP	% of tourism employment
TTCI	1	-.751 .143	-.596 .289	-.323 .596	.875 .052
% of inbound tourism		1	.974** .005	.780 .119	-.834 .079
FE inflow-inbound tourism			1	.814 .093	-.714 .175
% of tourism in GDP				1	-.693 .194
% of tourism employment					1

** . Correlation is significant at the 0.01 level (2-tailed).

Source: *The authors, based on research*

Table 6: *Summary of the results for Pearson's correlation coefficient analysis*

TTCI for observed countries	Indicators of tourist demand			
	% of inbound tourism	FE inflow - inbound tourism	% of tourism in GDP	% of tourism employment
Serbia	-.751	-.596	-.323	.875
Bosnia & Herzegovina	-.785	-.257	.086	-.448
Macedonia	-.585	-.635	.010	-.863
Croatia	-.308	.255	-.029	.159
Montenegro	-.514	-.480	-.355	-.607
Hungary	-.875	.008	-.648	-.701
Romania	.372	-.967**	.556	.621
Slovak Republic	-.829	-.513	-.715	-.701
Slovenia	-.886**	-.119	-.641	-.655
Bulgaria	.409	.005	-.593	.366

** . Correlation is significant at the 0.01 level (2-tailed).

Source: *The authors, based on research*

On the basis of the obtained results, it can be concluded that the hypothesis is conditionally confirmed, taking into account the identified exceptions. The conditionality of confirming the hypothesis of the research stems from the fact that the values of tourist demand indicators are influenced by a large number of factors that are not covered by the TTCI index methodology. On the other hand, a positive trend in the movement of total traffic of tourists, GDP and total employment in the observed countries suggests that a higher contribution of tourism to the overall economy is not the result of an absolute decrease in the value of these indicators.

Conclusion and implications

Tourist activity is achieving outstanding performance in recent years. Tourism and its performance contribute to economic growth and development, employment growth, infrastructure development and traffic, growth in investment and incentive effects on the overall performance of national economies. Tourist destinations, based on market demand indicators (number of tourists, foreign exchange inflows based on tourism, contribution to GDP), determine their competitiveness relative to other countries. In relative determining of competitiveness, factors such as price competitiveness, tourist preferences, safety and security, hygiene and other short-term factors are taken into account. Absolute competitiveness of the tourist destination implies its performance in relation to its potential, viewed by different long-term criteria of destination competitiveness (prioritization of travel and tourism, environmental sustainability, natural and cultural resources). Absolute competitiveness is a model and a long-term management tool in tourism, especially from the point of view of policymakers and market leaders in tourism business (travel agencies, hotel companies, carriers, insurance companies and other related participants). It is absolutely necessary to clearly understand the core activities of the company and the values it creates for its consumers (Piuković Babičković et al, 2016), especially in the area of tourism destination management. Observing those factors that are identified in a long-term - cultural, natural or business potential and resources, also presents a precondition in creating an efficient and targeted strategy in building destination competitiveness, which is a primary goal of tourism management. The models of competitiveness of the tourist destination, which were mostly based on determinants of the long-term character (Dwyer, Ritchie and Crouch), represent a tool in defining absolute concurrency and those factors that have the greatest

potential for further strategic development. Recent models such as Gooroochum and Sugiyarto's Competitiveness Monitor or Travel and Tourism Competitiveness Index that focus on factors that define competitiveness in the short term, enable the definition of relative competitiveness. Considering that TTCI includes, in part, factors of a long-term character, the consistency of its movement with the performance indicators of the tourist destination cannot be expected. This hypothesis is set out in this paper, and conditionally confirmed by the quantitative analysis of the correlation between the trends in the TTC index and indicators of the performance of the tourist destination (share of foreign tourists, foreign exchange inflows based on tourism, number of employees in tourism, participation of tourism in GDP). A particularly important factor of destination competitiveness is insurance and risk management in tourism, which is becoming increasingly important field of management in tourism. The application of the appropriate competitiveness model and the methodology for determining the significance of factors is a prerequisite for the application of an appropriate development strategy in tourism.

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DEVELOPMENT OF THE FINANCING MODEL FOR TOURISM OF LOCAL GOVERNMENTS IN THE FUNCTION OF THE PERFORMANCE AUDIT

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Abstract

The aim of this paper is to develop a procedural model of tourism financing in the function of an audit of the importance for the local governments financing and establishing a status that would support the development of the Republic of Serbia (RS). It is necessary to identify the requirements for the development of the mature model in the function of the performance audit that would contribute to the development of the RS through the development of local self-governments. Based on the requirements, different models of financing will be compared as well as the results based on the audit findings, in order to build a platform for the development of the model. Audit findings are used to measure a model that evaluates efficiency: spending funds in financing tourism, cooperation with local governments and compliance business objectives, results and contribution to RS development, which is the result of those measures. The research gives methodology faster objective estimation at lower costs.

Key Words: *tourist organization, local government, performance audit*
JEL classification: M42, Z30

Introduction

Citizens, the media and state institutions are interested in reducing public sector expenditures, as well as expenditures in the budget system. Very important thing is to find a model that will keep the funds for financing

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tourism under control and strengthen this purpose of the performance audit as well.

There are various types of controls, and what they have in common is their necessity. Control is necessary because it is very difficult to foresee the future of operations in any business, especially in the field of tourism. The more participants there are on the market and the quicker the information is acquired, the more efficient the market becomes (Tomić & Labović, 2013).

If one could anticipate things such as the hotel services market demand, general economic conditions, availability and resource costs, as well as human work and technological processes and innovations, the need for control would disappear. As the future events cannot be fully anticipated, the need for control should be completely transparent (Stanišić & Nikolić, 2009a).

Financial development plan

What is necessary for tourism organizations is to have their own plans for future sales. Various internal factors (unprofessional or inconvenient work of the hotel staff, inefficient advertising, etc.) and external factors (recession, competition activities) very often require the rewriting of such plans or their rebalance.

Only well organized controls can provide management in the tourism industry with timely information on the basis of which they will make an additional allocation of resources, make changes to the range of products / services, and, when necessary, make corrections of their plans.

The time needed for control is of great importance. If the control is executed on time, the management will prevent deviations from the planned (standard) activities and will prevent the mistakes from the previous period being repeated. If the control is performed before the start of a particular business event, management is in a position to remove all possible causes of improper functioning (Stanišić & Nikolić, 2009).

Since controls conducted before the start of a business event have their own advantages, controls that are carried out during the business process also have their own contribution, as they allow corrections on the spot. All these controls help the management to improve their control function at any moment.

The control cycle consists of three main parts:

1. Development of business standards,
2. Measurement and comparison of actual business activities according to the standard
3. Performing corrective measures if necessary (Stanišić & Nikolić, 2009c).

The plan (standard) of business represents the state of the future business that we tend to accomplish and is also determined by the goals of the organization as well as its planned efforts to achieve these goals. If standards are formulated more precisely (quantity, quality, costs, time), and not in general terms, statistical data will be used to obtain a more realistic picture of the management of the state of the organization.

Earlier results are valuable guidelines for the development of plans (standards).

Analyzing the information received and taking corrective measures represents the next very important phase. This phase involves summarizing the obtained results (volume of sales and other) from a particular part of the organization. After that is the phase of collecting the data of all the existing parts of the organization in order to make them summarize and determine the total sales volume for the entire organization. After this analysis, the operating costs (both the individual part and the whole organization) are examined and the amount of profit from sales is taken into account in order to compile the operating balance of the entire organization. This type of control system serves to collect and summarize data before undertaking corrective action.

Information on exemptions from the plans (standards) is in the part of the deviation from budgeted or standard business and serves the management to balance only the exceptions in the entire operation of the organization. Permanent control activity allows tourism to make the transition from the current state to the future situation easier, in accordance with the set goals.

Methods of budgetary control of the development of the financial development plan

There are various methods and techniques for controlling which managers rely on. They are necessary and they represent an instrument by which

performance is measured and evaluated. Control is needed in order to establish standards of behavior of individuals and also business standards. Controls are also the means by which the goal becomes more easily accessible, and their control assessments indicate whether the activity or process needs to be corrected in order to achieve the goal. The control plan is very important. The reason lies in the fact that plans provide the standards that are necessary for the manager to perform his control function. In addition, the results of the control activities lead to corrections and give the feedback so the cycle can be repeated (Stanišić & Nikolić, 2009d).

It is very important to establish the internal budget control, which is the central part of financial control. By creating numerical data, or budget for quantity and flow of resources, the manager creates a framework, or standard, according to which the actual business results will be evaluated (Stanišić & Nikolić, 2009).

The annual budget, as a sum of twelve-month plans, represents the organization's profit plan and contains all sources of revenue and all costs. They are the basis on which the management estimates the actual results of the business through planning and control functions.

Planning the operational budget is one of the most important activities in the organization, because without the drafting and adoption of the budget plan there are no financial transactions or settlement of liabilities. It is therefore very important that account holders of each sector in the organization take part in its creation, in order to be better motivated to implement the profit plan of the organization.

Budget plans are delivered to the departments to review them and, if necessary, make some corrections. A short statement of revenue for the next year is made and is given, together with the sector plans and supporting data, to general managers to assess the reality of revenue and expenditure objectives. Any additional updates and corrections are made by the general manager, the controller and the appropriate managers. The general manager's report mainly includes the following issues:

- competition,
- Economic and political conditions,
- unusual items,
- staff,
- equipment,

- prices,
- important achievements,
- cash flow (Stanišić & Nikolić, 2009e).

A review of the budget plan with the sector managers would be another useful control before its adoption. If there are some misunderstandings, it will again include the responsible sector managers until its final adjustments.

Responsibility for future plans

The question of the responsibility of the management role versus the responsibility of the audit role is based on the following:

- management's responsibility - since management is responsible for prescribing and implementing business documents in the organization as well as for the introduction and implementation of internal controls, for managing the business policy of the organization, at the same time is also responsible for the implementation of the financial plan;
- The responsibility of the auditor - the auditor, and especially the internal auditor, can undoubtedly contribute to the detection and prevention of criminal acts and illegal activities, or to prevent false financial reporting (Eremić-Đodić et al., 2017a).

Researching

Tourism organizations can have significant driving force in the development of the Republic of Serbia, but in order to establish and develop, among other things, access to financial resources (Sedlak et al., 2016). In line with the proposal of the ministry responsible for tourism, the Government adopts the Strategy for the territory of the Republic of Serbia. The strategy particularly contains:

1. Analysis of the current situation and the current level of tourism development;
2. Comparative analysis of tourism of competitive countries;
3. Advantages and disadvantages of tourism in the Republic of Serbia;
4. Tourism development aims;
5. Tourism development vision;
6. Selection of priority tourism products;
7. Proposal for priority tourist destinations;
8. An analysis of the impact on cultural heritage of natural assets;
9. Suggestion for tourism development policy;

10. Investment suggestion ;
11. Competitive plan.
12. Action Plan (Official Gazette of the Republic of Serbia, 2015).

As the aim of the work is to develop a procedural model for financing tourism, which would be in the function of the performance audit for financing the local governments and for establishing a status that would support the development of Republic of Serbia. Development strategy or any other planning document adopted at any management level has no purpose unless it is specified and applied in practice or unless it lead to an improvement in the quality of life of the citizens it relates to (Tomić & Labović, 2012).

Since the topic of this paper is the development of the financing model for tourism of local government in the function of the performance audit the work is based on the Action Plan and its Strategy for the Development of Tourism of the Republic of Serbia during the period 2016-2025, it defines activities, business owners and implementation time. Based on them, 15 (fifteen) tables were created with indexes by means of which surveys of tourist organizations / communities were conducted. They are shown in the following pages:

Table 1: *Summary table which data is checked in the city government*

1.	Updating and adopting changes to existing ones, creating and adopting new STRATEGIC master plans
2.	Preparation and adoption of local tourism development programs
3.	Coordination and reporting on the implementation of the strategy
4.	Improvement of the development and efficient use of tourist infrastructure and suprastructures and establishing a monitoring and recording system
5.	Improving the efficiency of using available EU funds in the field of tourism
6.	Capacity and quality improvement of managing in the tourist area and destinations
7.	Suggested measures
8.	A program of subsidies for activity and projects of importance for the development of tourism
9.	Investments

Table 2: *Updating and adopting changes to existing ones, creating and adopting new STRATEGIC master plans*

Number of updated master plans	
Number of adopted new strategic master plans	
Record check (web site MTTT, job progress report, MTTT report)	Circle: -web site MTTT - work progress report; - MTTT report.
Time for implementation 2016-2020. Comment: Preparation and adoption of new strategic master plans 2016-2025.	

Table 3: *Preparation and adoption of local tourism development programs*

Number of developed and adopted programmes in accordance with the Law on Tourism	
Developed web application for coordinating the implementation of strategies	Yes/no
Number of seminars and number of participants in seminars / workshops	
Local institution reports (TO, DAS, SCC, and other partners, web site-MTTT, NTOS i LTO)	Circle: - TO; - DAS; -SCC; - and other partners; -web site -MTTT, NTOS and LTO
Implementation time 2017-2020	

Table 4: *Coordination and reporting on the implementation of the strategy*

Determined content and dynamics of the reporting on the flows of strategy realisation	Yes/no
Reords are periodical reports MTTT, NTOS, local institutions, TO, DAS, SCC and other partners	Circle periodical reports:- MTTT, -NTOS, -local institutions, TO, DAS, -SCC and other partners.
Implementation time 2017-2021	

Table 6: *Improvement of the development and efficient use of tourism infrastructure and suprastructure and establishing a system of monitoring of the state and records*

Improved quality of tourist infrastructure and suprastructure	Number of hotels and other categorised facilities for accommodation per 100 inhabitants	
	Number of beds in categorised accommodation facilities	
	Length of built and arranged bicycle trails and other cultural routes	
	Set up tourist signaling	Yes/no
	Number of visitor / info centres	
	Number of campsites	
Development of the ICT sector in tourism	Number of arranged beaches	
	Number of Internet users	
	Internet in bussiness	Yes/no
Records	Presence on social networks	
	SORS, SCC, web site, MTTT, BRA	Circle:- -SORS, -NBS, - web site, -MTTT, -BRA
Time Continuous activity		

Table 7: *Improving the efficiency of using available EU funds in the field of tourism*

Guide for EU funds users and the tourism industry sector of the RS	Yes/no
Number of organized seminars and education for preparation of projects	
Number of participants in seminars / workshops	
Record Web site MTTT, web site NTOS, LTO, regional and provincial TO, software applications and online presentations of professional associations	Circle: -web site MTTT, -web site NTOS, -LTO, -regional and provincial TO, -software applications and online presentations of professional associations
Time: Continuous activity	

Table 8: *Capacity and quality improvement of managing in the tourist area and destinations*

Number of organized seminars and educational trainings	
Number of participants in seminars-workshops	
An act on the tourist destination management model	Yes/no
Developed and adopted model of destination cards	Yes/no
Developed and adopted „e-TOURIST“ programme	Yes/no
Record (web site MTTT, NTOS web site, LTO, regional and provincial TO, reports of the above mentioned institutions)	Circle: -web site MTTT, -NTOS web site, -LTO, regional and provincial TO, -reports of the above mentioned institutions
Deadline: 2017-2021	

Table 9: *Suggested measures*

Established system of payment cards for consumption in regional accommodation facilities (food and beverage)	Yes/no
Number of arrivals of local tourists	
Number of nights of local tourists	
Number of arrivals and realized nights of local tourists based on the use of vouchers	
Number of arrivals of organized groups of foreign tourists	
Number of organized groups of foreign tourists	
Foreign exchange income from tourism	yes/no
Redefined country policy in tourist destinations	yes/no
Available documents for the application for the use of vouchers or incentives for travel organizers, SORS, NBS, documentation of AP and local government in tourist destinations	circle the record you are performing in the column field above
Deadline: 2019-2020	Time: Continuous activity

Table 10: *A program of subsidies for activity and projects of importance for the development of tourism*

Quality tourism infrastructure	Yes/no
Number of tourism development projects	
Number of seminars and educational trainings	
Number of participants in seminars-workshops	
Number of arrivals and realized nights of local and foreign tourists	
Foreign exchange income from tourism	Yes/no
Records: Web site MTTT, work progress , Report MTTT, SORS, NBS	Circle: -web site MTTT, -work progress , -Report; -MTTT, -SORS; -NBS
Time: continuous activity	

Table 11: *Investments*

Published catalog of investments in tourism and participation of promotional activities related to investments in tourism in the country and abroad	yes/no
Improved investment environment and increased investment in tourism	yes/no
Record: reports of competent institutions, web site MTTT, work progress	Circle: -reports of competent institutions web site MTTT; -work progress
Time: Continuous activity	

Table 12: *A summary table which data is checked at the Ministry of Finance*

Interdepartmental cooperation and coordination of activities - drafting a plan of joint activities of the Ministries for the strategy implementation and action plan	
Amendments to relevant legislation (established after model definition)	

Table 13: *Interdepartment cooperation and coordination of activities - drafting a plan of joint activities of the Ministries for the implementation of the strategy and action plan*

A plan of joint activities of the relevant institutions for the implementation of the strategy and action plan	yes/no
Check record (web site, MTTT, work progress, reports MTTT)	Circle: -web site,- MTTT, -work progress,-reports MTTT.
Implementation time 2017-2020	

Table 14: *Suggested measures*

Established system of payment cards for consumption in regional accommodation facilities (food and beverage)	yes/no
Number of arrivals of local tourists	
Number of nights of local tourists	
Records: SORS, Ministry of Finance, BRA	Circle: -SORS, -Ministry of Finance,- BRA
Deadline: 2019-2020	

Table 15: *Amendments to relevant legislation (established after model definition)*

A modern legislative framework for planning and improving tourist destinations	yes/no
Number of cards issued	
Registered payment through cards	yes/no
Number of arrivals and nights of local tourists	
Records: reports from the competent institutions, progress work, MTTT, web site of relevant institutions	circle:- reports from the competent institutions - progress work; - MTTT; -web site of relevant institutions
Time: 2019-2020	

Table 16: *The table which data is checked in the SORS*

Improved methodology and procedures for the collection and processing of statistical data and in accordance with International Standards and Practice	yes/no
Statistical monitoring in the area of tourism according to the TSA model	yes/no
Record: SORS. NBS, web site MTTT, BRA	Circle: -SORS. -NBS,- web site MTTT,- BRA.
Deadline: 2017-2021	

Therefore, the aim of this strategy is to approach tourism systematically, not only through economic indicators (as a possible sustainable source of creating new added value and employment in the Republic of Serbia), but also through the multiplicative effects that tourism has on the overall social, local and regional development (the Ministry of Trade, Tourism and Telecommunications 2016).

Evaluating the funding model in the function of the performance audit for financing local governments is a very complex process and involves many aspects that are sometimes qualitative. Audit findings are used to measure a model that evaluates the efficiency of spending the resources in financing tourism, assess the efficiency of cooperation between tourist communities and local governments, and assess the compliance between business objectives, achieved results and contribute to the development of the Republic of Serbia.

Based on the survey, it has been established that there are no unique records for the public sector which could be submitted by the tourist organizations or the tourist communities. On the basis of qualitative criteria for specificities related to master plans and operational plans for tourism development, we have not found the estimated joint commissions by tourism organizations/communities nor local governments who made the reports and conducted control of funds and also organized working meetings on the basis of the conducted questionnaire. In the survey, 35 travel agencies participated by a random sample.

The survey showed that there was a great deal of interest among the respondents to engage themselves in completing the submitted questionnaires. Although a larger number of respondents agreed that the information they should obtain from the sources mentioned in the questionnaire were the most important for making decisions on the improvement and development of tourism, the results of the research are as follows:

- Clearly provided data indicate that there is insufficient cooperation between tourist organizations and local governments. Cooperation among them is at a very low level.
- The information provided indicates that cooperation between the Ministry of Finance and the tourist organizations / communities almost does not exist or if it exists, it is at a very low level, lower than the cooperation with the local government.
- Based on the provided data it is obvious that the tourist organizations / communities deliver the annual report Form TU-14 to the Statistical Office of the Republic of Serbia "Researching on tourist agencies for ____ year".

There you can find information about: the tourist organization, its employees, the number of branches, branch offices, the means of transport of tourists and their ownership, the travels of domestic tourists in the country and abroad, including the number of tourists and the number of overnight stays, the country of origin of foreign tourists and the number of their overnight stays, the number of local visitors. This is the reason why the majority of the sections in the questionnaires remained unfilled. Therefore, in the tourism sector in the Republic of Serbia it is necessary to provide financial resources for establishment and development as well as appropriate advisory support (Jovin et al., 2017a.) Although organizations provide an advantage to financial services, in many cases, funding needs arise due to inadequate financial resources management (Jovin et al., 2017b). For this reason, it is necessary to provide training and counseling to tourist organizations, and especially to new and small ones, as well as "permanent information and continuous improvement of the level of professional knowledge" which is "extremely important for successfully adapting" 15 tourism organizations to challenges and increasing competitiveness. When the activities in their environment become more complex, the importance of advisory support is growing.

When the law prescribes important elements for the formation and work of the commissions, their implementation is realized. However, if there is possibility for the founder of the commission to determine the essential elements, we find that the deadline for finishing the job is not defined, nor is the way or dynamics of reporting. The tasks of the commissions are not defined as well.

Conclusion

The conducted research has shown that there is no desirable link between tourist organizations and local governments, primarily on the issue of feedback through the reports based on the implementation or execution of master plans and operational plans.

Audit entities have no established commissions that would control the spending of master, operational and other resources, nor do they have unique or comprehensive records that would allow the data to be adjusted in a simple and fast way. That would be the basis for the managers of all sectors (participants in that plan) to make timely decisions about the validity of business activity. However, only partial and supportive records are kept, in different places and with different founders.

Without this, it is not possible to talk about the development of the financing model for tourism of local governments in the function of the performance audit.

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TERRORISM AND TOURISM SAFETY

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Abstract

The purpose of this research is to analyze the problems of terrorism and are its threats to the security of people, tourism and infrastructure used by travel agencies and institutions, both nationally and internationally. The modern world and its current condition has brought with it a very dangerous threat to general security, as well as to tourism throughout the world including the Republic of Serbia.

Terrorism, in its threat to modern civilization is a phenomenon of the modern age. Its ever present activities cause many risks to the safety of humans, economic and other national values, is of a very worrying nature.

These values include, tourism, national and multinational infrastructure and its contents which consist of: facilities, tourist services, assets, social and economic well-being of citizens, society, and the wider international community.

Genetic method along with dynamic factors of threat increase was used to describe phenomenon and methods of threatening the touristic infrastructure.

Key Words: *terrorism, threats, infrastructure, risks, security, tourism.*

JEL classification: Z32, Z39

Introduction

Terrorism in its modern form is international problem that presents a great threat to human lives, infrastructure and material assets a whole. Goal of terrorist threats weather delivered individually or groups, is mainly to impose fear, panic and insecurity via media. The main targets are citizens,

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tourists and government representatives. Terrorists execute their threats by planting explosive devices, performing armed attacks, or committing suicide actions. In this way they don't just inflict injuries and kill people, but destroy infrastructure and create major material damage. Moreover, as well as imposing a threat to society and infrastructure, the destruction of objects and means, terrorists inflict economic damage. With that in mind, terrorism as a phenomenon of modern civilization drastically endangers many societies on the planet. Europe is especially threatened and this threat is increasing from Islamic groups. Therefore, terrorist attacks and armed threats will be even more accentuated in Europe making it unsafe. The huge influx of refugees and immigrants from Middle East and Asia and African region, and the rise of criminal activities, all represent threats. Migration, immigration and exile will increase in the future and refugees will come to Europe and Balkans in considerable numbers. Therefore, the highest threat from terrorism and organized crime will be directed towards tourism, infrastructure and the freedom of movement and winter, summer tourist centers.

Terrorism, organized crime, criminals and refugees increase the threat to society and therefore increase the risks. Adequate and high quality risk assessment of the above mentioned threats will have a significant contribution to the minimizing of the risks and casualties. From the above mentioned assumptions and predictions of the author of this paper and many other authors, the threat could be minimized if security were to be increased to include predictions, and the assessment, planning and understanding the danger that is indicated by best intelligence available. Special attention should be given to the fact that terrorist organizations have obtained large amounts of chemical, biological and radioactive substances. From these materials, based on experience, it is reasonable to assume that terrorists are creating dangerous devices which they intend to use (contaminating water and land). This is reinforced by the knowledge that that I.S (ISIS) in Syria had long ownership over chemical industry in their country.

Terminology and defining of transformed terrorism

Terrorism as a phenomenon is a major problem of modern civilization. It represents a threat to the everyday life of modern man. As humanity develops and advances in cultural, material, technical and other ways, terrorist tactics follow, threatening, endangering, and slowing the human development. In that way terrorism is constantly changing. The types of

threats, organizing and staging of terrorist and military conflicts between terrorists, armed forces and religions, are constantly fluctuating. At the same time modern terrorism as dangerous phenomenon especially in the new millennium is increasing rapidly, threats, victims, material destruction for example catastrophes, *Catastrophe in Middle East, especially Iraq and Syria* (2016-2017). The fact that terrorism as a phenomenon and problem of modern civilization, has become the most current form of menace is shown by the examples of violence in multiple countries among which are: Afghanistan, Pakistan, Libya, Iraq, Syria, Nigeria, Yemen, Western Europe etc. One of the countries that was most affected is France. Everything above mentioned warns us to seriously consider and get actively involved in finding a solution. Terrorism is at the same time an old and new phenomenon, directed towards intimidating wide masses and targeted governments, destruction of social values, during which they change and improve the threat etymology methods. Moreover, the above mentioned shows that it is hard to define terrorism because it's meaning changes with historic and societal contexts. An additional problem is that terrorism is not a solid lasting term. It is determined by society, and with societal changes its basic meaning changes and that is exactly what happened in the Middle East.

Many researchers, academics and scientists have put a lot of effort to define the term terrorism, as well as its basic characteristics, however it could not be determined due to the USA attitude which is the biggest obstacle to solving this problem. Based on general debate and activities three scientific teams were formed to define international terrorism, its causes and measures to stop and suppress it. Failed attempts to make a unified definition of this problem appeared even in the activities of these teams. Certain political groups did not want this problem to be defined as it was not in their interests. The contacts of these politic groups/bodies did not allow definition and defining of the causes and the appearance of terrorism. In order to adequately define the terrorism phenomenon, harmony and agreement of important elements, as well as adequate contents, is needed. *Therefore one can pose a question: can one research something and make conclusions about it when it cannot be precisely named or defined?* Confusion is evident even in different attitudes and political interests in which criminal techniques and tactics are hidden, which is confirmed by different attitudes in repressive measures towards executors of terrorist acts. As an example of this, the attitude towards terrorism in the Middle East – Islamic state (IS or ISIS) and its branches (Al Shabab, Al Nusra, Al Fronta, Boko Haram etc.) can be used.

Therefore, the question is being posed regarding latest form of terrorism that has transformed and adjusted to the new conditions, strategies and organizational tactics. In order to be able to offer an answer to that question it is necessary to look back at earlier considerations and happenings concerning international terrorism.

In the last century, at the end of 20th and beginning of the 21st, terrorist acts are mainly referred to acts with foreign elements, and in this case it is about foreign acts of violence which will later be expressed as international terrorism. International terrorism can be divided in to: *transnational* and *international terrorism*, at that time, the classification of executed threats was defined according to the rules and regulatory measures with the aim to prove executed terrorist acts in international relationships. Therefore, international terrorism in the sense of revealed facts is actually transnational terrorism. Acts of transnational terrorism are all mentioned forms of violence whose executors are persons or groups of people. Before the *transformation of terrorism*, in this new era, methods of terrorist threats were attacks in the form of “kill and run from the scene in to underground”, and they would enter “sleeping” phase untill the next attack. However, *terrorism in new millennium has been transformed into a new form of violence and confrontation with armed forces of one or multiple states*. In addition to the above mentioned, territories are being taken and occupied, residents are being forced in to refuge, caliphate states are being declared. Production of arms is being conducted as well as dangerous instruments, with strong support from United States, Saudi Arabia and other allies which in earlier period was not part of the terrorist methods of work. Before we start defining terrorism, among many proposed definitions we will take one as working definition “*Terrorism, indoctrination, method and means to induce fear and insecurity in citizens by the systematic use of violence with the goal of expressing certain mainly political goals*” (Bošković, 2015).

In order to be able to define terrorist groups transformation and their methods and forms of violence it is necessary to point out the original meaning of the word transformation “*To transform, to change, to reshape, to changeover, to transfigure, to convert*” (Mićunović, 1988), The above quoted terms which are connected to terrorism imply to reshaping of terrorist organizations, the names of terrorist groups their methods of work and goals towards organizing terrorism in modern conditions. Islamic state has proclaimed Caliphate and resorted to a new form of political violence through newly organized, transformed, terrorist

organizations. This form of violence indicates new way of defining terrorism. The terrorist groups applied new forms of violence in organizing terrorist conflicts against the state armed forces using the principle of military warfare and using heavy artillery weapons. Modern terrorist forms of violence are transformed terrorist organizations, reshaped to undertake assaults against armed forces of the specific country they are in conflict with. Therefore, transformed terrorism changes the form and definition of this type of terrorism and we can say that *modern organized and transformed terrorism is reshaped and a changed form of terroristic, intimidating political-religious violence over their enemies, “infidels” and anyone who is different, by inflicting horrific tortures, suffering, murders, destruction and burning of valuables with the name of forming caliphate.*

Characteristics of outer and inner transformed terrorism and threat it imposes to tourism

Before we try to explain characteristics of modern terrorism, it is necessary to explain former domestic and foreign characteristics. Earlier terrorists practiced tactics that included assault, murder and quick withdrawal. Then they would stay low and wait for the news and reactions from security institutions, government, after which they would prepare themselves for new threats and attacks. In spite of some attacks in several European cities among which are Brussels and Paris the number of terrorist attacks is lower than it was during the seventies. In the seventies the number of terrorist threats was at the peak, while in those years ('70-'80ies), in Europe alone were 800 attacks, and yearly number of victims was over 150, which was recorded at Maryland university. During that time most active terrorist organizations were: IRA, ETA, Red brigades, Red army, RAF etc. they were mainly operating because of “ideology”. According to Tophofen today's terrorist organizations like Al Kaida work out of “religious conviction”. Al Kaida branches such are Al Nustra, Al Shabab, Al Fronta and others in the Middle East represented a threat based on religion, committing the most gruesome crimes of the modern age. However, from 2001 until 2014 the number of terrorist attacks in the world had significantly grown especially if we take into consideration the situation in the Middle East and Africa. 0.3 % of attacks happened in Europe. Moreover, as Al Kaida (ISIL, IS) appeared, the terrorist doctrine and tactics have changed compared to the period between the seventies and nineties, where terrorist organizations have transformed from attack, kill run tactic to strategic tactics of open,

constant and frontal warfare against armed forces of Iraq, Libya and Syria on the land and conflicts with Russian armed forces in the air when they brought down the Russian fighter airplane “Sukhoi”.

The word *transformation* means, “*To transform, to change, to reshape, to changeover, to transfigure, metamorphose*” (Mićunović, 1988). In the other words, transformation implies reshaping and reorganizing as well as adjusting to new conditions of one environment. Therefore in our described situation transformation means *transforming of terrorist organizations and their activities in reshaped form of organizing with the aim to be more efficient and violent*.

This statement points out the behavior and activities of terrorists in the Middle East where they resorted to, until now, unseen terrorism, terror and war actions between ISIS and State armed and police forces of Syria, Libya, Iraq and other countries who joined to help suppress terrorism in that part of the world. If we observe this, we get the impression that this statement can be a new base for defining modern i.e transformed terrorism.

Considering that Syrian armed forces received help from Russia, France, UK and other European countries in the form of military forces and technical assistance, ISIS was defeated, broken and banished from Syrian, Libyan and Iraqi lands. After being banished and defeated by air force, ISIS regrouped and transformed into small groups and scattered in Africa, Europe and Balkans where they illegally crossed the borders along with refugees, or returned to their countries of origin, hidden and reverted to a “sleeping” state. Members of Wahhabi movements from BH and Kosovo and Rashka, have already voiced, and asked their compatriots, comrades and the like-minded for support and use of all available means. Therefore, in this specific point they will not wait for long and they should be expected at Balkans and in Serbia at tourist destinations.

Characteristics of internal terrorism

“Internal terrorism and extremism is the joint name for ways of endangering constitutional order and entire state safety within the state borders” (Milošević, 2005). In accordance with extremism, in the wider context, terrorism encircles all political understanding and behavior of a single person, group or organization which drastically deviates from what is acceptable, legal and legit in political relationships and struggles within

state. Internal terrorism implies *extremist-separatist alliances and terrorist acts against the government in their own state with the aim of bringing down the existing system and come to power*. In the modern age, terrorist organizations overthrow governments with the help of some countries who are in disagreement with the existing government and would use all possible means, even terrorism, to achieve their goals” (Pejanović, 2017). Therefore, broken terrorist groups are now hiding in multiple states, among which are neighboring Albania, BH, and KM. Their future targets can be people and facilities in Serbia, among which are tourist facilities. Moreover, terrorists used the TV station Jazeera, and it was reported in daily press, to give instructions how to take revenge on their enemies and infidels. In those countries mentioned, Republic of Serbia and Bosnia and Herzegovina were mentioned. The instruction was to use weapons, cold weapons, poisons, bombs, explosives and all other available means to inflict as much damage as possible. Therefore, people, facilities, transport means, tourist resorts (beaches etc.) can be future targets of terrorist group factions of ISIS.

Characteristics of religious terrorism

Religion gives a man the highest sense of freedom and it introduces him into most hidden secrets and defines his relationship with the universe. On the other hand it can be used to justify violence, war and repression. Someone may say that all the good that faith has created has its opposite pair in the other side. We cannot exactly define the ultimate goal of religion and its relationship with societal violence, but what we know is that at the beginning of the twenty first century a link between religion and terrorism has largely been formed Johnathan, R. V. (2004), “*Religion* is Latin word which means “*faith, creed, belief in supernatural beings, god*”, while religious means “*devoted, pious, one who believes in supernatural beings, especially in god*” (Mićunović, 1988).

Fanatic religious terrorism is based on long term preparations and national feelings. It is directed towards destruction of existing system of given state. Religious terrorism exists in all religions, and it is especially expressed and has deep roots in the Islamic world. Religious (Islamic) fanaticism, money, robbery, pleasure, revenge and killing are main motifs of Albanian terrorists and their “landing” on Kosovo and Metohia district. In the organization “Liberation army of Kosovo” (OVK/UCK) there were constantly between 300 and 800 foreign mercenaries. “The largest number of mercenaries were citizens of Albania, including higher officers

of Albanian army, police and national security, as well as some mercenaries from the fundamentalist Islamic states” (Pejanović, 2008). “However, terrorism in Kosovo and Metohia has gone beyond all known methods of terror in the world and grew in to systematic cleansing of non-Albanian citizens in this district, especially Serbians” (Pejanović, 2003). Moreover, even though conflict at Kosovo and Metohia (KIM) is long finished, oppression and persecution of Serbian people continues without a chance of getting back to their homes.

“Osama bin Laden has united five Islamic militant fundamental factions from Pakistan, Syria, Egypt, Bangladesh and Afghanistan into a single organization of around 4000 jihadi terrorists so called mujahedin. These fanatics participated in the war in the Bosnia and Herzegovina, terrorized in Kosovo and Metohia, several thousand mujahedin warriors fought for Bosnian Muslim forces. Members of Hanjar division (so called Albanian-Sandzak brigade of BH army) that was formed 1993 in Sarajevo mainly consisted of Albanians (around 3000) who were trained by Afghanistan and other Arabian countries mujahedin warriors” (Pejanović, 2003).

The members of those organizations are burdened with fanatic religious pledge and faith in Allah for whom they are willing to give their life and take other lives. Hamas recruits minors whom they prepare for suicide missions. *Member of “Hamas” swears to Allah and his ideology leader that he will willingly lay his life just to fulfill given task, for which he will be paid after his death with eternal afterlife, suicide bomber killer performed attack in 2006 and he was only 17 years old.*

Unfortunately, tragedy is that in this forces they push, train and recruit kids aged from 3-15. *“Religious terrorism term implies to the violence motivated by religious feelings, spiritual guidance and need for holy war, acquisition of political gain without fear even for their own lives”* (Pejanović, 2016).

Next to the above mentioned, we indicate and observe that almost no terrorist organization works alone in their threats and that all of them are under control of some state. Quite frequently they are formed, organized, financed and run by those states. Certain states mainly have their own goals which get fulfilled via terrorist organizations. Therefore, this type of activity is just one of the forms of state terrorism. Some western countries have also achieved their goals using terrorist threats and activists in the Balkans. Their intelligence and security services work out scenarios,

execute them and create a crises like in Rachak village at Kosovo and Metohia district, Miskin market case in Sarajevo after which NATO bombed Serbia and Republic Srpska. Similar examples of creating crises were assassination of Serbian Prime Minister Zoran Djindjic, assassination of Oliver Ivanovic and similar threats are just some of examples of crises created by intelligence services of western states. Therefore, above mentioned and similar terroristic threats endangered and can endanger people, material and other values, and security as a whole.

Tourist infrastructure sensitivity to terrorist threats

Infrastructure can be seen like logistic function which provides favorable conditions for quality performance of other functions of logistic support. With the increase of danger, especially from terrorism, in modern theory analysis and, in practice the expression “critical infrastructure” is more and more present. Due to ever growing risk of terrorist activities it was needed to predict corresponding measures for each system. Just after the terrorist attacks in September 2001, critical infrastructure has become important and a structural part of national security. “Its protection represents one of the “every state” priorities” (Škoro & Ateljević, 2015).

With that in mind, critical infrastructures represented like joint principles with basic commands in control, sustainability, risks, threats and protection from all types of threats. Under the types of threats, risks and dangers on infrastructure, we consider and take as influence, human factor, technology and technical insufficiencies and elementary disasters. In order to understand endangerment of critical infrastructure, our starting point is key and significant data about entire infrastructure and its contents. Critical infrastructure is very complex due to human potential, information system and unconditional connection of national and international critical structure. That correlation enables destructive organizations to attack, threat, endanger and destroy, entire architectural, natural and ecologic infrastructure. Therefore, it is necessary to break down the system of critical infrastructure to its respective components in order to enable easier recognition, understanding and concluding the problem this paper is all about. However, tourist infrastructure is not only threatened by terrorist groups, but by criminal groups and criminals, and all who want to exploit its use. Next to criminal groups, this type of infrastructure can be attacked by groups and people who do not belong to criminal groups but want to acquire benefits by performing illegal actions.

Tourism in the time of modern terrorism

Terrorism as modern phenomenon and threat of modern civilization threatens entire planet. It has taken a new form of threats, attacks as well as contamination of nature with very dangerous poisons. Attacks in Europe, Middle East, Africa and other regions targeted not only cities and significant facilities and killed people but they attacked tourist destinations and resorts. Tourism has found itself in bad situation called alert phase. Therefore, the new situation can have a drastic influence and decrease the number of travels and tourists. Next to terrorist threats, elementary disasters of natural and artificial origin also present a danger for tourism. Artificial natural disasters are orchestrated by scientists, people who want to influence climate. According to data, decrease of tourist visits was marked in 2009, mainly due to economic crisis, and a bit later due to terrorist threats. However, predictions say that an increase of tourism can be expected by 2030, when it is estimated that terrorism will be brought to minimum. World tourist organization (UNWTO) estimates growth in tourist numbers starting from 2015 by 4,3% compared to 2013, mentioned estimation is based on factual data where in 2010 Egypt had over 14million foreign tourists, however that number decreased in 2014 to 9,6 million. In Tunisia in 2010 there were 9 million tourists but by 2014 that number decreased to 6 million. Europe also had significant losses in tourism where highest decrease was for Paris due to entire situation and terrorist threats at that time. (Published 02.02.2016. comments). Tourist infrastructure can be threatened by terrorism, criminals, organized crime, thefts and similar threats. In this sense tourist infrastructure consists of mountains, rivers, lakes, seas, natural resources, roads, facilities, beaches, resorts and similar objects.

Critical infrastructure of human security

Our research is directed towards relationship and influences on critical infrastructure, mainly what is observed is national infrastructure and its values that are used by tourist agencies and their clients. However in our case, defining critical infrastructure of human security means *taking planned, necessary security measures and protecting people who visit tourist infrastructures and their valuables*. Therefore, human health and lives as critical infrastructure are one of the most threatened. Terrorist groups in large numbers of attacks are directed towards taking human lives, threatening human health, environment and valuables, while criminal groups and organizations threaten security of their lives and

valuables by committing robbery and destruction. Significant influence on security of critical infrastructure has international and national political implications. The above mentioned organizations threaten entire human critical infrastructure by frequent and often very aggressive threats. With often and aggressive threats they aim to create as many casualties as it is possible as well as to destroy as much infrastructure as it is possible. This theory is confirmed by latest events in the Middle East where Islamist groups have organized within ISIS. They caused death of a couple of hundreds of people, destroyed many cities to the ground, thousands of citizens were banished from their homes and forbidden to return. In this case terrorist organizations have, out of ideology, faith and hatred, inflicted complete terror at this places. This case is one of the most drastic examples of threat to critical infrastructure by killing large numbers of people, banishing, destruction of cities, environment by terrorist leaders and their followers. *Threat to critical infrastructure implies planned, organized and executed mass threat with most modern and vile form of terrorism in which people were murdered, burnt alive, facilities destroyed, polluted environment and people were forbidden to return to their homes.* “Risk assessment revises all measures to lower risks and all decisions which are connected to lowering risks through application of acceptable criteria” (Butorac, 2013).

Therefore, above quoted definition points us towards need to make risk assessment for information systems as well as for tourist facilities.

Risk from biologic and chemical agents

Considering that we explained characteristics of the modern and Islamist groups and consequences of their actions in the Middle East. We have shown their recent and possible threats that can cause great risks. It is hard to precisely predict lethal effect of potentially catastrophic bio-terroristic incidents. Those predictions are very important for defining the defense measures of public health. For example, unpredictability of human behavior can influence morbidity, especially if contagious agents are involved. “In the cases of agents transmittable by air, factors like wind speed and direction, filtration and other environmental parameters could lead to completely different attack results. Exact prediction is limited also by the scope of our knowledge about biology, pathogen, and their interaction with hosts (how infection develops and ways of spreading). Moreover, as with any catastrophes it is not easy to know up front how efficient our plans in emergency state are, and how competent people who

will carry them out will be” (Bostrom & Ćirković, 2011, 2012). Having that in mind, we will stress, that terrorist groups who occupied chemical and biologic agents factory have come in to possession of the large amounts of chemical and biologic poisons, and that, they have exported it outside of Middle East, that represents great threat for tourist infrastructure. All tourist infrastructures are sensitive to above mentioned agents that impose huge risks for tourism, as their consequences cannot be predicted upfront nor can be total risks and damages be defined. In this case it is unpredictable, where, when and how terrorist will perform their actions, therefore, consequences are unpredictable.

Contamination with chemical and biologic agents can happen at the: tourist camps, beaches, water, roads, forests, facilities. Experience of modern society remind us of existence of the chemical, biologic, radioactive, nuclear and other dangerous materials, which if used could endanger the entire civilization. If we remember the anthrax contamination in Tokyo by the Aum Shinirikyo, when over five thousand of people were affected and around five hundred were poisoned, and if we take in to consideration the case in Sirya and similar problems, situation is worrying. Moreover, as many of this agents were exported out of Syria to other locations, there is possibility for IS to build workshop for creation of weapons, which imposes great threat to entire international community and unimaginable risks for safety of humans and other living beings.

Critical information infrastructures

Among many critical facilities of infrastructure that are sensitive to *terrorist threats*, we will describe only a few as we are limited by working space. One of the critical infrastructures, used by tourist agencies, institutions and other subjects and one that cannot be avoided is information infrastructure. Under critical information infrastructure we refer to infrastructures that if they were to be attacked and disabled or destroyed it would have consequences on national system, society and political welfare and development. In this sense critical infrastructure includes human activities, services, welfare, technology, information, and protected data, in the other words entire network of infrastructure. Specificity of information structure refers to Information systems, cybernetic space (connectivity of electrical networks), telecommunication networks, energetic systems, transportation, financial sector, statistic system, banking system, healthcare, distribution system, military, police, judicial system, etc. as well as information and air traffic system. All of

those and other infrastructures can be misused and manipulated as computer-information communication between tourist agencies and other institutions is well developed. Moreover, that infrastructure is frequently threatened which is confirmed by many facts. Models of risk management and crisis management are far from perfect, and they need to be improved. Having in mind the sensitivity of infrastructure in general, this type of network became critical and threatened by multiple threats, such as: terrorist, criminal malversation, corruption and other threatening motifs. Management can come to situation where they cannot keep this type of infrastructure under control and protection. Therefore, social and information networks are very sensitive to technology, technical and natural disasters, when great or total damages to those systems occur. In order to be able to precede and stop the above mentioned threats, every tourist agency should, before concluding cooperation with clients, make assessment of all possible threats and dangers.

Conclusion

When we talk about modern and dangerous terrorism and threats from Islamist terroristic organizations, modern civilization should take this phenomenon seriously. After Paris and Brussels attacks, to all European citizens and institutions of European civilization terrorist attacks became more of a real nightmare and closer than ever before. If we analyze terrorist threats in Europe between 1970 and 1990 when more hundreds of attacks per year happened and number of victims was around 150 per year, it presented real and dangerous threat. However, when we analyze number of attacks and victims in past twenty years, that number is far higher, especially if we bear in mind that in one day couple of thousands of people died in Syria due to ISIS actions. Let's try to explain bit closer the modern threat of terrorism, in the year 2016 when transformed terrorism in the Middle East has presented new form of terrorist fight, where terrorist organizations openly fight with armed forces. In those confrontations hundreds of people lost lives, many were abducted, taken and considered missing. This is a serious warning that there is a possibility of drastic and disastrous casualties and material damage. Today this problem warns us that everything has changed, and that nothing is as it was in the past, it implies serious consideration and finding solutions to adequately respond to modern evil of the new era. Modern forms of confrontations between terrorist groups and State armed forces have made fundamental change of terrorist actions. Modern terrorist groups are equipped and armed with all available weapons and

means for long and hard warfare. They will resort to suicidal actions killing large numbers of children, woman and man, and they will sacrifice themselves in the name of Allah. They use: plastic explosives, plant bombs in facilities and means of transportation, artillery weapons, poisons and other means for mass destruction. In that way they are showing their power and weakness of societies who could not oppose them. In earlier times it was not possible to presume or think that terrorist will impose this big and complicated threat, and that societies will not be able to endure and oppose them.

When it comes to tourist infrastructure, terrorist organizations warns us about their ultimate goals, destruction and damaging of infrastructures.

Securing critical infrastructure is of vital importance and should be treated as one of the most significant challenges for scientists, researchers and interested experts. Researching and determining connections and correlations through identification of possible risks, finding solutions and ways of protection is the ultimate goal. It enables us to perform the risk assessment that is connected or related to terrorist threats. Therefore, above mentioned problems or similar situations represent challenge, for improving and rebuilding methodology for risk assessment for tourist infrastructure having in mind complexity of critical infrastructure system. Today in modern civilization technology of risk assessment is developed and perfected for all types of risks including terrorists and their threats. Nevertheless, in some methodology risk assessment is lacking study about resistibility of tourist infrastructure. When it comes to terrorism risk assessment methodology evaluators should identify possible threats, vulnerabilities of infrastructure, in individual and common areas. However, resistibility analysis requires matching and expert evaluation of endangerment of infrastructure along with adequate cooperation and reactions. It asks for cooperation between owners and users of above mentioned infrastructures. It is necessary to stress out that risk assessment of infrastructure is part of wider frame within which analysis on risk resistibility on terrorist threats should be main goal and key response in protection of infrastructures against threats. Terrorism was always a threat to human society, and modern time brought modernized threats which are significantly more dangerous they were in the past.

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TERRORISM AS A CONTEMPORARY CRIMINOLOGY IMPACT FACTOR ON TOURIST EFFECTS

Boriša Lečić¹; Zdravko Skakavac²;

Abstract

Terrorism as a destructive social phenomenon, and as a symbol of violence, fear and insecurity, generates negative implications in all spheres of social life, especially in the sphere of economy and the economy of modern states. Implicitly, terrorism produces a negative, multiplied impact on tourism and its overall effects, which has, in recent years, positioned itself as an ideally easy terrorist target. Tourist destinations and tourists themselves have become direct strategic and tactical targets of terrorist attacks aimed at achieving long-term political, ideological and religious goals, destabilizing the system of national and regional security. Although the causal connection between terrorism and tourism is specific, unbreakable and cannot be ignored, it is nevertheless very complex and difficult to quantify and accurately define the negative effects of the impact of terrorism on tourism, as statistical indicators and individual scientific research deny direct correlation and decline in tourism revenue at the national level. The aim of this paper is to analyze the impact of contemporary terrorist acts, and the amplitude of their impact on tourist effects.

Key Words: *terrorism, tourism, security, economy, terrorist attacks*

JEL classification: Z30, Z39

Introduction

There is no universal academic consensus on the definition of terrorism, however, each approach observed individually possesses a common note. It refers to the illegitimate use of force during the process of achieving goals, which may be of an ideological, political or religious character.

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These goals are easier to achieve if the opponent, i.e., the target, of a terrorist organization is economically or militarily weaker. Terrorist activities, depending on the prism of observation, are almost as old as the human race. However, the first more serious, organized forms of terrorist activity appeared at the beginning of the New Era, over the territory of present day Israel, when Jewish nationalists launched militant action aimed at expelling the Romans from the area of, what was then, Palestine.

Looking at current macroeconomic tendencies, one can notice that tourism is a significant factor in the formation of gross domestic product. Very often tourism is characterized as an invisible form of export. Moreover, taking into account the global character and phenomenology of tourist travels, the selection of tourist designations as one of the main targets of terrorist attacks is entirely logical and to be expected. It can be said that tourism, throughout its history, experienced the most dynamic growth in the post-World War II period. The conditions for organized travel were acquired with shorter work hours and longer leisure time, which came about as the result of cultural progress and the growth of workers' rights. Certain forms of liberalization, such as the reduction of administrative barriers to border crossings, also facilitated the birth of one of the most intensive modern economic branches. In reviewing a rather short period of time, namely the past twenty years, we will notice that there has been a doubling in the number of international travel trips. If we take into account a longer period of time, the aforementioned expansion is, as one would expect, significantly higher. In the period from the 90s until the present day, international tourism movements have been almost tripled (World Tourism Organization UNWTO). Based on research conducted by some relevant international organizations, international tourism will see an increase of 35% over the next ten years (Mapping the Future of Global Travel and Tourism).

Some of the main threats to the development of the tourism industry are of a sociological and security character. The expansion of certain tourist destinations is often accompanied by a rise in the crime rate of the destinations in question. However, the possibility of terrorist attacks is becoming the most significant risk factor for the global tourism industry. Taking into account scientific theories in the field of psychology, one notices that Maslow's hierarchy of needs places safety among the most important of human needs. Starting from the assumption that a tourist does not wish to think about his/her own safety while on vacation, places that are a potential target of tourist attacks will be bypassed by future

tourists. Destinations that have the reputation of being unsafe can easily be replaced by safer ones. Terrorist attacks affect the security reputation of tourist destinations and the sowing of fear among potential tourists. Fear of terrorist activity can, in a very serious way, impact economic trends in the area of supply and demand on the international tourist market. The mentioned tendencies, in the field of digression of tourist activities, have been noticed on more recent examples of well-known tourist destinations such as Turkey, Egypt, Tunisia, Morocco, where the so-called "Arab Spring", or the war for democracy, led to a change of the ruling parties and authoritarian regimes, the epilogue being long-term political instability, anarchy, chaos and civil wars, which in turn led to an even stronger, strengthening of Islam and those structures that advocate the application of the Sharia (Skakavac & Skakavac, 2017)

An important factor for establishing a mutual correlation between tourism and terrorism is the globalization process. Globalization contributes to the destruction of human barriers, but also facilitates the strategic and operational implementation of terrorist activities. One of the key events which marked the beginning of a new era in the fight against international terrorism is the attack on the World Trade Center in New York in 2001. This attack also greatly affected tourism movements within the United States. A similar situation occurred in France where the "doctrine of shelter" and neutral politics proved unsuccessful and counterproductive, as seen from the waves of related terrorist attacks that hit this country in early 2015 (Lečić, 2015).

Due to the political and security instability caused by terrorist attacks, tourist demand in these countries soon fell, and a restrictive security policy strongly affected the mobility of people, which was in turn restricted.

The concept of safety and risk in tourist travels

Simplified, risk can be defined as a level of exposure to certain forms of threat or danger. When choosing tourist destinations, tourists place a high value on their own security, that is, a lower level of risk from the escalation of unrest caused by various forms of political instability. Taking into account global tendencies, a significant level of influence by mass media, as well as the unavoidable social networks, is evident in the formation of a perception of instability, in countries with traditionally attractive tourist destinations. When analyzing the correlation between the

selection of tourist designations and the level of risk from potential terrorist activities, it is impossible to avoid the influence of the media factor. As a result of the above, a very different perception of risk, in relation to the actual situation on the field, is possible. From this follows that the risk, which is present during tourist trips, can be viewed as real risk and perceived risk, which exists depending on the reputation of the tourist destination and the preference of potential tourists.

Analyzing the mutual relationship and the level of influence of terrorist activities on tourism, it is of utmost importance to take into account the mentioned tourist preferences. Some scientific theories in the field of tourism define certain categories of tourists, i.e., they explain what certain types of tourists expect from their travels. One of the most famous is Cohen's typology, which talks about the interaction between tourists and global tourism institutions. However, the aforementioned study did not discuss the impact of risk factors on the selection of tourist trips and tourist behavior. Roehl and Fesenmaier classified tourists into the following three groups, depending on their perception of risk (Roehl & Fesenmaier, 1992):

- tourists who do not prefer risk,
- tourists who perceive functional (institutional) risk,
- tourists who are inclined to take risks.

The first group of tourists, which does not prefer risk, simply does not connect the existence of any kind of risk, on the one hand, with their own travel trips, on the other. Tourists who perceive a functional, that is, institutional risk, observe organizational aspects as the main generators of potential risks. The third group, tourists prone to taking risks, prefer the existence of any kind of risk within their travel destination. Although, no attempts have been made to link the two academic concepts within scientific circles, there is a certain degree of similarity. The theory pertaining to risk perception has managed to gain significance within cognitive psychology. However, only after the 2001 terrorist attacks on the US, did eminent scientists in the field of tourism pay more attention to this area. Most often, the identified risks associated with tourism are related to terrorist threats, crime rates, health epidemics or natural disasters. The Argentine author, Maximiliano Korstanje, devoted much of his writing to the sociological aspects of threats, hazards and risks (Korstanje, 2011). In the focus of his work is the issue of identifying threat and the relativity of the question of understanding risk. From the aspect of tourism risk analysis, it is necessary to make a distinction

between the concepts of risk and threat. It is necessary to, semantically, see the mutual relationship between the above terms. Threats imply the risk involved while risks generate threats. In this way, a symbiotic relationship between threats and risk can be established. Also, what is important to note is that there is no adequate academic consensus on what conditions generate potential risks. Security represents a level of protection against potential damage and negative resulting outcomes. Depending on the existence of different types of tourists, it is very difficult to measure their actual security at a particular location. The mentioned security aspect is a very relative concept and is highly correlated with fear. Tourists, depending on their affinities and preferences, have different perceptions of fears. Also, the level of fear present during a stay in a specific tourist destination is very often directly related to the possession of relevant information about the place itself. As already mentioned in this text, mass media and social networks play a very important role in these relations. These information tools can be a key factor in creating asymmetric information. Very often, at different times, they create a global atmosphere of fear which results in very few places in the world being considered safe. For the purpose of illustrating the above assertion, certain statistics cite an individual's chance of becoming a victim of terrorist attacks at a modest 0.002% (Ehrich, 2015). Very often, tourists' fears of potential terrorist attacks are unjustified. It can be said that terrorists, to a small degree, have achieved their goals when a tourist gives up on his/her planned trip, or arrives at the destination scared. This psychological moment of fear has been, in recent times, much more present in those parts of the world where terrorist activities are most intense. Primarily, the parts we refer to here are the Middle East and parts of the African continent. The media had a very significant impact in generating an atmosphere of fear. Due to the daily exposure to frightening information, tourists had the impression they would be placing themselves at high risk if they opted for a trip to one of the destinations mentioned. Tourists' fear, should they choose to go to a particular tourist destination, can be descriptively expressed in two ways. Tourists fear that they may be the victims of an organized terrorist attack during an international trip, if they visit a region hostile to their country of residence. On the other hand, they fear that they may be the victims of a terrorist attack simply by being in the wrong place at the wrong time, without prejudices regarding the relationship between the tourist destination and their domicile country. This distinction may hold a high level of importance because it can define the potential choice, in terms of choosing a future travel destination. In some countries such as Egypt and

Tunisia, tourist destinations are highly targeted by militant Islamic groups. These terrorist organizations especially favor attacks on those sites that are known for being visited by a large number of tourists from the NATO pact countries (especially those who participated in operations in Syria and Iraq). Attacks, and potential victims, are extremely publicized at the international level, which contributes to the publicity of the terrorist organization taking responsibility for the attack. After the terrorist attack itself, an extremely delicate issue imposes itself, whether the attack could have been prevented and the human casualties avoided. Often, some radical opinions can be heard such as that the tourists themselves were responsible for having chosen to travel to a politically unstable region. Generally speaking, the governments of the countries the tourists come from, and, above all, the host countries, are obliged to ensure the safety of tourists. However, in politically unstable countries and regions, states are not able to provide security even to their own people. In such situations a certain moral dilemma arises, whether the domestic population should enjoy primacy in security because, among other reasons, they pay taxes, or foreign tourists, who ultimately represent a generator of cash inflow. As regards the responsibility of the governments of domicile countries, it can be said that the foreign ministries of all NATO countries are extremely vigilant about issuing travel recommendations for those countries that are of a potentially dangerous and unsafe character. As it is to be expected, the US State Department is particularly active when issuing these recommendations and notifications. When providing information on travel safety, the date of recommendation is also of special importance. The date of the issuance of the recommendation is based on analytical, operational and security activities of the State Department. The above activities of countries fighting against terrorist acts are carried out in order to avoid civilian casualties. With the passage of time, new mechanisms, technologies and methodologies appear, on both sides, making the battle a bit fiercer. Taking into account the theoretical aspect, terrorist attacks were previously observed as the resulting outcome of activities carried out by individuals with certain psychopathological disorders. However, recent research has shown that terrorist delinquents are, in most cases, of sound reason and are aware of the consequences that result from their activities. They are also aware of the difficulty of their task, and for this reason they plan their operations carefully and analytically. It is precisely due to these reasons that the prevention of terrorist activities has become an extremely complex activity, because in *ex ante* security analysis, it is difficult to

make a distinction between a potential terrorist and an ordinary citizen or a tourist.

The link between terrorist activities and tourist movements

Modern international terrorism has a very low level of incorporated ethical values. Terrorists do not have any form of respect for institutions of a system. Generally speaking, fertile land for the creation of terrorist organizations are those regions with a high level of population dissatisfaction, primarily with economic conditions for normal life flows. Some phenomena such as globalization, modernization, wars and recessions create frameworks within social communities for the rise of dissident groups and support for the growth of radical ideas, which creates a basis for the recruitment of new dissidents from within the population (Lutz & Lutz, 2008). These tendencies could be seen in the latest conflicts in Syria and Iraq. From the scientific standpoint, it is difficult to identify the main causative factor for the spread of terrorist ideas and sparks. When speaking about the most well-known and active terrorist organization of today - ISIS, it is possible to identify the religious factor. However, as already mentioned, economic reasons represent, at the very least, an equally important basis for the intensification of terrorist aspirations. It can be said that a set of economic, religious, psychological, sociological and cultural phenomena has an impact on the development of terrorist ideas and operations. Terrorism can find its foothold among those groups of people who do not possess any other political method of action, that is, when they are unable to achieve their strategic goals by any other type of activity, apart from the militant. It is widely known, and has already been mentioned in this paper, that the expansion of terrorism is, in the narrowest context, related to globalization. The process of globalization has brought about economic inequality between nations and states. The mentioned inequality in acquired economic wealth can lead to a strong wave of dissatisfaction expressed through militant and aggressive actions. Similarly, as the accompanying phenomenon of globalization, certain transient processes appear in individual societies. In such processes, there is often the annulment of a previous and the establishment of a completely new value system. When this occurs, there is a possibility that a part of the social community will fail to find its place in the new system and thus become an easy target for recruitment by terrorist organizations. A specific example of this tendency is the wave of demonstrations, protests and rebellions in North Africa and the Middle East at the end of 2010, better known as the "Arab Spring". Observed

from today's perspective, it can be said that the aforementioned process of rebellion failed fundamentally, i.e., that its essential objectives in terms of social stability, freedom, equality and an enviable level of modernization, were not realized. Due to the stated reasons, the largest number of recruited terrorists are from the Middle East, and especially Northern and Central Africa, where the Boko Haram and ISIS terrorist organization are most present, which are fighting against so-called "Western values" with the aim of establishing the Shari'ah and the Islamic state, out of the same ideology (Skakavac, 2016).

Understanding the functioning, motives and goals of terrorist organizations can help to understand the interconnection between terrorism and tourism. By attacking tourists, terrorist organizations are able to achieve some of their goals, primarily seen through publicity and media attention. Very often, there are internal confrontations within the terrorist groups themselves, and in this way a particular fraction obtains an internal reputation. In addition, tourists have a certain symbolic value as representatives of the countries they come from, that is, an attack on tourists represents an attack on hostile governments. When viewed from this perspective, it can be said that there is an inseparable connection between international tourism and diplomatic ties. Tourists are seen by terrorist organizations as ambassadors of their countries (Richter & Waugh, 1986). Attacks on foreign tourists give terrorists guaranteed media attention. However, if the target of attacks have a purely domestic goal, domicile governments can, using censorship mechanisms, exclude publicity that is vital for terrorists. Theoretically, the goal of terrorist organizations can be represented through ideological, strategic and tactical objectives (Richter & Waugh, 1986). Ideological objectives are long-term, and, most often, involve national, class, or religious struggles. Tactical targets are short-term in character, they involve operational activities and are very often associated with daily criminal activities. Richter and Waugh emphasize that terrorist attacks on tourists are linked to the realization of the terrorists' strategic goals and, with their accomplishment, terrorists gain publicity and influence the weakening of the economy of the country in which the attack took place, through the reduction of tourism industry revenues. For the above reasons, terrorists gravitate towards international tourist centers which are usually visited by tourists from NATO member states. Terrorists are also able to infiltrate themselves into tourist groups without arousing much suspicion. Speaking about the direct links between terrorism and tourism, they are manifested through common characteristics of multinationalism, the crossing of

international borders, the use of modern communication technologies, and the like (Sönmez & Graefe, 1998). It can be said that the first terrorist attack associated with tourist activities was at the 1972 Olympic Games in Munich. Palestinian terrorists attacked Israeli athletes gaining publicity in the range of about 800 million people. After this event, international tourists began to think more intensively about the dangers arising from terrorist threats.

The impact of terrorist activities and political instability on the tourism industry in Turkey

In the light of the aforementioned, one can say that the most recent example of the causal relationship between terrorism and tourism is that of Turkey. First of all, Turkey is a country that represents a significant regional player, whose economic and political influence is undergoing a strong expansion. Tourism has a significant share in the Turkish economy. In addition, given its geostrategic position, the Middle Eastern conflicts, history, economy, complex confessional relations, the Kurdish issue and Turkey's European path, a fertile ground for terrorist aspirations has also been created. Taking into account all these factors, the most significant terrorist threat to the Turkish state is the unresolved position of the Kurds, who predominantly inhabit the southeastern part of the country. The political activity of the said ethnic group is largely implemented within the framework of the Kurdistan Workers' Party (better known by the Kurdish acronym - PKK), which also has its militant wing under the name of the People's Defense Force.

Table 1: *Review of the number of foreign tourist arrivals by year*

Year	Number of foreign tourist arrivals
1995	7,083,000
2000	9,586,000
2005	20,273,000
2010	31,364,000
2011	34,654,000
2012	35,698,000
2013	37,795,000
2014	39,811,000
2015	39,478,000
2016	30,289,000

Source: *The World Bank Open Data*

Terrorist activities in Turkey have taken on two forms: within the context of armed conflicts in the country's southeast region between government forces and formations controlled by the PKK, and attacks in the western parts of the country and large cities where a significant number of tourists are present. Attacks on tourist destinations are mainly carried out under the direction of Kurdish separatists. Taking into account the operational activities and terrorist activities of the PKK, at the end of the 20th and the beginning of the 21st century, it may be said that they were not aimed, for the most part, at those locations attractive to tourists. In the last decade of the 20th century, 6 bomb attacks were carried out on tourist destinations (Rodoplu-Arnold et al., 2003).

It can be said that thanks to the preservation of tourist destinations, and, of course, due to the positive measures of the Turkish state which related to tourism promotion and stimulation, this sector has become a very important one in building Turkish GDP. A particularly noteworthy result was achieved at the very beginning of the 21st century, between 2000 and 2005, when the number of foreign tourists increased from 8 to 21.2 million. Inclusive of 2005, the share of Turkey's tourism sector in total GDP was 13.5%. Speaking in absolute terms, tourism generated \$17.5 billion in revenue that year (The World Bank Open Data). A positive trend continued even after 2005, despite the global recession. In 2011, Turkey became the sixth most popular tourist destination in the world and the fourth most popular destination in Europe. In terms of tourism, it reached a zenith in 2014, with as many as 40 million foreign tourists. That year, tourism participation in the formation of Turkey's GDP was 13.8% (Knoema).

At the end of 2014 and the beginning of 2015, Turkey became actively involved in the conflict in Syria and Iraq, on the side of the NATO coalition led by the United States. Radical Islamic terrorists had a brutal response in the form of terrorist activities on the Turkish territory, with particular emphasis on attacks on tourist-attractive destinations. PKK conflicts were also intensive. Most often, terrorist attacks were carried out in Istanbul, directed against tourists. In June 2016, there was an attack on the Ataturk airport, in Turkey's largest city, for which the Islamic State took responsibility. As many as 45 people lost their lives in the attack and the attack resonated around the world. Attacks in the capital, Ankara, also claimed a large number of victims. After numerous terrorist attacks, Turkey lost the epithet of a safe tourist destination. These events had an almost devastating impact on the level of foreign visits. Based on the data

presented in Table 1, a decrease of almost 40% in 2016 compared to 2014, can be noticed. It should be noted that a decline in visits to Turkey was also the result of the cooling off of relations with Russia in 2016, due to a Russian aircraft being shot down by Turkish authorities. 2017 saw a relative stabilization, primarily political relations and situations, which led to a partial recovery of tourism and tourist indicators. According to incomplete data from the Turkish Tourism Ministry, it is estimated that the number of visits has increased by 28% compared to 2016.

Table 2: *Review of the victims of terrorist attacks during the period 2013-2017*

Year	Number of deaths due to terrorism
2013	82
2014	38
2015	452
2016	484
2017	46

Source: *PRI's The World*

Table 2 presents data on victims of terrorist attacks in Turkey. There is a clear correlation between the number of tourist visits and the number of victims. During the times when the number of victims was high, tourists did not prefer visiting Turkey. Naturally, researching the field of tourism and security, i.e., terrorism, is not the equivalent of studying natural phenomena. Certain exceptions and deviations from general tendencies exist, first of all with regard to enthusiasts who prefer risk exposure and those who are attracted by the lower price of tourist arrangements due to reduced demand.

Tourism in the Republic of Serbia

Globally and regionally, the Republic of Serbia cannot be ranked among those with a highly developed tourism branch. On the other hand though, this means that it possesses high potential, unused resources and room for expansion. Tourism may have a key role in the economic development of a country because it represents, as already mentioned, an immaterial form of export. Through tourism, it is possible to realize the inflow of fresh foreign currency which affects the strengthening, stabilization and an increased demand for domestic currency, and ultimately, better living and working conditions.

The basic planning framework, through which the adoption of institutional measures for the implementation of domestic tourism processes is carried out, is the Tourism Development Strategy of the Republic of Serbia. The strategy is passed by the Government, i.e., the Ministry of Trade, Tourism and Telecommunications, based on the Law on Tourism. The strategy, currently in force, refers to the development of tourism between 2016 and 2025. It may be stipulated that one of the main preconditions for the development of the tourism sector in a given country is the existence of adequate infra-structural conditions, first of all in terms of a well-developed and well-maintained road network. If these issues were regulated in Serbia, it is likely that tourist demand would increase, and, subsequently, foreign tourist arrivals. The Tourism Development Strategy gives rural tourism a prominent position, especially the development of ecological tourist villages where emphasis is placed on organic food, clean air, an active holiday in nature and a healthy environment.

Table 3: *Number of total, domestic and foreign tourists in the Republic of Serbia in the period 2007-2016*

Year	Total number of arrivals	Domestic	Foreign
2007	2,306,558	1,610,513	696,045
2008	2,266,166	1,619,672	646,494
2009	2,021,166	1,375,865	645,301
2010	2,000,597	1,317,916	682,681
2011	2,068,610	1,304,443	764,167
2012	2,079,643	1,269,676	809,967
2013	2,192,435	1,270,667	921,768
2014	2,194,268	1,165,536	1,028,732
2015	2,437,165	1,304,944	1,132,221
2016	2,753,591	1,472,165	1,281,426

Source: *Republic Institute for Statistics*

Observing the data from Table 3, one can notice a negative tendency in the period from 2008 to 2010, when the number of total tourist visits decreased. These movements were primarily conditioned by the global recession and falling demand. Since 2011, there has been an increase in the number of arrivals, which has retained a steady tendency. In addition, there is a constant increase in the number of foreign tourist arrivals, during the observed period, which is especially important from the aspect of foreign currency inflows. When looking at foreign tourists, primacy is

held by tourists from neighboring countries, as well as from countries in the region. The most numerous are tourists from Bosnia and Herzegovina, Bulgaria, Turkey and Montenegro (Republic Institute for Statistics). This is precisely the area that should be addressed when working on spreading the recognition of Serbia as a tourist destination, since such a consciousness still does not exist. On the global tourist plan, a growth tendency is noticeable for, thus far, underdeveloped destinations, which could be a development opportunity for Serbian tourism. As relates to the mentioned foreign currency inflow, according to data from the Ministry of Trade, Tourism and Telecommunications, an inflow of about one billion US dollars was realized in 2017. Proportionate to the increase in the number of tourist arrivals, is the growth of foreign currency inflow. The main holders of tourist activity in the Republic of Serbia are urban areas, mountains, spas and rural tourism. Urban tourism is mostly manifested through, first and foremost, Belgrade, as the largest and most important city, followed by Novi Sad, Niš and Subotica. The most important mountain tourist destinations are Zlatibor, Kopaonik, Tara and Divčibare. Mountains are attractive both during the summer and winter months and offer potential opportunities for different types of vacations. Spa tourism is also present in Serbia, although it is undergoing a big crisis as it has not managed to withstand modern trends and market demands. One part of the spas has failed to find an adequate way of restructuring and implementing a change in ownership. Observing modern global tourist requirements, a large number of tourists prefer short breaks and weekends in spa resorts (popularly called "spa centers"). Certainly, we should address modernizing spas and, in a more focused manner, attracting potential tourists. The three most popular spa destinations in Serbia are Vrnjačka Banja, Sokobanja and Bukovička Banja, given that Vrnjačka Banja has three times more visitors than the latter two. As far as rural tourism is concerned, it is still in expansion and in its infancy. The Republic of Serbia has a significant potential in this segment, which has also been recognized by the Government. There is also a recommendation from the World Tourism Organization for a more detailed development of rural tourism. The most famous ethnic and tourist villages are Drvengrad, Koštunići, Gostilje, Sirogojno and Sićevo. Strategically speaking, some of the stated strengths for the development of tourism in Serbia are a diversified tourist offer, a good geostrategic position, an expansion of air traffic, Belgrade's growing reputation as a city of entertainment, as well as the entry of global and regional hotel brands to the market. Opportunities and chances for the further development of tourism are seen in a correctly defined government policy for strengthening the public-private

partnership model. One of the significant opportunities for progress in this field is reflected in the desire of a certain number of tourists to visit, in the tourist sense, unexplored locations. Some weaknesses and aggravating circumstances for the development of tourism are reflected in an insufficiently developed awareness of its economic importance and a generally passive attitude towards it, as well as an insufficiently developed road, rail and river transportation network. Potential threats are reflected in the strengthening of neighboring countries' competitive activities, and relative instability in terms of political tensions in the Western Balkans (Ministry of Trade, Tourism and Telecommunications of the Republic of Serbia).

Terrorism in the Republic of Serbia

Different forms of terrorist activity have existed throughout the history of the Republic of Serbia. Chronologically, one of the most significant events, which captured the attention of the world public, was the assassination of King Aleksandar Obrenović and his wife in May 1903. Taking into account the frequency of changes in royal families and regimes, in various state-forms, in the 20th century, it is difficult to identify specific groups that have the character of terrorist groups. Such a relative relationship arises from the fact that one organization represents a disruptive, unlawful and repulsive factor for one regime, while representing a liberator for another. After 1918 and the formation of the Kingdom of Serbs, Croats and Slovenes, the main carriers of terrorist activities were those groups that opposed the creation of a new state. Armed interventions by authorities were taken with the aim of destroying the insurgents. These interventions were primarily carried out over the territory of today's Kosovo and Metohija and parts of Macedonia and directed against Albanian separatists. After 1929 and the establishment of the Kingdom of Yugoslavia, the main state enemies were the Communist Party of Yugoslavia, the Secret Internal Macedonian Revolutionary Organization (better known as VMRO) and Croatian separatists. Under the influence of the two latter organizations, King Aleksandar I Karađorđević was assassinated in Marseilles in 1934. After 1945 and the establishment of the Communist government, the main terrorist organizations were thought to be monarch sympathizers, as successors of the Ravna Gora movement from the Second World War, and members of the Ustaša movement. As a result of activities implemented by intelligence structures, first the Department for People's Protection and later the State Security Administration, a large number of internal

enemies and emigrants not in line with the new regime were eliminated. After the breakup of the SFRY and the establishment of the FRY, the main focus of terrorist activities was transferred to the territory of Kosovo and Metohija, that is onto Albanian separatists. The so-called "Kosovo Liberation Army" (KLA) committed a large number of terrorist attacks against official institutions of the Republic of Serbia and the Federal Republic of Yugoslavia between 1996 and 1999. The KLA was strongly associated with other different forms of criminal organization, including drug trafficking, human trafficking and illegal arms trafficking. KLA activities were also directed against Albanians who were loyal to the regime in Belgrade. After the end of the Kosovo conflict in 1999, Albanian terrorists tried to use favorable circumstances to escalate conflicts in Southern Serbia, in Bujanovac, Preševo and Medveđa. A large number of KLA veterans moved to the ranks of the so-called "Liberation Army of Bujanovac, Preševo and Medveđa" (OVBPM). Conflicts were intensified during 2000 and 2001, after which this terrorist formation was disbanded. Taking into account the current situation and the tendencies of terrorist activity in our country, it can be concluded that the situation is in line with global trends and that the greatest threat comes from Islamic extremism. Significant operational activities by domicile security services were carried out in 2007 in the village of Zabren, on Mount Ninaji, near Tutin. It was at that time that an illegal camp for training radical terrorists was discovered. A large quantity of weapons, plastic explosives and different caliber ammunition was also found. During a clash with police forces, a member of the Wahhabi movement lost his life. The mentioned terrorists represent a part of the Wahhabi movement. This movement draws its roots from the 18th century, from the area of present day Saudi Arabia, Iraq, Iran and Syria. Their essential belief is that all modern trends that have taken hold among the Muslims should be eradicated, and that they should return to the original, fundamental forms of Islam. They are considered to be the ideological creators of the holy war, that is, jihad, since they first began to use force against those with different beliefs in order for them to join Wahhabism. Members of the Wahhabi movement are recognized for their long beards and wide, ankle-length, pants. However, under modern conditions for carrying out security activities, members of the Wahhabi movement should be seen as a particular criminal group which is trying to realize its goals under a religious cloak. The informal Wahhabi headquarters in the Balkans is located in Priština, where the movement is the most numerous, and the village of Gornja Maoča on the border of the Tuzla Canton of the Federation of Bosnia and Herzegovina and the Brčko District. On the territory of the Republic of

Serbia, Wahhabism is most intensive in Novi Pazar, Priboj, Sjenica and the southern part of Kosovska Mitrovica. For now, Wahhabi activities have been directed at religious objects, that is mosques, where members of the Wahhabi movement try to impose their own interpretation of Islam onto other believers. It is believed that a number of these individuals are present in Belgrade itself. They are most often people from the surrounding area of Novi Pazar, Kosovo and Metohija and Bosnia and Herzegovina, but there is also a number of Serbs who have converted to Islam. There are no dangers from any major terrorist attacks, but the existence of any extreme, especially religious formations represents a certain risk factor that should be controlled. In terms of terrorism and tourism, attention should be paid to three main tourist sites in the Republic of Serbia: Belgrade, Zlatibor and Vrnjačka Banja. Belgrade, as the largest city and a cosmopolitan city, attracts a large number of foreign tourists. On the other hand, the tourist areas of Zlatibor and Vrnjačka Banja are territorially the closest to the Wahhabi strongholds.

Conclusion

While working with these facts, it is impossible not to notice an opposite proportional relationship between terrorism and tourism. Relevant statistics can be interpreted in such a way that the level of fear of terrorist attacks is not proportionate to the real risk level. It is quite natural and expected that during periods of a high level of risk from terrorist activities the economic branch of tourism experiences a falling trend. However, as already mentioned, both the field of terrorism and the field of tourism represent social science fields. In this field, exceptions and certain deviations from general legalities are always possible. In particular, it is possible to have some paradoxical contemporary trends in which tourists prefer visits to high-risk destinations, as well as those where great human tragedies took place. It is clear that national governments and security agencies have a leading role in this, their objective being to prevent the danger from potential terrorist attacks. More detailed cooperation and data exchange is necessary both at the internal and external levels. Some countries are developing mechanisms in the fight against terrorism reflected in stricter visa requirements for residents and citizens of countries located in unstable regions. However, many countries hesitate to introduce restrictive measures because this would hinder the free movement of goods, services and people. It is difficult to say that there is a universal recipe in the fight against terrorism, especially one that is connected with the economic branch of tourism. Each, individual attack is

extremely specific and is an individual case in itself. The only way to effectively prevent potential terrorist attacks on tourists is to identify potential risks and coordinating cooperation between security services with the aim of protecting the population and tourists. However, practice has shown that international cooperation in this area is effective only when all parties find an important common interest which is, at that given moment, more important than their specific objectives. Certain international law subjects will decide on a fight against terrorism only if it brings them more benefits than support for terrorism, which in essence relativizes anti-terrorist cooperation and struggle (Lečić, 2017).

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GERMAN FOR SPECIAL PURPOSES (GSP) IN TOURISM: LEARNING OBJECTIVES AND DIDACTIC CONSEQUENCES

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Abstract

Given the current number of L2 foreign language lessons in academic and subject-specific programs at the College of Hotel Management in Belgrade, the question arises as to what the quality of language skills of future professionals is to be expected when using appropriate terminology in German as L2. Considering the fact that the terminology in tourism is only a segment of German for special purposes (GSP), its purpose is to promote the ability of learners to communicate with professionals and lecturers on tourism-specific topics and in professional communication domains. The work aims to identify learning objectives and didactic consequences and to offer some useful methodological guidelines in language teaching. In order to achieve this, grammar and its progression are not at the center of the teaching process, but they are permanent companions and components of a vocationally oriented DaF lesson.

Key Words: *German as GSP, tourism, communication, objectives, DaF lessons*

JEL classification: *Z13*

English as the language of communication and the position of other languages

It is obvious that, because of the significant growth of interest in specialized languages, the demand for language teaching has increased. The development of foreign language teaching in recent years shows that the technical language share is constantly growing and that the role of language teaching in foreign languages is falling. The main objective of specialized language teaching is according to Hoffmann (1985), generally said, “the ability to communicate about the subject“ in a foreign language.

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The learners should be empowered to cope with future professional tasks (p. 53).

Language policies are also concerned with the choice of foreign languages, primarily when it comes to the state school system. Although there are many languages in Europe, only the most widely spoken languages such as English, French, Spanish, German and Russian are taught in schools. In a number of cases, border languages are chosen, i.e. languages of neighboring countries and there are indeed quite a few reasons why English in most cases has a dominant role in the school system. Not only is it the mother tongue in the series of countries (Great Britain, Malta, Ireland), and the language of the world's leading policy makers, such as the United States, but it also, in recent decades, played a leading role as a general functional means of communication (*lingua franca*). In Europe, (Filipovic, 2009) it functions as the language of communication among relatively highly educated members of different national communities in professional, political and academic communication and is closely linked to the essential ideas of the 21st century – the ideas of multilingualism and multiculturalism (p. 97). In any case, English cannot challenge its attractiveness in terms of international communication, and above all the place it occupies in the lives of young people, so that it can be classified as the leading "language of the world traffic" (Neuner et al., 2009). It is believed that if all Europeans mastered the English language, there would be absolutely no communication problem (p. 21). In Crystal's book *English as a Global Language*, (2003) he states that the number of English speakers is growing rapidly and will reach a quarter of the total population, which means one and a half billion people, because the development of this global language at three levels - like L1, L2 and foreign language, inevitably leads to the fact that in one moment more people will speak this language than any other (p. 6).

Multilingualism in the context of the education system

A favorable atmosphere for learning foreign languages should, first of all, create educational and linguistic policies that language learning is not actually an obligation, but in each society, it is necessary to provide multiple language resources. However, such language polytheism does not arise by itself, but is created by inclusion in our essential developments and decisions concerning education and upbringing.

Herdina and Jessner (2002) introduce the Dynamic Model of Multilingualism (DMM) based on dynamic organizational theories and focus on the field of multilingualism. The dynamics of multilingualism dictates the personal attitudes of the students and the purpose for which they learn a language. Since the environment and the context of language learning always correlate with each other, the very beginning of language adoption is never static. Therefore, Jessner (1999) states that both linguistic and metalinguistic competences determine the process of language adoption of L3 students. According to Roche (2013), self-evaluation of language competences is of special importance because it reflects on motivation, fear and other factors that act on one another (p. 173).

According to Lévy-Hillerich (2009), it seems that despite the Bologna Process or because of it, the multilingualism that aims at GER currently leads to the adoption of only one foreign language, English (p. 15). At present, the still undeveloped situation at all levels of the education system in Serbia is that English is the most widely studied, either as a compulsory or optional foreign language, primarily because it still holds the primacy as the language of global communication. The fact is that English is the first foreign language to be taught, either as a compulsory or optional foreign language at all levels of education. However, the Lisbon Strategy (2000-2010) had the goal of improving education in the European Union to affect the development of the economy and increase the number of jobs in Europe (p. 29). Within it, the most important is learning foreign languages, and the task of educational institutions, among other things, is improving the teaching of foreign languages, as well as the introduction of obligatory two foreign languages to be learned besides mother tongue, for the sake of better communication between people and communities in Europe, as well as for greater competitiveness of citizens in the labor market and better opportunities for their employment.

The Council of Europe and the European Union (GER², 2001), on the other hand, point out a completely different opinion – that concentrating on only one language and practical aspects of language use not only leads to linguistic poverty and reduction of cultural diversity in Europe, as well as limiting the field of communication to banal everyday topics, it would also ignore the decisive goal of European integration, which is the

² GER is abbreviation for Gemeinsamer Europäischer Referenzrahmen (2001).

removal of prejudice and the development of mutual interest and understanding for the specialty of each individual, which in fact is the basis of the common life of the most diverse peoples in Europe. According to Neuner et al. (2009), understanding becomes possible only when learning foreign languages does not get out of the sociocultural context (as in the case of English as *lingua franca*) (p. 20).

Therefore, the recommendation would be that all Europeans should know more than one foreign language, and at least two foreign languages should be included in the standard offer for all students at all levels of education. In order to respect the linguistic and political goals of the Council of Europe, this should not be just the most widespread in terms of the number of people who speak the most widely spoken languages, but also the languages of the neighboring countries, languages that are in one country represented as other languages L2, minority languages or languages of migrants, languages of smaller language communities, as well as non-European languages.

Lately, the field of language proficiency is undoubtedly one of the most noteworthy areas of applied linguistics. Given that research in this field is increasingly taking place, it is very important to determine what the subject of research in the field of language proficiency actually is. If we start from the definition of Hoffman (1985), who maintains that the language profession is "all the linguistic means used in the professionally specific field of communication to enable understanding and communication among the experts of that field", we can conclude that the meaning and purpose of language proficiency is to train students, i.e. to teach them how to incorporate professional language into another dimension - foreign language (p. 53). Based on this, it is to conclude that language for specific purposes is an abstract concept that covers a number of situations in the use of language, and which, however, does not define the exact subject of the research.

Those who do not learn English as a language of modern times are denied the right to social and economic progress by restricting access to education systems (Phillipson, 1992, 2006). Despite the international decline in the role of Germans, their language is still the second most widely learned foreign language in Europe. Due to the special history of European integration in the 20th century, Germany and Austria have not consistently demanded the status of German language in EU politics and administration so far, which would be entitled to according to their

number of spokespersons and Union treaties. This restraint did not bring disadvantages for the German-speaking countries, but contributed to the image improvement that has been observed for years.

In many cases, however, the creeping Anglicization of the German is prophesied and lamented in German-speaking countries. The German language has survived infiltration by the Latin and Greek terms of the scientific languages as well as Frenchization in the 18th and early 19th centuries. The best way to sacrifice beautiful words and phrases of German is by their frequent and deliberate use. One of the main concerns should not be a creeping Anglicization of German language, but the repression of German in important areas of life. Here the areas that require a global lingua franca, such as science, aviation and the global financial markets are not meant, but the many areas of life in which the proximity to the citizen is more important than those to international partners, such as domestic policy, administration, culture and retail.

General languages vs. languages for special purposes

The fact that (Hutchinson & Waters, 1992) “learners know specifically why they are learning a language” (p. 6) is a great advantage on both sides of the process. The group of **ESP** learners is going to achieve the same goal in the field of study, so learners’ motivation enables teacher to meet learners’ needs and expectations easier. The learner and the way of learning (‘acquiring language’) are considered to be the main factors in the whole process of learning. Hutchinson & Waters (1992) emphasize ESP to be an approach, not a product; that means language learning and not language use is highlighted. They draw the attention to a ‘learning-centered approach’ “in which all decisions as to content and method are based on the learner’s reason for learning” (p. 19).

Bühlmann & Fearn (1999) complaints have a valid definition of general language and define "general language teaching" as focused "primarily on communication skills in everyday situation-oriented classroom" (p. 81). According to Rocca & Bosch (2005), the objectives of the general language teaching are so fluid vis-à-vis the fluency and precision and economy of specialist language teaching. The contextualization of statements is particularly important for a satisfactory definition of general language. With this in mind, there are two key differentiators from general languages (p. 79).

- 1. the communicative action in everyday situations as a primary goal**
- 2. the situational context as extra-linguistic function and its semantic source**

According to this, specialist languages do not need extra-linguistic function or semantic context. They are characterized by the uniqueness and clarity of the terms and statements, the aim of the communication in a limited area between comparable communication experts. The function of the expression is dependent on the linguistic form. A professional language as a private communication system such as the everyday or specialized language does not exist. So that would be the most crucial differentiator. The concept of professional language arises first in a curricular context and arises from the need for a vocational qualification (f.e. Zertifikat Deutsch für den Beruf des Goethe-Instituts)³.

German for tourism refers to both general language and specialized linguistic DaF-lessons. Its object is the promotion of the capacity of learners, with professionals and lies in tourism-specific topics and in professional communication domains to communicate. This is an essential qualifier of the curricular framework, learning objectives, as well as the pedagogic and didactic principles.

One of the tasks of the language proficiency theory is to identify the situations in which the language for specific purposes is used in communication. Accordingly, the language for specific purposes is spread horizontally, and as a variable; the language for specific purposes is defined as a whole of all language resources used in the field of language science in order to enable communication among professional staff. To further specify the division of the language for specific purposes, according to Ischreyt (1965) the criterion of degree of competence is introduced, which leads to the vertical stratification of the language profession (p. 38).

Developing the language for special purposes

The basic criteria for the vertical differentiation of the language profession according to H. Ischreyt (1965) are the usage situations, the degree of expertise, the formality, the user's circle and the different

³ <https://www.goethe.de/de/spr/kup/prf/prf/bul.html> (retrieved on 29.3.2018)

relationship with other language realizations, general language (p. 38). He divides languages into the language of science, i.e. theory, expert language and so-called distributor language. W. von Hahn (1980) considers linguistic theory "the sharpest form of language profession" that abstracts the vocabulary language and defines terminological systems and norms and appears almost exclusively in written form (p. 391). Expert speech language is used in daily communication both by uneducated workers and educated experts. He can appear as a professional jargon or for example as an internal report and emphasizes simplified and reduced terminology systems (p. 392). The language of the distributor serves to communicate between experts of a profession and the laymen, and is also considered the language of popular science (p. 392). It is precisely the modernization of science and technology, as well as economic, political and cultural life, that led to the multiplication of the language for specific purposes and hence their classification.

Interpretation of technical vocabulary

Technical vocabulary is of particular importance for the analysis of the proficiency of the profession, since technical words are carriers of key information of professional communication. From the field of lexicon, these lexemes are primary bearers of the very content of the text and therefore must be part of the context. In addition, words are expected to be exact, unambiguous, stylistic, and stylishly neutral and should provide economical evidence. Polysemy in professional texts is avoided by standardization, i.e. by standardizing the lexemes that become part of the official vocabulary of a certain profession language.

Therefore, the main textual features of the texts written in language for specific purposes are coherence, a logical, substantially meaningful trace of text, and cohesion, which would otherwise be lost in translation.

Difficulties in interpreting profession-related terms stem from the fact that they do not represent simple lexical units but are a reflex of comprehensive knowledge from a given professional field. With their semantic features, they serve as a precise description of a specific segment of the professional field. Thus, according to Jung (2007), the language for specific purposes provides both conceptual and linguistic accuracy which creates a special connection between language and objective reality (p. 2).

Paul (1966) speaks in his book *Prinzipien der Sprachgeschichte*, published in Freiburg in 1898, about the so-called "language mix" (Sprachmischung) and defines it as the influence of one language on another, which does not use it almost completely or completely, but it is so vigorously differentiated that it has to be learned in particular (p. 390). In this definition Paul speaks of one important condition for linguistic interference - of the rule of one or more languages. Elements of a foreign language can be introduced into the mother tongue only by persons who speak at least one foreign language. Paul points out that a certain minimum of foreign language governance is needed to make contact possible.

Learning objectives and didactic consequences of GSP

For decades, linguists and educators have been contemplating about the problem of how many and which words are to be learned in the classroom. The result is many vocabulary lists for German as a foreign language. Considering the criteria by which the vocabulary has been filtered involves statistical, pragmatic and learning psychological issues. More extensive criteria for the selection of learning vocabulary that should be learned have been discussed recently.

According to Mackey (1965), frequency, dispersion (range), usability (coverage), learnability and availability are the criteria for the selection of the learning vocabulary. Howatt (1974) suggests frequency, usability and availability criteria (p. 8). For Corder (1973), frequency is also most important, but only after identifying the situation in which the language is used (p. 233). Some words that are very important for a learner group, otherwise can have a very low frequency. Neuner (1991) recommends the usability, the comprehensibility and the inclusion of learning as selection criteria (p. 79). The linguistic-pragmatic needs of learners are reflected in usability. Comprehensibility, the contact areas of source and target language and learning are features of the foreign language vocabulary learning process. According to Tschirner (2010), one understands at least 8,000 words for everyday communication and 2,000 should be the part of active vocabulary (p. 238). The fact is that we will be able to understand significantly more words in written language as well as in spoken if we use them ourselves. This brings us to the distinction between active or productive and passive or receptive lexicon.

According to Blažević & Bosnar-Valković (2002), productive lexicon is characterized by a high degree of availability of words. They are retrieved without problems from long-term memory and used productively (p. 684). According to Reisener (1989), the scope of active lexicon is relatively limited and should appear regularly in texts and exercises and be used productively to ensure its availability and to gradually expand it (p. 108).

LSP in higher education institutions

Foreign language as the language for specific purposes is either mandatory or optional from the first year at all tertiary-level institutions of academic and professional studies, and this is most often, but not exclusively, English. Therefore, during the planning phase of this descriptive study, we were led by the students of the higher educational institution who are expected to master the professional terminology in the practical application of their knowledge after completing their education. Since the German language is one of the languages offered by the High School of Hotel Studies in vocational studies starting from the first year (the foreign language has the status of an elective and, besides German, French and Russian are offered. The elective foreign language is taught during five of the total of six semesters according to the syllabus with a fund of 3 hours per week, which means one lecture and two exercise classes), we wanted to determine which professional terms in the field of gastronomy and cuisine come from the German language and uniquely signify certain activities and thus facilitate success in the profession. Problems that students encounter when translating certain words may occur either as a result of insufficient general knowledge of the target language, in the specific case German, or professional terms.

Tourism, on the other hand, as a diverse and complex economic sector, encompasses a broad spectrum of economic activities and activity profiles. It belongs to the tertiary sector (services), where the number of employed and the need for skilled labor is constantly high. Foreign language skills in diverse occupations of tourism – where communication is a part of the offered product – play a central role and that is why foreign-language professionals are always in high demand. Various circumstances have made tourism a significant phenomenon; it has become an inseparable part of life, it influences the economy of many countries and this is why it became even more interesting field for researches in language for special purposes.

Functional grammar and vocabulary as fixed components of the DaF-lesson for tourism

Grammar in job-related German courses should primarily be the receptive and productive use of structures that occur in professional interaction situations. Here a difference should be made between oral and written communication. Funk (2001) believes that in the area of spoken language and in use of grammar, there is no difference.

However, the following question arises: Is that the same in written communication? Unlike oral communication, in the written area we find significant grammatical differences. Funk (2001) proposes a list with a selection of the structures that are more frequently found in technical texts (p. 971).

On the sentence level:

- In technical texts, the main clause prevails.
- As subordinate clauses, relative and conditional ones occur most frequently.
- Causal statements with *because* are rare, in most cases you will find there phrases.
- Pronominal adverbs are common.

Verbs:

- Past participle I and II
- Verbs without actively acting subject
- Verbs in the passive that describe processes
- Verbs with inseparable prefixes

Verbs with respect to quantitative relations (to increase)

- Verbs in subjunctive I and II
- Imperative forms (also semantic variants)

To compile the grammatical inventory for German lessons, first we have to clarify the relationship between oral and written communication shares, while the receptive skills and oral production should be the focus of the lesson. Therefore, according to Rocca & Bosch (2005), these structures are used in dealing with specialized texts and the use of passive language is taught. Students should understand but not actively use them (p. 80-81).

In the field of lexicography, the differences between written and spoken communication are smaller. For this reason, the specialized vocabulary for oral language use is the focus of the German lessons for tourism.

Characteristics of the technical vocabulary (Funk, 2001: 971):

- You can often find compounds such as *Fremdenverkehrsabgabe*, *Ökosteuer*, *Kurtaxe*, *Bettenkapazität*
- Nominations generally such as supplement rather than supplement, implementation rather than performing, Use instead of use, etc.
- Foreign words mostly Anglicism like *know-how*, *flyers*, *advertising*, *publicity*, *corporate identity*, *marketing*, etc.
- Adverbs and adjectives as prefixes as *innerdeutsch*, *höchstmöglich*, *außendienstorganisation*, *binnemarkt*
- Adjectives in general
- Affixes like *-bar*, *-ig*, *-sam*

Textbooks for German as a language for specific purposes in a wider area of tourism

One of the burning issues in GSP as a subject in high school and university education is the primary literature used in regular classes. The professional literature in German in the field of tourism at higher education institutions in Serbia is viewed in the widest possible sense by including the areas that can be presented under the auspices of tourist services such as gastronomy, restaurant and hotel industry. There are several textbooks that we want to highlight which, in the context of modern *glottodidactics*⁴, provide students with opportunities to develop their communicative competences.

The volume and textbook "*Kommunikation im Tourismus*" from the "*Kommunikation im Beruf*" series was written by a team of authors led by Dorothea Lévy-Hillerich and is published by the Goethe-Institut in cooperation with the publisher Fraus (Pilsen) and the Cornelsen Verlag. It is supposed to be used by pupils and students in vocational and technical schools, specialized secondary schools, post-graduate classes and

⁴ Glottodidactics is the area of the applied linguistics studying learning and teaching foreign languages. According to Vuco (2009), it is the interdisciplinary science that, from the theoretical point of view, learns the mechanisms of language adoption by defining approaches and operational components that determine methods and techniques in teaching foreign languages (p. 15).

technical colleges and it serves as the basis for vocationally oriented teaching of German as a foreign language. It includes the following contents:

- At the reception
- In the kitchen
- In the restaurant
- Travel agency foundation
- Touristic fairs and exchanges
- Tourism and viticulture
- Staffing.

„Deutsch für Mitarbeiter im Tourismus“ (Mehmet Uysal, Mehmet Göcmen, Gerhard Wazel et al.) presents exercise material "German for Employees in Tourism" and is one of the most important products of the EU Innovation Transfer Project "Improving Linguistic Competencies for Incoming Tourism within the EU (IMLIT)", which was coordinated between 2011-2013 by the Department of German Studies Suleyman Demirel University and was developed with great success with the help of partners Technical University Košice / Slovak Republic, IIK Institute of Intercultural Communication Erfurt / Germany, College of Foreign Languages of Selçuk University Konya and Isparta Vocational College of Suleyman Demirel University.

The exercises printed here are basically not a traditional textbook for German lessons in secondary schools or at universities, but they are primarily intended for online self-study of employees in the field of tourism.

The specific needs, living and working conditions of target group in the field of tourism suggested that the language course should be designed in the form of blended learning, as this flexible teaching methodology means a time-economic training during working hours.

Ja, gerne! A1 - Deutsch im Tourismus: Kursbuch (inkl. CD) is aimed at learners and employees in tourism industry. The course-bearing band for learners without prior knowledge trains communication in typical situations in restaurants, hotels and holiday resorts.

The series Menschen im Beruf conveys specialist German language skills for various occupational fields and interdisciplinary skills - lively, practical and success-oriented.

Figure 1: *Significant editions in the field of hotel industry, gastronomy and tourism*

TITLE AND AUTHOR	TARGET GROUP	LEVEL
„Das Langenscheidt Bildwörterbuch Gastronomie“, HamppVerlag, 2017	Those preparing for everyday work in Germany	A0/A1
„Berufsfeld Küche. Übungsheft“. (series: Einstieg Beruf - Erste Schritte in die deutsche Sprache) Albert, Ruth; Krauß, Susanne; Reisewitz, Judith u. a. Ernst Klett Sprachen, 2016	Those preparing for everyday work in Germany	A0/A1
„Deutsche Sprache in Hotel & Restaurant“, Prosonsoft GmbH/e-learning target group: Die Lernsoftware bereitet auf den allgemeinen Umgang mit der deutschen Sprache in Hotel und Restaurant in Deutschland vor.		Fortgeschrittene und Einsteiger mit Vorkenntnissen
„Deutsch im Hotel - Gespräche führen“, Barberis, Paola; Bruno, Elena Hueber, 2000	Apprentices in the hotel and tourism industry	Prerequisites are approximately 150 hours of instruction in German
„Deutsch im Hotel – Korrespondenz“, Barberis, Paola; Bruno, Elena Hueber, 2001	Apprentices in the hotel and tourism industry	Prerequisites are about 150 hours of lessons in DaF
„Deutsch in der Gastronomie und Hotellerie“, Albrecht, Urte; Kostka von Liebinsfeld, Gerhard Hueber, 2015, Taschenbuch	Greek, Spanish, Polish and Romanian staff in the catering industry	
„Erfolgreich in Gastronomie und Hotellerie“(series PluspunkteBeruf), Born, Kathleen; Tra Bui, Ly Hong; Burghardt, Sophia; Lehmann, Cornelia; Kupfer, Nora; Müller, Andreas; Than, Pham Dang; Wilsdorf, Nadja Cornelsen, 2015.	Learners who want to prepare for their daily work	A2/B1

„Menschen im Beruf - Tourismus (2 volumes)“, Schumann, Anja; Schurig, Cordula Hueber, 2015.	Learners who want to prepare for dealing with German-speaking tourists	A1 + A2
„Herzlich Willkommen Neu. Deutsch in Restaurant und Tourismus“. Cohen, Ulrike unter Mitarbeit von Christiane Lemcke Langenscheidt, 2001.	Apprentices in the gastronomy / tourism industry	A2-B1
„Ja, gerne! Deutsch im Tourismus“, Grunwald, Anita Cornelsen, 2014.	Learners who want to prepare for typical situations in dealing with tourists and hotel guests	A1
„Kommunikation im Tourismus“. Lévy-Hillerich, Dorothea Cornelsen Verlag, 2005.	Pupils and students in vocational schools, etc.	from B1/B2
Meet the need: Kapitel „Gastronomie“ www.meet-the-need-project.eu.	Learners who prepare for the work routine in the respective labor market sectors	A2/B1
„Projektarbeiten zum Berufsfeld Koch/Köchin“, Abdulaziz Bachouri, Abdulaziz; Otte, Stefanie; Köbis, Laura; Schäfer, Katrin; Schmidt, Julia Mareike; Dombrowsky, Janice; Keil, Juliane; Nemitz, Christiane; Topaloglu, Burak; Zäper, Sophie The work was created in 2012 in the project module "Deutsch für den Beruf – fachliche Handlungsorientierung" at the Herder Institute of the University of Leipzig.		
„Zimmer frei Neu. Deutsch im Hotel - aktuelle Ausgabe“, Cohen, Ulrike; Grandi, Nicoletta; Lemcke, Christiane Langenscheidt, 2012.	Apprentices from the hotel sector without prior knowledge.	from A1

New approaches to foreign language learning and methodology of teaching

The next generation of IT will be proficient in human language - at least to the extent that humans communicate with technology in their own language and that technology can automatically extract the most important information from the digital knowledge of the world. The language-capable technique will reliably translate and interpret, it will summarize conversations and texts and it will help with learning. For example, it will help immigrants, who will continue to need German-speaking countries, to learn the German language and cultural integration.

However, fonts and dictionaries are not enough for this level of technology, including spelling corrections and pronunciation rules, because when it comes to modeling speech understanding and automatically generating the right questions and answers, technology has to model the language more comprehensively and move beyond syntax to semantics⁵.

In *glotodidactics*, digital media has enriched the teaching and teaching practices by changing the position of the learner and the teacher (collaboration, autonomous learning, individualization of learning, online interactions, and role of the teacher)⁶. In particular, the effects of digital technology in teaching and learning German as a GSP should be considered, and in doing so analyze the benefits of using these new technologies. In the intercultural field, we could address the sociocultural component of the behavior of the Internet users, the web marketing strategies of German companies as well as social networks. Means of communication and the access to information have been fundamentally changed by the digital environment. In linguistics and translation science, computer programs for automated language processing, text analysis, dictionary making and translation have contributed to great advances in language proficiency. Scientists, teachers and translators have now efficient means of research, such as synchronous or diachronic corpus analysis, analysis of subject discourses, terminology and specialized vocabulary, language specific phraseology or syntax, inventory of

⁵ See <http://www.meta-net.eu/whitepapers/volumes/german-executive-summary-de> (retrieved on 21.2.2018)

⁶ See <https://laugautier.wordpress.com/2015/09/08/cfp-deutsch-als-fachsprache-im-digitalen-zeitalter-neuer-termin/> (retrieved on 21.2.2018)

existing digital dictionaries, specialized translation or multimedia writing, which substantially affects the field of tourism and its other subfields.

Motivational factors in the process of transferring knowledge of foreign languages in general and the language for specific purposes

One of the questions that is often discussed by foreign language lecturers and subject-matter professors of the narrowest professions is, among other things, the position of professor of the language for specific purposes. The question arises, first of all, about whether in general and to what extent professors of foreign languages need to know the area of the tertiary-level institution where they teach; whether and to what extent the professor of languages should pass through possible additional methodical-didactic training for work in teaching the proficiency of the profession.

Motivating students and maintaining their work motivation at an optimum level requires great advancement of teachers and is of paramount importance in the teaching process. However, the motivation for learning depends not only on the school and the teaching process, but also on certain sociocultural, psychological and family factors, which are characteristic of each student separately. Therefore, according to Žerajić & Vlajković (2011), given the attention paid to students' motivation, it is a surprising fact that very little is known about the conditions, performance and processes of motivation of teachers themselves, as well as about the different aspects of teaching and learning, that is, the motivation of students, students and other factors of the education system (p. 155-156).

The phenomenon of motivation is of utmost importance for the flows and outcomes of teaching and can influence the functioning of other factors that are in the teaching process indispensable. According to Žerajić (2011), motivated students learn faster and more easily, they adopt the required material, they achieve an optimal level of knowledge in a short time period, unlike the non-motivated ones that most often interfere with the working atmosphere and achieve poorer results (p. 72).

According to (Müller, Andreitz & Palekčić, 2008), the topic of teacher motivation can be approached with the aim of determining the motives that determine the selection (p. 40). At times, a variety of factors that influence teachers' motivation are difficult to identify and define

theoretically. That is why it is, according to Žerajić & Vlajković (2011), very often "elusive" in the teaching process, in that its dynamism, correlation with other factors and comprehensiveness is difficult to follow (p. 156).

Conclusion

Considering that the teacher of LSP is familiar with the material, he/she encounters an abundance of methodical, didactic and linguistic information and approaches that are often not transparent and, in its meaning, difficult to estimate for use in teaching; how the chosen method approaches the material to students and classifies it substantially from irrelevant, and to what extent teaching is based on language for specific purposes. Also, one of the problems faced by glottodidactics and, in this particular case, teaching vocational languages in higher education is the fact that our higher education institutions do not have adequate textbooks, manuals, glossaries and materials that enable professors and students to easily understand professional texts and professional terminology. The LSP teachers/lecturers are those who are more or less creating a curriculum by adapting it to the student's level of knowledge, because we have to consider that this knowledge varies from individual to individual.

Therefore, the most motivated role is played by a well-motivated teacher, and it is necessary to continue to explore this field and offer teachers different types of stimulation. A typical but also "ideal" teacher is satisfied with his call, enjoys working with children and likes the language he teaches. In order for this crude assumption to be didactic, it would be necessary to apply other methodological procedures, e.g. monitoring and analyzing classes, interviewing pupils and teachers, and so on. According to Žerajić & Vlajković (2011), this opens the possibility to get some new, significantly different, but more precise data on the causes and outcomes of teacher motivation (p. 168).

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