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**TOURISM  
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**Tourism in the Era of Digital Transformation**



**THEMATIC  
PROCEEDINGS**

**I**



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



# DIGITAL TRANSFORMATION IN THE FUNCTION OF IMPROVING THE COMPETITIVENESS OF THE REPUBLIC OF SERBIA IN THE TOURISM SECTOR<sup>1</sup>

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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, signals 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 1-10-7 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 digirates (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*



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 <sup>1</sup>	DIGITAL TECHNOLOGIES ENABLE EMPLOYEES TO WORK BETTER WITH <sup>2</sup>			SELECT DIGITAL QUALITIES <sup>2</sup>				
		Customers	Partners	Employees	Clear strategy	Strategy to transform	Skills provided	Managers encourages use	Leaders have skills
IT AND TECHNOLOGY	6.23	TOP 5	TOP 5	TOP 5	TOP 5	TOP 5	TOP 5	TOP 5	TOP 5
TELECOMMUNICATIONS	5.89	TOP 5	TOP 5	TOP 5	TOP 5	TOP 5	TOP 5	TOP 5	TOP 5
ENTERTAINMENT, MEDIA	5.49	TOP 5	TOP 5	BETWEEN TOP 5 AND BOTTOM 5	TOP 5	TOP 5	TOP 5	TOP 5	TOP 5
PROFESSIONAL SERVICES	5.39	BETWEEN TOP 5 AND BOTTOM 5	TOP 5	BETWEEN TOP 5 AND BOTTOM 5	TOP 5	BETWEEN TOP 5 AND BOTTOM 5	TOP 5	TOP 5	TOP 5
TRANSPORTATION, TOURISM	5.18	TOP 5	BETWEEN TOP 5 AND BOTTOM 5	TOP 5	BETWEEN TOP 5 AND BOTTOM 5	TOP 5	BETWEEN TOP 5 AND BOTTOM 5	TOP 5	BETWEEN TOP 5 AND BOTTOM 5
FSI – ASSET MANAGEMENT	5.18	BOTTOM 5	BETWEEN TOP 5 AND BOTTOM 5	BETWEEN TOP 5 AND BOTTOM 5	TOP 5	BETWEEN TOP 5 AND BOTTOM 5	BETWEEN TOP 5 AND BOTTOM 5	BETWEEN TOP 5 AND BOTTOM 5	TOP 5
FSI - BANKING	5.14	BETWEEN TOP 5 AND BOTTOM 5	BETWEEN TOP 5 AND BOTTOM 5	BOTTOM 5	BETWEEN TOP 5 AND BOTTOM 5	BETWEEN TOP 5 AND BOTTOM 5	BETWEEN TOP 5 AND BOTTOM 5	BETWEEN TOP 5 AND BOTTOM 5	BETWEEN TOP 5 AND BOTTOM 5
RETAIL	5.03	TOP 5	BOTTOM 5	BETWEEN TOP 5 AND BOTTOM 5	BETWEEN TOP 5 AND BOTTOM 5	TOP 5	BOTTOM 5	BETWEEN TOP 5 AND BOTTOM 5	BETWEEN TOP 5 AND BOTTOM 5
AUTO	5.01	BETWEEN TOP 5 AND BOTTOM 5	BOTTOM 5	BETWEEN TOP 5 AND BOTTOM 5	BETWEEN TOP 5 AND BOTTOM 5	BOTTOM 5	BOTTOM 5	BOTTOM 5	BETWEEN TOP 5 AND BOTTOM 5
PHARMA	5.00	BETWEEN TOP 5 AND BOTTOM 5	BETWEEN TOP 5 AND BOTTOM 5	TOP 5	BETWEEN TOP 5 AND BOTTOM 5	BETWEEN TOP 5 AND BOTTOM 5	BETWEEN TOP 5 AND BOTTOM 5	BETWEEN TOP 5 AND BOTTOM 5	BETWEEN TOP 5 AND BOTTOM 5
CONSUMER GOODS	4.90	BETWEEN TOP 5 AND BOTTOM 5	BETWEEN TOP 5 AND BOTTOM 5	BOTTOM 5	BETWEEN TOP 5 AND BOTTOM 5	BETWEEN TOP 5 AND BOTTOM 5	BOTTOM 5	BETWEEN TOP 5 AND BOTTOM 5	BOTTOM 5
FSI - INSURANCE	4.80	BOTTOM 5	BOTTOM 5	BOTTOM 5	BETWEEN TOP 5 AND BOTTOM 5	BETWEEN TOP 5 AND BOTTOM 5	BETWEEN TOP 5 AND BOTTOM 5	BETWEEN TOP 5 AND BOTTOM 5	BETWEEN TOP 5 AND BOTTOM 5
EDUCATION	4.71	BETWEEN TOP 5 AND BOTTOM 5	BETWEEN TOP 5 AND BOTTOM 5	BETWEEN TOP 5 AND BOTTOM 5	BOTTOM 5	BETWEEN TOP 5 AND BOTTOM 5	BETWEEN TOP 5 AND BOTTOM 5	BETWEEN TOP 5 AND BOTTOM 5	BOTTOM 5
OIL & GAS	4.68	BOTTOM 5	BETWEEN TOP 5 AND BOTTOM 5	BETWEEN TOP 5 AND BOTTOM 5	BETWEEN TOP 5 AND BOTTOM 5	BOTTOM 5	BETWEEN TOP 5 AND BOTTOM 5	BOTTOM 5	BETWEEN TOP 5 AND BOTTOM 5
HEALTH CARE PROVIDER	4.67	BETWEEN TOP 5 AND BOTTOM 5	BOTTOM 5	BOTTOM 5	BOTTOM 5	BETWEEN TOP 5 AND BOTTOM 5	BOTTOM 5	BOTTOM 5	BETWEEN TOP 5 AND BOTTOM 5
MANUFACTURING	4.54	BOTTOM 5	BOTTOM 5	BOTTOM 5	BOTTOM 5	BOTTOM 5	BETWEEN TOP 5 AND BOTTOM 5	BOTTOM 5	BOTTOM 5
PUBLIC SECTOR - FEDERAL	4.51	BOTTOM 5	BETWEEN TOP 5 AND BOTTOM 5	BETWEEN TOP 5 AND BOTTOM 5	BOTTOM 5	BOTTOM 5	BOTTOM 5	BOTTOM 5	BOTTOM 5
CONSTRUCTION AND REAL ESTATE	4.50	BETWEEN TOP 5 AND BOTTOM 5	TOP 5	TOP 5	BOTTOM 5	BOTTOM 5	BETWEEN TOP 5 AND BOTTOM 5	BETWEEN TOP 5 AND BOTTOM 5	BOTTOM 5


  
 TOP 5      BOTTOM 5      BETWEEN TOP 5 AND BOTTOM 5

<sup>1</sup> 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

<sup>2</sup> 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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