THE ROLE OF MARKETING INFORMATION SYSTEMS IN THE FUTURE OF TOURISM

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Abstract

The paper investigates the possibilities and scope of the impact of marketing information systems on future tourist trends. Special emphasis is placed on the current conditions in which the world economy and tourism find themselves, which are significantly determined by the spread of the COVID 19 pandemic and the digitalization of business. In such conditions, the importance of marketing information systems for adequate management of relationship marketing in tourism is increasing. Namely, successful marketing in tourism means offering greater value than the competition, as well as customer satisfaction. Satisfaction is achieved when the obtained performance of the tourist service meets or exceeds expectations. Customer expectations are formed on the basis of pre-purchase information, and commercial success is achieved when performance exceeds expectations. Marketing information systems are often used in practice in order to constantly improve the customer base. One-on-one marketing, or tailoring travel services to individual customers, depends heavily on market and timely customer information. Research has shown that marketing information systems provide an organized and timely flow of market information that optimizes marketing decision-making in tourism.

Key Words: *marketing information systems, tourism, marketing decision making, satisfaction, performance*
JEL classification: *M31, Z30, Z32, D80*

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Introduction

The importance of tourism in modern conditions is reflected in its connection with activities such as: health, transport, politics, culture, etc.Namely, Al-Weshah (2020) considers that "information provides a necessary need to tourists and travelers" (p. 1171).

One of the important areas in which marketing has found its application is tourism. Their development was complementary, because tourism also gained its full expansion in the last decades of the twentieth century.

According to (Masri et al., 2020), "travel agents and managers must learn how to maintain customer relationship quality and continuance intention, and they must understand the influence of antecedent factors in the e-tourism environment" (p. 1). When we talk about marketing in tourism, the subject of its study is to answer the question of how and in what way it can contribute to facilitating the process of exchange in the tourism market.

Li (2020) considers that "tourism can be seen as the commercial sectors in which business functions almost exclusively use information and communication technology (ICT) that have permanently boost the development of tourism" (p. 10).

The internet, separately the social media become the primary source when customer want to purchase and plan their travel (Law, et al., 2014). Marketing in tourism as a subsystem in the service marketing system has developed in parallel with the development of the service sector all over the world. The first works in the area of marketing in tourism dealt with the articulation of certain concepts, different concepts and definitions, which is understandable given the level of tourism development at that time.

According to Katerinich et al. (2021) "to ensure the activities of the objects of the tourism industry today, it is vital to own and use various innovative technological systems that make it possible to facilitate and simplify the daily tasks facing the business" (p. 2).

Successful marketing is one that exceeds the value offered by the competition. After the purchase, the customer's satisfaction depends on the relationship between the observed performance of the purchased product and/or service and the customer's expectations. Satisfaction is achieved when the obtained performance meets or exceeds expectations.

Defining the tourist market and current trends

According to Mihailović & Popović (2018) "the basic elements of each market are: market entities, exchange facilities and price" (p. 148). Namely, according to the mentioned research "the interaction of these elements in space and time, ie the relationship between supply and demand (as subjects), goods or services as objects of exchange and prices as a monetary expression of value, shows certain specifics in certain markets" (p. 148). Fedoryshyna et al. (2021) point out that "marketing plays a very important role in the tourism business" (p. 23). In the commodity economy, each market can be defined as the totality of the relationship between supply and demand, ie as a form of exchange of products or services through money (Cvijanović, 2014).

Mihailović & Popović (2018) observe the market as follows: "the market is a group of people, who as individuals or as organizations have needs for products and who are sufficiently ready and authoritative to buy a product" (p. 148). In order for a given set of people to make a market, the following requirements need to be met: 1) The people who make up a set need a product in order for a market to exist; 2) They must have have purchasing power; 3) They must be willing to use their purchasing power; 4) Individuals in the group must have the authority to buy a specific product (Milisavljević, 2007).

Cvijanović et al. (2016) point out that "due to its specifics, the tourist market is also called a market of a special kind - sui generis" (p. 73). According to Xiao (2019) "the main purpose of tourism industry is to attract people's attention so that a good marketing strategy to be a breakthrough for the development of tourism and potential customers is regarded as key objects observed by tourism managers" (p. 43). The tourist market is a very dynamic and open system. Xiaoluan (2021) states that "since 2020, the outbreak of covid-19 has changed the operation mode of many industries, and also has a great impact on the global tourism industry" (p. 279). According to Sheresheva et al. (2021) "the tourism industry was among the first and most badly hit by the COVID-19 pandemic. Thousands of tours all over the world had to be interrupted, and those planned for later dates had to be canceled or postponed" (p. 3).

The Americas recorded the strongest results in the first nine months of 2021, with arrivals up 1% compared to 2020 but still 65% below 2019 levels (UNWTO, 2021). Europe saw an 8% decline compared to 2020,

which is 69% below 2019; in Asia and the Pacific arrivals were 95% below 2019 levels as many destinations remained closed to non-essential travel; Africa and the Middle East recorded 77% and 82% drops respectively compared to 2019 (UNWTO, 2021). According to preliminary estimates, international tourism experienced a mild 4% upturn in 2021, with 15 million more international tourist arrivals (overnight visitors) than in 2020 (UNWTO, 2022a). Namely, tourist arrivals (Table 1) remained 72% below the levels of pre-pandemic year 2019 (UNWTO, 2022a).

Table 1: *International Tourist Arrivals by (Sub)region*

	(million)			Share:%	Change: %		
	2019	2020	2021	2021	20/19	21/20	21/19
World	1,464	400	415	100	-72.7	3.8	-71.7
Advanced economies	777	215	218	52.5	-72.3	1.2	-72.0
Emerging economies	687	185	197	47.5	-73.1	6.8	-71.3
Europe	746.1	235.7	279.8	67.4	-68.4	18.7	-62.5
Northern Europe	83.5	21.7	15.1	3.6	-74.0	-30.3	-81.9
Western Europe	205.4	79.8	71.7	17.3	-61.1	-10.2	-65.1
Central/Eastern Eur.	153.2	46.0	54.5	13.1	-70.0	18.4	-64.4
Southern/Medit. Eur	304.0	88.2	138.5	33.4	-71.0	57.1	-54.4
- of which EU-27	540.5	178.4	203.9	49.1	-67.0	14.3	-62.3
Asia and the Pacific	360.4	59.4	20.9	5.0	-83.5	-64.8	-94.2
North-East Asia	170.3	20.3	11.3	2.7	-88.1	-44.3	-93.4
South-East Asia	138.6	25.4	3.3	0.8	-81.7	-87.0	-97.6
Oceania	17.5	3.7	0.7	0.2	-79.0	-81.4	-96.1
South Asia	34.0	10.0	5.6	1.4	-70.5	-43.8	-83.4
Americas	219.3	69.9	81.9	19.7	-68.1	17.2	-62.7
North America	146.6	46.7	54.8	13.2	-68.2	17.3	-62.7
Caribbean	26.3	10.3	16.7	4.0	-61.0	62.8	-36.5
Central America	10.9	3.1	4.8	1.1	-71.6	53.7	-56.4
South America	35.4	9.8	5.7	1.4	-72.2	-42.4	-84.0
Africa	68.6	15.9	17.9	4.3	-76.8	12.4	-73.9
North Africa	25.6	5.5	6.1	1.5	-78.4	10.4	-76.1
Subsaharan Africa	42.9	10.4	11.8	2.8	-75.9	13.5	-72.6
Middle East	69.9	19.0	14.5	3.5	-72.8	-23.7	-79.3

Source: *UNWTO, World Tourism Barometer*

The following tourist trends in Serbia can be noticed:
- in January 2021, compared to January 2020, the number of tourist arrivals decreased by 40.4%, and the number of overnight stays decreased by 34.8%. (SORS, 2021); in January 2021, compared to January 2020, the number of overnight stays of domestic tourists decreased by 10.7%, and the number of overnight stays of foreign tourists decreased by 66.9% (SORS, 2021);

- during 2021 there are positive growth rates which are, among other things, a consequence of the reduced base from the previous year; namely, in December 2021, compared to December 2020 (Table 2), the number of tourist arrivals increased by 139.5%, and the number of overnight stays increased by 101.2% (SORS, 2022);
- in December 2021, compared to December 2020, the number of overnight stays of domestic tourists increased by 71.0%, and the number of overnight stays of foreign tourists increased by 179.4% (SORS, 2022).

Table 2: *Arrivals and overnight stays in the Republic of Serbia in the period 2021-2020*

Republic of Serbia / regions	In total			
	XII 2021	I-XII 2021	Index	
			XII 2021 XII 2020	I- II 20 1 I-XII 2020
Arrivals				
Republic of Serbia	212,279	259,1293	239.5	142.4
Serbia – North	102,303	103,6246	291.0	172.8
Belgrade region	64,734	607,873	333.6	183.7
Region of Vojvodina	37,569	428,373	238.5	159.4
Serbia – South	109,976	155,5047	205.6	127.4
The region of Šumadija and Western Serbia	85,914	105,6801	211.0	128.2
Region of Southern and Eastern Serbia	24,062	498,246	188.3	125.8
Region of Kosovo and Metohija	...	...	...	...
Overnight Stays				
Republic of Serbia	552,729	8,162,430	201.2	131.6
Serbia – North	248,342	2,808,272	206.8	165.9
Belgrade region	153,131	1,628,288	228.6	175.4
Region of Vojvodina	95,211	1,179,984	179.3	154.3
Serbia – South	304,387	5,354,158	196.9	118.8
The region of Šumadija and Western Serbia	240,910	3,565,312	208.9	119.7
Region of Southern and Eastern Serbia	63,477	1,788,846	161.7	117.0
Region of Kosovo and Metohija	...	...	...	...

Source: *Statistical Office of the Republic of Serbia (SORS), Statistics of catering and tourism*

Domestic tourism and travel **close to home,** as well as **open-air** activities, **nature-based** products and **rural tourism** are among the major travel trends (Table 3) that will continue shaping tourism in 2022 (UNWTO, 2022b).

Table 3: *Changes in costumer trends*

CLOSER	MORE RESPONSIBLE
Domestic tourism has shown positive signs in many markets since people tend to travel closer. Travelers go for 'staycations' or vacations close to home.	Sustainability, authenticity and localhood: travelers believe in the importance of creating a positive impact on local communities, increasingly searching for authenticity.
GET AWAY Nature, Rural Tourism and Road Trips have emerged as popular travel choices due to travel limitations and the quest for open-air experiences.	**LONGER STAYS & HIGHER SPENDING** 2021 has seen a significant increase in spending per trip and longer stays

Source: *World Tourism Organization (UNWTO)*

Marketing information system in tourism and its functional components

In the field of promotion and reservations, new communication and promotional tools have been developed based on e-marketing technology for communication with consumers and greatly increase the efficiency of marketing activities (Official Gazette of RS, 2016).

According to Alnusairat et al. (2021) "information gained from customers enables the firm can make significant implications about demographics, satisfaction, motivation, behavior, and projected advantages" (p. 48).

Jobber & Rainbow (1977) define the marketing information system as "a system in which marketing information is formally collected, stored, analyzed and distributed to managers in accordance with their information needs, regularly and according to an established plan" (p. 104).

Zhang (2021) points out that „the new generation of information technology promotes the transformation of traditional tourism to intelligent tourism, such as big data, Internet of Things, artificial intelligence, block chain, etc." (p. 1).

MIS is the "window to the world" that the company has and is increasingly the primary connection with customers. According to Li (2020) „the innovation of smart tourism is sourced from the recent significant

development of information technology, especially the technology about Big Data store, analysis and computing, which provide new possibilities to mine information and create value" (p. 13).

Vojnović (2014) points out that "MIS consists of four main components: (1) market research; (2) marketing notification; (3) internal reporting subsystem; (4) m*arketing decision* support subsystems" (p. 231).

1. Market research. Information obtained from market research helps management to adapt to market trends and make timely business decisions. Certainly, a significant component of MIS are the managers who use this system. Managers contact clients to analyze them effectively, with marketing information being a valuable business support. Consequently, the organization of this system depends on the type of decisions that company managers have to make.

2. Marketing notification. Data collection, analysis and management programs are used for marketing intelligence purposes. Accordingly, market information is obtained for making optimal marketing decisions in tourism.

3. Internal reporting subsystem. Database marketing is a system in which marketing data is edited, stored and used for internal reporting. Data can be organized into a "flat file" or a relational database, where data is stored in interconnected tables and where each column and row corresponds one characteristic of the entry. Each row, for example, can represent the user, while the columns give names and information about the purchase made.

4. *M*arketing decision support subsystems**. This component consists of system managers who, as the name suggests, manage the system and maintain its constituent elements. This primarily refers to software and hardware networks, through which they achieve compliance with the business policy of the organization.

Information technology is a valuable support for creating effective strategies for communicating with customers of tourism services (Troshin et al., 2020). According to Patro (2021), "in today's competitive environment, marketing is much more important than the production and sale of the product/service" (p. 235).

The strategic role of marketing is further emphasized with the application of new technology, based on the Internet. According to Vojnović (2014), "The behavior of potential customers is investigated through the WEB and e-commerce" (p. 230). In an economy that is largely dependent on knowledge, the ability to gather and analyze information and, based on it, to act effectively faster than the competition, is an essential skill that leads to the creation of a competitive advantage.

On-line analytical data processing and geographic information systems

Yoga et al., (2019) consider that "the existence of internet technology has changed the lifestyle in various aspects, including in way of communication" (p. 97). Consequently, according to Camela et al. (2020), "in Big Data Era, Statistical Tourism Observatory needs to be revised" (p. 1655). Consequently, continuous market information is necessary.

According to Pencarelli (2020) "new digital technologies have introduced important innovations in factories, hospitals, hotels, cities and territories" (p. 455). Geographic Information Systems (GIS) enable marketing employees to geographically "map" their competitors, suppliers, customers, business partners and prospects. Site selection, trade area analysis, environmental impact analysis, site design, network planning, risk analysis - are common applications.

According to Alnusairat et al. (2021) "Its Geographic Information System (GIS) seems to be a remarkable new technology with a wide range of applications in tourism, both inside the tourist industry and in ecotourism development" (p. 47). GIS data provides new visualization opportunities to marketing employees, who can track user behavior at a fixed location in a specific time period.

Mihailović et al. (2020) point out that "strong geographical proximity emphasizes spatial closeness through a wide range of direct sale arrangements as well as indirect relations with one or very few intermediaries"(p. 2). Geographic Information System marketing applications include the following elements (Robert, 2003):
1. User location. Behavior data from user files, subscriber lists, returns under warranty, transaction history with time and location information are linked.

2. Geographic market information. Market data is linked to physical maps; data can be classified by country, city, postal code, voter list data, etc.
3. Location of marketing activities. Transactions, distribution patterns, results of direct reactions, sales forecasts, advertising costs are connected with the geographical location.
4. Business location. Business facilities are marked on maps so that media coverage, population density, purchasing power, retail density, etc. can be displayed.
5. Location. The location of trucks, cars, planes and other means of transport is determined using GPS.

Functions of *marketing decision* support system

Marketing research is primarily concerned with providing market information and measuring consumer reactions to various marketing actions (Moutinho & Evans, 1992).

The Marketing Decision Support System (MDSS) allows the user to explore more tourist opportunities. Typical features of this model include models and techniques for (Cvijanović & Mihailović, 2010):
- Sensitivity analysis.
- "What if" analysis.
- Setting goals.
- Reporting on exceptions.
- Pareto analysis.
- Prediction models.
- Simulation models.
- Scorecards and dashboards.

Benefits from the application of marketing information systems in tourism

MIS influences the connection of marketing with suppliers, customers and other partners. According to Gajdošík (2018) "smart tourism describes the current stage of tourism development influenced by the evolution of information technologies" (p. 26).

The main benefits of MIS arise in the areas of merging functions, market monitoring, strategy development and its implementation (Cvijanović & Mihailović, 2010).

MIS supports the introduction of tourist services on the market, enables cooperation and cooperation of marketing strategies. This system is an integral part of customer relationship management, sales automation and customer service management.

MIS enables the coordination of activities in the marketing department and between marketing and other functions in the organization, such as finance, logistics and customer service (Cvijanović & Mihailović, 2010).

Perspective of marketing information systems in tourism

Innovations in the digital economy, such as open source systems, platform technology, cloud computing, ultra-fast and efficient search engines, smartphones and other devices based on wireline and wireless network infrastructure have dramatically changed the image of many industries (Sziva and Nemeslaki, 2016).

Namely, Happ & Ivancsó-Horváth (2018) consider that "with the emergence, spread and rapid development of computers, and later computer networks, a new era has begun" (p. 9). At the same time, Mihailović & Popović (2020) point out „there is an increasing need for tourist movements towards the environment of preserved natural and cultural values" (p. 284).

According to Liang (2021), "in the development of computing technology, computing models play an extremely critical role" (p. 1). In developed market economies, the Internet has already entered the field of tourism, and the range of applications of the Internet for marketing purposes is very wide: from "online" advertising, through online shopping (or sales), to "online" services (Mihailović & Popović, 2021). Labunska et al. (2022) consider that "tourism today is a field in which the processing, use and transfer of information is a vital component of daily activities" (p. 19).

The essence of the service-oriented business trend is reflected in the shift from product-oriented to user-oriented thinking. According to Wicks (2021) "we're thrilled about an array of exciting luxury hotel openings in the new year, some of which were delayed due to COVID-19, as well as

exciting ways to elevate the way we plan, get from one city to the next, and enjoy some much-needed R&R while exploring our favorite parts of the world" (p.1). Experts predict the 6 biggest travel trends for 2022: 1) The glamorous return of train travel; 2) A travel advisor is a globetrotter's best friend; 3) Supporting local; 4) Celebrating life's most important moments with travel; 5) Prioritizing wellness; 6) Making each trip meaningful (Wicks, 2021).

The importance of tourism in urban protected areas is increasingly emphasized, as well as its connection with the development of agriculture and other activities. According to (Popović & Mihailović, 2020), "urban protected areas are protected areas situated in or at the edge of larger urban centres" (p. 89).

The accelerated development of science will lead to a better response to the increasingly sophisticated demands of consumers in tourism. Cvijanović & Vuković (2012) believe that "the role of marketing in tourism will be large and promising, especially if it is intertwined with other areas such as sociology, psychology, informatics, consumer behavior, etc." (p. 39).

Conclusion

In modern business, information technology is rapidly transforming the way in which the importance of marketing information systems in tourism is observed. In the era of digitalization, tourism organizations are striving to adopt e-commerce methodologies.

In such conditions, all organizations have a comprehensive influence of Internet users and competition. This is especially evident in the marketing sector where information technology comes into contact with the user. The importance of marketing information is growing in knowledge-based and information-based economies where the emphasis is on services as a fundamental value factor.

Tourist services are significantly dependent on information. Tourist organizations in the era of digitalization are creating and controlling their relationship with users, which is getting closer. They use information technology to connect and align with tourism service users and business partners and achieve measurable business results quickly.

Acknowledgements

References

1. Alnusairat, S., Elnaklah, R., Ab Yajid, M. S., Johar, M. G. M., & Khatibi, A. (2021). Information system, geography, information management system and tourism planning: a geographical perspective from Malaysia. *PalArch's Journal of Vertebrate Palaeontology*, Vol. 18, No. 2, 42-60.

2. Al-Weshah, G. (2020). E-marketing practices from Jordanian tourism agencies perspectives: a qualitative evidence. In K. P. Mehdi (Ed.): *Destination Management and Marketing: Breakthroughs in Research and Practice*, 1170-1187.

3. Carmela, I., Giuseppe, P., & Siciliano, R. (2020). Mining big data in tourism. *Quality and Quantity*, Vol. 54, No. 5-6, 1655-1669.

4. Cvijanović, D. (2014). *Turističko tržište u dunavskom regionu*, Institut za ekonomiku poljoprivrede, Beograd.

5. Cvijanović, D., Mihailović, B (2010). *Menadžment i marketing uslužnog sektora*, Institut za ekonomiku poljoprivrede, Beograd.

6. Cvijanović, D., Mihailović, B., Vukotić, S. (2016). *Marketing i konsalting u funkciji razvoja turizma Srbije*, Institut za ekonomiku poljoprivrede, Beograd.

7. Cvijanović, D., Vuković, P. (2012). *Uloga marketinga u turizmu dunavskog regiona Srbije*, Institut za ekonomiku poljoprivrede, Beograd.

8. Fedoryshyna, L., Halachenko, O., Ohiienko, A., Blyznyuk, A., Znachek, R., & Tsurkan, N. (2021). Digital marketing in strategic management in the field of the tourism. *Journal of Information Technology Management*, Vol. 13, 22-41.

9. Gajdošík, T. (2018). Smart tourism: concepts and insights from Central Europe. *Czech Journal of Tourism*, Vol. 7, No. 1, 25-44.

10. Happ, É., & Ivancsó-Horváth, Z. (2018). Digital tourism is the challenge of future–a new approach to tourism. *Knowledge Horizons. Economics*, Vol. 10, No. 2, 9-16.

11. Jobber, D., Rainbow, C. (1977). A Stady of the Development and Implementation of Marketing Information Systems in British Industry, *Journal of the Marketing Research Society,* Vol. 19, No. 3, 104-111.

12. Katerinich, O., Degtyaryova, T., & Usova, I. (2021). Modern information systems as a marketing tool in the development of a tourism business. *E3S Web of Conferences*, Vol. 273, No. 66, 1-6.

13. Labunska, S., Zyma, O., & Sushchenko, S. (2022). The use of information systems as a way to ensure interaction between small and big tourism enterprises. *Access Journal*, Vol. 3, No. 1, 16-28.

14. Law, R., Buhalis, D., Cobanoglu, C (2014). Progress on information and communication technologies in hospitality and tourism. *International Journal of Contemporary Hospitality Management*, Vol. 26, No. 5, 727-750.

15. Li, S. (2020). Trends, Development and Issues in Tourism Information System. *The Frontiers of Society, Science and Technology*, Vol. 2, No. 14, 10-16.

16. Liang, H. (2021). Intelligent Tourism Personalized Recommendation Based on Multi-Fusion of Clustering Algorithms. *Advances in Multimedia*, Vol. 1, No. 1, 1-11.

17. Masri, N. W., You, J. J., Ruangkanjanases, A., Chen, S. C., & Pan, C. I. (2020). Assessing the effects of information system quality and relationship quality on continuance intention in e-tourism. *International journal of environmental research and public health*, Vol. 17, No. 1, 174-189.

18. Mihailović, B., Popović, V (2020). Promotion of rural areas of Braničevo-Danube region through branding of agri-food products. In D. Cvijanović (Ed.): *Fifth International Scientific Conference - Tourism in Function of Development of the Republic of Serbia - Tourism and Rural Development – TISC 2020*. Vrnjačka Banja: University of Kragujevac, Faculty of Hotel Management and Tourism in Vrnjačka Banja, Vol. 5, No. 2, 282-298.

19. Mihailović, B., Popović, V. (2018). Management of service marketing: a perspective of modern tourism sector. In V. Bevanda & S. Štetić (Eds.): *Modern management tools and economy of tourism sector of the present era*. Association of Economists and Managers of the Balkans headquartered in Belgrade, Serbia and the Faculty of Tourism and Hospitality from Ohrid, Macedonia, 143-158.

20. Mihailović, B., Popović, V. (2021). Digital marketing of agri-food products in support of rural tourism during the Covid pandemic. In D. Cvijanović (Ed.): *Tourism International Scientific Conference* – Tourism Challenges amid Covid-19 – TISC 2021. Vrnjačka Banja: University of Kragujevac, Faculty of Hotel Management and Tourism in Vrnjačka Banja, Vol. 6, No. 1, 111-126.

21. Mihailović, B., Radić Jean, I., Popović, V., Radosavljević, K., Chroneos Krasavac, B., Bradić-Martinović, A. (2020). Farm Differentiation Strategies and Sustainable Regional Development. *Sustainability*, Vol. 12, No. 17, 1-18.

22. Milisavljević, M. (2007). *Savremeni strategijski menadžment*, Megatrend, Beograd.

23. Moutinho, L., Evans, M. (1992). *Applied Marketing Research*, Addison – Wesley, Colorado Springs.

24. Official Gazette of RS (2016). Tourism Development Strategy of the Republic of Serbia for the period from 2016 to 2025.

25. Patro, C. S. (2021). Digital Tourism: Influence of E-Marketing Technology. In B. Barbosa (Ed.): *Impact of New Media in Tourism*, IGI Global, USA, 234-254.

26. Pencarelli, T. (2020). The digital revolution in the travel and tourism industry. *Information Technology & Tourism*, Vol. 22, No. 3, 455-476.

27. Popović, V., Mihailović, B. (2020). Business Models for Urban Farming in and Around Urban Protected Areas: EkoPark Belgrade Case Study. In A. Jean Vasile, J. Subić, A. Grubor, D. Privitera (Eds.), *Handbook of Research on Agricultural Policy, Rural Development, and Entrepreneurship in Contemporary Economies,* IGI Global, USA, 89-107.

28. Robert, R. R. (2003). Marketing Information Systems. *Encyclopedia of Information Systems*, Vol. 3, 137-151.

29. Sheresheva, M., Efremova, M., Valitova, L., Polukhina, A., & Laptev, G. (2021). Russian tourism enterprises' marketing innovations to meet the COVID-19 challenges. *Sustainability*, Vol. 13, No. 7, 1-17.

30. Statistical Office of the Republic of Serbia (SORS), Statistics of catering and tourism, number 46, year LXXI, 26.02. 2021.

31. Statistical Office of the Republic of Serbia (SORS), Statistics of catering and tourism, number 16, year LXXII, 30.01. 2022.

32. Sziva, I., Nemeslaki, A. (2016). *Utazás Evilágban*, Versenyképesség és internet a turisztikai piacon Információs Társadalomért Alapítvány, INFOTA Kutatóintézet, Budapest.

33. Troshin, A. S., Sokolova, A. P., Ermolaeva, E. O., Magomedov, R. M., & Fomicheva, T. L. (2020). Information technology in tourism: Effective strategies for communication with consumers. *Journal of Environmental Management & Tourism*, Vol. 11, No. 2, 322-330.

34. Vojnović, I. (*2014*). Urban Sustainability Research, Politics, Policy and Practice. *Cities*, Vol. 41, 530-544.

35. UNWTO, *Impact Assesment of the Covid-19 Outbreak on International Tourism*, https://www.unwto.org/impact-assessment-of-the-covid-19-outbreak-on-international-tourism, https://www.veranda.com/travel/g38628219/travel-trends-2022/, (19 Decembar 2021).

36. UNWTO (2021). *World Tourism Barometer and Statistical Annex*, Vol. 19, No. 6.

37. UNWTO (2022a). *World Tourism Barometer*, Volume 20, Issue 1.

38. Wicks, L. (2021). *Experts Predict the 6 Biggest Travel Trends for 2022*, https://www.veranda.com/travel/g38628219/travel-trends-2022/, (25 December 2022).

39. World Tourism Organization (UNWTO). *Impact assessment of the covid-19 outbreak on international tourism, January 2022b,*

https://www.unwto.org/impact-assessment-of-the-covid-19-outbreak-on-international-tourism, (15 January 2022).

40. Xiao, Y. (2019). Tourism marketing platform on mobile internet: a case study of WeChat. *Journal of Electronic Commerce in Organizations (JECO)*, Vol. 17, No. 2, 42-54.

41. Xiaoluan, X. (2021). Research on social media tourism marketing in the post-epidemic period. *Jurnal Audiens*, Vol. *2*, No. 2, 279-288.

42. Yoga, I. M. S., Korry, N. P. D. P., & Yulianti, N. M. D. R. (2019). Information technology adoption on digital marketing communication channel. *International journal of social sciences and humanities*, Vol. 3, No. 2, 95-104.

43. Zhang, H. (2021, February). Exploration and Analysis of Tourism Marketing Management Innovation Based on Big Data. *Journal of Physics: Conference Series*, Vol. 1744, 1-4.