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The Impact of Digital Technologies on Tourists' Travel Choices and Overall Experience

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Abstract
Digital technologies have revolutionized the tourism industry, offering tourists unprecedented access to information, bookings, and immersive experiences. The paper's main purpose is to investigate the influence of digital technologies on tourists' decision-making processes and travel experiences in Armenia. The data are based on a survey done among 385 respondents. Findings reveal widespread adoption of digital platforms among tourists in Armenia, contributing positively to their travel experiences. Pearson Chi-square testing reveals a significant relationship among some factors. According to the results, 65.7% plan entertainment in the destination by using the Internet to find out about the main attractions in advance. More than 70% get travel information from Facebook and Instagram. People evaluate digital technologies' impact on their travel experience with an average of 4.28 (1-5 (the best) scale). The Customer satisfaction score is 80.4 %. The main problems are connected with fake information, technical issues, differences in online and offline prices, hotel room pictures, etc. The research underscores the importance of continuous advancements in digital infrastructure and services to further enhance Armenia's tourism sector. The results of this study may be useful for marketing strategies. The study reveals some problems that may be useful for tourism companies and state regulation bodies.

Key Words: tourism, digital technology, social media, tour, booking, survey, CSAT, NPS, Pearson Chi-square testing, Republic of Armenia

JEL Classification: L83, Z32, L86.

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1. Introduction

Digital technologies have transformed our lives significantly. It is easier for people to communicate, find information, find new jobs, send messages, etc. The role of digital technologies is very significant in tourism as well. Now, tourists may easily find information about tourist places and resources, make reservations, buy tickets, plan their trips, etc (Antón-Maraña et al., 2023; Hoang et al., 2023; Mohammed Alnasser & Mohammed Alkhozaim, 2024). Travelers do not need to go to travel agencies anymore. They can use online booking platforms for hotels and air tickets, pay online, find information on social media and other websites, etc. Social media platforms like Facebook, Instagram, TikTok, YouTube, etc., are widely used by tourism companies and tourists (Barbosa et al., 2022; Susanto et al., 2023). Enterprises use them for marketing purposes. Tourists share their photos and videos, online reviews, and ratings on social media (Oliveira et al., 2022; Sotiriadis, 2017). Such activities influence other people travel decisions.

Nowadays, mobile apps are used widely among tourists (Dorcic et al., 2019; Magano and Cunha, 2019; Seker et al., 2023). Such applications have a lot of services, such as: bookings, online and offline maps, audio guides, translation, recommendations for local activities, etc.

Another opportunity provides virtual and augmented reality technologies (VR and AR) (Wei, 2019; Samaddar & Mondal, 2023). Tourists may explore the destination virtually before booking. Augmented reality applications give information about the places and increase on-site experiences.

Digital technologies enable tourism enterprises to gather and analyze big data in order to understand the tourism market, tourists' needs, preferences, and behavior and adjust their marketing policies by targeting relevant markets (Fuchs et al., 2014).

Digital technologies have entered all spheres of life. Now, the technologies of smart cities enable the lives of citizens and tourists (Mkrtchyan et al., 2023). Smart transportation systems, smart hotels, free Wi-Fi in public areas, and other smart solutions make it easy to arrange everything on time. Expert systems must respond to the development of digitalization and science and technology as a whole (Ševčík, 2024).

Tourism development is very crucial for all countries as well as for Armenia (Tovmasyan, 2023; 2021). Tourism is one of the main economic sectors in Armenia. It is a developing sphere which attracts more and more local and international tourists year by year.

The aim of this paper is to evaluate the impact of digital technologies on tourists' decision-making and travel experience in Armenia. For that purpose, a survey was done among the local population to find out how much they use digital technologies for planning their trip, their satisfaction and dissatisfaction with using digital technologies in tourism, and the main areas for improvement.

The structure of the paper is as follows: literature sources present some studies about the impact of digital technologies on tourists, and the methodology describes the main methods used for the research. The analysis and discussion present the results of the empirical study, which was conducted using a survey based on a questionnaire developed by the authors. The number of generated responses is 385. The conclusions and recommendations section presents some findings. The main findings emphasize the role of digital technologies on tourism in Armenia. People widely use digital technologies for tourism planning and are satisfied with their experience.

2. Literature review

Digitalization and innovation are interrelated and interact (Orellana, 2017), that is, on the one hand, digital transformation affects the innovation economy, and on the other hand, innovation affects the digitalization process (Xu & Li, 2022; Yang et al., 2022; Dziembała & Talar, 2021).

Digitalization is a new form of communication between producers and consumers of tourist services, becoming a source of competitive advantages of tourist organizations (Natocheeva et al., 2020). Digital technologies are widely used by tourists nowadays (Kiba-Janiak, 2014; Kowalska, 2012).

Digitalization has caused many structural changes, reorganization in economics (Kusairi et al., 2023; Lacko et al., 2023) and in companies (Krajčík et al., 2023). It is a strategic approach for companies to better their performance (Alshourah, 2023).

Traditional economics explains the economic growth by the level of production factors, and market competition by prices, but nowadays many economists try to explain these phenomena through innovation, including digitalization. Digitalization is important in the innovation economy for a number of reasons (Berman, 2012; Peppard & Ward, 2016):

1. *Increase in efficiency*: digitalization allows the private sector of the economy to attune their activities and processes, making them more efficient. This provides an opportunity to reduce costs and improve productivity, giving resources that can be invested for research and development (R&D) purposes (Peshkova & Samarina, 2018; Johnson, 2019).
2. *Improving customer experience*: digitalization gives an opportunity to the private sector of the economy to provide better and more personalized services. For example, due to big data analysis, a business can identify customers' needs and preferences, match its offers to them (Sahu et al., 2018).
3. *Creation of new business models*: digitalization is creating new business models such as subscription-based services and digital marketplaces that are changing the way the mentioned business operates and interacts with customers (Gobble, 2018; Hess et al., 2016).
4. *Growth of innovations*: digitalization creates new opportunities for innovations, such as the creation of new products and services, new markets (Balcerzak & Pietrzak, 2017; Quinton et al., 2018).

The role of digitalization in organizations has increased due to the fact that it has a noticeable impact on the overall performance of the organization (Lozić & Fotova Čiković, 2021, Skare et al., 2023). In particular, due to digitalization, the organization can increase its distribution, communication efficiency and the quality of management decisions (Gregory et al., 2019; Krupina et al., 2020).

The tourism sector is very much involved in digital transformations, increasingly qualifying them with expressions such as Tourism 4.0 or Smart Tourism (Pencarelli, 2020; Mura & Stehlikova, 2023). Tourism 4.0 is a concept aimed at improving the added value of tourism through the use of "Industry 4.0" technologies in the field of tourism, such as autonomous robots, virtual reality, autonomous transport, big data and artificial intelligence (Abdurakhmanova et al., 2023).

Dynamic development of digital technologies and the Internet, as well as the higher level of importance of high-quality information for the successful conduct of tourism and hotel business, make it possible to expand the range of information services and make them much more efficient (Hristoforova et al., 2019, Skare et al., 2024).

Digital technologies are the combination of information, communication and communication technologies such as social networks, telephone equipment, etc. (Bharadwaj et al., 2013; Fitzgerald et al., 2013). Internet is the primary method for tourism enterprises to communicate with tourists (Devkota et al., 2023).

Digital technologies play a prominent role in modern society (Opute et al., 2020). Improving customer experience has become one of the most motivating factors for organizations to implement digital transformation (Balcerzak & Pietrzak, 2017, Kurowska-Pysz et al., 2024). Digitalization provides an opportunity to significantly increase the ability of business to identify and measure the demand with data analysis, which, in turn, leads to a large-scale process of digital transformation of organizations worldwide. The customer/buyer, using a number of digital technologies, forms new requirements and expects satisfaction, and digital technologies allow satisfying the useful and synchronized requirements with minimal effort by having smart features on a round-the-clock basis (Shrivastava, 2017; Korcsmáros et al., 2024). That is a complex process, it includes managing the changing behavior of customers/buyers, information processing about them, optimizing their activities, integrating technologies, improving business models (Westerman & Bonnet, 2015; Nwankpa & Roumani, 2016).

Digital technologies enable businesses to communicate with customers through advanced digital applications, though being responsive towards competitors with minimum resources. Digital marketing and competitive advantages significantly influence marketing effectiveness (Kerdpitak, 2022).

Digitalization is fundamentally changing traditional business models and approaches (Ng & Wakenshaw, 2017; Tang et al, 2021), social connections and interactions, increasing the concentration of the country's domestic markets (Nuccio & Guerzoni, 2019). So, many SMEs move towards digital transformation (Civelek et al., 2023) and also use technology-enabled marketing channels for increasing the performance of their business (Civelek et al., 2020). The emergence of social media platforms has provided many opportunities for SMEs to do better marketing and promotion activities (Žufan, 2020). Industry 5.0 will lead to enhanced development of SMEs (Krajčík, 2021).

Various types of digital technologies are used in the practical activities of enterprises in tourism and hospitality industry, such as global distribution systems, booking and reservation systems, electronic information systems, management information systems, mobile communication systems, and Internet services (Nikolskaya et al., 2021).

New technological innovations such as 5G mobile network, artificial intelligence, radio frequency identification, mobile devices, smartphones and wearables, applications, cryptocurrency and blockchain significantly changed the paradigm of tourism and hospitality industry (Đikanović & Jakšić-Stojanović, 2022).

The powerful capabilities of Tourism 4.0 technologies allow for the enhancement of interaction with a system and enrichment of the tourist experience itself, providing new ways of assisting in behavior change and even in the long-lasting transformation of the users (Stankov & Gretzel, 2020).

One of the key tourism micro-trends of millennials is fully digital tourism (Ketter, 2020). Digital technologies make it possible to organize smart tourism (Tovmasyan, 2021a) and virtual tourism (Tovmasyan, 2022). Virtual tourism was a practical and valuable option for mass tourism during the COVID-19 outbreak (Akhtar et al., 2021).

Some articles focus on the influence of Information and Communications technology (ICT) accessibility on tourists' choices of destination, their experiences, and their satisfaction (Da Costa Liberato et al., 2018).

Dredge et al. (2019) analyze the challenges and opportunities of digitalization in tourism. Tham et al. (2020) analyze the influence of social media on tourists' destination choice. Jeong and Shin (2020) explored how tourists use smart tourism technologies at destinations and measure the effects of smart tourism technologies (STT) usage on overall travel experience and future revisit intention.

Liu et al. (2019) explored the roles that social media played in the tourists' choices of six travel components (destination, transportation, accommodation, food and dining activities, attractions, as well as shopping and leisure activities). Four roles have been identified: *Need Generator, Supporter, Guider* and *Approver*.

The study by Ismarizal and Kusumah (2023) revealed that Instagram content can trigger Generation Y and Z tourists' decisions to visit tourist destinations. Interesting Instagram content in terms of color, captions, and other people's comments can be one of the factors that attract tourists to visit tourist destinations.

According to studies Generation Z is more willing to disclose personal information on social media (Rózsa, 2024).

Another study investigated the influence of TikTok on the travel decision-making of young Chinese tourists. The findings of multiple cluster analysis and structural equation modeling indicated that perceived trust and hedonic motivation were the most important drivers of these tourists' actual behavior. The results also revealed that there are significant differences in the factors that influence the choice of destination for Millennials and Gen Z using TikTok (Zhou et al., 2023).

3. Methods

The main purpose of this article is to evaluate the impact of digital technologies on Armenian tourists' travel choices and touristic experiences. For that purpose, a survey was done among the local

population, to find out how much they use digital technologies for arranging and organizing their trip, and their satisfaction and dissatisfaction with the use of digital technologies in tourism.

Survey was done via a questionnaire which was elaborated by the authors. The questionnaire included open, closed and semi-closed questions.

The population size was considered the total population of Armenia: 2.97 million people. The sample was defined by Sample size calculator (Calculator.net), setting the confidence level at 95%, margin of error 5%, so the sample size was 385.

The questionnaire was distributed online. The duration for data collection was 8 months, from July, 2023 till February, 2024. The number of total responses was 401 and the valid number of responses was 385.

After gathering the answers, a database was created in MS Excel. The results were analyzed via MS Excel and SPSS software.

The main research questions are:

1. Are digital technologies widely used by tourists?
2. Are tourists satisfied with the use of digital technologies in tourism?
3. Do social media and other platforms impact on travel choices and travel experience of tourists?

The results of the survey were also analyzed using Pearson Chi Square statistical testing (p value less than 0.05) for finding if there is any significant relationship between the factors.

4. Results

4.1 Incoming and domestic tourism development trends in Armenia.

Tourism is one of the main branches of the economy in the Republic of Armenia. It has shown growth tendencies in recent years which was disrupted because of the Covid-19 pandemic. In 2019 1894377 tourists visited Armenia (increasing by 14.7% as compared to 2018). In 2020, this number was only 360338, decreasing by 81% compared to the previous year. In 2021 the sphere began recovering and 870308 incoming tourists visited Armenia (Tovmasyan, 2022a). In 2022 the number of incoming tourists was 1665658 (The socio-economic situation in the RA, 2023 January). In 2023 the number of incoming tourists reached to 2316666 which is 39 % more than last year (The socio-economic situation in the RA, 2023 January-December).

In recent years domestic tourism was also growing in Armenia. In 2019, the number of domestic tourists in Armenia was 1544600. In 2020, due to the Covid-19 pandemic, the number of domestic tourists decreased by about 33% compared to the previous year, amounting to 1045756 people. In 2021, the number of domestic tourists increased by 52.6% compared to 2020, and by 3.3% compared to 2019 and was 1595826. In 2022, the number of domestic tourists was higher than in previous years – 1929940 (Tovmasyan, 2023).

So, the numbers indicate, that after the pandemic tourism is recovering in Armenia.

4.2 Some figures on internet and social media users in Armenia.

According to Digital 2023 Report on Armenia (Digital 2023: Armenia):

- There were **2.18 million internet users** in Armenia at the start of 2023, when internet penetration stood at 73.4 percent. Armenia's total population was **2.97 million** in January 2023 (The socio-economic situation in the RA, 2022 January-December).
- Armenia was home to 1.85 million social media users in January 2023, equating to 62.3 percent of the total population.
- **Facebook** had **1.40 million** users in Armenia in early 2023.

- Facebook's ad reach in Armenia was equivalent to **50.4 percent** of the total population at the start of 2023.
- **Instagram** had **1.01 million** users in Armenia in early 2023.
- Instagram's ad reach in Armenia was equivalent to **36.4 percent** of the total population at the start of the year.
- **Facebook Messenger** reached **1.03 million** users in Armenia in early 2023.
- Facebook Messenger's ad reach in Armenia was equivalent to **37.1 percent** of the total population at the start of the year.
- **LinkedIn** had **320.0 thousand** "members" in Armenia in early 2023.
- **Twitter** had **92.8 thousand** users in Armenia in early 2023. Twitter's ad reach in Armenia was equivalent to **4.2 percent** of the local internet user base (regardless of age) at the start of the year.
- A total of 4.10 million cellular mobile connections were active in Armenia in early 2023, with this figure equivalent to 138.04 percent of the total population.

So, these figures indicate that the majority of the population uses internet, also the number of social media users is high. The number of cellular mobile connections is higher than the number of the population, as the same person may have several mobile connections.

4.3 Analyzing the results of the survey.

The survey results show that 36.6% of respondents were 17-25 years old, 29.9% were 36-50 years old, 86.5% were female, 53.2% had higher education, 48.1% were employees, and the income level of the majority were up to 100,000 AMD and 100,001-200,000 AMD (Table 1).

Table 1. **The demographical view of survey participants**

Questions	Frequency	Percent
1. Your age		
• Up to 16 years old	7	1.8
• ***17-25 years old***	***141***	***36.6***
• 26-35 years old	95	24.7
• ***36-50 years old***	***115***	***29.9***
• 51-65 years old	25	6.5
• 66 and elder	2	0.5
2. Gender		
• Male	52	13.5
• ***Female***	***333***	***86.5***
3. Education		
• pupil	8	2.1
• student	83	21.6

• with secondary professional education	46	11.9
• ***with higher education***	***205***	***53.2***
• postgraduate	43	11.2
4. Occupation		
• pupil	9	2.3
• student	92	23.9
• **employee**	**185**	**48.1**
• self-employed	65	16.9
• retired	4	1.0
• not mentioned anything	30	7.8
5. Income level by month		
• ***up to 100,000 AMD***	***120***	***31.2***
• ***100,001-200,000 AMD***	***119***	***30.9***
• 200,001-300,000 AMD	67	17.4
• 300,001-400,000 AMD	27	7.0
• 400,001 and above	36	9.4
• not mentioned anything	16	4.2

Source: Composed by the authors based on the survey results.

According to Table 2, 51.9% of participants had traveled in and outside Armenia, while 30.4 % - only in Armenia.

47.5% travels in Armenia 2-5 times a year, and 33.2% once a year.

45% of participants travels outside Armenia once a year.

People mostly travel with family, friends, while only 6.2% traveled alone.

63.4% gets information about travel destination through social media advertising, 45.5% - through friends, relatives, 41.3% - through advertising from travel agencies, 30.1% via travel bloggers.

Table 2. **Travelling options of participants**

Questions	Frequency	Percent
1. You have ever traveled		
• in Armenia	117	30.4
• outside Armenia	65	16,9
• ***In and outside Armenia***	***200***	***51.9***

• I have never travelled at all	3	0,8
2. How many times a year do you travel in Armenia?		
• I'm not travelling	38	9.9
• ***Once a year***	***128***	***33.2***
• ***2-5 times***	***183***	***47.5***
• 6-10 times	17	4.4
• 11 times or more	19	5.0
3. How many times a year do you travel outside Armenia?		
• I'm not travelling	151	39.2
• ***Once a year***	***173***	***45.0***
• 2-5 times	59	15.3
• 6-10 times	2	0.5
• 11 times or more	0	0
4. You travel		
• alone	24	6.2
• ***with family***	***171***	***44.4***
• ***with friends***	***53***	***13.8***
• ***with family and friends***	***80***	***20.8***
• both alone and with friends	13	3.3
• both alone and with family	15	3.9
• alone, with family and friends	22	5.8
• mot mentioned anything	7	1.8
5. How do you get information about your travel destination before you travel? (Participants could choose several options)		
• ***through my friends, relatives***	***175***	***45.5***
• through TV advertising	21	5.5
• ***through social media advertising***	***244***	***63.4***
• ***through advertising from travel agencies***	***159***	***41.3***

• through travel magazines	16	4.2
• ***via travel bloggers***	***116***	***30.1***
• other	4	1.0
• mot mentioned anything	8	2.1

Source: Composed by the authors based on the survey results.

The participants rated the ***role of digital technologies in tourism planning in average 4.53*** (they could rate on a scale of 1-5, where 1 is not helpful at all, 5 is very helpful).

Table 3 shows, that *55.8 % of people book a tour online with the help of the internet*, 41.6 % through a telephone conversation and 30.1% visit a travel agency and make a reservation.

46% book a hotel through a travel agency, 38.4% use online booking systems: booking.com, expedia.com, tripadvisor.com, etc. and 34.3% books a hotel through the specific hotel's website.

48.8% buys an air ticket through a travel agency, 34.8% - through a specific airline's website or mobile app and 24.7% uses online booking systems: expedia.com, tripadvisor.com, etc.

65.7% plan entertainment in the destination by using the Internet to find out about the main attractions in advance, 32.5% - through a travel agency and 28.6% asks friends for advice.

Table 3. **Travel planning by respondents**

Questions	Frequency	Percent (Participants could choose several options)
1. How do you book a tour?		
• ***I visit a travel agency and make a reservation***	***116***	***30.1***
• ***through a telephone conversation***	***160***	***41.6***
• ***online with the help of the internet***	***215***	***55.8***
• I ask my friends to do it for me	19	4.9
• other	1	0.3
• not mentioned anything	9	2.3
2. How do you book a hotel?		
• ***through a travel agency***	***177***	***46.0***
• ***I use online booking systems: booking.com, expedia.com, tripadvisor.com, etc.***	***148***	***38.4***
• ***through the specific hotel's website***	***132***	***34.3***
• I ask my friends to do it for me	23	6.0
• Other	0	0
• not mentioned anything	20	5.2

3. How do you buy an air-ticket?		
• ***through a travel agency***	***188***	***48.8***
• ***I use online booking systems: expedia.com, tripadvisor.com, etc.***	***95***	***24.7***
• ***through a specific airline's website or mobile app***	***134***	***34.8***
• I ask my friends to do it for me	22	5.7
• other	1	0.3
• not mentioned anything	42	10.9
4. How do you plan entertainment in the destination?		
• ***through a travel agency***	***125***	***32.5***
• ***I use the Internet to find out about the main attractions in advance***	***253***	***65.7***
• ***I ask my friends for advice***	***110***	***28.6***
• I use the tourism mobile apps of the destination	58	15.1
• I try to get information from tourist information centers in the destination	61	15.8
• Other	0	0
• not mentioned anything	21	5.5

Source: Composed by the authors based on the survey results.

Table 4 shows, that *58.4 % use online/offline maps for travelling*, 27.3 % use hotel booking apps, 26% does not use anything.

71.9% gets travel information by Facebook, 70.6% - by Instagram.

45.7% post pictures on social media during or after the trip and only 10.1 % does not post pictures.

Table 4. **Using social media and mobile apps**

Questions	Frequency	Percent
1. What mobile apps do you use for trip planning? (Participants could choose several options)		
• ***online/offline maps***	***225***	***58.4***
• tourism apps for that destination	58	15.1
• audio guide	32	8.3
• ***hotel booking apps***	***105***	***27.3***

• airticket booking apps	72	18.7
• ***I don't use anything***	***100***	***26.0***
• other	0	0
• not mentioned anything	12	3.1
2. Through which of the following social networks do you get the most travel information? (Participants could choose several options)		
• ***Facebook***	***277***	***71.9***
• ***Instagram***	***272***	***70.6***
• Tik Tok	46	11.9
• Twitter	3	0.8
• LinkedIn	9	2.3
• **Youtube**	**96**	**24.9**
• Other	0	0
• not mentioned anything	5	1.3
3. Do you post your pictures on social media during or after your trip?		
• ***yes***	***176***	***45.7***
• no	39	10.1
• ***sometimes***	***166***	***43.2***
• not mentioned anything	4	1.0

Source: Composed by the authors based on the survey results.

Table 5 shows, that for 100 people cost is not important at all during making a decision about where to go on vacation, while for 80 people it is very important.

The location is very important for 110 people and not important at all for 98 people.

The popularity of the place and existing ads are of medium importance, existing pictures, others' comments and the rating are important.

Table 5. **When you have to make a decision about where to go on vacation, what will you pay attention to? (frequency)**

Factors	not important at all	not important	medium	important	very important	not mentioned anything
cost	100	6	40	91	80	68
the location	98	7	9	96	110	65

the popularity of the place	56	32	80	53	27	137
existing ads	60	47	74	35	7	162
existing pictures or videos	70	14	74	83	29	115
other people's comments about the place	66	20	71	82	32	114
rating formed as a result of other people's ratings	68	23	63	82	31	118

Source: Composed by the authors based on the survey results.

Table 6 shows, that the majority of people sometimes use social networks for choosing a restaurant, transport and tours, and the majority always use social networks for choosing hotels, sightseeing.

Table 6. **Using social networks for choosing the following resources (frequency)**

Resource	I don't use it at all	I use sometimes	I always use	not mentioned anything
restaurant	51	173	91	70
hotel	44	117	143	81
sightseeing	46	125	171	43
transport	86	124	84	91
tours	54	149	119	63

Source: Composed by the authors based on the survey results.

The respondents were asked to evaluate the likelihood of writing a positive comment about the place online / on social media about their positive experience, when they are satisfied with their stay. The range of answers was: 1 - I will not write at all, 10 - I will definitely write. The average score is 6.63.

The respondents were also asked to evaluate the likelihood of writing a negative comment about the place online / on social media about their negative experience, when they are dissatisfied with their stay. The range of answers was: 1 - I will not write at all, 10 - I will definitely write. The average score is 4.81.

People also evaluated *the impact that digital technologies have on their travel experience* (the range of answers was: 1 - very negative, 5- very positive). The *average score was 4.3*.

People evaluated the *effectiveness of information provided by social networks when planning their tour* (the range of answers was: 1-not effective at all, 5-very effective). The *average score was 4.28*.

People also rated their *overall level of satisfaction with the use of digital technologies in the tourism sector* on a scale from 1 (very dissatisfied) to 10 (very satisfied). The *average score was 8.1.*

Customer satisfaction (CSAT) score was calculated with the following formula (How to calculate a Customer Satisfaction Score, n.d.):

CSAT Score (%) = (Sum of All Scores) ÷ (Sum of the Maximum Possible Scores) × 100 = 3095 / 3850 *100% = 80.4 %

So, the ***satisfaction score with the use of digital technologies in the tourism sector was 80.4%.***

Net promoter score (NPS) was calculated by asking the respondents the following question: "How likely is it that you would recommend your friends to use digital technologies when planning a trip? The range of responses is from 1 (I would not recommend it at all) to 10 (I would definitely recommend it)".

Net Promoter score is calculated like this: % of Promoters - % of Detractors (Luck, 2023).

Customers that rate 6 or below are called Detractors, those who grate a score of 7 or 8 are called Passives, and those who give a 9 or 10 are Promoters.

Net Promoter score = 207/385*100-70/385*100=53.7%-18.2%=35.5%

So, ***NPS is 35.5%.***

For evaluating the significance between some factors, Pearson Chi-square testing was done. According to results, some significant relationships were identified between the age of respondents and other factors. Mainly *17-25 years old post pictures on social media, then 26-35 years old. 17-25- and 26-35-years old book tours online themselves via internet, while 36-50 years old mainly visit travel agencies or by phone call.*

36-50 years old respondents book hotels mainly by travel agencies or by online portals, while 17-25- and 26-35-years old book directly from the webpage of the hotel or use online booking portals.

Mainly 17-25 years old use Tik-Tok and Instagram for getting tourism information, the others use mainly Facebook, then Instagram.

17-25, 26-35 and 36-50 years old mainly use social media for choosing a restaurant, sightseeing places and tours.

Table 7. **Pearson Chi-Square analysis**

Factors	Pearson Chi-Square Value	Significance level
Age * Posting pictures in social network during or after trip	42.245	0,000
Age * Booking a hotel	366.474	0.000
Age * Booking a tour	119.140	0.022
Age * Using social media for tourism information	320.409	0.000
Age * Using social media for choosing a restaurant	52.757	0.001
Age * Using social media for choosing sightseeing places	74.980	0.000
Age * Using social media for choosing tours	118.582	0.000

Source: Composed by the authors based on the survey results.

People were also asked to mention the problems they have encountered when using digital technologies for tourism services (hotel booking, air ticket purchase, etc.). Almost 90 % mentioned that they have not encountered any problems. The others have mentioned the following problems:

1. Difficulties in changing the air ticket,
2. Differences in online and offline prices,
3. Differences in hotel rooms' pictures and the reality,
4. Difficulties in establishing direct contact,
5. Inefficient structure of web sites,
6. Incomplete, not updated, fake information,
7. Sometimes due to technical issues the registration is not completed, we have to solve the problems on the spot,
8. Inaccuracy of Google map data,
9. Not simple and disorganized menu/features, slow loading, which brings in its turn bad customer experience,
10. Fake reviews on hotels by their friends for raising the rating artificially,
11. Some webpages do not have Armenian language,
12. Not knowing the language.

People were also asked to mention their suggestions for increasing the applicability and efficiency of digital technologies in the field of tourism in Armenia. 83% had no suggestions, others mentioned the following:

1. Create websites for travel companies, hotels, help guest houses, hotels and similar structures to present themselves correctly and competently on the platforms by providing Courses or Videos,
2. Conduct informational seminars, increase the level of digital literacy,
3. To have a digital platform where it is possible to find out the prices of all hotels operating in the RA, the availability of room types, as well as a platform for information about domestic, inbound and outbound tourism companies operating in the RA and why not also the opportunity to write a comment or review. This will make it easier for other customers to navigate.
4. Create a unified platform where you can make reservations not only for the hotel, but also transport and guide, as well as get information about the monuments of the given region.
5. Audio guides, QR registration at the airport,
6. To ensure the financial security of the tourist, there should be digital guides on how to use, how not to be cheated,
7. Make apps more accessible,
8. On social platforms, the route should be presented as clearly as possible, but not with texts full of adjectives. It is possible to create a map on which all the destinations offered by the given tourism agency will be marked with their stops and times. You can also add a button, with the help of which it will be possible to compare the given tour with another tour, maybe even with a tour organized by another organization. It will be very nice if there is a professional photographer during the tour, or at least one who has undergone training and has a camera, and then sends us those photos.
9. Creation of one common system/app for all tours organized in the RA, which may be downloaded to follow the tour offers on the date we want,
10. Using digital technologies to provide a lot of information about a given place, to suggest why we should choose that particular place,
11. Provide quality content,
12. After online registrations, there must be no need to call again, to make sure that the registration has been completed,
13. Be honest with consumers, post correct pictures, provide accurate information, post a lot of videos on social media,

14. Online apps in Armenian would be effective in increasing the effectiveness of tourism in Armenia,
15. Increase the control so that the fraudsters make up a small percentage,
16. Involvement of travel bloggers,
17. Seek places that are forgotten or possibly on the verge of collapse and target them with digital technologies,
18. Professional advertising and marketing,
19. Introducing new apps,
20. Improve websites, add maps, add live chat features,
21. The price list should be in the available pictures,
22. It would be more educational and interesting if apps provide information on our historical and cultural monuments, monasteries, or, for example, by scanning plants, we could understand the degree of usefulness and harm of a given plant.
23. Create apps available in different languages so that foreign tourists can familiarize themselves with the sights of Armenia before visiting.

5. Discussion

The results of the study reveal that people mostly travel with families and friends. The majority (63.4%) gets information about travel destination through social media advertising. The role of digital technologies in tourism planning was rated in average 4.53 (with a 1-5 scale, where 1 is not helpful at all, 5 is very helpful).

More than 70% gets travel information by Facebook and Instagram.

65.7% plan entertainment in the destination by using the Internet to find out about the main attractions in advance. 55.8 % of people book a tour online with the help of the internet and only 30.1% visit a travel agency and make a reservation, while 46% book a hotel through a travel agency and 48.8% buys an air ticket through a travel agency. This means that for booking people mainly rely on travel agencies, while for getting information and for planning their entertainment they use internet themselves.

The likelihood of writing a positive comment about the place online about the positive experience is 6.63 (1-10 score, where 1 - I will not write at all, 10 - I will definitely write), and the likelihood of writing a negative comment about the place online about the negative experience is 4.28.

People also evaluated the impact that digital technologies have on their travel experience in average 4.28 (1-5 scale).

The Customer satisfaction score with the use of digital technologies in the tourism sector was 80.4%, while Net promoter score was 35.5%.

Pearson Chi-square testing shows that mainly 17-25 years old post pictures on social media, 17-25- and 26-35-years old book tours and hotels online themselves via internet, and the elders by travel agencies. Mainly 17-25 years old use Tik-Tok and Instagram for getting tourism information.

45.7% post pictures on social media during or after the trip and only 10.1 % does not post pictures.

The main problems were connected with fake information, technical issues, differences in online and offline prices, hotel rooms' pictures, etc. They also see the need to develop this sphere by creating new apps with wider opportunities, raising digital literacy, providing quality content and reliable information, etc.

The analysis reveals the answers to the main research questions. It proves, that digital technologies are widely used by tourists, they are satisfied with the use of digital technologies in tourism, and social media and other platforms impact on travel choices and travel experience, as they mainly find information via social media.

The main findings are related with previous studies: wide use of digital technologies for booking in tourism (Kiba-Janiak, 2014; Kowalska, 2012; Devkota et al., 2023); getting information and travel choices by social media (Da Costa Liberato et al., 2018; Tham et al., 2020; Jeong and Shin, 2020; Liu et al., 2019; Ismarizal and Kusumah, 2023; Zhou et al., 2023), doing marketing and business in tourism (Nikolskaya et al., 2021; Westerman & Bonnet, 2015; Nwankpa & Roumani, 2016; Kerdpitak, 2022; Civelek et al., 2020; Žufan, 2020), sharing personal information on social media (Rózsa, 2024; Sotiriadis, 2017) etc.

6. Conclusion

Digital technologies greatly influence all spheres of life. Tourism is one of the spheres which is directly influenced by the rise of digital technologies. While these technologies may have both positive and negative impacts, this study aimed at analyzing its influence on tourists' tour planning and travel experiences.

The analysis in this study highlights the great influence of digital technologies, particularly social media, on contemporary travel behavior and decision-making processes of tourists. It is evident that a significant portion of travelers, particularly those in younger age brackets, rely heavily on online platforms for gathering information, planning entertainment, and booking accommodations and tours. While traditional travel agencies still play a role in certain aspects of booking, the trend leans towards self-reliance on digital channels for information and planning.

Moreover, the findings underscore the importance of digital technologies in shaping the overall travel experience, with a majority of respondents expressing satisfaction with their utilization in the tourism sector. However, challenges such as fake information, technical issues, and discrepancies in pricing persist, indicating areas for improvement in the digital infrastructure of the tourism industry.

Moving forward, there is a clear call for the development of innovative applications, enhancement of digital literacy among travelers, and the provision of reliable and high-quality content to meet evolving consumer demands. By addressing these concerns and leveraging the opportunities presented by digital advancements, stakeholders in the tourism sector can enhance customer satisfaction, foster greater engagement, and drive positive experiences for travelers in the digital age.

Here are the main implications of the study:

- These findings underscore the growing importance of digital platforms, particularly social media, as key channels for travel information dissemination and engagement with tourists.
- Tourism industry stakeholders can leverage these insights to tailor marketing strategies and service offerings to better meet the needs and preferences of techie travelers.
- The study reveals some problems which may be useful not only for tourism companies but also for state regulation bodies. Addressing challenges related to fake information, technical issues, and pricing disparities requires collaborative efforts among policymakers, industry players, and digital platform providers to ensure a seamless and trustworthy online travel experience.
- Initiatives aimed at enhancing digital literacy among travelers and promoting the development of user-friendly apps and platforms can contribute to improving overall customer satisfaction and loyalty in the tourism sector.

The research has also some *limitations*: the study primarily focuses on digital technology usage and its impact on travel behavior, potentially overlooking other factors that may influence travel decision-making, such as socio-economic status, cultural preferences, or destination characteristics. Also, the reliance on self-reported data may introduce response biases, affecting the accuracy and reliability of the findings.

Future research considerations. This was an initial analysis to understand the use of digital technologies by tourists, their perceptions, satisfaction and so on. The research results add some theoretical and

empirical background to the existing literature and in some points, they prove the findings of other researchers analyzed in the literature review as well. Further studies should include wider populations and more questions to understand the role of digital technologies more thorough. Longitudinal studies tracking changes in digital technology adoption and travel behavior over time can provide deeper insights into evolving trends and patterns. Qualitative research methods, such as interviews or focus groups, may also be used for understanding of travelers' experiences and perceptions regarding the use of digital technologies in tourism.

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References

1. Abdurakhmanova, G., K., Astanakulov, O.T., Goyipnazarov, S.B., Irmatova, A.B., (2023) *Tourism 4.0: opportunities for applying industry 4.0 technologies in tourism*, ICFNDS '22: Proceedings of the 6th International Conference on Future Networks & Distributed Systems, December 2022, 33–38. https://doi.org/10.1145/3584202.3584208
2. Akhtar, N., Khan, N., Mahroof Khan, M., Ashraf, S., Hashmi, M. S., Khan, M. M., & Hishan, S. S. (2021). Post-COVID 19 tourism: will digital tourism replace mass tourism?. *Sustainability*, 13(10), 5352. https://doi.org/10.3390/su13105352
3. Alshourah, S., Altawalbeh, M., Mansour, M., Al Haraisa, Y., & Al-Kharabsheh, A. (2023). Digital strategic orientation and firm's performance: the moderating effect of environmental uncertainty. *Polish Journal of Management Studies*, 28 (2): 7-27. DOI: 10.17512/pjms.2023.28.2.01
4. Antón Maraña, P., Puche Regaliza, J. C., Arranz Val, P., & Aparicio Castillo, S. (2023). Examining the relationship between online distribution channels and tourist satisfaction and loyalty. *Tourism & Management Studies*, 19(4), 7-20. https://doi.org/10.18089/tms.2023.190401
5. Balcerzak, P. A., & Pietrzak, B. M. (2017). Digital Economy in Visegrad Countries: Multiple-criteria Decision Analysis at Regional Level in the Years 2012 and 2015. *Journal of Competitiveness, 9*(2). pp. 5-18, DOI: 10.7441/joc.2017.02.01
6. Barbosa, B., Rocha, A., & Pina, L. (2022). Guerrilla marketing on Facebook: A mixed-method study on the effects on brand image and content sharing intentions. *Tourism & Management Studies*, 18(3), 37-47. https://doi.org/10.18089/tms.2022.180303
7. Berman, S. J. (2012). Digital transformation: Opportunities to create new business models. *Strategy & Leadership, 40*(2), 16-24. https://doi.org/10.1108/10878571211209314
8. Bharadwaj, A., El Sawy, O. A., Pavlou, P. A., & Venkatraman, N. (2013). Digital Business Strategy: Towards a Next Generation of Insights. *MIS Quarterly, 37*(2), 471-482. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2742300 (Accessed: 09 February, 2024)
9. Civelek, M., Krajčík, V., & Ključnikov, A. (2023). The impacts of dynamic capabilities on SMEs' digital transformation process: The resource-based view perspective. *Oeconomia Copernicana*, 14(4), 1367–1392. doi: 10.24136/oc.2023.019
10. Civelek, M., Ključnikov, A., Vavrečka, V. and Gajdka, K. (2020). The Usage of Technology-Enabled Marketing Tools by SMEs and Their Bankruptcy Concerns: Evidence from Visegrad Countries. *Acta Montanistica Slovaca*, Volume 25 (3), 263-273, https://doi.org/10.46544/AMS.v25i3.01
11. da Costa Liberato, P. M., Alén-González, E., & de Azevedo Liberato, D. F. V. (2018). Digital technology in a smart tourist destination: the case of Porto. *Journal of Urban Technology*, 25(1), 75-97. https://doi.org/10.1080/10630732.2017.1413228

12. Devkota, N., Gajdka, K., Siwakoti, R., Klimova, M., & Dhakal, K. (2023). Promoting Sustainable Tourist Behavior through Promotional Marketing. *Journal of Tourism and Services*, *14*(26), 219–241. https://doi.org/10.29036/jots.v14i26.512
13. Digital 2023: Armenia, URL: https://datareportal.com/reports/digital-2023-armenia, (Accessed: 09 February, 2024)
14. Đikanović, Z., & Jakšić-Stojanović, A. (2022, May). The Implementation of New Technologies in Tourism and Hospitality Industry-Practices and Challenges. In International Conference "New Technologies, Development and Applications" (pp. 991-995). Cham: Springer International Publishing. https://link.springer.com/chapter/10.1007/978-3-031-05230-9_116 (Accessed: 09 February, 2024)
15. Dorcic, J., Komsic, J. and Markovic, S. (2019), Mobile technologies and applications towards smart tourism – state of the art, *Tourism Review*, Vol. 74 No. 1, pp. 82-103. https://doi.org/10.1108/TR-07-2017-0121
16. Dredge, D., Phi, G. T. L., Mahadevan, R., Meehan, E., & Popescu, E. (2019). *Digitalisation in Tourism: In-depth analysis of challenges and opportunities*. Executive Agency for Small and Medium-sized Enterprises (EASME), European Commission. https://ec.europa.eu/docsroom/documents/33163/attachments/1/translations/en/renditions/native (Accessed: 09 February, 2024)
17. Dziembała, M., & Talar, S. (2021). The role of ICT in smart specialization of EU regions. *Journal of Business Economics and Management*, *22*(6), 1512-1530. https://doi.org/10.3846/jbem.2021.15324
18. Fitzgerald, M., Kruschwitz, N., Bonnet, D., & Welch, M. (2013). Embracing Digital Technology. *MIT Sloan Management Review, 1-12.* https://emergenceweb.com/blog/wp-content/uploads/2013/10/embracing-digital-technology.pdf (Accessed: 09 February, 2024)Fuchs, M., Höpken, W., & Lexhagen, M. (2014). Big data analytics for knowledge generation in tourism destinations–A case from Sweden. *Journal of destination marketing & management*, *3*(4), 198-209. DOI: 10.1016/j.jdmm.2014.08.002
19. Gobble, M. M. (2018). Digitalization, Digitization, and Innovation. *Research-Technology Management, 61*(4), 56-59. DOI: 10.1080/08956308.2018.1471280
20. Gregory, G. D., Ngo, L. V., & Karavdic, M. (2019). Developing e-commerce marketing capabilities and efficiencies for enhanced performance in business-to-business export ventures, *Industrial Marketing Management*, Volume 78, 146-157. https://doi.org/10.1016/j.indmarman.2017.03.002
21. Hess, T.; Matt, C.; Benlian, A.; Wiesböck, F. (2016). Options for Formulating a Digital Transformation Strategy, *MIS Quarterly Executive*, Vol. 15, No. 2, pp. 103-119 https://www.researchgate.net/publication/291349362_Options_for_Formulating_a_Digital_Transformation_Strategy (Accessed: 09 February, 2024).
22. Hoang, S.D., Dey, S.K., Tuckova, Z. (2023). Exploring the Impacts of Virtual Reality Technology in Sustainable Tourism during the Covid -19, *Transformations in Business & Economic*, 22 (58), 65-86.
23. How to Calculate a Customer Satisfaction Score (CSAT), https://www.callcentrehelper.com/how-to-calculate-customer-satisfaction-csat-109557.htm (Accessed: 09 February, 2024)
24. Hristoforova, I. V., Silcheva, L. V., Arkhipova, T. N., Demenkova, A. B., & Nikolskaya, E. Y. (2019). Improvement of digital technologies in marketing communications of tourism and hospitality enterprises. *Journal of Environmental Management and Tourism*, 10(4), 829-834. DOI: https://doi.org/10.14505/jemt.10.4(36).13
25. Ismarizal, B., & Kusumah, A. H. G. (2023). The Instagram Effect on Tourist Destination Choices: Unveiling Key Attraction Elements. *Journal of Consumer Sciences*, 8(2), 124-137. DOI: https://doi.org/10.29244/jcs.8.2.124-137

26. Jeong, M., & Shin, H. H. (2020). Tourists' experiences with smart tourism technology at smart destinations and their behavior intentions. *Journal of Travel Research*, 59(8), 1464-1477. https://doi.org/10.1177/0047287519883034
27. Johnson, M. R. (2019). Inclusion and exclusion in the digital economy: Disability and mental health as a live streamer on Twitch.tv. *Information, Communication & Society, 22*(4). pp. 506-520, DOI: 10.1080/1369118X.2018.1476575
28. Kerdpitak, C. (2022). Marketing Effectiveness Model of Tourism Business in Thailand. *Journal of Hunan University Natural Sciences*, 49(4). https://doi.org/10.55463/issn.1674-2974.49.4.9
29. Ketter, E. (2020). Millennial travel: tourism micro-trends of European Generation Y. *Journal of Tourism Futures*, 7(2), 192-196. https://doi.org/10.1108/JTF-10-2019-0106
30. Kiba-Janiak, M., (2014). The Use of Mobile Phones by Customers in Retail Stores: a Case of Poland, *Economics & Sociology*, Vol. 7, No 1, pp. 116-130. DOI: 10.14254/2071-789X.2014/7-1/11
31. Korcsmáros, E., Huszárik, E.S., Kosár, S.T., Mura, L., & Csinger, B. (2024). The Impact of the Coronavirus Pandemic on SMEs in Term of Customer Centricity in Slovakia and Hungary. *Lecture Notes on Data Engineering and Communications Technologies* 213, pp. 163-180. https://doi.org/10.1007/978-3-031-62213-7_8
32. Kowalska, M. (2012). "Th e internet impact on market behavior of young consumers", *Journal of International Studies*, Vol. 5, No 1, pp. 101-106. https://www.jois.eu/files/KowalskaV5_N1.pdf (Accessed: 09 February, 2024)
33. Krajčík, V. (2021). The readiness of Small and Medium-sized Enterprises (SMEs) for the digitalization of industry: Evidence from the Czech Republic. *Acta Montanistica Slovaca*, Volume 26 (4), 761-772. https://doi.org/10.46544/AMS.v26i4.13
34. Krajčík, V., Novotný, O., Civelek, M., & Semrádová Zvolánková, S. (2023). Digital Literacy and Digital Transformation Activities of Service and Manufacturing SMEs. *Journal of Tourism and Services*, *14*(26), 242–262. https://doi.org/10.29036/jots.v14i26.551
35. Krupina, G. D., Safiuliin, N. A., Kudryavtseva, S. S., Savushkina, L. N., & Kurakova, C. M. (2020). Analysis of the digitalization efficiency in agricultural complex in the Republic of Tatarstan. *BIO Web of Conferences, 17*, 00230. https://doi.org/10.1051/bioconf/20201700230
36. Kurowska-Pysz, J., Czart, P., & Kot, S. (2024). Familiness as a Determinant of Competitiveness of Family Businesses – The Organisational Effectiveness-Based Approach. Journal of Competitiveness, 16(2), 182-209. https://doi.org/10.7441/joc.2024.02.10
37. Kusairi, S., Wong, Z. Y., Wahyuningtyas, R., & Sukemi, M. N. (2023). Impact of digitalisation and foreign direct investment on economic growth: Learning from developed countries. *Journal of International Studies*, 16(1), 98-111. doi:10.14254/2071-8330.2023/16-1/7
38. Lacko, R., Hajduova, Z., Mura, L., & Dzogan, M. (2023). The Attractiveness of Foreign Direct Investments for Business: the Case of the Selected European Union members. *Transformations in Business & Economics*, Vol. 22, No 2 (59), 2023, 27-40
39. Liu, X., Mehraliyev, F., Liu, C., & Schuckert, M. (2020). The roles of social media in tourists' choices of travel components. *Tourist studies*, 20(1), 27-48. https://doi.org/10.1177/1468797619873107
40. Lozić, J., & Fotova Čiković, K. (2021). The impact of digital transformation on the business efficiency of the New York Times. *UTMS Journal of Economics, 12*(2), 225–239 https://www.utmsjoe.mk/files/Vol.12.No.2/9.THE_IMPACT_OF_DIGITAL_TRANSFORMATION_ON_THE_BUSINESS_EFFICIENCY_OF_THE_NEW_YORK_TIMES.pdf (Accessed: 09 February, 2024)
41. Luck I., (2023) How to Calculate Net Promoter Score (NPS): Easy NPS Calculation Formula, https://customergauge.com/blog/how-to-calculate-the-net-promoter-score#6%20NPS%20Calculation%20Mistakes%20to%20Avoid11 (Accessed: 09 February, 2024)

42. Magano, J., & Cunha, M. Z. N. (2019). Mobile Apps and Travel Apps on the tourism journey. *Tourism and Leisure*, *8*, 17. https://www.ajhtl.com/uploads/7/1/6/3/7163688/article_60_vol_8_5__2019_portugal.pdf (Accessed: 16 April, 2024)
43. Mkrtchyan, T.M., Tovmasyan, G.R., Dallakyan, S.A. (2023). Sustainable Development of the Tourism Sector of the Republic of Armenia in the Context of an Innovative Economy. In: Popkova, E.G. (eds) Smart Green Innovations in Industry 4.0. Springer Climate. Springer, Cham. https://doi.org/10.1007/978-3-031-45830-9_43
44. Mohammed Alnasser, E., Mohammed Alkhozaim, S. (2024). Unveiling Tourist Behaviour in Time of Smart Tourism Technology and Social Influence. *Transformations in Business & Economics*, 2 (62),434-460.
45. Mura, L., & Stehlikova, B. (2023). Innovative Approaches: Using DEMATEL Method in the Research of SMEs Operating in Tourism Sector. In: *Valeri, M. (eds) Family Businesses in Tourism and Hospitality. Tourism, Hospitality & Event Management.* Springer, Cham. https://doi.org/10.1007/978-3-031-28053-5_10
46. Natocheeva, N., Shayakhmetova, L., Bekkhozhaeva, A., Khamikhan, N., & Pshembayeva, D. (2020). Digital technologies as a driver for the development of the tourism industry. *E3S Web of Conferences* (Vol. 159, p. 04002). EDP Sciences. https://doi.org/10.1051/e3sconf/202015904002
47. Ng, I. C. L., & Wakenshaw, S. Y. L. (2017). The internet-of-things: Review and research directions. *International Journal of Research in Marketing, 34*, 3–21. https://doi.org/10.1016/j.ijresmar.2016.11.003
48. Nikolskaya, E. Y., Zakharova, E. V., Galkin, D. V., Kovaleva, N. I., & Panova, N. A. (2021). The Impact of Digital Technologies on the Transformation of the Tourism and Hospitality Industry. *Revista Geintec-Gestao Inovacao e Tecnologias*, 11(4), 623-632. http://revistageintec.net/old/wp-content/uploads/2022/03/2133.pdf (Accessed: 09 February, 2024)
49. Nuccio, M., & Guerzoni, M. (2019). Big Data: Hell or Heaven? Digital Platforms and Market Power in the Data-Driven Economy. *Competition & Change, 23* (3), 312–328. https://doi.org/10.1177/1024529418816525
50. Nwankpa, J.K., & Roumani, Y. (2016). IT Capability and Digital Transformation: A Firm Performance Perspective. *International Conference on Interaction Sciences. Proceedings.* 4. https://aisel.aisnet.org/icis2016/ISStrategy/Presentations/4 (Accessed: 09 February, 2024)
51. Oliveira, A. S., Renda, A. I., Correia, M. B., & Antonio, N. (2022). Hotel customer segmentation and sentiment analysis through online reviews: An analysis of selected European markets. *Tourism & Management Studies*, 18(1), 29-40. https://doi.org/10.18089/tms.2022.180103
52. Opute, A., Irene, B., & Iwu, G. (2020). Tourism service and digital technologies: A value creation perspective. *African Journal of Hospitality, Tourism and Leisure*, 9(2), 1-18. https://www.ajhtl.com/uploads/7/1/6/3/7163688/article_5_vol_9_2__2020_germany.pdf (Accessed: 09 February, 2024)
53. Orellana, S. (2017). Digitalizing Collaboration, *Research-Technology Management*, 60:5, 12-14, DOI: 10.1080/08956308.2017.1348125
54. Pencarelli, T. (2020) The digital revolution in the travel and tourism industry. *Inf Technol Tourism* 22, 455–476. https://doi.org/10.1007/s40558-019-00160-3
55. Peppard, J. & Ward, J., (2016). *The Strategic Management of Information Systems: Building a Digital Strategy*. John Wiley & Sons. ISBN: 978-0-470-03467-5
56. Peshkova, G. Y., & Samarina, A. Y. (2018). Digital economy and recruitment potential: strategical interconnection and prospects. *The Education and Science Journal, 20*(10): 50-75, DOI: 10.17853/1994-5639-2018-10-50-75

57. Quinton, S., Canhoto, A., Molinillo, S., Pera, R., & Budhathoki, T. (2018). Conceptualising a digital orientation: antecedents of supporting SME performance in the digital economy, *Journal of Strategic Marketing*, 26:5, 427-439, DOI: 10.1080/0965254X.2016.1258004
58. Rózsa, Z., Ferenčáková, L., Zámek, D., & Firstová, J. (2024). Generation Z's perception of privacy on social media: Examining the impact of personalized advertising, interpersonal relationships, reference group dynamics, social isolation, and anxiety on self-disclosure willingness. *Oeconomia Copernicana*, *15*(1), 229–266. https://doi.org/10.24136/oc.2956
59. Sahu, N., Deng, H., & Molla, A. (2018). A capability based framework for customer experience focused digital transformation. *ACIS 2018 Proceedings,* 22. DOI: 10.5130/acis2018.an
60. Samaddar, K., & Mondal, S. (2023). AR and VR-based travel: a responsible practice towards sustainable tourism. *International Journal of Tourism Cities*. https://doi.org/10.1108/IJTC-05-2022-0135
61. Sample size calculator, https://www.calculator.net/sample-size-calculator.html?type=1&cl=95&ci=5&pp=50&ps=2970000&x=0&y=0 (Accessed: 09 February, 2024)
62. Saura, J.R., Palacios-Marques, D., Ribeiro-Soriano, D. (2023). Online Visitor's Reviews and Their Influence on Sustainable Tourism Businesses: An Applied Analysis of User-Generated Content. *Transformations in Business & Economics,* 22 (59), 124-143
63. Seker, F., Kadirhan, G., & Erdem, A. (2023). The factors affecting tourism mobile apps usage. *Tourism & Management Studies*, 19(1), 7-14. https://doi.org/10.18089/tms.2023.190101
64. Shrivastava, S. (2017). Digital Disruption is Redefining the Customer Experience: The Digital Transformation Approach of the Communications Service Providers. *Telecom Business Review: SITM Journal, 10*(1), http://www.publishingindia.com/tbr/65/digital-disruption-is-redefining-the-customer-experience-the-digital-transformation-approach-of-the-communications-service-providers/611/4328/ (Accessed: 09 February, 2024)
65. Skare, M., Gavurova, B., & Kovac, V. (2023). Investigation of selected key indicators of circular economy for implementation processes in sectorial dimensions. Journal of Innovation & Knowledge, 8 (4). https://doi.org/10.1016/j.jik.2023.100421
66. Skare, M., Gavurova, B., & Kovac, V. (2024). Sustainability of Gender Employment and Pay Gap Types Regarding Female Participation in Corporate Management. Environment, Development and Sustainability. https://doi.org/10.1007/s10668-024-04753-9
67. Sotiriadis, M. D. (2017). Sharing tourism experiences in social media: A literature review and a set of suggested business strategies. *International Journal of Contemporary Hospitality Management*, *29*(1), 179-225. https://doi.org/10.1108/IJCHM-05-2016-0300
68. *Stankov, U., & Gretzel, U. (2020). Tourism* 4.0 technologies and tourist experiences: a human-centered design perspective. *Information Technology & Tourism*, 22(3), 477-488. https://doi.org/10.1007/s40558-020-00186-y
69. Susanto, B., Wardhani, Y. K., Sutiarso, M. A., Muhartoyo, M., & Sadjuni, N. L. G. S. (2023). The role and use of social media as a medium for marketing tourist attractions and increasing tourist visits. *Journal of Commerce, Management, and Tourism Studies*, *2*(1), 48-55. https://doi.org/10.58881/jcmts.v2i1.93
70. Ševčík, P. (2024) Mandatory Specialization of a Forensic Expert. Právník. 2024, 163 (3), 289-295.
71. Tang, Y., Chau, K., Hong, L., Ip, Y., & Yan, W. (2021). Financial Innovation in Digital Payment with WeChat towards Electronic Business Success. *Journal of Theoretical and Applied Electronic Commerce Research, 16(5)*, 1844–1861. https://doi.org/10.3390/jtaer16050103
72. Tham, A., Mair, J. & Croy, G. (2020). Social media influence on tourists' destination choice: importance of context, *Tourism Recreation Research*, 45:2, 161-175, DOI: 10.1080/02508281.2019.1700655
73. The socio-economic situation in the RA, 2022 January-December, The Statistical Committee of the RA, p. 173, https://armstat.am/file/article/sv_12_22a_510.pdf (Accessed: 09 February,

2024)
74. The socio-economic situation in the RA, 2023 January, The Statistical Committee of the RA, p. 130, https://armstat.am/file/article/sv_01_23a_421.pdf (Accessed: 09 February, 2024)
75. The socio-economic situation in the RA, 2023 January-December, The Statistical Committee of the RA, p. 162, https://www.armstat.am/file/article/sv_12_23a_421.pdf (Accessed: 09 February, 2024)
76. Tovmasyan, G. (2021). Capital investments, tourist tax and tourism development: The case study of Armenia. *Economics and Sociology*, 14(1), 199-213. doi:10.14254/2071-789X.2021/14-1/13
77. Tovmasyan, G. (2021a) Organization of «Smart» Tourism Using Technological Solutions and Innovations. *AMBERD Bulletin*, 3, pp. 50-56. 10.52174/2579-2989_2021_3_50
78. Tovmasyan, G. (2022). Virtual Tourism: Travel from Home. *AMBERD Bulletin*, 3, pp.136-143, DOI: 10.52174/2579-2989_2022.3-136
79. Tovmasyan, G. (2022a). Evaluating the Role of Tourism in the Economic Development of the Republic of Armenia and Other Member States of the Eurasian Economic Union. *Journal of Liberty and International Affairs*. 8 (3):83-98. DOI: https://doi.org/10.47305/JLIA2283083t
80. Tovmasyan, G. (2023). Factors that influence domestic tourism demand: Evidence from Armenia. *Economics and Sociology*, 16(2), 75-88. doi:10.14254/2071-789X.2023/16-2/5
81. Wei, W. (2019). Research progress on virtual reality (VR) and augmented reality (AR) in tourism and hospitality: A critical review of publications from 2000 to 2018. *Journal of Hospitality and Tourism Technology*, *10*(4), 539-570. https://doi.org/10.1108/JHTT-04-2018-0030
82. Westerman, G., & Bonnet, D. (2015). Revamping your business through digital transformation. *MIT Sloan Management Review,* https://sloanreview.mit.edu/article/revamping-your-business-through-digital-transformation/ (Accessed: 09 February, 2024)
83. Xu, J., & Li, W. (2022). The Impact of the Digital Economy on Innovation: New Evidence from Panel Threshold Model. *Sustainability, 14*(22), 15028. https://doi.org/10.3390/su142215028
84. Yang, W., Chen, Q., Guo, Q., & Huang, X. (2022). Towards Sustainable Development: How Digitalization, Technological Innovation, and Green Economic Development Interact with Each Other. *International Journal of Environmental Research and Public Health, 19*(19), 12273. https://doi.org/10.3390/ijerph191912273
85. Zhou, Q., Sotiriadis, M., & Shen, S. (2023). Using TikTok in tourism destination choice: A young Chinese tourists' perspective. Tourism Management Perspectives, 46, 101101. https://doi.org/10.1016/j.tmp.2023.101101
86. Žufan, J., Civelek, M., Hamarneh, I. ., & Kmeco, Ľubomír . (2020). The impacts of firm characteristics on social media usage of SMEs: Evidence from the Czech Republic. *International Journal of Entrepreneurial Knowledge*, *8*(1), 102–113. https://doi.org/10.37335/ijek.v8i1.111

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