

Digital Tourist in a Digital World - New Ways of Making Tourism in the XXIth Century

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ABSTRACT

The pandemic period has influenced (positively or negatively) many areas of activity. The main reason why this has happened is that tourism, unlike other areas, has activities focused on the consumer of tourist services, which means an extremely large number of citizens and not on the development of a good or service that meets the need. The classic tourist does not necessarily want access to the tourist infrastructure (restaurants / hotels) as much as he wants access to points of interest, tourist infrastructure being a bonus. Unfortunately, the authorities have not found a "winning formula" to attract tourists and give them what they need and want - access to tourist information and points of interest. Moreover, there is a strong lack of information on the number of tourists who came to a certain area, who visited a certain destination, and the feedback they provided. Until recently, all was monitored by the National Tourist Information Centers, which were forced by the Ministry of Tourism to present very high figures in order to look "good". This research is intended to present the output of a project that the authors implemented four years ago at the national level, in the field of tourism, to demonstrate the need and usefulness of transforming classic tourism into a digital one. The project consists of marking and promoting the tourist and cultural capital, through Quick Response (QR) code plates, which are mounted in the area of points of interest and which, once scanned by tourists, provide them with information about the history and legends of the point of interest. It also provides developers with information about tourists, such as the number of people who scanned a particular QR code, the genre of people who scanned, the type of device, the period in which they scanned, and the operating system of their scanning device. More than the presentation of the output, this research also includes the result of a study applied to a sample of 350 respondents, users of the project, through which we wanted to see if there is a direct link between customer satisfaction (CSAT) and access to historical, tourist, and cultural information.

KEYWORDS: *customer satisfaction, digital tourism, digital tourists, points of interest*

JEL codes: *L31, L26, L83, L86, O35*

1. INTRODUCTION

Since ancient times, people's interest in tourism and culture has been an activity that did not distinguished between spoken language, state delimitation, or geographical positioning (Zuhrt, 2008). The first records of a tourist nature were made by the father of history, Herodotus, who, walking along ancient Greece, wrote on a piece of papyrus the map of the main temples that believers could visit to pray (Zuhrt, 2008).

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From that period until now, tourism activities, in general, and the field of tourism, in particular, have developed strongly, which is why everything has led to the emergence of several types of tourism. Even if tourism has several branches, its main purpose is one - to increase the satisfaction of tourists and their well-being (Smith, 1994).

Tourism is a comprehensive field, where elements from many areas intertwine and form very well developed systems, whose main purpose is to satisfy the main customers (CSAT) - tourists (Richards, 2019). The authorities of countries with high tourist potential have understood this and have tried over time to bring to the fore those important elements of tourism - culture, history, legends and ethnographic elements - and to promote them by all possible means. At the same time, they have made it easy for all tourists, regardless of their nationality, to access this information through various methods. This has made little-known areas real Instagram points - Instagram Spots (Costache et al., 2021) - where tourists end up because they saw a picture on social networks and they also want a photo shoot or a memory of that place. This has made tourism an important place in a state's economy.

The question that comes to the mind of any researcher in this field is: Can the digital environment influence the behavior and decisions of a tourist so much that he visits a certain goal just because he has been visited by several people? Complementary to this, another question was the basis of our study: Can a country, increasing its presence of tourist, cultural, and mythological capital in the digital space, be more attractive to foreign tourists? Through the present study, the analysis of the project results, and the study carried out with the help of econometrics, we have discovered that the answer to both questions is "yes".

A very important tool in the development of tourism was the process of digitization and the transposition of the tourism potential in the digital space (Xiang, 2018; Happ & Horvath, 2018). This made it possible to visit a certain region or country at a click away, by phone or computer, on specially designed and internationally promoted platforms.

Moving the touristic, cultural, and mythological potential into the digital environment has allowed more than just visiting a region with a click. It has allowed, due to technology, to remove the language barriers that kept the tourists from learning important facts about a culture because of the fact that many tourists did not know more than the mother tongue. After moving everything in the digital environment, tourists had full and complex access to interesting information, in the language in which they feel comfortable, through automatic translation.

2. LITERATURE REVIEW

The national project through which we wanted to transfer the tourist and the historical and cultural heritage in the digital space is called "Digitization of Tourism in Romania" and was implemented from 2018 until now by the Association "Traveler through Romania". Through this project, we wanted to increase the level of awareness of the tourist and cultural heritage in Romania and, at the same time, to see what the behavior of tourists visiting different points of interest is. The central idea of the project started from the study of some researchers (Harting et al. 2017), who carried out an analysis on tourism in Germany, following the implementation of a project to digitize this field. But they were not alone.

The idea of digitizing tourism came about due to several factors. One of these and the most important is the income of people (potential tourists). An individual is very likely to have a

level of income sufficient for daily living, but insufficient to travel. By digitizing tourism, all the tourist and cultural capital of a human settlement, a region, or even a country can be made available (free or for a fee) to the individual. The only condition is that it has a device connected to the Internet (Barashok et al., 2020). As a result, many projects have been implemented that have tried to bring the tourist and cultural potential to tourists, through digitization (Hornova & Pachrova, 2021).

For all those people (potential tourists) who learn about the tourist and cultural potential of a country on specialized platforms, without visiting them, we can discuss the development of the desire to visit those places. This means that the desire to know and see in reality a certain place becomes a dire need. However, in the case of tourists who arrive on the spot, there must be the necessary infrastructure to digitize those points of interest, so that the tourists become their own guides, using the technical means at their disposal. The fundamental objective in tourism is to maximize an indicator – the customer satisfaction score (CSAT). The CSAT is a performance indicator that calculates the level of consumer satisfaction after using a product or service. Basically, consumers of digital tourism and digitization implemented on the spot, in the vicinity of points of interest, must be satisfied with what they see, feel and discover and be motivated to come, at least once again.

All these implemented technologies have made the transition from tourist 1.0 (the classic tourist, who books his travels, goes on vacation, has fun and, on return, completes a feedback form), to tourist 3.0, known as ‘‘Adprosumer’’, who uses smartphones intensively, available technology and digital media, for holidays and to get in touch with tourism and regional/local history (Granell, 2018).

Also, the better a country is known in the world, the higher is the share of tourism revenues in the total of GDP. This can be seen in the statistics. For example, in Figure 1 and Figure 2, the shares of tourism revenues in the Gross Domestic Product (GDP) of Romania and Bulgaria, in the period 2013-2021, can be observed.

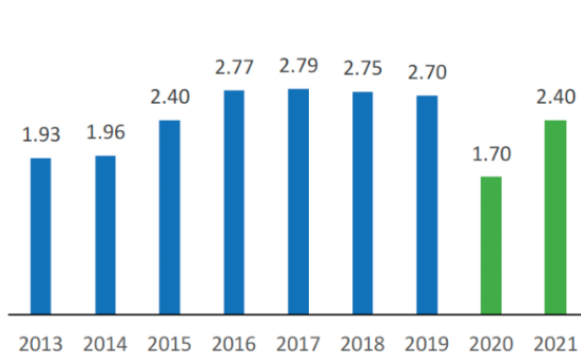


Figure 1. The share of tourism revenues in total GDP in Romania

Source: Adapted from National Institute of Statistics

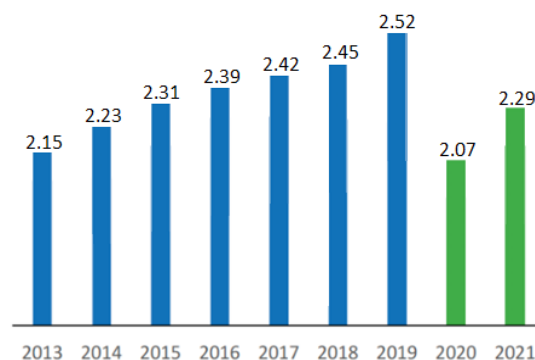


Figure 2. The share of tourism revenues in total GDP in Bulgaria

Source: Adapted from National Institute of Statistics

The shares of tourism revenues are important because a bigger share means a bigger number of tourists. Also, a bigger number of tourists can be attributed to a better knowledge of the history, culture, and mythology of that country, things that attract tourists and make that country much more attractive to the detriment of others.

The reason we chose the two countries is not accidental. These two countries are neighbours and have similar relief, openness to the Black Sea, and strong tourist potential. As it can be seen in Figure 1 and Figure 2, Bulgaria is much more attractive to tourists than Romania, which is why tourism brings much higher revenues in total GDP. The reason why this is happening is related to the way in which Bulgaria brings to the forefront its tourist potential (historical monuments, tourist attractions and cultural heritage) and the easy and efficient way in which it does so. The case of Bulgaria is not unique. All countries with a high level of tourists and income apply the same methods, namely the creation of the most interesting experiences for visitors and access to quality tourist / historical and cultural information, which transforms points of interest (in particular) and national tourism (in general), in basic elements of the country economy and brand (Brondoni, 2016).

Taking all these things into account, the project "Digitization of tourism in Romania" should facilitate the knowledge of points of interest both for digital tourists (3.0 tourists), but also for those who were hundreds or thousands of kilometers away, who do not have enough income to visit Romania and must get to know our country through digitization and digital media.

3. METHODOLOGY

In our scientific approach, we started from an obvious state of affairs - Romanian citizens (Romanian national tourists) do not know the tourist and cultural potential of their country, given the fact that it is limited to certain intensely promoted areas (sometimes even promoted inefficiently). Therefore, during the three years since the beginning of the project "Digitization of Tourism in Romania", we have mounted over 400 promotional plates with QR codes, placed near historical monuments and tourist attractions, which, once scanned by tourists with the help of the smartphone, they entered a platform made by us, where they could read information about the history and legends of that place, in all languages available throughout the Earth. Basically, we turned the tourist who arrives at that place, into his own guide, and the one who could not reach the point of interest, to find out about touristic capital entering the specially designed platform.

In order to see the feasibility of the project and to see the results after the implementation, we performed real-time analyzes. Each QR code scanned provides information about the device from which it was scanned, the genre of person, the operating system of the device and when that QR code was scanned, as well as the total number of scans / points of interest. This part of our study used all the information obtained in real time from the collection of more than 60,000 QR code scans in four years. This real-time analysis allowed us to identify the visiting habits of foreign and domestic tourists.

Another part of our analysis focuses on a post-implementation questionnaire of the project. Because we wanted to see exactly how access to tourist and cultural information influences the level of appreciation of tourists / potential tourists to the tourist and cultural capital of Romania, we conducted a survey, which aims not only to identify clear trends, but also the interdependence between certain variables (analyzed through statistics and econometrics).

The research methodology consisted of an exploratory research, of quantitative type, which we carried out to highlight the degree of satisfaction of tourists, determined by the free access to cultural and tourist information, facilitated by the digitization of information. The research was carried out in an opinion poll that we conducted through a questionnaire posted and

distributed online, at <http://www.isondaje.ro/sondaj/859098613/>, between 15.02.2022-30.03.2022. The questionnaire was distributed through a group developed by us on social platforms such as Facebook and Instagram, and was accessed by 395 people, who provided valid answers, each of them being direct beneficiaries of the project of digitizing tourism and culture in Romania. The target group is made up of people passionate about tourism, eager to assimilate new information about the objectives visited, presented in a form that is as accessible as possible.

The process of analyzing the recorded data that we used in our study is specific to the quantitative analysis of the data, namely: frequency of occurrence of responses, central tendency, comparison of the mean, correspondence analysis and factor analysis.

4. RESULTS

The results we obtained from the analysis are, at least, interesting. Not only were we able to identify the visiting habits of the tourists through the information connected by scanning the QR codes, but we were also able to identify a difference between the pre-implementation and the post-implementation period.

Thus, we found from the beginning, before implementing the project, that Romanians know, on average, somewhere between 10-20 tourist attractions / historical monuments in our country, and then, after the implementation of the project, all these data changed. This can be seen in figure no. 2 and 3:

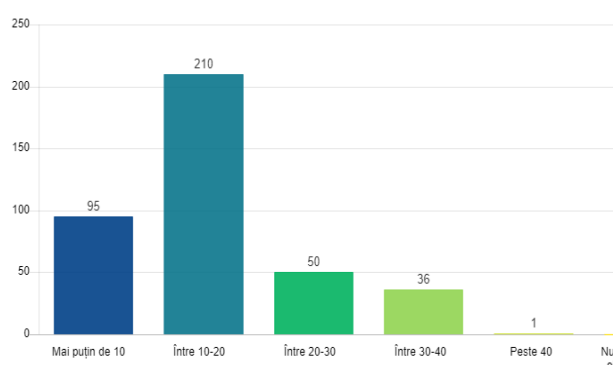


Figure 3. Number of points of interest known before project implementation

Source: Made by the authors, through the study conducted on *Isondaje.ro*

(<http://www.isondaje.ro/surveys/results/830613696>)

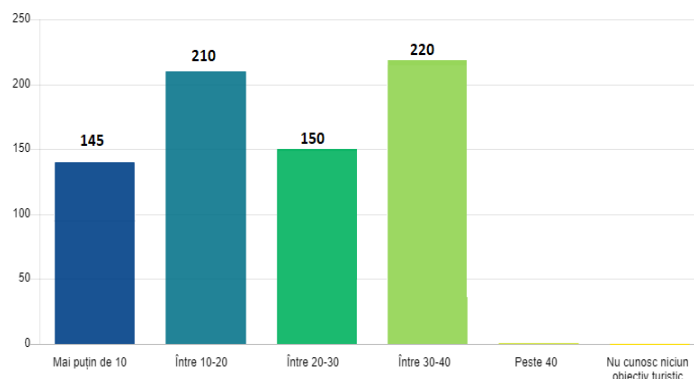


Figure 4. Number of points of interest known after project implementation

Source: Made by the authors, through the study conducted on *Isondaje.ro*

(<http://www.isondaje.ro/surveys/results/830613696>)

Regarding the analysis based on econometric study, in order to demonstrate that the free access to historical and cultural information favors the openness of people to visit a certain country as well as the interest to know as many points of interest as possible, we made certain study hypotheses.

Main hypothesis (IP): Tourists appreciate the easy access to information (historical and mythological) that is made available through the QR code located in the vicinity of the tourist points they visit.

Curiosity led us to deepen the results of the study we undertook by formulating the following working hypotheses:

I1 - The intention of the tourists to recommend accessing the information written in the plates with QR codes, located in the vicinity of tourist attractions is not influenced by the number of tourist attractions visited.

I.2. Tourists who have seen and used the QR codes located in the vicinity of points of interest want to implement this project at the national level and would recommend to friends / acquaintances this way of tourist information.

I3 – Tourists, who know more points of interest than the average, used the QR codes for information and want to implement the project at national level.

In order to verify the main hypothesis (tourists appreciate the easy access to the information - historical and mythological - that is made available to them through the plates with QR codes located in the vicinity of the tourist points they visit), we analyzed the answers to questions 8 and 9 of the questionnaire, by the method of comparing the means and observing the central tendency of the answers (Table 1). The high score (1.94) of the average respondents who, at the time of the study, stated that they had seen and used the QR codes for information, indicated that this way of informing is appreciated by tourists and even considered useful (average response score 1.50). Also, the central tendency of the answers to those two questions, given the median score, indicated that most respondents saw and used the QR codes (the score of the median 2.00 indicates the trend of affirmative answers) and considers this method of information useful (the score of the median 1, explains the fact that the information contained in the QR codes is very useful, especially when there are no guides).

Table 1. Report

	8) Did you see the QR near the historical and tourist points in Romania? Did you use them?	9) If you scanned the QR from the tourist plates, how useful is the information to you?
Mean	1.94	1.50
N	395	395
Std. Deviation	.586	.742
Median	2.00	1.00

Source: Response processing in the IBM SPSS application by the authors

The testing of the first working hypothesis (I1 - The intention of the tourists to recommend accessing the information written on the plates with QR codes located near the tourist points is not influenced by the number of tourist objectives visited) is performed by means of the correspondence analysis method, questions no. 6 and 12. The results presented in Table 2 confirmed our hypothesis. Moreover, we observed that, at the time of the study, more than 90% of respondents were willing to recommend accessing the information encapsulated in the QR codes, located in the proximity of tourist attractions visited, which is a really good thing for both the national tourism and for the level of touristic, cultural and mythological knowledges of both national and foreign tourists.

Table 2. Correspondence Table

6) How many tourist attractions in Romania do you know?	12) Would you recommend the QR to friends and acquaintances?			
	Yes	No	I don't know	Active Margin
Less than 10	89	6	0	95
Between 10-20	195	15	0	210
Between 20-30	44	6	0	50
Between 30-40	29	7	0	36
Over 40	1	0	0	1
I don't know any tourist attractions	0	0	3	3
Active Margin	358	34	3	395

Source: Answer processing in the IBM SPSS application by the authors

The testing of the second working hypothesis (Tourists who have seen and used the QR code plates located near the points of interest want to implement this project at national level and would recommend to friends / acquaintances this way of tourist information) led us to disclose the results from the perspective of the respondents' desire to disseminate the information accessed through the use of digital means.

Interpretation of the answers to questions no. 9, 11 and 12, through the factor analysis, indicated to us that the respondents who used the information method provided through the QR codes considers this method of information useful (score 0.834), want to implement the project at national level (score 0.711), and would recommend this method of information to friends and acquaintances (score 0.661).

Table 3. Communalities^a

	Initial	Extraction
9) If you scanned the QR from the tourist plates, how useful do you find them?	1.000	.834
11) Would you implement this project nationwide?	1.000	.711
12) Would you recommend the QR to friends and acquaintances?	1.000	.661

Extraction Method: Principal Component Analysis.

- a. Only cases for which 8) Have you seen the QR near the historical and tourist points in Romania? Did you use them? = Yes, I saw and used are used in the analysis phase.

Source: Answer processing in the IBM SPSS application by the authors

Finally, testing the third working hypothesis (I3 - Tourists who know more points of interest than the media, used QR codes for information, and want to implement the project at national level) allowed us to correlate the intention to disseminate information obtained through digitization by the desire to extend the project to the national level. Analysis of the answers to questions no. 8, 11 and 12 - by the method of factor analysis - led us to the conclusion that the respondents who at the time of the study, used the digital method of information through the QR codes located in the tourist objectives visited are, to a large extent, willing to recommend their use and to implement the project at national level (score of extraction of factors 0.576).

Table 4. Communalities^a

	Initial	Extraction
11) Would you implement this project nationwide?	1.000	.576
12) Would you recommend the QR to friends and acquaintances?	1.000	.576
Extraction Method: Principal Component Analysis.		

a. Only cases for which (8) *Have you seen the QR near the historical and tourist points in Romania? Did you use them? = Yes, I saw and used* are used in the analysis phase.

Source: Answer processing in the IBM SPSS application by the authors

Simultaneously with the remarkable results obtained through the questionnaire, we focused on those results in the field, on the real-time data that the plates recorded, and allowed us to see how many digital tourists are. Thus, in Figure 5, can be seen the general trend obtained between 01.01.2020 - 30.04.2022:

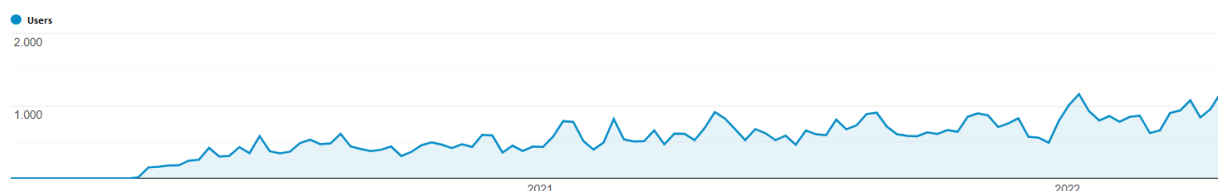


Figure 5. The trend registered by Google Analytics, following the scanning of the plates by 60,750 digital travelers, between 01.01.2020 - 30.04.2022

Source: Graph made by the authors, based on the information provided by the association we lead

We find, according to figure no. 5, that there is a general increasing trend in the number of digital tourists. This trend is fluctuating for several reasons. One of these is the number of points of interest discovered in the field. If at the beginning of the project, when only 100 points of interest were presented, the number of digital tourists was less than 100 daily, at the moment, when over 700 such points were presented, their number rose to over 300 digital tourists in every day. Also, the easy access to historical, touristic, and mythological information allowed the development of a self-promotion. Thus, tourists come, scan the plates in increasing numbers, and then announce their friends that they also have the opportunity to scan those plates and find relevant information, while spending a beautiful vacation in Romania.

Also, the Customer Satisfaction Score (CSAT) is constantly growing, given the existence of this project and the easy access to information. Because we counted this indicator throughout the project, it can be seen in Figure 6:

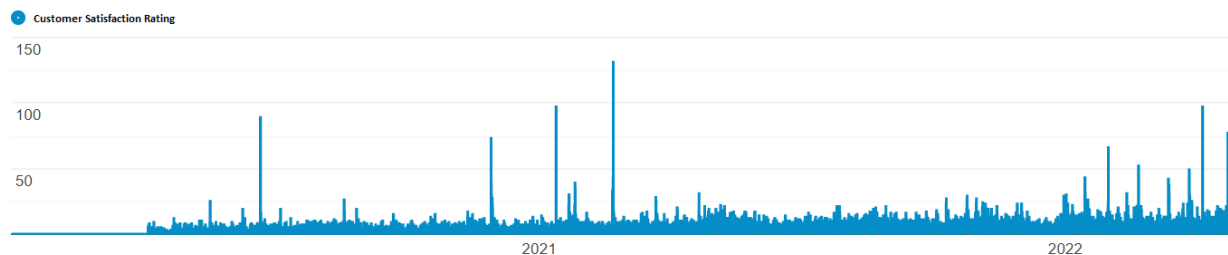


Figure 6. The trend registered by Google Analytics, following the scanning of the plates by 60,750 digital travelers, between 01.01.2020 - 30.04.2022, of the satisfaction rating
 Source: Made by the authors, based on the information provided by the association we lead

The satisfaction score felt by the customers could be made possible by recording, with the help of artificial intelligence, the way in which they interacted with a certain point of interest. In other words, every time they read about a particular point of interest directly on the platform or scanning the plates on the field, they left certain comments and ratings (satisfaction stars ranging from 1 "dissatisfied" to 5 "very pleased"). Thus, we could observe, as in Figure 6, that the CSAT indicator is in a continuous increase, registering a general increasing trend. Also, as can be seen, there are periods when the CSAT level is very high, above the average of the period. This is due to the high flow of visitors to the points of interest, during the holidays and vacations.

Another important aspect to be presented is the country where digital tourists come from. This can be seen in Figure 7:

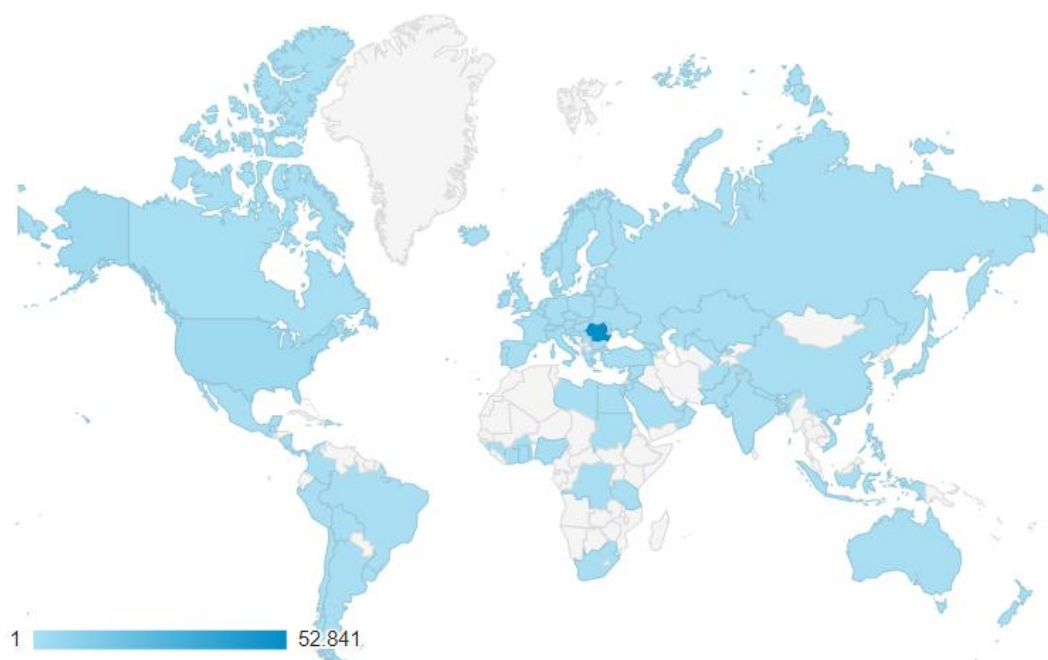


Figure 7. Countries where digital tourists come from

Source: Made by the authors, based on the information provided by the association we lead

Figure 7 shows that Romania has been receiving tourists from all over the world for the last three years. There is, as can be seen, a global coverage, which allowed a significant number of tourists from all over the world to know the tourist potential of Romania. Moreover, it is found that there are countries that have the color gray. Due to this, no digital tourists were

registered for various reasons, such as a small number of citizens, lack of strong IT infrastructure (internet access), or the project could not reach those areas by targeting. In any case, in the very near future, they will also get to know, in one way or another, the tourist, cultural, and mythological potential of Romania.

5. CONCLUSIONS

Tourism and culture of a country can attract tourists, if the latter have free access to discover the potential, culture, mythology, and history. Also, the more a country has a more developed tourist capital, the more attractive it is for people who want to discover it, the more salable it is both among tourists and in the eyes of tourism investors.

During the last three years in which we implemented this project and through the present analysis, we were able to demonstrate that in tourism and cultural promotion it is not enough to have a very large number of points of interest, if they are not promoted effectively or there is no free and quality access to information on the history and legends of those points, and if they are not transposed into the digital environment. Of course, the transposition of points of tourist and cultural interest must be more of an incentive, a tool to attract tourists to visit what a country has to offer and, at the same time, to stimulate them to know more, to incite them to discover a whole country. Also, these tourist plates with QR codes, together with the reports they generate in real time, must facilitate the development of auxiliary strategies to promote Romania's potential and allow as many tourists as possible to know and discover what Romanian tourist capital has to offer.

Throughout our study, econometric analysis showed that tourists are aware of the existence of QR codes from the proximity of points of interest and have shown us that this way of information is appreciated and considered useful. Also, the central tendency of the answers offered by the sample to the questions related to the observation and scanning of the plates, given the median score, indicated that most of the people who answered saw and used the QR codes (the score of the median 2.00 indicates the trend of affirmative answers) and useful information in this way of information (the score of the median 1, explains the fact that the information contained in the QR codes is very useful, especially when there are no guides). Moreover, one thing we were very happy about was that, at the time of the study, more than 90% of the respondents were willing to recommend accessing the information entered in the QR codes located at the tourist attractions visited. Also, through the factor analysis applied to certain questions, we were able to find that the respondents, who used the information provided through the QR codes, found it useful.

Also, respondents who, at the time of the study, used the digital method of information via QR codes located in the tourist objectives in proximity visited are, to a large extent, willing to recommend their use and to implement the project at national level (score of extraction of factors 0.576).

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