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**International
Scientific
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1-3 June, 2017

Vrnjačka Banja, Serbia

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

Tourism product as a factor of competitiveness of
the Serbian economy and experiences of other countries



**THEMATIC
PROCEEDINGS**

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



THE IMPACT OF TRAFFIC ON THE QUALITY AND TOURIST OFFER OF VRNJAČKA BANJA

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Abstract

The importance of transport has become one of the major and leading elements of each service industry, and not only of service but also of all the major industries in the world. Therefore, traffic and all traffic characteristics are given a lot of attention starting from the safety itself to the ecology of vehicles that are the key to road transport. This is the case also in the tourism industry as one of the leading service industries, which largely depends on traffic, particularly on travelers transport and the possibilities to reach certain tourist destinations. One of such destinations and the leading tourist offer in Serbia is Vrnjačka Banja. In this paper, we analyzed traffic safety and the possibility of visitors to reach Vrnjačka Banja, both in terms of domestic tourists and foreign tourists. In addition, we analyzed traffic improvement of one of the influential factors on the ecosystem of Vrnjačka Banja as an important factor in attracting tourists.

Key Words: *safety, traffic, tourism, quality, Vrnjačka Banja*
JEL classification: Z30

Introduction

Today, when many sciences and many disciplines increasingly "unite" and thus becoming dependent on each other, the quality and demand for certain services are highly correlated and industries largely dependent on each other. Such a correlation can involve traffic and tourism. The reason for this may be the demand of such a tourist destination, of course, if we have adequate access from major cities towards this destination, the

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impact of traffic on the pollution on such tourist destinations by vehicle or the traffic safety as one of the important factors of attractiveness.

In one such correlation, we can connect traffic in the Republic of Serbia with Vrnjačka Banja as one of the most important tourist destinations in Serbia. Vrnjačka Banja is one of the leading tourist destinations in Serbia. Based on the foregoing, in this paper, we will analyze the impact of traffic on the aforementioned tourist destination in terms of possible access of tourists, both foreign and domestic. We also analyzed traffic in terms of the influence of negative effects on the ecosystem, the source of which are vehicles, as another factor in attracting tourists.

The position of Vrnjačka Banja as a tourist attraction in the Republic of Serbia

Vrnjačka Banja is the economic, political and cultural center and covers an area of 239 km² with 26,481 inhabitants or 111 inhabitants per km², that are spatially distributed in 13 settlements and one municipal center. In the municipal center, there are 37.3% of the population, while 43.2% of the population of the municipality live in other 5 villages (Vrnjci, Ruđinci, Novo Selo, Podunavci, and Gračac). It is located in the central part of the Republic of Serbia at 43°37' of north latitude and 20°54' of east longitude GMT, about 200 km south of Belgrade on infrastructure corridor Kraljevo-Kruševac. By its surface area, Vrnjačka Banja belongs to the group of smaller municipalities of Serbia. As a spa, it belongs to the first category Serbia resorts. It is in a direct territorial contact with the municipalities of Kraljevo, Trstenik, and Aleksandrovac. Vrnjačka Banja territorially belongs to the Raška district, covering also Raška, Novi Pazar, and Tutin, whose administrative and political center is Kraljevo (Milićević, 2008).

Vrnjačka Banja dominates by the size of traffic among the tourist places of Serbia, thanks to its excellent geographic position, thermo-mineral waters, natural beauties, cultural-historical heritage, the long tradition in tourism... However, in tourism industry today, it is no longer sufficient to have "a long tradition," natural beauties, cultural-historical heritage... The offer of tourist products and services must constantly follow the needs of a modern tourist characterized by sophistication, mobility, and dynamism. It is necessary to have a completely new approach to tourism development. We need new, modern and attractive facilities and offerings in line with modern trends. Constant innovation of products, experiences,

and emotions, the search for new experiences, traveling for culture and education, return to oneself and nature, have become the new standards and market facts, without which it is no longer possible to participate in the global tourism industry.

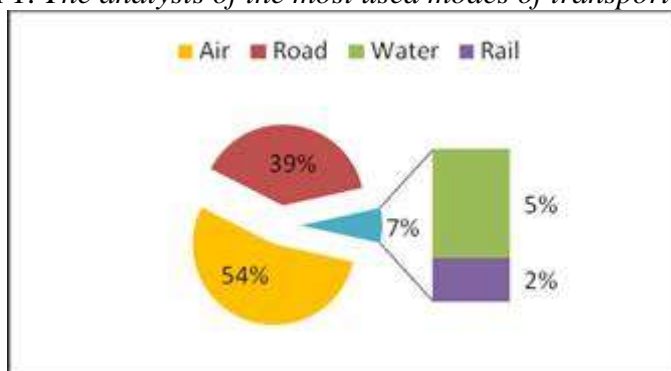
The importance of traffic in tourism

The development of traffic and tourism are rigidly interconnected with each other. Higher level of living standards, technical breakthroughs, more free time and a growing desire to travel, motivate people of different professions and ages to travel. One of the basic conditions for tourism development, in addition to the construction of modern accommodation facilities, is the construction of traffic infrastructure. Specific features of the traffic service are: high price (in tourism - with the cost of accommodation, the majority of costs), seasonal character (planning - the problem is how to ensure traffic functioning in high season and increase capacity utilization in low season), interdependence (of the majority of tourist entities, e.g. hotels and transportation companies), impact on society (especially on the local community - both positive and negative impacts), the great impact of external factors (on tourism and transportation - economic crises, wars, epidemics of communicable diseases...). The development of tourism in the world as a mass and organized economic activity is one of the most important characteristics of this time. Traveling for leisure today has a huge scale and allows many of the national economies in the world to realize large revenues from tourism. People who travel for leisure use various means of railway, road, air, sea and river transport. The historical development of traffic has had a stimulating effect on the transformation of tourism into a mass phenomenon only to have, again, at a later stage, tourism's retroactive effect on the development of traffic. It can be said that the development of tourism, as a separate economic activity in touristically developed countries, has influenced the change in the traffic system structure and the growth in the demand for passenger transport services. Traffic is the basic prerequisite for the development of the tourism industry.

Tourist potentials of a country such as natural beauty and cultural-historical motives come into play only with the construction of an appropriate traffic infrastructure. The impact of individual traffic branches on tourism development depends primarily on the structure and the composition of their transport capacities, their technological and

economic characteristics. Particular attention should be paid to the modernization and mutual harmonization of means of transport. The negative impacts of traffic on tourism are: traffic infrastructure, as it takes up an increasingly larger space (roads, gas stations, parking space, etc.) which is a visual degradation of the space; means of transport as they have a negative environmental aspect such as noise, harmful gases and substances, the problem of disposal and recycling of obsolete means of transport; and safety - the intensification of traffic is often accompanied by reduced safety. Taking into account that we have more modes of transport, we can conclude that not all modes of transport are equally represented in tourism, that is, not all modes of transport are equally used in tourists transport to their destinations. Histogram 1 shows the distribution of modes of transport from 2015, according to which it is possible to conclude that air and road traffic is the most used in the transport of tourists to their destinations. Of course, we must also note that this applies to tourists who travel to foreign countries. However, according to this and according to the observation of the situation of tourists who travel to the Republic of Serbia, they can use road traffic the most. Based on this, the further text analyzed the situation of road traffic in Serbia towards Vrnjacka Banja, which is the subject of our research in this paper. Also, we must not forget the tourists who come from other countries, and on the basis of diagram 1 identify some of the measures and benefits that can be included in this tourist offer and thus improve the quality of service and the very motive for visiting a tourist destination.

Histogram 1: *The analysis of the most used modes of transport in tourism*



Source: *Statistics of using modes of transport for the transport of tourists*, <https://www.statista.com/statistics/305515/international-inbound-tourism-by-mode-of-transport/>

Analyzing the share of individual modes of transport in the total tourist traffic, we must point out that the share of rail transport in the total volume of tourist traffic decreased due to the increase in the number of cars, the development of road networks, and huge competition of road transport. Railroad largely absorbs the needs of domestic tourists, while foreign tourists use it during the off-season.

The connection of Vrnjačka Banja traffic with major cities in Serbia

Based on the above, it can be concluded that traffic has a huge impact on the quality of a tourist offer and the very tourist service. The reason for this is that traffic has a great role in what connects the place of residence of passengers and the very tourist offer. The better connection of places with a tourist destination is, the more visitors will come to the destination. The connection itself can be assessed by the quality and the goodness of the connection with the traffic infrastructure itself. In countries where the roads are streamlined and where the construction of roads with modern pavement is greater, the conditions for faster and greater circulation of motor vehicles, and thus the conditions for increased tourist movements are created. In addition to this expansion of the traffic branch, it should be noted that some elements, such as safety in transport, the impact of the time factor and energy crisis, give railway traffic some degree of priority. The development of this structure of facilities and the quality of services is of great importance for the development of tourism industry, and especially receptive tourism. In our case, we will observe the connection of Vrnjačka Banja, as one of the most visited tourist destinations in Serbia, with five largest cities by population, in terms of road traffic. The reason for this research is that these are the largest nodes in Serbia where most of the population lives and therefore it is to be expected that the largest number of tourists comes precisely from these cities. Table 1 shows the distances of Vrnjačka Banja to the largest cities in Serbia, being Belgrade, Novi Sad, Leskovac, Niš, and Kragujevac. The table shows the values of the distances in kilometers as well as the average required travel to Banja.

Table 1: *The distance of major cities in the Republic of Serbia to Vrnjačka Banja*

City	Spatial distance (km)	Time distance (h)
Belgrade	196	3.07
Novi Sad	271	4.5

Niš	114	2.13
Kragujevac	60	1.07
Leskovac	169	2.22

Source: *The author, based on research*

On the basis of the aforementioned, it may be concluded that Kragujevac is one of the closest major cities which are near Vrnjačka Banja, while Novi Sad is the city farthest from this tourist destination. However, for this reason, the connection of all the cities to this destination is important; the very connection can define the very possibility and the quality of the access to this offer. The construction of new roads creates conditions for new tourist movements as well. If the road network is developed, it enables the achievement of shorter transport links between production and consumer regions, but also between initiative and receptive tourist areas. In countries where the roads are more streamlined and where the construction of roads with modern pavements is greater, the conditions for faster and greater circulation of motor vehicles, and thus the conditions for greater tourist movements are created.

So, it is very important to observe this in terms of Vrnjačka Banja as a tourist destination of both domestic and foreign tourists. The connection to the public transport from other cities is also very important, of course, both in terms of road and rail transport, which is also important to note (Opština Vrnjačka Banja, 2010).

Good road connection of Vrnjačka Banja is affected primarily by the fact that it is located in central Serbia. It is located at the intersection of local and regional roads which allow for a good position in the road transport network. Pojate-Kruševac-Čačak-Kraljevo highway connects Vrnjačka Banja with two major roads in the road infrastructure of Serbia.

Ibar highway is 30 km away from Vrnjačka Banja and is easily reached from Kraljevo. It connects Belgrade to the Adriatic Sea. On the other hand, through Kruševac and Pojate, one can reach Belgrade-Niš highway, which passes 60 km from Banja. This highway is a part of Pan-European Corridor 10, whose main route connects Salzburg, via Ljubljana, Zagreb, Belgrade, Niš, Skopje and Veles to Thessaloniki. The corridor has more branches, which connect Graz and Zagreb, Budapest and Belgrade, Niš and Istanbul, so it provides a link of Central and Western Europe to the Far and the Middle East. Through the territory of the municipality of Vrnjačka Banja, three regional roads also spread - R222 (Vrnjci-

Aleksandrovac), by which one can reach Aleksandrovac and Kopaonik; R224 (Novo Selo-Ušće), which connects the spa with Goč mountain and Kraljevo, and R225 (Kraljevo-Stanišinci), which also leads from the spa via Goč to Kraljevo. Public transportation by road traffic is very well-developed. From the spa bus station, there are direct lines which travel each day to Sombor, Subotica, Novi Sad, Belgrade, Smederevo, Požarevac, Svilajnac, Zlatibor, Čačak, Užice, Požega, Niš, Leskovac, Vranje and to Herceg Novi. Direct departures for Kosovska Mitrovica, Podgorica, Herceg Novi, and Budva are organized from the bus station in Kraljevo. On the other hand, there are numerous direct lines by which from other cities one can reach Vrnjačka Banja. Most buses for Banja depart from Belgrade and Novi Sad, and there are direct buses from Subotica, Sombor, Požarevac, Svilajnac, Zlatibor, Leskovac, Vranje, Kosovska Mitrovica and Herceg Novi. By rail traffic, Vrnjačka Banja is also well connected with other cities. The railway station is located in the village of Vrnjci, 3.5 km from the center of the spa. Stalać-Kraljevo-Požega line passes through the village, connecting the spa with two major rail lines - line Belgrade-Niš-Skopje-Thessaloniki and line Belgrade-Bar.

Of course, it is important to note that the reconstruction of line Belgrade-Bar has begun and the first phase will reach the reconstruction of 77 kilometers of line Resnik-Valjevo, which will allow trains to travel at speeds of up to 120 km / h, which will allow travelers to more quickly arrive at their destinations. According to the estimates, instead of the current two hours and fifteen minutes, it will take an hour and ten minutes to arrive in Valjevo from Resnik. To the train station in Vrnjci, there are regular bus lines from the spa and the services of many taxi drivers can also be used (Milićević, 2008).

The impact of traffic safety on the quality of national tourist offer and demand for tourist visits

In addition to all the important factors of traffic or so far mentioned in the work, an important factor for the selection of a destination during tourist visits is the very traffic safety, the safety of road sections which tourists use or travel to a specific destination. Traffic is one of 4 existential functions of each living space (work, housing, leisure, and traffic), which is aimed at connecting other functions, with as little negative effects as possible (Lipovac, 2008).

In modern tourism, 77% of all travels take place through road traffic. Thus dominant road traffic can be explained by its flexibility, price, and independence at disposal to all passengers, and therefore tourists. In addition, tourists often opt for renting cars in selected destinations, all with the aim to, in accordance with own interests and capabilities, get to know them better. Due to the demand for this type of services, many companies dealing with renting vehicles have emerged around the world, but of course, with all this, it is very important to what extent all the roads are safe, or how well the traffic safety management system is developed at the local level. For tourists, among other things, it is very important to be as safe as possible and not to have any problems on the road, in one word, the safety of travel is very important to them. The development of supporting facilities on our road network is not satisfactory, which affects the quality of transport services. On our roads, there are not enough motels for a break or real parking spaces, so the concentration of drivers weakens due to fatigue which causes a large number of traffic accidents.

The quality of transport services and the destination can be significantly increased by introducing the quality management system according to SRPS ISO 9001 (Punoševac, et. al., 2010).

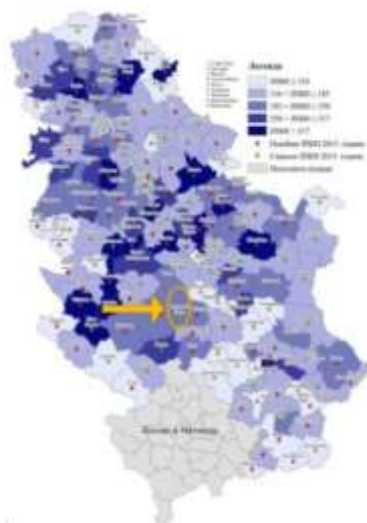
With the implementation of the quality system, both internal and external benefits are expected (Veselinović & Rajković, 2016). The synergistic effect is achieved by the integration of standardized management systems (Šofranac & Rajković, 2016).

The importance of traffic safety is a very important category that is related not only to general safety but also to safety in terms of tourism. On this basis, different standards governing the traffic safety management systems are adopted. This standard in the Republic of Serbia is ISO 39001: 2016. This international standard specifies the requirements for the safety management system of road transport (BDS) with the instructions for use, to allow the organization to function in the road transport system in terms of reducing deaths and serious injuries in road traffic accidents, which cannot be affected by this organization Institute for Standardization of Republic of Serbia, 2016).

When it comes to traffic safety in Vrnjacka Banja, on the basis of the data of Traffic Safety Agency, of course at the local level, according to statistics from 2015, the value of the public weighted risk for the

municipality of Vrnjačka Banja belongs medium risk value level class, as shown in Figure 1, where in 2015 there was a reduction of the public weighted risk compared to 2014.

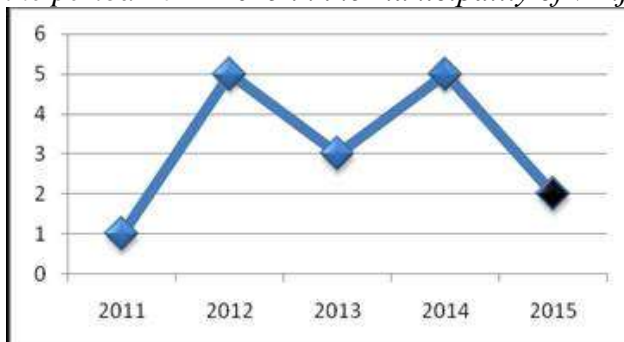
Figure 1: *The overview of weighted risk values of deaths by municipalities in 2015*



Source: *Road Traffic Safety Agency, Statistics of local self-government Vrnjačka Banja 2011-2015*

According to the same data, in the period from 2011 to 2015, there were 566 traffic accidents. However, in these accidents during this period, it was registered that a total of 15 people were killed as a result of traffic accidents, the death toll by the year of data is shown in Diagram 1. Of course, from the diagram it can be concluded that this number is in 2015, after the year of 2011, the lowest, thereby we can conclude that the number of killed tends to decrease.

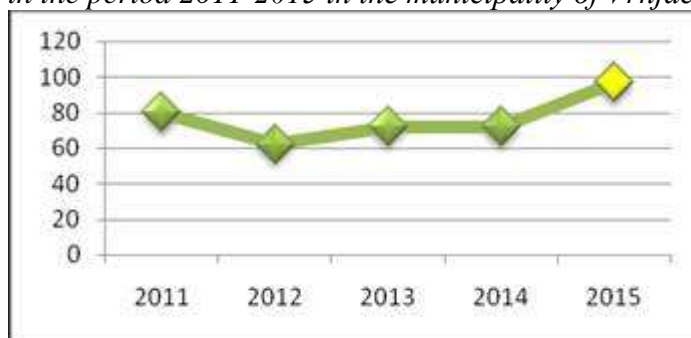
Diagram 1: *The overview of the number of people killed in traffic accidents in the period 2011-2015 in the municipality of Vrnjačka Banja*



Source: Road Traffic Safety Agency, *Statistics of local self-government Vrnjačka Banja 2011-2015*

When it comes to the number of injured in road accidents, according to Traffic Safety Agency, in the period 2011-2015, a total of 383 people were injured, see the distribution by years in Diagram 2. Analyzing Diagram 2, we can conclude that the largest number of injured was precisely in 2015, which means that we have a tendency of the increase in the number of injured persons in the municipality of Vrnjačka Banja.

Diagram 2: *The overview of the number of people injured in traffic accidents in the period 2011-2015 in the municipality of Vrnjačka Banja*

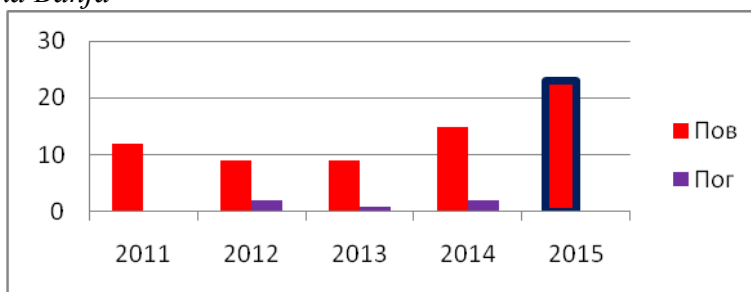


Source: Road Traffic Safety Agency, *Statistics of local self-government Vrnjačka Banja 2011-2015*

Tourists themselves, while visiting tourist offers or tourist destinations, participate as pedestrians in traffic, for the reason of sightseeing of the very city, in our case, getting to know the city and the attractions in the city. For this reason, a very important indicator of traffic safety can be a number of accidents involving pedestrians. According to the Traffic Safety Agency, in the period from 2011 to 2015, a total of 5 pedestrians

were killed in traffic accidents, provided that in 2015 there were no pedestrians killed. When it comes to pedestrians injured in the same period, the situation is different, the total number of injured was 68, of whom 23 were injured in accidents in 2015. These data are plotted in Diagram 3.

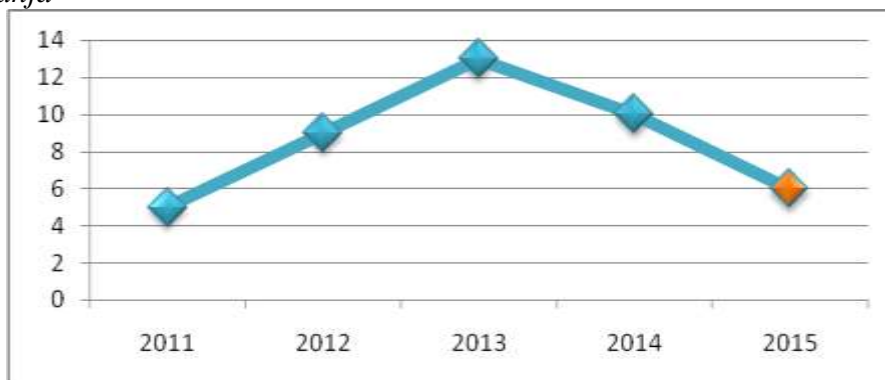
Diagram 3: *The overview of the number of pedestrians killed and injured in traffic accidents in the period 2011-2015 in the municipality of Vrnjačka Banja*



Source: *Road Traffic Safety Agency, Statistics of local self-government Vrnjačka Banja 2011-2015*

A common choice of tourists during tours as a replacement for walking is renting bicycles, the reason for it being a faster exploration of the destinations offered. In this case, a tourist becomes a participant of cyclist's category. According to the Safety Agency in the territory of Vrnjacka Banja in the period of 2011-2015, not one cyclist was killed in a car accident while the total of 43 was injured, the statistical overview is given in Diagram 4.

Diagram 4: *The overview of the distribution of injured cyclists in traffic accidents in the period from 2011 to 2015 in the municipality of Vrnjačka Banja*



Source: Road Traffic Safety Agency, *Statistics of local self-government Vrnjačka Banja 2011-2015*, <http://www.abs.gov.rs/statistika-lokalne-samouprave>

The analysis of the quality and possibilities of the visits of foreign visitors to Vrnjacka Banja in terms of traffic connections

Tourism today has become one of the most common tourist service industries, which is reduced to the visits to tourist destinations both within a country and international tourist destinations. So, for one tourist destination, it is necessary to have a good road connection in order to have more foreign tourists; it is simply for the reasons of good comfort and easy access to such destinations. In previous work, it has already been said about the most used modes of transport used by foreign tourists while visiting some of the tourist destinations. On this basis, we can also observe a possible access to one of the destinations in Serbia by foreign tourists.

When it comes to Vrnjacka Banja, we can easily analyze the possible access of foreign tourists to this destination in terms of multiple modes of transport. If we analyze the access to Vrnjacka Banja by air traffic, direct access is not possible because Vrnjacka Banja has no airport. So, by this transport, passengers could reach the cities in which we have airports like Niš which has Konstantin the Great Airport and Belgrade which has Nikola Tesla Airport. In the event of such a selection of transport to Serbia, it is necessary to use another mode of transport which is road traffic, and in this case, it is of great importance to have the connection of

the roads of major cities with Vrnjačka Banja, which was discussed in the previous part of the paper. As with the analysis of the length of driving from major cities in the Republic of Serbia to Vrnjačka Banja, we will analyze the length of travel from five greatest European cities to Niš and Belgrade (bearing in mind that we are analyzing air traffic and that only in those cities we have airports), and the already known and treated length of travel from these major cities to Vrnjačka Banja, therefore we will be able to analyze the connection and the quality of connectivity of European cities with Vrnjačka Banja. Table 2 shows the time distance of travel from London, Berlin, Madrid, Rome, Paris, and Vienna to Belgrade and Niš (cities in Serbia which have airports). We must note that the distances in time are taken from Google Maps, according to the data of travel time of different companies, therefore, minimum time distances in terms of traveling are shown.

Table 2: *Time distance of traveling by air traffic from major European cities to Belgrade and Niš*

European city	Time distance from the airport in Belgrade (h)	Time distance from the airport in Niš (h)
London	2.58	5
Berlin	1.67	2.08
Madrid	4.83	Over 5 hours
Rome	1.42	4.83
Paris	2.25	5.25
Vienna	1.08	4.08

Source: *The author, based on research*

According to known data from Table 2 and in Table 1, it is easy to specify the exact time distance and travel time for tourists from some major European cities to Vrnjačka Banja, via Belgrade or Niš, depending on the selection of the very tourists, and this is shown in Table 3. Of course, it is important in this case to say that in such cases when there is no airport in a tourist location, it is essential to combine several modes of transport, in this case, air and road transport.

Table 3: *Required travel time from larger European cities to Vrnjacka Banja via Belgrade or Niš*

European city	Travel time to Vrnjačka Banja via Belgrade (h)	Travel time to Vrnjačka Banja via Niš (h)
London	5.65	7.13
Berlin	4.74	4.21
Madrid	7.9	7.13
Rome	4.49	6.96
Paris	5.32	7.38
Vienna	4.15	6.21

Source: *The author, based on research*

According to these data, the shortest distance of the European cities to Vrnjačka Banja, by to the travel time, is distance Vienna-Belgrade-Vrnjacka Banja, or if you travel through Niš, the shortest travel is from Berlin. Of course, it is important to know that the transport of tourists to Belgrade or Niš is done by air traffic, while the transport from Belgrade or Niš to Vrnjačka Banja is done by road or other transportation. Travel agencies and airlines have realized the role of air traffic in tourism and the importance for transport. So based on that, many airlines offer tourists

transport from major cities to Belgrade at very reasonable prices, while the transport is of very good quality and, perhaps very important to passengers, the ticket is valid for departure and arrival, such flights are known as low-cost flights. Of course, there is the possibility of improving the quality and ease of travelling from both the abovementioned European cities and other cities in the world, this measure is enabling and increasing the capacity of the Morava airport near Kraljevo, which is located about 40 kilometers from Vrnjacka Banja, further work will analyze the possibility of the impact of this airport on the possibility of increasing the number of visits of foreign tourists.

Of course, a large number of passengers from great European cities can still decide to come to Vrnjacka Banja by some sort of road traffic transportation, whether personal transportation or organized transportation of passengers from their cities. Table 4 shows the distances from major cities in Europe to Vrnjačka Banja, of course, if the tourists opt for road transport.

Table 4: *The overview of distances of major European cities to Vrnjacka Banja*

European city	Spatial distance from Vrnjačka Banja (km)
London	2321
Berlin	1471
Madrid	2812
Rome	1505
Paris	2082
Athens	996
Sofia	282
Bucharest	538
Warsaw	1466

Source: *The author, based on research*

Of course, in addition to this transport, we have rail transport of tourists, but to Vrnjačka Banja we have no direct lines from European cities, so tourists always have to change trains in the cities in Serbia.

The impact of vehicles on environmental pollution and tourism demand

Vehicles are, as already known, one of the greatest sources of environmental pollution; however, the vehicles themselves can have a very bad impact on the tourism attractiveness. When choosing a tourist offer, tourists have a motive for relaxation, recreation, and enjoyment, if a tourist destination is polluted, the number of tourists will be smaller, with increasing environmental pollution of some tourist offer will decrease the number of tourists because they will not get the expected holiday, recreation and enjoyment. For the reason of the importance of environmental protection, different standards were adopted. Standards series SRPS ISO 14000 covers various aspects of environmental management. These standards provide practical tools for organizations that want to identify and control their impact on the environment and to continuously improve their environmental performance. SRPS ISO 14001: 2015 and SRPS ISO 14004:2005 are internationally accepted standards focused on environmental protection management systems. SRPS ISO 14001 specifies the requirements and describes how to establish an effective environmental protection management system (Institute for Standardization of Republic of Serbia, 2015). It applies to those environmental aspects that an organization can identify as those controlled and those that can be influenced. Requirements in SRPS ISO 14001 are intended to be included in any environmental protection management system. This means that the standard is applicable to any organization that wishes to establish, implement, maintain and improve the system of environmental protection management. The scope of application will depend on factors such as the environmental policy of the organization, characteristics of the activity, products and/or services, location and other conditions in which it operates. SRPS ISO 14004 gives guidelines for the introduction, application, maintenance and improvement of the environmental protection management system and its synchronization (integration) with other management systems. These guidelines can be applied to any organization, regardless of its size, type, location or the level of maturity.

The greatest pollution whose source are vehicles is precisely the pollution of the very air, and it is inevitable, especially vehicles using internal combustion engine as a power generator. In addition, most of these fuels during combustion remain unburned, or we have soot which is very

harmful to the man because it is cancerous. The problem of air pollution is that we have the problem of water pollution as well, and even soil pollution. Also, in addition to the water pollution by road vehicles, these pollutions concern the soil itself, as land can be contaminated also by pollutants from the atmosphere.

In addition to the emission of harmful substances from the vehicles in road traffic, the very noise of the vehicles themselves also represents harmful substances. Noise has a very bad and negative impact on the environment. Noise is one of the consequences of the movement of both an individual vehicle (because of all the circuits on the vehicle, due to the engine work, due to the movement of the vehicle and movement of tires on the road,...) and the very delays and congestion in cities. Noise also has a great impact on the psychological state of a man, in what way and to what extent depends on its level, spectrum of sound, exposure length... Increased noise can cause the deterioration of hearing, premature fatigue, but the impact on residents in cities can have a negative impact on normal rest, restoring power, being comfortable,...

These negative impacts of vehicles on the ecosystem are the leading factors that can have an important influence on the choice of tourist destinations. In order to provide a holistic consideration of the environmental situation, priority problems and development opportunities in the municipality of Vrnjačka Banja, REC and the municipal administration of Vrnjacka Banja conducted a broad survey among the citizens in the whole territory of the municipality. The survey was carried out thanks to the financial support to the Swedish Agency for International Development. The survey was delivered to all home addresses in the municipality, and a part was distributed through the working group members, primary and secondary schools. Completed questionnaires were submitted by 1,083 people. The survey consisted of several parts, but in our case, the important part is the part that is related to the environment. The current state of the environment was rated by 61% of respondents as unsatisfactory or poor, while almost 23% thought that the state of the environment is good or satisfactory. At the same time, about 16% of the respondents did not have an opinion on this topic. According to the survey, the problem pointed out by the respondents is noise and poor local roads, tracks and lack of parking, and the quality of drinking water. Of course, as a measure for the reduction and environmental protection aimed at increasing tourist demand, we may

propose the use of electric vehicles or hybrid vehicles, promoting the use of bicycles... As mentioned earlier, the cleaner and quieter the environment, the greater tourist attractiveness, and the vehicles play an important role in the influence on the environment and quality, (township Vrnjačka Banja, 2010).

The analysis of the impact of infrastructure and tourist signs in Vrnjačka Banja on the quality of the tourism offer

Besides all the already mentioned characteristics, which are associated with Vrnjačka Banja as a tourist destination, and that we analyze in this paper from the aspect of the traffic impact, it is important to mention some other facts that are related to the infrastructure and tourist signalization in terms awareness.

Regarding the infrastructure, the main problem is the state and quality of the roads, because many were built decades ago, of different materials and do not meet the standards with regard to road elements, the thickness of the pavement structure, the bearing capacity and the like. Due to insufficient investment in the road network, its maintenance is not proper and regular, which is why many roads are in an unsatisfactory condition, so they require rehabilitation, reconstruction, and construction of individual sections. Particularly unfavorable is the situation at regional roads.

The elements of local roads are very scarce because they are constructed from materials that do not meet the standards for road construction. Roads protection against surface waters is generally insufficient. The occurrences embankments settlement, slopes instability, and landslides are common.

As parking space for parking during the construction of facilities is not timely provided, Vrnjačka Banja has a significant problem of parking motor vehicles, especially in the central zone in which hotels and commercial facilities are mostly located. Available surfaces that are intended for that purpose are used irrationally and are insufficient, especially in the high season or when organizing some major events. Vehicles are left on all available areas, especially on sidewalks, impeding both pedestrian and motor traffic. The problem of parking is one of the most pressing problems of the municipality. The conditions for

conducting pedestrian traffic are also unfavorable because on a substantial part of the road network there are no sidewalks or their width is insufficient.

The condition of traffic signs is satisfactory, but the direction signaling is in poor condition. Many signposts, as well as tourist signs are damaged. For tourist signalization can simply say, as defined signpost signaling that is used for guiding a user to tourist destinations. Tourist signalization makes signs notice that traffic participants refer to tourist facilities and tourist attractions. What is characteristic of tourist signalization is certainly the fact that these characters can not be used as a substitute for regular signs for traffic management, not for advertising purposes of certain tourist sites. They represent the type of traffic signs and therefore have a clearly defined content, form and color, as well as the manner and place setting. So this is one of the problems that should be solved. The reason for this is that tourists often a difficulty coming to Vrnjačka Banja, but besides visiting all remarkableness and places that tourists can be very attractive and interesting. As in the previous part of the paper mentioned is of great importance for tourists can be just that easy and simple to navigate and coming to their own tourist destinations. So you need to invest a lot on how to preserve these traffic signals for the purpose of tourists can better instruct the tourist attraction offered.

Possible directions of tourism development through improved traffic and infrastructure

The analysis of the possibilities of tourism development in this case, of course, taking into account the traffic and infrastructure, will be viewed through the SWOT analysis. This analysis of the strengths, weaknesses, opportunities and threats of Vrnjacka Banja as a tourist destination is presented in Table 5.

Table 5: *The overall effect of the traffic and infrastructure on the tourist offer of Vrnjacka Banja*

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> - • A good traffic-geographical position - • The gravitation center of central Serbia, significant economic, health, educational and cultural center of the region, 	<ul style="list-style-type: none"> - • Bad connection to the main railway routes, leading through our country - • Conditions for pedestrian traffic - • Insufficient number of parking

<ul style="list-style-type: none"> - • Traffic safety at a high level, - • Environment preserved from traffic 	<ul style="list-style-type: none"> spaces - • Low use of bicycles
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> - • The existence of organizations with the purpose of investment and implementation of projects in the field of infrastructure construction - • Improving traffic and tourist signs - • Valorization of the railway line into a tourist attraction - • Commercialization of Lađevci Airport - • Increasing awareness on arrival in the destination - • Development of rent-a-car agencies 	<ul style="list-style-type: none"> - • Lack of application of standards in the quality of transport services and safety - • Condition and quality of roads - • Lack of funds to improve the entire infrastructure - • Under-investment to raise the level of competence in the field of transport - • A systematic analysis of the impact of traffic on the environment and ecotourism - • Changes in desires and habits of users-tourists

Source: *The authors*

Based on the SWOT analysis, which is the data in Table 5, one can conclude that the benefits of Vrnjačkoj Banja are some that can not have any tourist destination. First of all, the most important is the favorable geographical position it has in relation to other tourist destinations in Serbia. In addition, an important center of events during the whole year, what requires to propose a possibility of an increased number of tourists, hence the need to improve transport infrastructure, especially traffic signs. But already on this basis can be concluded that one of the weaknesses is the number of parking spaces that also need to be addressed. The chances to improve the access of foreign tourists to this tourist destination are too large. Commercialization of the airport would primarily Lađevci could attract tourists avid accession to this tourist destination, taking into account the spatial and temporal distance between the airport and Vrnjačka Banja. Also, the chance is to develop and rent-a-car agencies that could offer tourists the vehicle from the airport to get to Vrnjačka Banja. Also it is possible to improve access to rail traffic from different cities in Serbia to this tourist destination. All previous chances are possible to achieve with organizations that are aware of this effect and that could be invested in development of traffic. Of course with all we have and the dangers, which most can't reflected in the pollution of the

environment in which traffic can be a major cause. The danger to the overall development can be a failure to apply the prescribed standards of service quality and standard of transportation that are directly related to traffic safety. In the previous part of the work has already been said about the impact of security on the quality and the possibility of influencing tourists to choose a tourist destination just for safety.

Conclusion

According to the so far seen in this study, we can conclude that traffic has a big impact on the tourism offer, and the visit to a tourist offer itself as is the case with Vrnjačka Banja. Of course, we still need to observe the options of connecting Vrnjačka Banja with major cities, in order to increase the number of tourists, both domestic and foreign. It is necessary to develop more all forms of transport to the destination, but also the very infrastructure to the destination and in the tourist offer itself in order to increase the quality of the tourist attraction, from the field of traffic so that tourists can feel as safe and comfortable as possible.

If the quality of transport and transport infrastructure is higher, the better is the tourist attraction. Thus the analysis in this paper, the impact of traffic on the tourist attraction Vrnjačka Banja can be concluded that, despite its association with other cities must in any case to increase the level of integration to a higher level, because the demand would be greater. Traffic affects the development of tourism by building and modernizing transport networks, the scope and quality of transport vehicles, prices of transport services and the organization of transport. Construction and modernization of the transport network to access certain areas, regions and countries. The satisfaction of tourist needs can not be fully achieved if the means of transport to their technical and other characteristics do not suit the needs of tourists. Therefore, the bit speed, comfort and safety of means of transport used by tourists because it affects their choice of means of transport. It is important to know that investment in transport in order to improve tourist attractions represents not that the funds invested in vain but is closely related to national income 'or income of a municipality. So that consequently the development and modernization of transport infrastructure and the introduction of new types of transport means and the contribution of resources Vrnjačka Banja and its tourist attractions, which is not negligible. So the commercialization aerodrome Lađevci significantly increased visits

Vrnjačka Banja by foreign tourists, so in addition to the contribution of the municipality would be developed and the standard of living of people, opening new restaurants or similar catering facilities, the possibility of developing temporary foreign tourists during vacation time.

We must not forget the only condition that we have in terms of traffic connections as well as a state of transport infrastructure. It is necessary to consider all the possibilities that are given in the paper but also other disadvantages or dangers that may arise as a result of the introduction of new systems and the development of transport infrastructure. Also a danger to Vrnjačka Banje as one of tourist destinations in Serbia must be taken into account and the application of quality standards because it can badly affect the tourists who choose their potential tourist destination. All that has so far mentioned is very important in the case of Vrnjačka Banje as one of the most popular tourist destinations in Serbia.

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