

DEVELOPMENT OF THE TOURIST PLACE TAKOVO: MULTICRITERIA ANALYSIS FOR CONSTRUCTION OF CASTLE REPLICA

Miodrag ŽIŽOVIĆ
Danica FATIĆ
Vučelja LEKIĆ
Mališa ŽIŽOVIĆ

Abstract: *The paper analyses the possibilities of the development of the complex in Takovo as an attractive tourist destination in Serbia rich in natural heritage as well as wealth of cultural-historical monuments of the great importance. This area is recognized as a cultural-historical experience that should be accompanied by cultural and entertainment content other special interests and activities.*

Keywords: *Tourism, Takovo, analysis, alternative, criteria, decision making*

INTRODUCTION

Research carried out in the field, literature, statistics, as well as spatial determination based on topographic maps, aerial and satellite images, graphic representations and visual representations, showed that the municipality of Gornji Milanovac has a number of comparative advantages for the development of tourism on its own territories (Spatial plan). First of all municipality has a very good geographical and traffic position that makes the territory “on the way” to distinct tourist destinations of the sea and the mountains, and on the other hand very close to the most important tourist destinations in Serbia (Belgrade and Vojvodina). The economy of the municipality is considered one of the healthiest in the Republic of Serbia. This region boast stunning natural beauty and cultural heritage, so the entire area is viewed through the wealth of opportunities for tourism development.

Improvement of conditions for development and promotion tourism are determined by the sustainable development strategy of the municipality of Gornji Milanovac (Strategy) and Development plan (Plan) which defines development of planning and regulation documentation, expansion of

accommodation facilities, construction of hotels, motels, sports halls and castle in Takovo, but also improving the work of tourist organizations, provision of space for work, info centers and souvenir shops, marketing activities, promotional material, education of personnel in tourism, etc.

Takovo complex, devoted to the heroes from Second Serbian Uprising, is a kind of open-air museum that is easy to reach and worth visiting. On the highway "Miloš Veliki" from Belgrade to Čačak, after the entrance front toll ramp in Obrenovac, the fourth side toll ramp is in Takovo, which leads to Gornji Milanovac (as main direction).

Takovo is interesting as a destination, above all as a historical place (Ćirković, 2004 and Pavlović, 2002) because it was included in significant events in Serbia in the 19th century. Two years after the failure of the first Serbian uprising that began in 1804 under the leadership of Karađorđ Petrović, on April 23, 1815, particularly in this place, a decision was made to continue the uprising against Turkish rule. One of the landmarks related to the rise of the uprising is the so-called "Takovski grm", i.e. the oak under which the plan for the rise of the Second Serbian Uprising was made.

Miloš Obrenović was elected as the new leader of the uprising. The uprising was not particularly long (only three or four months), but afterwards, through diplomatic activity, the Serbian state was created.

Here we will only list what is interesting to see in Takovo, related to this event, without a long story about the event itself.

THE CHURCH IN TAKOVO

The log cabin church dedicated to St. George was built in 1795 on the foundations of the previous church from 1724. It should be noted here that the church was originally built during the Austro-Hungarian rule (period 1718-1739). So, in the period between the Peace of Požarevac in 1718 and the Peace of Belgrade in 1739 - at the same time when the log cabin church was built (also the municipality of Gornji Milanovac).

This church is significant for the history of the Serbian people because here the leaders of the uprising took communion and swore allegiance to the newly elected leader Miloš Obrenović after the agreement on the uprising on Cveta on April 23, 1815. After this act and the signing of the participants, they all went to the place where the people were waiting for them, one kilometer away near the old oak trees, to announce the decision to raise the uprising.



Picture 1: Wooden Church in Takovo.

MONUMENT COMPLEX

The place where the decision was announced to the waiting people was at that time an oak forest. Today, there are oak trees there, but it is mostly a meadow popularly known as “Kneževa livada”. It is owned by the state, during the reign of King Milan Obrenović, this land was purchased from the then owners.

Noadays in this place we can find dried successor of the main oak, new oak heirs and marble monument from 1887, the work of sculptor Mihail Čebinac from Kraljevo, according to the project of engineer Manok.

A promenade leads through the middle of the meadow. On one side of the promenade there are oak trees which are under protection of the state. In the center of the site, right in front of oak trees, a natural amphitheater is dominated with a monument of Miloš Obrenović and Archimandrite Milentije Pavlović, who performed the act of communion and oath. This monument was erected in 1890, which was displayed at the world exhibition in Paris in 1900. and is the work of the first trained Serbian painter and sculptor, Petar Ubavkić (1852-1910).

Note: A copy of this monument was placed in 2004 in front of the building of the Government of the Republic of Serbia in Belgrade.

About a hundred meters from Kneževa livada flows the river Dičina.



Picture 2: Memorial of Prince Miloš.

MUSEUM OF THE SECOND SERBIAN UPRISING

In Takovo, not far from the log cabin church, there is the Museum of the Second Serbian Uprising, opened in 1994. It is part of the museum of the Rudnik-Takovo region from Gornja Milanovac. It covers the period from 1804 to 1839 - from the beginning of the First Serbian uprising to the end of the first reign of Prince Miloš Obrenović. Among the exhibits, it is worth mentioning the bronze plate with the signatures of the signatories of the oath to Miloš Obrenović in the log church, which is located on the outside of the museum building, parts of the oak under which the decision on the uprising was announced to the people, Miloš Obrenović's clothes, the painting "The Uprising of Takovo" by the famous Serbian painter Paja Jovanović from 1894, etc. It is interesting to say that the building of the Museum in Takovo was part of the building of the Elementary School in Takovo, built in 1889-1890 as an endowment of King Aleksandar Obrenović. In fact, two buildings were built for this school and the Elementary School in Takovo worked in them until March 29, 1981, when one of the buildings burned down in a fire and the building where the museum is located was partially damaged. Later, new buildings were built for the needs of the school, and this building was reconstructed into a Museum building as part of the commemoration of the 175th anniversary of the Takovo uprising.



Picture 3: Museum of the Second Serbian Uprising.

THE CASTLE IN TAKOVO WHICH ONCE EXISTED

We will only give chronological events about this object:

In 1899, by the decision of the principality of the Rudnik district (headquarters in Gornji Milanovac), the construction of a castle for the royal couple in Takovo on Kneževa livada began with two accompanying buildings, a house for servants and a stable for horses. It is being built according to the project of a bureau from Vienna. In September 1901, everything was finished, equipped with about 2500 objects and handed over to the royal couple for use. On May 29, 1903, an assassination was carried out in Belgrade and the royal couple was killed. Caring for the castle stops completely, more precisely, the government begins to look favorably on the devastation and collapse of the castle's buildings. The first auctions were already in 1905, and then we have them in 1911 to donate funds for furnishing the home of Miloš the Great (the building of today's high school in Gornji Milanovac).

In 1917, a fire broke out in the castle and after that only the walls remained. In 1943, the walls have been demolished and then in 1945 demolition and removal of stone from this terrain and handing over the plot to PIK Takovo followed.

Auxiliary buildings - a building for servants and stables for horses are still standing today although devastated.



Picture 4: Royal castle in Takovo.

PLANS FOR THE CONSTRUCTION OF A REPLICA OF THE CASTLE IN TAKOVO

These plans really exist and have been officially adopted and promoted (e.g. the development plan of the Municipality of Gornji Milanovac 2009-2013) by various political groups that have been elected for the past fifteen years. It is claimed that the planning documentation (that is, the urban plan) for the area of Takovo has been prepared, as well as the fact that the Republic of Serbia allocated (promised, provided) funds for this purpose. It is assumed that private investors will also be interested in the construction of additional facilities. The documents mention the term Palace complex, which means a replica of the castle and an artificial lake of 1 to 1.5 ha (Info). At the same time, one part of the castle is reserved for dignitaries of the highest state interest, and the other part is open to visitors.

It is natural to ask the question: if all the plans are done, if the urban plan is finished, why write and give any comments?

Consensus in principle for the construction of a replica of the castle in Takovo obviously exists. The construction plan (from 125 years ago) exists. A lake built next to a river on a relatively swampy land is possible and with the expert supervision of the authorities of the Republic of Serbia, which take care of the waters, it will certainly be well done. However, some follow-up questions naturally arise and it makes sense to consider them further.

The facilities that were ancillary to the original castle are obviously in very poor condition and it is a big question whether they are even needed in their original form. Can some other content be built instead of them that better suits the new needs of tourists as the main users of this area?

The planned lake is up to one and a half hectares in size and it will be a swimming pool during the summer months. Is there a possibility to build an Aqua Park in that area?

Is there a possibility of building sports fields that would be accessible to visitors?

It is clear that all new contents must be compatible with the basic purpose of this place and have to fit in higher goals set by the state of Serbia.

A PROPOSAL FOR MULTI-CRITERIA ANALYSIS FOR THE CONSTRUCTION OF A CASTLE REPLIKA

In this section we will use approaches of multi-criteria analysis for examination of possible alternative choices for development of Takovo complex with the aim of obtaining the best alternative choice. Many decision methods can be used and for an overview we refer to Žižović 2011, 2018 and references therein.

The alternatives considered here are related to the development plans of Takovo within the framework of the development of tourism and the tourist offer of the Municipality of Gornji Milanovac. At least those plans that were available to us or appeared as parts. The ratings given here were made in consultation with experts in the field available to us. It is clear that everything can be significantly different from what is given here. This analysis is not conclusive. We will use method of multi-criteria analysis presented by Miljković et al., 2017.

We propose the following alternative choices given by Table 1.

Table 1: Alternatives.

A ₁ : Construction of a replica of the castle and accompanying buildings in the form they were in 1901.
A ₂ : A ₁ +construction of the lake in the surface between the buildings and the river Dičina on an area of 1-1.5 ha.
A ₃ :A ₂ +construction of akva park and the mini sports field
A ₄ : construction of a replica of the castle in the form it was in 1901 with the construction of a hotel facility with an indoor swimming pool instead of the accompanying facilities from 1901.
A ₇ : the construction of a replica of the castle in the form it was in 1901 without accompanying buildings
A ₈ : A ₇ + construction of a lake in the area in front of the castle and the river Dičina (1-1.5ha)
A ₉ : A ₈ + construction of an aqua park and mini sports grounds
A ₅ : A ₇ + the development of the lake in the area in front of the castle to the river Dičina (1-1.5ha)
A ₆ : A ₅ + construction of an aqua park with mini sports fields

For the criteria and their evaluations for the selection of the alternative, we decided as to use set of criteria as proposed in Sava, 2018.

Table 2: Criteria.

C ₁ : Evaluation of investment size (price performance)
C ₂ : Feasibility (in technical and administrative terms)
C ₃ : Attractiveness for the visitors
C ₄ : Utility for the local community

Table 3: Criteria scales.

CRITERION	EVALUATION
C ₁	1-excessively high prices
	2-high price and difficult realization
	3-possible realization with the help of a wider community and loans
	4-feasible with the help of the wider community
	5-feasible at the local level
C ₂	1-very difficult, feasible with great efforts
	2-hardly feasible
	3-feasible with problems
	4-feasible
	5-easy feasible
C ₃	1-insignificant
	2-low
	3-medium
	4-good
	5-extraordinary
C ₄	1-insignificant
	2-low
	3-nearly good
	4-good
	5-extraordinary

For each evaluation of the criterion values of the alternatives, basic grades from 1 to 5 are used, but grades with one decimal point can also be used to emphasize the levels of difference (for example, for the evaluation of alternatives A_x , A_y according to criterion C_4 , we give a rating of 4.2 or 4.3, respectively, and this means that A_x is two tenths of the difference between good and extraordinary, and A_y is three tenths of the difference between good and extraordinary).

Table 4: Decision matrix

	C ₁	C ₂	C ₃	C ₄	I Σ	II		
A ₁	4	4	1,5	2	2.85	2.8	2.6	2.475
A ₂	3.6	3.6	3	3	3.30	3.33	3.24	3.21
A ₃	3.5	3.5	3.5	3	3.40	3.49	3.40	3.40
A ₄	3.8	4	3.5	4	3.77	3.72	3.74	3.725
A ₅	3.6	3.6	4	4.5	3.90	3.85	3.94	3.96
A ₆	3.4	3.5	4.5	4.5	3.96	3.96	4.07	4.125
A ₇	4.2	4.2	1.5	2	2.95	2.9	2.68	2.545
A ₈	4	3.7	3	3	3.47	3.47	3.37	3.32
A ₉	3.8	3.6	3.5	3	3.53	3.58	3.5	3.485

The use of grades with one (or more) decimal places is mandatory if we have evaluations by several experts, because everyone's opinion should be respected.

We used weighting coefficients to evaluate the alternative:

$$(I) \quad w_1=0.4, \quad w_2=0.1, \quad w_3=0.3 \quad \text{and} \quad w_4=0.2,$$

and the order of alternatives is obtained

$$A_6 \rightarrow A_5 \rightarrow A_4 \rightarrow A_9 \rightarrow A_8 \rightarrow A_3 \rightarrow A_2 \rightarrow A_7 \rightarrow A_1.$$

In cases where we used weight coefficients

$$(II) \quad w_1=0.4, \quad w_2=0.1, \quad w_3=0.4 \quad \text{and} \quad w_4=0.1,$$

$$(III) \quad w_1=0.3, \quad w_2=0.1, \quad w_3=0.4 \quad \text{and} \quad w_4=0.2,$$

$$(III) \quad w_1=0.25, \quad w_2=0.1, \quad w_3=0.45 \quad \text{and} \quad w_4=0.2,$$

the order of alternatives is obtained

$$A_6 \rightarrow A_5 \rightarrow A_4 \rightarrow A_9 \rightarrow A_3 \rightarrow A_8 \rightarrow A_2 \rightarrow A_7 \rightarrow A_1.$$

CONCLUSION

The expected result is that alternative A₆ is the best, regardless of the fact that it is also the most expensive. Building a replica of the castle itself (which was not in use) is obviously more interesting than building the same replica with replicas of ancillary buildings. And this is to be expected because these auxiliary objects today will not (if they were made) serve the purpose they could have had at the end of the nineteenth century.

References

- Miljković, Boža; Žižović, Mališa; Petojević, Aleksandar and Damljanović, Nada, 2017, New Wighted Sum Model, Filomat, vol. 3, no. 10, pp. 2991-2998.
- Pavlović, Stevan K, 2002, Serbia: The History behind the Name, London: Hurst & Company, ISBN 9781850654773.
- Sava, Cipriana and Žižović, Mališa, 2018, Multi-criteria anlisis the second step towards developing a new tourist destination, QUESTUS, vol. 12, pp. 19-28.
- Ćirković, Sima, 2004, The Serbs, Malden: Blackwell Publishing, ISBN 9781405142915.
- Žižović, Miodrag, 2011, Application of computer technology in tourism industry of Moravica district, Msc thesis, Universty Singidunum, Belgrade (Serbia).
- Žižović, Miodrag, 2018, Primena metoda višekriterijumske analize u predviđanju turističke tražnje, PhD thesis, Universty Singidunum, Belgrade (Serbia).
- Plan, <https://gornjimilanovac.rs/wp-content/uploads/2020/07/Program-razvoja-opstine-Gornji-Milanovac-za-period-2009-2013.pdf>
- Spatial plan, <https://www.camping.rs/wp-content/uploads/2014/01/Nacrt-Prostornog-plana-opstine-Gornji-Milanovac-2011.pdf>
- Strategy, <https://gornjimilanovac.rs/wp-content/uploads/2020/07/20120920StrategijaOdrzivogRazvoja.pdf>
- Info, <https://morava.info.rs> Jan 16. 2020.

Notes on the authors

Miodrag ŽIŽOVIĆ, Ph. D. Assistant Research Professor, Institute of economy, Belgrade, Serbia. Email: miodragz@gmail.com

Danica FATIĆ Ph.D. student, Mathematical faculty, University of Belgrade, Serbia, Assistant Faculty of technical sciences in Čačak, University of Kragujevac, Serbia. Email: danicafatic@gmail.com

Vučelja LEKIĆ, Teaching Assistant Department of Mathematics. Faculty of Technical Sciences Čačak, University of Kragujevac, Serbia. Email: vucelja.lekic@ftn.kg.ac.rs

Mališa ŽIŽOVIĆ, Professor PhD. University of Kragujevac, Serbia Ph.D. Faculty of technical sciences in Čačak, Serbia. Email: zizovic@gmail.com