MULTI-CRITERIA ANALYSIS OF POSSIBILITIES IN RURAL TOURSIM

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Abstract: This paper presents a view of tourism possibilities in Republic of Serbia rural areas by application of multi-criteria analysis, from the viewpoint of finding optimal tourist offer satisfactory for both the service provider and guest. Also, this is important for the whole country due to the need for this kind of tourism to become more significant and provide possibility for more citizens of Republic of Serbia to spend vacation in Serbia. This kind of tourism in villages near well-known spas and health resorts with aqua parks can be combined with spa tourism, as in given example of the town of Aranđelovac.
Keywords: Rural tourism, multi-criteria analysis, weighting method, new weighting method, weighted coefficient.

Introduction

The study „*Strategy of Republic of Serbia's tourism development*", ordered by the Ministry of Trade, Tourism and Telecommunications of Republic of Serbia, realized in 2006 by **„***Horwath Consulting Zagreb*" (Croatia) and University of Belgrade – Faculty of Economics (Serbia), was published in 2006 (Horwath 2006: 1, Government of Serbia 2006: 2). From this study and obvious conclusion can be made that rural tourism is not attractive for investment.

The study proposes some locations on which a few (and just a few) investments should be made to develop ethno resorts, specifically resorts with low investments and costs of maintenance.

Bearing in mind that this study's main goal, was to stimulate and develop tourist destinations interesting for foreign tourists according to the best global practices, and that rural tourism was not well structured and organized at the time, the mentioned approach was logical.

But, taking into account domestic tourists and their needs, it seems that this approach cannot be justified for many reasons, let mention just a few:

- domestic tourists are vast majority in Serbian tourist resorts;
- significant number of Serbian tourists spend their vacation abroad, and if rural tourism could be improved to the higher level so that even a small fraction of that number would spend their vacation in Serbia, multiple benefits would be achieved;

- if rural tourist high-quality offer would become alternative for domestic tourists, then it would become attractive for some foreign tourists – and the goal always should be to achieve equivalence in numbers of domestic tourists going abroad and foreign tourists coming from abroad.

With all this in mind, the paper (Žižović 2011: 6) analyze this situation and concludes that, before any investments are made in this field of economy, a study on real possibilities of Serbian rural tourism and predictable results of investing into the need of local tourists for acceptable conditions and affordable prices.

That kind of study, of course, was never made, but it is natural that if something is not available, it will develop if there is enough interest.

So, rural tourism, even though not subsidies by the government, develops right into direction suggested by the mentioned paper (Žižović 2011: 6).

This paper applies multi-criteria analysis to main directions of rural tourism development, depending on some real and some hypothetical situations in surroundings of rural tourist resorts. It is assumed that enough high quality of services and accommodation is achieved (Hamović 2007: 3, Pavlović 2009: 6).

Multi-criteria analysis of rural tourist resorts

Knowing that rural tourism in Serbia is mainly employed by rural households as supplementary activity, and rarely by innkeepers to whom agriculture is supplementary activity, it is possible to classify rural tourist resorts into 12 categories, depending on what those resorts can offer, alone or together with surroundings. Those 12 categories are 12 alternatives of rural tourism:

- *Alternative A*: household with separate house (or houses) in yard with apartments in which guest spend time and prepare meals;
- *Alternative B*: household with infrastructure as in alternative *A*, but also with separate kitchen and dining room for guests;
- *Alternative C*: Same as alternative *A*, but with smaller swimming pool in the yard;
- *Alternative D*: Same as alternative *B*, but with smaller swimming pool in the yard;
- *Alternative E*: Same as alternative *A*, but with public swimming pool in the surroundings, which is at favourable distance for the guests;
- *Alternative E_1*: Same as alternative *C*, but with public swimming pool in the surroundings, which is at favourable distance for the guests;
- *Alternative F*: Same as alternative *B*, but with public swimming pool in the surroundings, which is at favourable distance for the guests;
- *Alternative F_1*: Same as alternative *D*, but with public swimming pool in the surroundings, which is at favourable distance for the guests;
- *Alternative G*: Same as alternative *E*, but with restaurant and entertainment programme within public swimming pool complex in the surroundings, which is at favourable distance for the guests;

- *Alternative G_1*: Same as alternative E_1, but with restaurant and entertainment programme within public swimming pool complex in the surroundings, which is at favourable distance for the guests;
- *Alternative H*: Same as alternative *F*, but with restaurant and entertainment programme within public swimming pool complex in the surroundings, which is at favourable distance for the guests;
- *Alternative H_1*: Same as alternative F_1, but with restaurant and entertainment programme within public swimming pool complex in the surroundings, which is at favourable distance for the guests;

Here a table is given with details for each alternative.

offer / alternative	A	B	C	D	E	E_1	F	F_1	G	G_1	H	H_1
apartments	×	×	×	×	×	×	×	×	×	×	×	×
separate kitchen and dining room		×		×			×	×			×	×
private pool			×	×		×		×		×		×
public pool					×	×	×	×	×	×	×	×
restaurant + entertainment									×	×	×	×

Further alternatives *A* and its derivatives will be left out, since serious tourist providers in this region always provide high quality food in their facilities – if some guests prefer to prepare their meals themselves, they can always opt for it.

Criteria used in this paper for analysis of tourist offers are:

- *Criterion a*: Evaluation of meeting tourists' interests;
- *Criterion b*: Evaluation of investments and infrastructure maintenance costs;
- *Criterion c*: Evaluation of tourist resort provided services quality;
- *Criterion d*: Evaluation of employment and quality of living improvement for the people living in the surrounding area;
- *Criterion e*: Evaluation of general society benefit from this kind of tourism.

Evaluation will use *weighted method* presented in the book (Nikolić, Borović 1996: 5), while weighed coefficients will be selected by method from the paper *New weighted method* (Miljković et al. 2017: 4), and having the following situations:

(1) There are no government investments in this field, but owners of tourist facilities invest by themselves alone or jointly in building and maintenance of all facilities;

(2) There are facilities, like public swimming pool, recreational and ball parks, as well as restaurant with own income, and these guest will be "add-in" to raise their income;

(3) There are facilities like swimming pool, ball parks and restaurants, but of closed type, so rural tourism hosts co-finance their guests to use those facilities;

(4) There is government investment in the form of subventions and favourable loans for construction and maintenance of public facilities for rural tourism.

In situation (1), when there are no public tourist facilities, the most important is criterion b, and thus, the order of criteria is:

$$b \to c \to a \to d \to e$$

with weighted coefficients:

$$v(b) = 0.4, \quad v(c) = 0.2, \quad v(a) = 0.2, \quad v(d) = v(e) = 0.1,$$

and degree of each of alternatives satisfying each criterion is given in the following table:

	a	b	c	d	e
B	5	10	5	6	5
D	6	9	6	6	6
F	7	8	7	8	7
F_1	8	7	8	8	8
H	9	6	9	10	9
H_1	10	5	10	10	10

The values in this table are normalized to values in range [1,10] and are of maximization type. Thus, ranking of alternatives is given as:

$$D \to H_1 \to H \to F_1 \to F \to B.$$

In other cases, by varying weighted coefficients, it is easily obtained that alternative H_1 is the best, followed by alternatives H, F_1, F, D and B, i.e.

$$H_1 \to H \to F_1 \to F \to D \to B.$$

A good example of alternative D is etno household „Three oaks" in the village of Klatičevo, near Gornji Milanovac (web: http://www.trihrasta.com/).

Fig. 1: Ethno household in Klatičevo (source:
http://www.turizamnaselu.rs/domacinstvo11.html).

A good example of alternative *H* is *Eco Village Koštunići* near Gornji Milanovac, which has public pool in the form of small river lake, with restaurant on the river bank.

Fig. 2: Eco Village Koštunići (source: http://ekoselo-kostunici.rs/eng/).

Fig. 3: Aqua dreams Samaila (source: http://www.bazenisamaila.com).

A good example of facility in the surroundings of possible rural tourism locations is *Aqua dreams Samaila* near city of Čačak. Considering that also Trepča spa is not far away from this location, that small region is a good example of promising possibilities for rural tourism providing tourists with domestic food in the contryside, while facilities that provide more activity and entertainment are fairly near.

An excellent example of facility in the surroundings is Aqua park facility in Aranđelovac, which is also famous of its *Bukovička Banja spa* and special rehabilitation hospital bearing the same name. Aqua park has an area of 6 hectares, modern attractions, high slides and three pools with thermal mineral water. These facilities provide many possibilities for the rural tourism in surrounding villages.

Fig. 4: Aqua Park in Aranđelovac (source: http://www.aquapark-izvor.com).

Conclusion

Although nothing was done on a study about demands from domestic tourists, phenomenon of aqua parks in Serbia (recently became popular destination for short weekend vacations) with restaurants provided sustainable development of rural tourism in their surrounding areas, and it became evident that these places attract larger number of tourists recently.

It is obvious that with certain government help this might become serious sector of tourism business, which would attract foreign tourists in more significant number (at some locations they are already present).

In that way, sustainable development of rural areas would be induced, providing more even economic development of rural and urban areas.

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