COMPARATIVE ANALYSIS OF TWO HUNTING EVENTS IN SERBIA

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Abstract. In this paper, we observe two hunting events in Serbia, the “Golden Fox from Rajac” and “Wolf Battue”, and we make their comparative analysis in the light of the satisfaction of hunters and hunters’ evaluation of events.

Keywords: Hunting event, multi-criteria evaluation, weighted coefficient, comparative analysis, hunters' expectation, hunters' satisfaction.

Introduction

According to the official data Hunting Association of Serbia has around 85,000 members. Accordingly, numerous hunting events and festivals are held each year, of both local and regional significance, and a few of national significance with international participation. Hunting festival of local and regional significance are usually one day events, where hunters gathering and games (hunting) are held from early morning till around noon, and afterwards various events follow, like exhibitions, competitions, awarding and closing ceremony with party.

National and international events gather hunters not only from local associations, but from other regions and countries, who prefer to arrive at least one day before official opening ceremony. These events span sometimes over one, but more often over two days, and hunters from farther regions usually stay three or even four days. Obviously, these hunters are of more interest to the organizers, usually a local hunting association and local tourist organization.

A survey at two hunting festivals included both local and visiting hunters, with aim to enquire into their satisfaction with the organized events and ambience. The hunting festivals discussed in this paper are “Golden Fox from Rajac” and “Wolf Battue”, the former organized by hunting association and tourist organization of Ljig municipality, and the latter organized by hunting association and tours organization of Blace municipality.

Mountain Rajac is one of the most famous mountain regions of lower altitude (600-849m) in Serbia, and is part of mountain Suvobor (864m), which is well-known of its 7,740ha hunting ground, while Rajac is famous of “Kosidba na Rajcu” (“Haymaking on Rajac”, a traditional Scythe haymaking competition, see Bjeljac et al., 2010a, Brankov et al., 2009). Ljig municipality, besides these two, is home to another eight festivals each year 6 "Festivals and fairs in Ljig municipality").
Golden Rajac Fox is of regional significance and the event is held on the slopes of mountain Rajac. Most of the visiting hunters are from Belgrade and surrounding towns between Belgrade and Ljig municipality. Hunting game is usually followed by dog show and clay pigeon shooting.

The Wolf Battue is of national significance with international participation by hunters from Bulgaria, Macedonia, Montenegro, Bosnia and Herzegovina, and Croatia. Besides various hunting events and shows, sales and exhibitions of hunting equipment is also organized. Blace municipality is home of five festivals, fairs and events each year (see Bjeljac, 2010b, 7), of which the most popular is “Plum Days”.

Ranking of festivals is performed according to 2. The main goal of these survey was to assess the contentment of festival visitors, and make prediction whether certain visitors will come back the next year.

The questionnaires

Two separate questionnaires were prepared, one for the hunters and the other for the exhibitors. To gather more information for various analysis, questionnaires consisted of a few, but not too many questions.

Here, we will present questionnaires for hunters and exhibitors. For each of the questions, except the last two (“Do You plan to visit the event the next year?” and “Which of the previous criteria is of major importance for the decision of the next year visit?”), each visitor gave two value marks, the expected value (what was expected before the event) and the real value (given after the event).

Questionnaire for Hunters

Place from where You come from: _________________

Questions to answer:

1. Quality of hunting program (hunting terrain, safety, game availability)
   Expectations mark value: ______
   Reality mark value: ______

2. Quality of accompanying hunting competitions (e.g., clay pigeon shootout, dog show, etc.)
   Expectations mark value: ______
   Reality mark value: ______

3. Quality of accommodation and price-quality (if used)
   Expectations mark value: ______
   Reality mark value: ______
4. Quality of hunting dogs accommodation (if used)
   Expectations mark value: ______
   Reality mark value: ______

5. Quality of reception (organized transport, parking lots)
   Expectations mark value: ______
   Reality mark value: ______

6. Quality of Catering before closing party (restaurants-prices, etc.)
   Expectations mark value: ______
   Reality mark value: ______

7. Quality of Catering after closing party
   Expectations mark value: ______
   Reality mark value: ______

8. Quality of accompanying events and stuff (hospitality of organizer, souvenirs, environment, etc.)
   Expectations mark value: ______
   Reality mark value: ______

9. Which of the previous criteria (questions) have major influence on whether You will come again the next year (provide the number of the question)? ______

10. Do You plan to come back the next year (Yes/No)? ______

Questionnaire for Exhibitors

Place from where You come from: ________________

Questions to answer:

1. Quality of accommodation for exhibitors (if used)
   Expectations mark value: ______
   Reality mark value: ______

2. Quality of reception (organized transport, parking lots)
   Expectations mark value: ______
   Reality mark value: ______

3. Quality of Catering before closing party (restaurants-prices, etc.)
   Expectations mark value: ______
   Reality mark value: ______

4. Quality of Catering after closing party
Expectations mark value: ______
Reality mark value: ______

5. Quality of accompanying events and stuff (hospitality of organizer, souvenirs, environment, etc.)
   Expectations mark value: ______
   Reality mark value: ______

6. Quality of space/locations obtained or hired from the organizer for display of their goods
   Expectations mark value: ______
   Reality mark value: ______

7. Quality of sale, i.e., number of made deals
   Expectations mark value: ______
   Reality mark value: ______

8. Which of the previous criteria (questions) have major influence on whether You will come again the next year (provide the number of the question)? ______

9. Do You plan to come back the next year (Yes/No)? ______

In the questionnaire for hunters, the questions 1-8 have two answers (mark of expectations-what You expected before coming to the event and mark of obtained-what is You evaluation of reality after the event), and in the questionnaire for exhibitors, he questions 1-7 have these two answers. All answers are in range 0-10 meaning:

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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>0</td>
<td>Completely unacceptable</td>
</tr>
<tr>
<td>1</td>
<td>Very bad, but acceptable</td>
</tr>
<tr>
<td>2</td>
<td>Bad, but acceptable</td>
</tr>
<tr>
<td>3</td>
<td>Bearably acceptable</td>
</tr>
<tr>
<td>4</td>
<td>Tolerable</td>
</tr>
<tr>
<td>5</td>
<td>With lots of objections</td>
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<tr>
<td>6</td>
<td>Good with a few objections</td>
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<tr>
<td>7</td>
<td>Good</td>
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<tr>
<td>8</td>
<td>Very good</td>
</tr>
<tr>
<td>9</td>
<td>Excellent</td>
</tr>
<tr>
<td>10</td>
<td>Exceptional</td>
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Multi-criteria analysis of “Golden Fox from Rajac”

Around 480 hunters took part in “Golden Fox from Rajac” in 2018, of which 48 were given questionnaire, 22 from local and surrounding municipalities (up to 45km) and 26 from farther regions.

The following two formulae were used for ranking of the event:

(1) \[ O_i = w_i \frac{O_1}{10} + \cdots + \frac{O_8}{10}, \]

(2) \[ O_2 = w_i \frac{O_1}{10} + \frac{O_j}{10} \sum_{j \neq i}^{8} w_j \frac{O_j}{10}, \]

where:
- \( i \) is order number of the criteria which is dominant (assigned by each examinee),
- \( w_i = 0.3 \) is weighted coefficient for dominant criterion and \( w_j = 0.1 \) \( j \in \{1,2,3,4,5,6,7,8\}, i \neq j \), are weighted coefficients which correspond to other criteria
- \( O_i, O_j \) are the real value marks given by visitors for each criteria.

The formula (1) is standard weighted sum formula, while formula (2) is analogue of formula given in Žižović, 2018.

The average mark obtained by formula (1) is \( \bar{O}_1 = 0.865 \) and the average mark obtained by formula (2) is \( \bar{O}_2 = 0.813 \).

Only one hunter answered that to not come the next year, and his average answer values are \( O_1 = 0.56 \) and \( O_2 = 0.122 \) by formulae (1) and (2), respectively.

It is obvious that the second formula gives more realistic value for each examined person. From the analyzed data it is obtained that the lowest average answer values for hunters who will come again the next year are 0.54 and 0.48 by formulae (1) and (2), respectively.

Now we present formulae for deviation from expected values, i.e., measure of satisfaction:

(3) \[ Z_i = w_i \frac{O_1 - o_1}{10} + \cdots + \frac{O_8 - o_8}{10}, \]
(4) \[ Z_2 = w_i \frac{O_i - o_n}{10} + \frac{1}{10} \sum_{j=1, j \neq i}^8 w_j \frac{O_j - o_j}{10}, \]

where:
- \( O_n \) is the mark of obtained, \( n = 1, 2, \ldots \),
- \( o_n \) is the mark of expected \( n = 1, 2, \ldots \).

The formula (4) is given in Pavlović et al., 2018.

The average values obtained by formula (3) is \( \bar{Z}_i = -0.024 \), and the average value obtained by formula (4) is \( \bar{Z}_2 = -0.023 \).

These two values represent average deviations.

It is interesting to note that both formulae (3) and (4) yield the same value \( Z_1 = Z_2 = -0.18 \) for the hunter that answered to not come the next year.

**Multi-criteria analysis of “Wolf Battue“**

Around 600 hunters took part in “Wolf Battue“ from all parts of Serbia, as well as from Bulgaria, Macedonia, Montenegro, Bosnia and Herzegovina and Croatia. Also, a significant number of exhibitors was present. The questionnaire included 121 hunters and 75 exhibitors.

Since the major criteria (factor) for coming again the next year had value 10 (the answer value for the question that examinees chose as dominant factor for coming again the next year), it became obvious that both formulae presented in the previous section will yield the same results. Also, all examinees answered that they will come again the next year.

Thus, for simplicity, we can use only the formula (1)
\[ O_H = w_i \frac{O_1}{10} + \ldots + \frac{O_8}{10}, \]

and (3)
\[ Z_H = w_i \frac{O_1 - o_1}{10} + \ldots + \frac{O_8 - o_8}{10}, \]

where the dominant criterion weighted coefficient is given value \( w_i = 0.5 \), while all others are \( w_j = 0.5/7 \ (i \in \{1, 2, 3, 4, 5, 6, 7, 8\}, j = 1, 2, \ldots k) \).

The same evaluation can be done for the exhibitors by using the same functions
\[ O_E = w_i \frac{O_1}{10} + \ldots + \frac{O_8}{10}, \]

and
where $w_n$ are weighted coefficients, $O_n$ are answer values obtained from exhibitors and $o_n$ are expected answer values from exhibitors by criterion $n$ ($n \in \{1, 2, 3, 4, 5, 6, 7\}$). The dominant criterion weighted coefficient is given value 0.5, while all others are $w_j = 0.5/6$ ($i \in \{1, 2, 3, 4, 5, 6, 7\}$, $j = 1, 2, \ldots, k$).

The average mark of the event by hunters is

$$\bar{O}_H = 0.901,$$

and the corresponding deviation is

$$\bar{Z}_H = 0.032.$$

The average mark given by exhibitors is

$$\bar{O}_E = 0.822,$$

and the deviation is

$$\bar{Z}_E = 0.024.$$

For aggregate estimation of the event we can use the following formula

$$O = 0.7\bar{O}_H + 0.3\bar{O}_E = 0.877,$$

and for the aggregate deviation

$$Z = 0.7\bar{Z}_H + 0.3\bar{Z}_E = 0.03.$$

Notice that questionnaires contained question: Which of the previous criteria (questions) have major influence on whether You will come again the next year (provide the number of the question)?

For the “Golden Fox from Rajac” event, the first or second question was the dominant criteria for 79% examined hunters, and for 21% of them other criteria were of greater importance (socializing, hospitality, closing party). For the “Wolf Battue“event, the dominant criteria was hospitality and catering for 90% of examined hunters, while only 10% of visitor gave more importance to criteria related to hunting.

For exhibitors, the most dominant criteria are hospitality and socializing, while only 10% gave more importance to their business success.
Conclusion

According to the results of analysis it can be concluded that hunters coming from farther location to the mentioned events are more interested in socializing, having good time and enjoying the nature than for the game (quarry) and personal success in making significant number of kills. The fact that during the previous “Wolf Battue “only 2 wolves were shot, and around 600 hunters were more than happy with the whole event.

From touristic point of view, both events are successful and represent good examples for other regions that already have smaller hunting events and aim to make them more successful by attracting more visitors.
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