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INTEGRATED LANDSCAPE ANALYSIS: CONSUMERS' PREFERENCES APROACH FOR DEFINING THE COMPETITIVE LANDSCAPE COMPOSITION. A CASE OF WINE TOURISM IN PAZARDJIK DISTRICT, BULGARIA

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Abstract

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Tourism is a driving force that is generally considered as an opportunity for promoting economic and social development as well as a useful tool for landscape planning and management. This article focuses on a method for landscape analysis aimed at quantifying the relationship between preferences of visitors and landscape features for defining the competitive wine tourism landscape composition. An application based on the rural areas in Pazardjik district, in Southern Bulgaria. The results are based on a survey for assessing the value of landscape composition through indirect techniques of consumer's landscape valuation focusing on winery. The spatial expression of consumers' preferences to the potential capacity of the landscape winery composition to meet their consumer's preferences a set of pictures showing degrees of potential visitor satisfaction. The method constitutes a useful tool for the design of wine tourism planning and management strategies. The results show that consumers prefer presence of well-maintaned man-made elements with the high degree of wilderness of the landscape.

Key words: landscape elements, consumers'preferences, wine tourism product

Introduction

Landscape and wine tourism are connected in terms as key objectives in landscape planning and management in some rural areas specialized in wine producing. All of this calls for careful evaluation of the effects of territory on the tourism. In recent years there has been significant interest in landscape management as a tool for development of particular industry or economic sector (Heijman and Hubregtse, 2002, 2003; Vollet and Arlot, 2006; Dissart, 2009; Waltert, 2009; Requena et al.,, 2009), (Howley et al., 2012). Therefore, alterations in the landscape can bring about significant demographic and economic change in rural regions (Howley, 2011). Proper combination of the realities of the landscape of a region with opportunities for economic development may lead to rapid and multiplier effect (Howley, 2011). Realities of the landscape of a given territory, can add value to the products in agriculture and tourism (Chen, 2011; Brown, 2006; Marangon and Tempesta, 2008; Gupta and Mythili, 2009; Trevisan and Mauracher, 2006).

In Bulgaria tourism and agriculture sectors, occupy a large part of the working population and are the main alternatives to the economic development of the rural areas (Nikolov et al., 2012). Perception of landscape as an essential tool for achieving competitiveness in a particular economic sector is not a popular approach among studies in the countries of Eastern Europe.

In this paper, we attempt to assess the importance of individual elements in explaining consumers'preferences for certain landscapes. The evaluation of interplay between landscape and attractiveness of particular product is a complex task. This complexity stems from variable aspects of the concept of landscape.

Hull and Revell (1989) express landscape as "the outdoor environment, natural or built, which can be directly perceived by a person visiting and using that environment. A

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scene is the subset of a landscape which is viewed from one location (vantage point) looking in one direction. . . ". On the other side landscape can be defined as a set of visually visible by the human eye relief elements such as ground, part of the territory, including the various rock formations visible on the horizon, visible flora and fauna, climatic phenomena which occur in the relevant territory created structures civilization as infrastructure, buildings, ponds, agricultural land.

In the economic sense, tourism can have a positive effect upon employment figures, GDP and production, and stimulates new economic activities and boosts a territory's potential for endogenous development (Lacitignola et al., 2007). Landscape appearance influences tourists' expectations, stimulates different kinds of activities and can modify future behavior patterns (Tress and Tress, 2001; Stone and Wall, 2004; Lacitignola et al., 2007). The consequences of certain changes for the environment and landscape can, in turn, modify visitors' perception and appraisal of the territory, as well as the quality of the tourist experience (Gossling, 2002a; Petrosillo et al., 2006; Watson et al., 2007).

Much of the features of the landscape may not be visible, and their presence is reflected by means of another human perception. Such features can be air quality, a sense of calm that nature gives, the sense of time and others. Given the wide variety of elements and their complex expression in the composition of the landscape, they need to be organized into groups. Landscape elements can be divided into four groups (Dissart, 2007):

- Elements which gives a sense of the physical presence of the landscape (type topography, climate, rock formations, etc.);
- Elements resulting from human activities (buildings, roads, agricultural land, etc.);
- Elements that determine the subjective perception of the landscape (wilderness, remoteness from civilization, biodiversity);
- The time factor, the landscape is a dynamic structure that is constantly changing its physical and abstract aspect in time.

According to Romstad (2000) in the tourism sector, important elements of the landscape that can be used in the creation of value are:

- Biodiversity, ecosystems, all located within a territory from the ground, allowing for a healthy lifestyle;
- Cultural and historical heritage - historical artifacts, cultural events, a local language, traditions and customs of society;
- Attractiveness of the landscape, a sense of peace and relaxation;
- A diverse landscape - enabling emotional experience.

The purpose of this paper is to analyze the landscape composition as a value to consumers of wine tourism product. The paper represents some of the results of the project CLAIM "Supporting the role of the Common agricultural policy in Landscape valorisation: Improving the knowledge base of the contribution of landscape Management to the rural economy" call identifier: FP7-KBBE.2011.1.4-04.

Methodological Approach

The methodology followed in this paper can be divided into five distinct parts. First, using geographic information systems, the area of study was classified into unhomogeneous landscape compositions. Second, we took photos that were intended to cover the most important landscape elements in context of wine tourism. Third, we assessed the perseption of the landscape as a value in consumers' perspectives. Fourth, we evaluated the attractiviness of the landscape elements present in each image using nominal variables. Finally, we build a model of attractive wine tourism product to consumers' perceptions of visual quality of the landscape.

Splitting the area into homogeneous compositions

Using geographical information system in Pazardjik district, Bulgaria were indentified areas covered with vineyards and wine buildings. There are 6 wineries and vineyards situated on the hill and mountainous slopes.

Photography

The photos used in the survey included natural and man-made elements. There were 9 panels, each containing 5 photos, and 48 participants ranked the best one of each panel. Each participant evaluate landscape elements using 4 scale grade from the own point of view. More than 45 photos were taken in the study area between April and May 2013, with the aim of capturing the most relevant features of the landscape. The photos were taken using an Nikon D60 digital camera on clear days. The place of shooting was the area around of identified wineries. The result is a wide variety of pictures represent various landscape composition, with most the elements that were to included in the visual quality expert panel analysis.

Panels

A selection of photos of different landscape compositions was made for presentation to observers on 9 panels, with 5 compositions on each panel. The observers choose one compostion from each panel.

Survey of consumers'preferences

Participants in five focus group determined which elements and also which composition of the landscape like them in the context of wine tourism. In the conducted experimnent, 48 participants take part. All of them are visitors at wineries in the Pazardjik region.

Photo Images

1 – Landscape composition vineyards + building of winery + hill;
2 – Landscape composition vineyards + mountain
3 – Landscape composition building of winery + hill
4 – Landscape composition building of winery + village
5 – Landscape composition wine restaurant;
6 – Landscape composition building of vineyards + traditions
7 – Landscape composition vineyards
8 – Landscape composition building of winery
9 – Landscape composition of winery + history

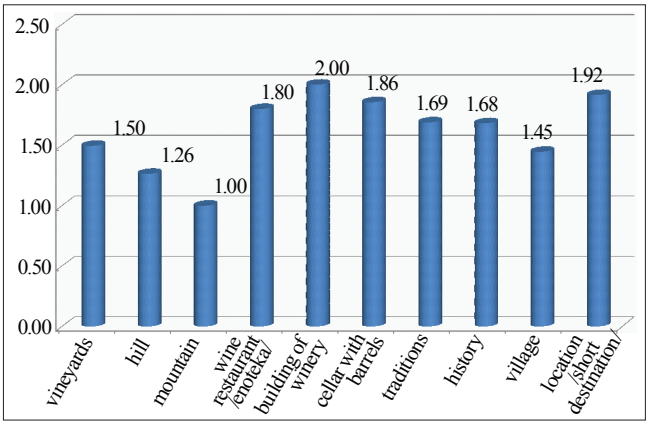

Fig. 1. Average score of landscape elements. Own survey, 2013

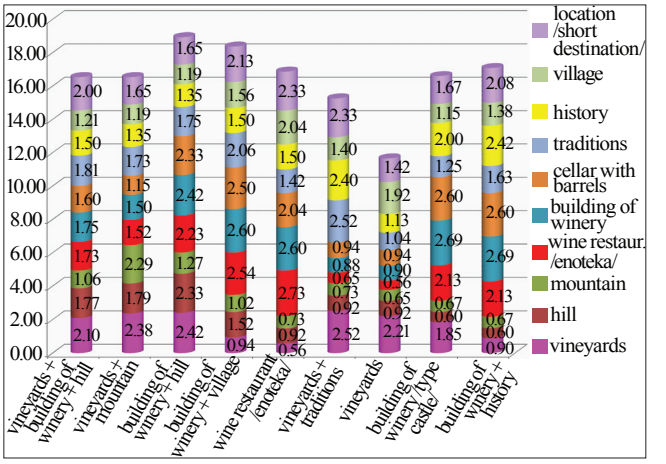

Fig. 2. Presents /contribution/ of each landscape element to the various landscape compositions. Own survey, 2013

The evaluation of landscape composition is accomplished with the aid of participants of focus group. They provide an assessment of how much the appearance of an element of the landscape in the proposed product has value for them. Focus groups were conducted in two stages. The first is a questionnaire in which each participant assesses individual landscape attributes whether they meet his expectations related with sense of wine tourism. Thus, assess the importance of each attribute. Participants form a summary assessment that gives an idea of preferred combinations of attributes (landscape composition). In the second stage are displayed images representing different combinations of the landscape attributes.

Participants express the opinion what is the most attractive to them in a sense of wine tourism. Responses of each participant shall be reconciled with the questionnaires. Thus verifying the results sought. Gives an answer to the question of which elements of landscape stimulate the demand of wine tourism and how wineries use them.

Assessing of landscape compositions

Assessing is carried out using the following formula:

$$A_{jk} = \sum_{i=1}^{n} B_{ijk} \ ,$$

where: n – number of landscape elements;
B_{ijk} – rating of consumer "k" on element "i" of the composition of the landscape "j";
A_{jk} - summary of the consumer "k" on the composition of the landscape "j".

Each participant in the focus group has 4 point scale for evaluation, which evaluates the features of the landscape as follow: /0 - no difference, 1 - slightly important, 2 - very important 3 - very strong significance/. Participants evaluate each element of the landscape, then all estimates are summed to obtain a valuation of the overall landscape composition, expressed his opinion. The more highly generalized assessment of the landscape, the higher the value the user has. The assessment of landscape elements take place into wineries who develop wine tourism. The goal is each member of the focus group to perceive the surrounding landscape by using all their senses and give strictly subjective assessment of the importance of its constituent elements.

Results

The observers choose nine photos with landscape compostion from each panel (*on next page*).

Consumers' preferences to the landscape elements. Participants in the experiment evaluated the degree of importance of each of the 10 attributes of the landscape. Based on these estimates we calculate average values (Figure 1). As a result, the most preferred attributes are - the existence of an attractive building of the winery; nearby location of the winery; the availability of a cellar with barrels; the presence of a restaurant; local traditions and rich history. It is noteworthy that the majority of these landscape attributes are inner factors, which can be managed by winery. Nature landscape attributes have low scores, making them to have a weaker role in the attractiveness of the product wine tourism.

Each landscape attribute is evaluated in terms of its predomination in the images of landscape compositions. Figure 2 presents these values for each of the 9 images representing different landscape compositions. Based on these we determine the perfect model of landscape from the consumer's perspective. The perfect model consists of attributes, which have a relatively high value, and these values are close to each other. Thus, the composition is defined as a well balanced and preferred by the consumer. These are images depicting landscape composition - 1) vineyard + building of winery + hill; 2) vineyard + mountain.

Figure 3 presents the cumulative evaluations of each shot landscape composition. Each respondent gives opinion by separate assessment of each attribute of the landscape, then scores is summarized to give a cumulative score for each shot landscape composition. Highest cumulative score has image Number 3 that represents the combination of an attractive building of the winery and hilly terrain. Image Number 4 receives high ratings and showing again building the winery, but located in the village. The least attractive is defined image of landscape composition consists of only vineyard in the landscape (image number 7).

Figure 4 shows the results of the expert evaluation showing the most preferred landscape composition by respondents. The percentages show the distribution of images of landscape compositions based on the highest aggregate score from consumer's perspective. Image 3 (building of winery + hill) is the most liked landscape composition about 35% of the respondents. The next level of attractiveness of landscape composition is vineyard + mountain (see image number 2), following by landscape composition - building of winery + village (image 4). Another preferred composition of landscape is captured in image number 3 (building of winery + history). The rest images of landscape compositions are not identified as attractive to respondents. Other images (images 6 and 7) of landscape compositions are not defined as attractive to the respondents such as, combination of vineyards and traditions or even just vineyards.

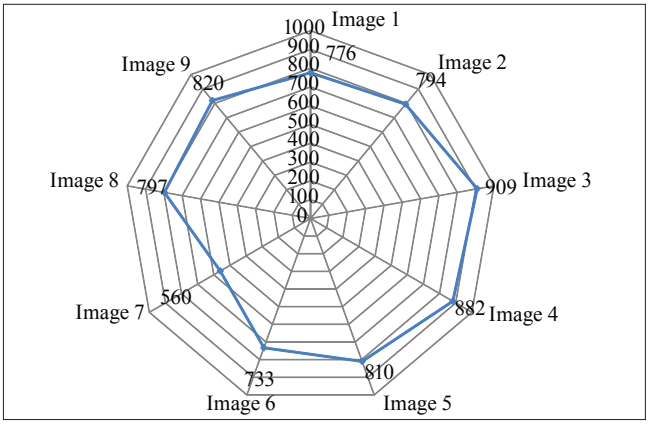

Fig. 3. Total score of each image of landscape. Own survey, 2013

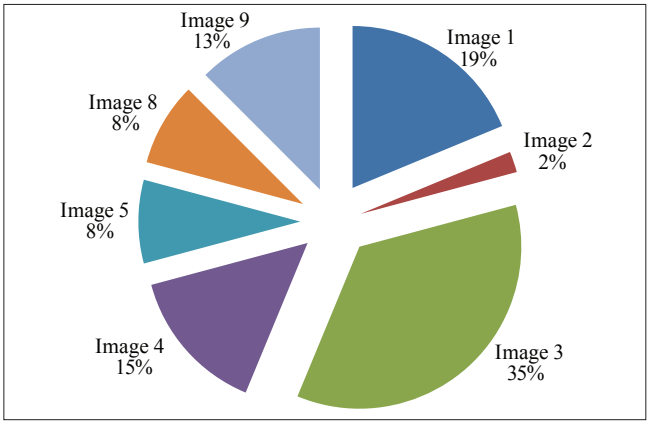

Fig. 4. Preferences /number of the most liked image/ of landscape composition. Own survey, 2013

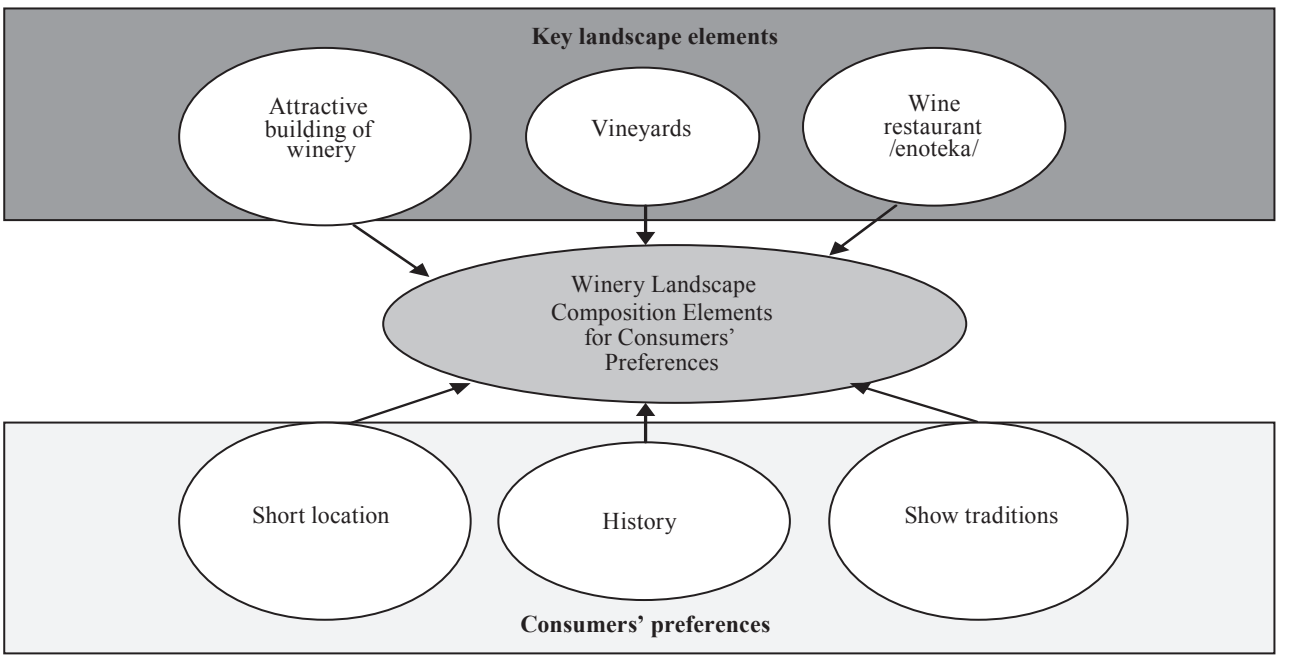

Fig. 5. Model of attractive wine tourism product

Conclusion

Based on the results we build a model of attractive wine tourism product to consumers' perceptions of visual quality of the landscape. The model includes key landscape elements and consumers'preferences for valuable landscape composition. Figure 5 represents the model.

The main elements included at the model are:

- Short location of the winery in the composition of the landscape. Placement selection of the complex in a particular landscape, must comply with the following factors - open, expansive and diverse landscape that captures the eye (picturesque landscape).

- Attractive building of winery. The architecture of the winery, should enable them to maximize view of the surrounding landscape. Another factor that must be taken into account in the construction of the complex is to provide a quiet atmosphere. To meet this condition, the complex must be located away from the traffic, but at the same time the access to it has to be easy;

- Enoteka is another important element of the product is the creation of conditions for a tasting of local wines. This

requires an enoteca and a special place for wine sales in the complex.

- In wine production is necessary to combine local traditions and history. This ensures uniqueness of the wines offered in the complex.

- The wineries must possess vineyards. From consumers' point of view vaneyards create spiritual experience and sense of place.

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