

Competitiveness model for ecotourism: a case study in BBG

Gadiah Ranti¹, Linda Theresia², Silvia Mahardika³ and Ramon Bangun⁴

Department of Industrial Engineering, Institut Teknologi Indonesia, Indonesia

¹gadiah63@gmail.com,²tarlind@yahoo.com,³silvia_merdika@yahoo.com,⁴bangun66@yahoo.com

Abstract. The existing competitiveness model for tourist destination does not consider the product specifications of each tourist destination. In the era of globalization, it is clear that generic competitiveness models are inadequate to determine the competitiveness of tourist destinations. The model should be more oriented towards specific segments of tourism in the global market. This paper focuses on ecotourism competitiveness model and takes Bogor Botanical Gardens (BBG) as a case study. The results will be very valuable in helping management to have better understanding about the problems in developing the competitiveness of BBG and formulating strategies for managing these tourist destinations effectively. The data collected are both qualitative from interview to key persons and quantitative from a survey to the visitors. Total 150 questionnaires were distributed and the number of valid questionnaires is 134. The research finds out that main resource factors and specific resources are very important attributes to increase the competitiveness of ecotourism objects. The management of BBG should pay attention to the conservation and managing natural resources in a sustainable manner and also pay attention to tangible and intangible resources that increase visitor satisfaction.

Keywords: ecotourism, competitiveness, BBG

1. Introduction

The number of tourist destinations around the world continuously increase, which results in tighter competition in the international tourism market. Likewise, the competition to attract tourists between regions in Indonesia also increases [14]. In order to make its tourist destinations become competitive, each region should identify and analyze the competitiveness of its tourist destinations [10]. Competitiveness is an important factor that affects the performance of tourist destinations [8]. A tourist destination will be competitive if it can attract and satisfy tourists [10]. Thus, competitiveness becomes very interesting for practitioners and policy makers [18].

In tourism, competitiveness is expressed as the ability of a tourist destination to create and integrate value-added products, in order to maintain its resources and also increase its market position against competitors [12]. A tourist destination which has the ability to provide superior goods and services in various aspects from the viewpoint of tourists compared to other destinations will be more competitive [7]. Newell stated "competitiveness is the ability to produce goods and services that are better for sale to consumers [20]. Therefore, in order that a tourist destination to be in demand by tourists, each tourist destination must have competitiveness and it is able to maintain its market position by improving its quality over time [4].

In West Java Province, one of the cities most in demand by both domestic and foreign tourists is the city of Bogor. In 2016, the District and City of Bogor were ranked first with the highest number of tourists visits compared to other districts and cities in West Java [5].

As many as 26% of tourists who travel to Bogor City visited BBG. BBG offers natural beauty as its mainstay. This urban forest which is also a historical plant and research site has several facilities offered, such as guest houses, cafeterias, garden shops, libraries, meeting houses, artificial lakes, orchid houses, flora tours and various other natural nuances. Despite these facilities, the number of visitors to BBG from 2009 to 2015 still fluctuated as shown in figure 1.

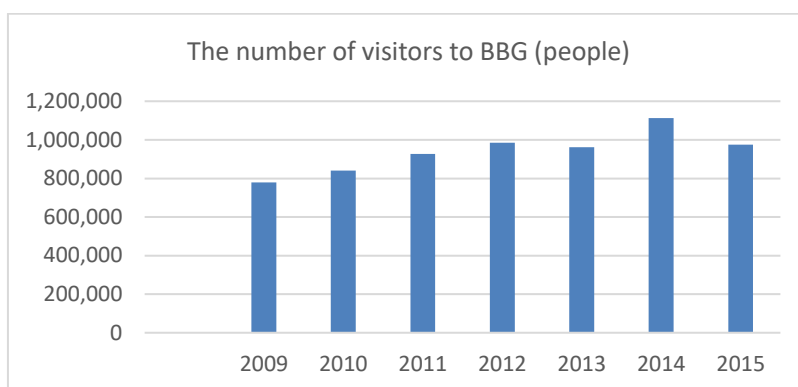


Figure 1. Number of visitors to BBG

Source: BBG processed by authors

In 2009-2012 the number of visitors to BBG continued to increase, however, in 2013 there was a decrease. Although in 2014 there was an increase, in 2015 decreased again. The management of BBG should concern on this fluctuation because BBG is an ecotourism which will be proposed as a world heritage site to the United Nations or UNESCO [18]. To formulate the strategy in order to make BBG more attractive, it is necessary to identify factors influencing the competitiveness of the BBG as an ecotourism object. But, there are limited research related to ecotourism competitiveness models. Therefore, the main objective of this article is to identify the factors influencing competitiveness of BBG as an ecotourism object.

2. Theoretical background

2.1. Competitiveness model

Competitiveness can be viewed from either macro or micro perspective. From macro perspective, competitiveness is expressed as a country's performance in international markets indicated by social, cultural and economic indicators [6]. From micro perspective, an understanding of competitiveness is expressed as a company's ability to compete, grow and generate profits [1]. Competitiveness is the ability of an organization, company or country to reach a certain position in the market, which allows organizations, companies or countries to benefit as long as possible [20]. Thus the competitiveness of tourist destinations is the ability of a tourist destination to optimize its attractiveness that gives added value to the tourist destination, also for tourists who come and also increase added value for the community at the tourist destination.

Over the past few decades, interest in learning the competitiveness of tourist destinations has grown. Basically, a set of techniques and methods is needed to analyze and compare various attributes of competing tourist destinations [21]. However, there are no clear definitions or models that have been developed, because there is still debate about competitiveness entities. Many models are developed to express the competitiveness of tourist destinations. Crouch and Ritchie developed the most famous tourist destination, competitiveness model in the period 1993 to 1999. This model was redesigned in 2003 and called it Conceptual Model of Destination Competitiveness / Conceptual

Model of Tourism Destination Competitiveness [19]. This model has been refined so that it contains 36 attributes of competitiveness of tourist destinations, which are grouped into five main groups. Crouch and Ritchie distinguish the ten most important attributes from 36 attributes of competitiveness of tourist destinations. The ten attributes are: natural conditions, relations to markets, culture and history, superstructure of tourism, security, price, accessibility, image, location and infrastructure. Six of the ten attributes are related to resources and attractions [2]. It appears that resources and attractions are the main reason for tourists to visit a tourist destination and this is a force to attract tourists. De Keyser & Vanhove (1994) developed a theoretical model that emphasized the role of macroeconomic factors in the tourism industry, such as policies related to factors of supply, transportation, and demand [3]. Hassan (2000) developed a model that highlighted the importance of environmental sustainability, as one of the four determinants of tourism competitiveness [12].

Dwayer and Kim (2003) developed a tourism competitiveness model where important influencing factors were inherited resources, created resources, and also supporting factors [7]. Zili, Luo; Benhua, Xiao (2014) states that the factors determine tourism competitiveness are location, environment, facilities, service quality, and tourism attractions [22]. Goffi (2013) developed a competitiveness model by taking into account the main resource factors, specific resources, supporting factors, infrastructure, tourist destination management, tourism destination development policies and demand factors [9]. Meanwhile Snežana Štetić, et. al., (2014) developed a competitiveness model consisting of: key resources, specific business tourism resources, destination management, independent attributes [20]. Kaleji et al., (2017) examines the competitiveness of the Anzali Special Economic Zone, and states that important competitiveness factors are: weather, wild life, attractive landscape and sea coasts, tourism superstructures (hotels, restaurants, tours and travel agencies, etc.) [13]. In addition there are also models of competitiveness of tourist destinations proposed by Hanafiah et al. [11]. Each of these authors believes that none of the models are fully satisfactory, so they develop their own models. However, it is said that none of the models above provides comprehensive treatment of various issues relating to each determinant of objective competitiveness.

2.2. Competitiveness model of BBG

Over the past few decades, research on the competitiveness of tourism destinations has grown. The general model of destination competitiveness has been developed with broad determinants and attributes. But even though these determinants and attributes are numerous, it is impossible to all have the same interests or influence in determining the competitiveness of tourist destinations. Therefore, the model built must focus on attributes that may have the greatest impact on a particular segment of a tourist destination. Competitiveness model of BBG business tourism destination was developed by researchers based on research models of Ritchie and Crouch (2003), Gooffi (2013), Snežana Štetić, et. al., (2014) and Zili, Luo; Benhua, Xiao (2014). These models were developed based on the competitiveness excellence model originally developed by Porter (1990) [16].

3. Research methodology

This research is a descriptive-analytic study conducted by survey method. The research data was obtained in two ways, namely qualitative and quantitative. Qualitative data are collected through interviews with selected resources, who have competence in tourism and understand the condition of BBG, namely: 1) Ir. Sugiarti (Public Relations of BBG); 2) Kapat Yuriawan S.kom (Head of BBG Tour Guide); 3) Sofie Mursidawati (Curator of the Orchid & Raflesia Collection of BBG).

From qualitative data, we produced a competitiveness model of tourist destination consisting of 33 attributes that are grouped into 8 groups of determinants of competitiveness. The first determinant variable is "main resource" which includes 7 attributes; the second determinant variable is "specific resource" which includes 4 attributes. The third determinant variable is the infrastructure that contains 5 attributes. The fourth determinant variable is the supporting factor that contains 7 attributes. The fifth determinant variable is tourist destination management, which contains 3 attributes. The sixth determinant variable is travel agents that include 3 Attributes. The seventh determinant variable is the government that includes 2 attributes and the eighth variable is labor which consists of 2 attributes.

This model is divided into 2 groups, namely: 1) the first group that deals with human resource factors; 2) the second group other than human resource factors.

Furthermore, quantitative data collection was carried out through a field survey with a questionnaire. Questionnaires designed for research on the competitiveness of BBG are arranged in two parts. The first part of the questionnaire is related to the socio-demographic profile or socio-demographic characteristics of respondents. In this sense, information about gender, age and location of residence. The second part of the questionnaire contains questions from the competitiveness model with 39 attributes as in Table 1. The questionnaire uses a Likert scale with scores from 1 to 5 that aims to evaluate and assess the state of the attributes observed in relation to competitiveness.

The populations of this study were visitors of BBG. A total of 150 questionnaires were circulated, and only 134 valid questionnaires. Respondents were taken randomly from visitors of BBG. The sample size of 134 respondents was considered satisfactory and could say that the sample represented the population when compared to other similar studies where the sample size ranged from 83 to 210 respondents (Crouch - 83 respondents, Gomezelj and Mihalič - 118 respondents, Dwyer, Livaic and Mellor - 132 respondents, Enright and Newton - 210 respondents).

Reliability or internal consistency of the questionnaire is needed. Reliability tests aim to determine the consistency of the results obtained and ensure that the use of different items in measuring various constructions provides consistent results. In this study test the reliability of the questionnaire using Cronbach's alpha coefficient. Alpha coefficients are calculated using the SPSS statistical software package. Alpha coefficient values range from 0 to 1 and the higher the value obtained is considered a more reliable test. The generally accepted test reliability limit is ≥ 0.70 , but in some tests lower levels of the alpha coefficient are also accepted (≥ 0.50 or 60 0.60) (Reynaldo, Santos, 1999, Qu et al., 2000; www.ats.ucla.edu/stat/spss/faq/alpha.html)

The results of the research data processing from the questionnaire include two parts. The first part covers the socio-demographic characteristics of respondents, the second part presents the results of statistical analysis of the determinants of the model (descriptive statistical analysis and single factor analysis of variance/ANOVA).

4. Result and discussion

4.1. Socio demographic characteristics of respondents

The socio-demographic characteristics of the respondents considered are as follows: gender, age and occupation (workplace). Of the total sample of 134 respondents, 81 people (60%) were female, while only 40% of respondents were male. Thus, more dominant female sex is present in the sample. From the gender analysis of the respondents, it was found that most of the respondents who visited BBG were female (60%). The largest age group is under 30 years (77%). The age group between 30 and 50 is 19%, and groups over the age of 50 are very rare, which is only 4% of the total visitors. Domicile analysis of respondents shows that the majority of BBG visitors are domiciled in Greater Jakarta (63%), while from outside Greater Jakarta only 19%.

4.2. Descriptive statistical analysis of the competitiveness model determinants

The results of processing satisfaction questionnaire data can be seen in Table 1.

Table 1. Statistical analysis of the competitiveness model determinants

Determinants	Attributes	Mean	Standard deviation
Main Resources	1. Natural resources	3.64	0.66
	2. Cultural and historical heritage	3.41	0.59
	3. Infrastructure	3.57	0.71
	4. Leisure opportunity	3.47	0.69
	5. Culinary	3.21	0.80
	6. Cultural attractions	1.34	1.63
	7. Shopping opportunity	3.45	0.68
Specific Resources	8. Service quality	3.59	0.69
	9. Quantity of hotels	3.18	0.87
	10. Quantity of restaurants	2.66	0.82
	11. Quality Hotel and restaurant environment	3.13	0.72
Infrastructure	12. Transportation quality	3.54	0.75
	13. Information system	3.05	0.93
	14. Accessibility of people with disabilities	3.42	0.83
	15. Health facilities	3.59	0.74
	16. Sanitation	3.01	1.04
Supporting Factor	17. Access to Kebun raya Bogor	3.72	0.63
	18. Easines to get information	3.21	0.94
	19. Availability of display for educational purposes	3.46	0.69
	20. IT infrastructure	3.30	0.76
	21. Environmental quality	3.67	0.86
	22. Security	4.01	0.83
	23. Parking	3.58	0.77
Management	24. Availability of tourist destination identifiers	3.32	0.86
	25. Management capability	3.52	0.71
	26. Brand image Kebun raya Bogor	3.31	0.86
Travel Agent	27. Participation of travel agent to promote Kebun Raya Bogor	3.21	0.63
	28. Availability of travel agents	3.32	0.86
	29. Quality of travel agents	3.14	0.95
Government	30. Government's commitment to develop Kebun Raya Bogor	3.75	0.70
	31. Relationship between management and government	3.45	0.68
Man Power	32. Quality of Services of Kebun Raya Bogor	3.59	0.69
	33. Employee skills	3.59	0.72

Resource: Based on observation data analysis

While, the comparison of average and standard deviation of competitiveness models can be seen in Figure 2.

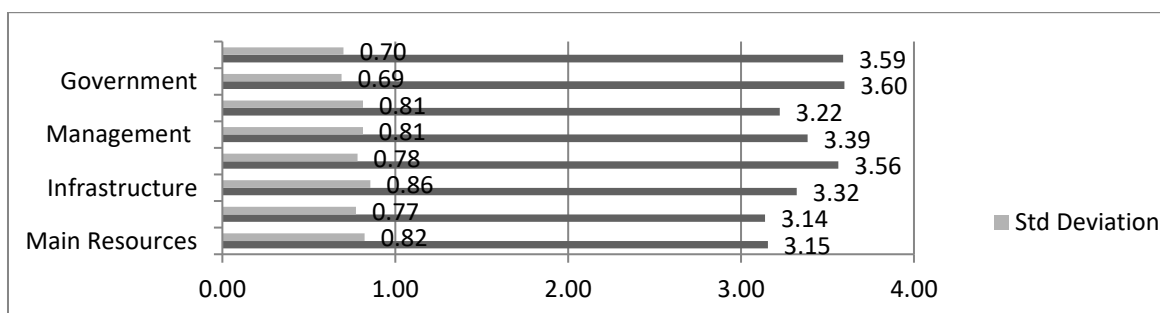


Figure 2. Comparison of average and standard deviation of competitiveness models

Descriptive statistical analysis shows the lowest average value of respondents' satisfaction is the factor main resources and factor specific resources (Figure 3). The standard deviation for most attributes is less than 1, and only for the attributes of cultural attractions and sanitations is greater than 1. This shows that there is a relatively large consensus between respondents with the attributes analyzed. From Table 4 shows that the average value of the main source attributes ranges from 1.34 to 3.64. The processed data for the main source can be seen in Table 3 which shows that the worst ranking is the attribute of cultural attractions (1.34), culinary (3.21) and the cultural and historical heritage attributes (3.41). While the highest level of satisfaction is the natural resource attribute (3.64).

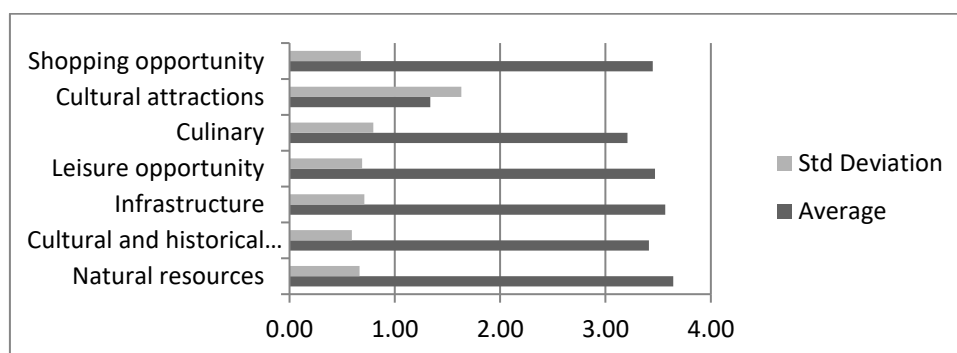


Figure 3. Comparison of average and standard deviation of main source factors

Processed data for specific resources can be seen in Figure 4. For specific resource factors, attributes that have the lowest satisfaction level are quantity restaurant (2.66). While attributes that have the highest level of satisfaction are service quality (3.59).

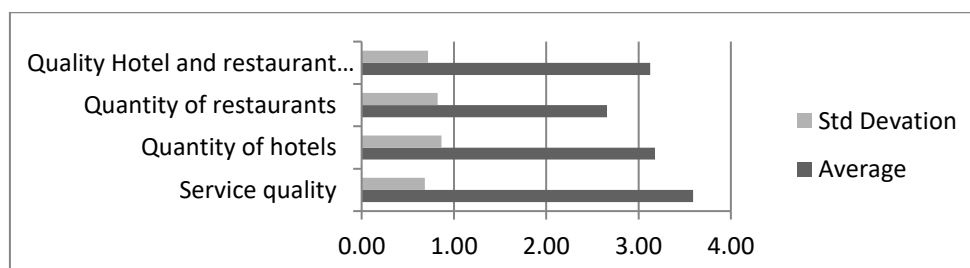


Figure 4. Comparison of average and specific resource factor deviation standards

4.3. Analysis of variance (Anova)

Anova analysis is done to determine whether the deviation between groups is greater than the difference in the group itself. In this study a single factor analysis of Anova (single factor analysis of Anova) was conducted in relation to residence and age of respondents. Analysis in relation to the respondent's age is presented in Table 2.

Table 2. Variant analysis in relation to age

Attributes	Age	Mean	σ	F	p
Main Resources	Under 30 Years	3.16	0.85	0.392	0.738
	30-50 Years	3.18	0.73		
	Above 50 Years	3.05	0.75		
Specific Resources	Under 30 Years	3.10	0.78	1.34	0.397
	30-50 Years	3.30	0.75		
	Above 50 Years	3.08	0.56		

Table 2. Variant analysis in relation to age (cont.)

Attributes	Age	Mean	σ	F	p
Infrastructure	Under 30 Years	3.31	0.88	2.36	0.403
	30-50 Years	3.27	0.73		
	Above 50 Years	3.70	0.55		
Supporting Factor	Under 30 Years	3.54	0.80	2.508	0.295
	30-50 Years	3.63	0.70		
	Above 50 Years	3.74	0.55		
Management	Under 30 Years	3.46	0.88	6.191	0.003
	30-50 Years	2.81	0.75		
	Above 50 Years	3.00	0.57		
Travel Agent	Under 30 Years	3.22	0.80	5.950	0.01
	30-50 Years	3.19	0.61		
	Above 50 Years	3.39	0.45		
Government	Under 30 Years	3.61	0.70	0.128	0.881
	30-50 Years	3.54	0.70		
	Above 50 Years	3.67	0.48		
Man Power	Under 30 Years	3.67	0.74	0.598	0.565
	30-50 Years	3.68	0.62		
	Above 50 Years	3.58	0.46		

Note: M=the arithmetic mean, σ =standard deviation, F=the value of F statistics, p= the level of significance (p<0.05), Source: Authors, based on data processing in SPSS

The results in Table 6 show that there is no statistically significant difference between the competitiveness attributes of the BBG in relation to the respondent's age (F count 6,261). The analysis in relation to the respondent's residence shows that there is no statistically significant difference between the competitiveness attributes of the BBG in relation to the residence (F count 7.341).

5. Conclusion

Competitiveness of tourist destinations is influenced by internal and external factors. This research provides a comprehensive insight into the importance of ecotourism in developing its competence in the present competitive tourism industry era. Through this research, we produced a specific competitiveness model for ecotourism, so that it can be determined the important factors that become the leverage of ecotourism competitiveness.

The results of the study at BBG show that the main resource factors and specific resources are very important attributes to improve the competitiveness of ecotourism objectives. Although the BBG is primarily ecotourism, it shows that not only physical factors are important factors to determine visitor satisfaction, but also cultural attraction factors. Therefore, it is important for managers of BBG to pay special attention to the development of cultural attractions in order to increase the competitiveness of BBG. Besides that, supporting facilities such as restaurant and sanitation are also important factors which should be improved.

Thus, the findings of the research show that in order to increase the competitiveness of ecotourism, management should pay attention to the conservation and managing natural resources in a sustainable manner and also pay attention to tangible and intangible resources that increase visitor satisfaction.

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