CONSUMER PREFERENCES IN ECO-TOURISM DEVELOPMENT IN BALI WITH UGC (USER GENERATED CONTENT) APPROACH

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Abstract The concept of ecology-based tourism or ecotourism is the main attraction for tourists. This study was conducted to determine the attributes of superior ecotourism at resorts based on consumer preferences using the UGC (User Generated Content) approach. This study was use a non-probability sampling approach and the data analysis technique was the Jaccard Score, Z-Score and PCA rankings. The results show that ecotourism attributes that are consumer preferences based on UGC include natural beauty, accessibility, atmosphere, food and beverages, and service. In addition, the ranking of superior ecotourism attributes based on consumer preferences with a jaccard score coefficient from each resort, has a different rating. This rating also applies to the results of the binomial z-score test analysis which shows the level of consumer satisfaction with these attributes. Based on the PCA analysis, it was found that the resort hotel that has the potential to compete is between Legian and Oberoi. Resorts that have competitive potential are able to improve performance based on two main components formed from the PCA analysis, namely basic and advanced offers. The greater value of this coefficient means that the attribute has a large effect on improving performance and has an effect on resort decision making.

Keywords: User generated content (UGC), Consumer preferences, Ecotourism, Resort, PCA, Jaccard score, Z-score

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INTRODUCTION

Tourism is one of the fastest growing industries in the world, with the potential to increase foreign exchange and rapidly create jobs. In line with this, the potential of Indonesia's natural wealth is the main attraction for the sustainability of the tourism sector. This growth is also expected to be able to boost other sectors operating around it. According to Suradnya (2006), tourism is a complex, multisectoral and fragmented activity. Therefore, it is necessary to coordinate various sectors regarding appropriate strategic planning in order to be able to significantly boost economic growth in other sectors. The level of uncertainty is very high in the

future, so planning was expected to anticipate changes in the environment and avoid as far as possible the negative impacts that may be caused by these environmental changes. In addition, the United Nations, the World Bank and the World Tourism Organization (WTO), have recognized that tourism is an inseparable part of human life, especially regarding social and economic activities. According to Pradikta (2015), tourism is a journey from one place to another, temporary in nature, carried out individually or in groups, as an effort to find balance or harmony and happiness with the environment in the social, cultural, natural and scientific

dimensions. Based on this definition, of course, it can be understood that the scope of the tourism sector is very broad, including the development of ecotourism areas.

The concept of eco-based tourism or better known as ecotourism is the main attraction for tourists. This is in line with the increasing public attention to environmental issues, people are starting to realize that their buying behavior can harm the environment, people are starting to look for and environmentally friendly sometimes even paying more for such products (Kahn, 2007; Lee et al., 2010). Ecotourism has better and higher quality expectations than conventional tourism. According to the Quebec Declaration (Eilani, 2013), it is stated that ecotourism is a form of tourism that adopts the principles of sustainable tourism based on natural beauty. In addition, ecotourism is able to have a small impact on natural damage, while creating jobs helping nature conservation activities themselves. This concept does not only involvcultivation activities, but rather to take advantage of the natural potential that exists and is developed as a special attraction for tourists. One of them is what happened in Bali. Bali has been named the world's most popular tourist destination in the 2020 Traveler's Choice Award, beating Paris and London which are often considered the world's favorite destinations. This is certainly a matter of pride for Indonesia and also an encouragement to be able to maintain the competitiveness and charm of Bali in the eyes of the world. Bali is a destination that offers a very complete tourist attraction, ranging from natural beauty in the mountains and under the sea, to the unique culture that can be found in Bali and becomes a special attraction for both local and foreign tourists. Based on data from the Central Statistics Agency (BPS) of Bali Province (2020) stated that, the arrival of foreign tourists (tourists) from 2014 to 2019 experienced a significant increase of around 40%. In 2014 the total number of foreign tourists visiting reached 3,766,638 people, while in 2019 it reached 6,275,210 people.

Table 1. Number of Foreign Tourist Visits in Bali Province

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Year	Total foreign tourists
2014	3 766 638
2015	4 001 835
2016	4 927 937
2017	5 697 739
2018	6 070 473
2019	6 275 210

Source: BPS Bali Province, 2020

Based on table 1, the significant increase in foreign tourists is certainly proof that Bali is a priority destination favored by foreign tourists from various countries in the world. According to BPS data from the Province of Bali (2019) that the number of star hotels in Bali based on class is the largest in Badung Regency, especially in the coastal areas of Seminyak and Legian. Currently both are the center of tourist destinations who want to enjoy the charm of the beauty of the coast after Kuta beach. As a means of supporting the development of the ecotourism sector, various facilities were built such as hotels, resorts, villas, restaurants, cafes, to adequate watersport facilities.

Resort hotels are one of the supports for the development of ecotourism by offering the concept of natural beauty as a tourist attraction. The increase in tourists visiting certainly increases the prospect of the resort hotel business in the coastal areas of Seminyak and Legian Bali. This also triggers competition between resorts that offer similar natural beauty. This level of competition is also supported by the increasing number of hotels and resorts in Bali every year, especially in Badung district. According to BPS data from the Bali Province (2019), the total number of hotels in Bali reached 507 in 2019, and the highest number was in Badung Regency with a total of 394 hotels in all class categories. Of course, this is a challenge for the resort management to attract consumers. On the other hand, of course, managers must also be able to analyze the level of competition and the competitive advantage of the company in order to be able to win market competition. Managers must always make observations related to consumer satisfaction and preferences in order to formulate the best marketing and development strategies so as to win market competition.

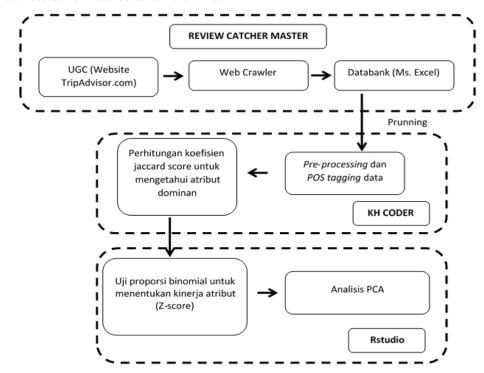
The current state of technological development has led to the reality of the marketing transition from offline to online which is easier to reach by consumers from various regions of the world. Currently, more and more consumers are starting to use online media to find information and share experiences with other consumers regarding their experience of staying at a hotel. Of course this is a separate consideration for consumers in determining their choice. Reviews or reviews of a trip can help consumers to learn about products, tourist destinations, accommodation, to prevent unwanted things. According to Tuominen (2011), 3 out of 4 tourists who are going on vacation use online reviews as a source of information when planning a trip. The same thing also happened to sales of other

products (Chevalier & Mayzlin, 2006, Zhu & Zhang, 2010). Various websites that provide information in the form of User Generated Content (UGC) related to resorts and providing online booking features, including TriAdvisor, Agoda, Booking and Traveloka.

The TriAdvisor.com website was chosen as a source of information in this study because it is considered credible and can include foreign tourists with data in the form of User Generated Content. User Generated Content is content generated by individual users or partners, either in the form of writing, images or videos that are widely distributed on various online platforms. With these data, it can be seen that the ecotourism attributes of the resorts are the competitive advantages of each resort based on consumer preferences. This research will compare 3 resorts namely Samaya Beach Resort, The Oberoi Resort Beach and The Legian Beach Resort. The three resorts have adjacent locations and the same natural view, namely Seminyak Beach, Bali. So this research is important to do to find out the dominant ecotourism attributes of the three resorts, so that the management is able to formulate the right competitive strategy based on the perceptions of their consumers directly.

RESEARCH METHODS

This research was conducted at 3 resorts located in Badung Regency, Bali Province, namely The Legian Bali Resort, The Oberoi Beach Resort and Samaya Seminyak Bali beach resort. This study uses secondary data obtained from the online platform TripAdvisor.com as the main data analyzed. The research method uses a quantitative descriptive approach with a combination of several analytical tools. Review/testimonials are collected using the UGC (User Generated Content) method by collecting customer reviews on the tripadvisor.com website. The sampling technique in this study used a non-probability sampling approach. The number of respondents in this study is based on the number of people who leave reviews on tripadvisor.com. The number of samples used as research respondents was 4,980 from a total population of 6,183. The following steps are carried out in this research:



The data analysis technique used descriptive statistical analysis with Jaccard Score and Z-Score rankings. According to Nurdiana (2016), Jaccard Coeficient is one of the methods used to calculate similarity between two objects (items). In addition, Hu & Trivedi (2020) also explained that the jaccard coefficient was able to determine the importance rating of the attributes for each selected resort brand.

The manual formula for determining the jaccard coefficient is

$$jaccard = \frac{a}{F1 + F2 - a} \tag{1}$$

a: frequency of all attributes in the document

F1: attribute frequency for a particular brand

F2: attribute frequency on other brands

While the binomial z score test is carried out to show the (relative) performance of the attributes. In statistical analysis, a critical value of z will be set to test a predetermined hypothesis. In the research of Hu and Trivedi (2020) explained that the relative ranking is also presented based on the Z-score from the binomial proportion test which shows customer perceptions of hotel attributes from satisfied to dissatisfied. Formula to calculate Z Score:

$$Z = \frac{(x-\mu)}{\sigma} \tag{2}$$

x : observed value (raw score)

μ: population mean

 $\boldsymbol{\sigma}$: population standard deviation

Z : Z Score (standard value)

The analytical tool used to assess the performance of ecotourism attributes is a review catcher master application to collect all reviews into a data bank (Microsoft Excel) and a kh-coder to carry out the coding process. Furthermore, data processing is carried out with the Rstudio application to run PCA analysis. According to Supranto (2010), to state the dimensions that underlie the evaluation of customer satisfaction, it can be done using principal component analysis (PCA).

RESULTS AND DISCUSSION

1. Overview

The Samaya resort

The Samaya Seminyak is a 5 star resort located on Jalan Laksmana Seminyak Beach Kuta, Seminyak, Postal Code 80361 with excellent service excellence. In 2020 The Samaya Seminyak resort received the "Traveller's choice award" from TripAdvisor. The Samaya Seminyak is a destination for foreign tourists and local tourists because it is able to reflect almost all resorts an ideal hotel in Bali, especially with the complete facilities offered and able to pamper the tourists. Resort It has direct access to the beach with a sea view that is typical of the island of Bali. The samaya has 24 2 types of villas, namely the Beachfront Villas type (with an area of 220 square meters) which has a beach view and the Royal Courtyard Villas type (with an area of 300 square meters and a private pool) which are close to the golf course. This resort offers a luxurious beachfront retreat with traditional Balinese hospitality and modern comforts. In addition, The Samaya Seminyak is a resort that has received "Green Globe Certified" for 3 consecutive years as a resort committed to developing eco-green tourism. Several applications of eco-green tourism

such as rainwater storage tanks for water resources, manufacture of organic fertilizers, arrangement of soundproof rooms to minimize noise pollution, and massive waste reduction strategies were carried out.

The Oberoi resort

The Oberoi is a resort that has stunning views with a strategic location on Jl. Kayu Aya, Seminyak, Kuta, Bali, 80361 is near the Seminyak beach and is surrounded by fifteen hectares of lush gardens, and features a natural amphitheater for traditional dance performances. Some other stunning facilities include Frangipani cafe, turtle restaurant, and wooden bar as a place to relax which is in great demand by visitors. Resort It has direct access to the Seminyak beach so it can be a special attraction for tourists. Especially with the turtle breeding facilities owned by this resort, tourists can participate in the turtle breeding process and the process of releasing turtles back into the open sea. This facility is certainly one of the flagship of The Oberoi resort which is committed to implementing the principles of ecotourism.

The Legian Bali resort

The Legian Bali is one of the best 5 star resorts located on Jalan Kayu Aya, Seminyak Beach, Bali 80361, Indonesia. Resort it offers the impression of exclusivity and comfort for the tourists. Its strategic location and flanked by 2 exotic beaches can be a special attraction for tourists. In addition, this resort also has a blend of Balinese design and modern comfort. The Legian Bali offers 67 suites overlooking the sea plus 15 private villas that stand majestically amidst gardens and private pools. The Legian Bali is included in the Beach Resort category which has bay view and beach view access with natural panorama (beach) attractions and provided natural attractions such as infinity pools, tropical gardens, and watersports (surfing). The beauty and comfort offered by this resort has been awarded the Top 20 resorts in Indonesia for 2 consecutive times (2019-2020) given by the Reader's Choice Award.

2. Ecotourism attributes based on consumer preferences

The results showed that ecotourism attributes based on the jaccard score were able to describe the level of importance of attributes based on consumer preferences of each *resort*. The weighting is done by processing UGC data on the KH coder application. UGC data of 4,980 respondents was processed to

determine the attributes of ecotourism that are the focus of visitors. Here are the results from 3 *resorts*,

Tha Samaya beach *resort*, Tha Oberoi and The Legian Bali:

Table 2. Ecotourism attributes (jaccard score)

Attribute	Samaya	Rank	Oberoi	Rank	Legian	Rank
Natural beauty	0.6091	2	0.9911	1	0.7033	1
Accessibility	0.5273	3	0.8479	2	0.5384	3
Atmosphere	0.3941	5	0.4133	4	0.2862	5
Food and	0.9528	1	0.3793	5	0.3554	4
beverage						
Service	0.4139	4	0.5990	3	0.5684	2

Source: Secondary data, processed (2021)

Based on the secondary data processing above, obtained 5 attributes that are included in the attributes of ecotourism, namely, natural beauty, accessibility, atmosphere (ambience), food and beverage and service. Based on the use of UGC in Hu and Trivedi's (2020) research, the element transformation is the brand /brand name, the construct is the detected brand attribute, and the rating is the Jaccard value of the detected attribute.

The jaccard value of detected ecotourism attributes is able to describe the superior attribute rating based on consumer preferences. Hu & Trivedi (2020) also explained that the jaccard score was able to determine the importance rating of the attributes for each resort brand. In table 4 it can be seen that there are differences in the level of importance of the different attributes of each resort. The most important ecotourism attribute at The Samaya resort is Food and beverage with a jaccard score coefficient of 0.9528, followed by the next attribute, namely natural beauty, accessibility, service and the last is atmosphere (ambience). Meanwhile, The Oberoi and The Legian resorts have in common the most important ecotourism attribute, namely natural beauty with a jaccard score coefficient of 0.9911 and 0.7033.

These results indicate that the main concern of visitors at The Samaya based on the jaccard score is the enjoyment of food and beverage offerings. While the next sequence of ecotourism attributes is natural beauty, accessibility, service and resort atmosphere . This is in line with the research conducted by

Saksana (2019) that the attributes of ecotourism that are considered the most important by both domestic and foreign tourists in choosing hotels in Bali are the food and beverage attributes. and natural beauty. While the other two resort hotels are more dominated by the attributes of natural beauty. This is in accordance with the statement in Zhou's research (2011) that the existence of beautiful and cool natural potential is very difficult to obtain in crowded urban areas and full of air pollution. So the arrival of tourists to a resort that offers beautiful natural scenery and is pollution-free is the main reason. An environment that is friendly to nature can be created by conserving the characteristics of natural resources and existing potentials, improving environmental quality, and increasing awareness of the environment.

The next analysis is an analysis of the Z-score binomial proportion test, in the study of Hu and Trivedi (2020) explaining that the relative ranking is presented based on the Z-score of the binomial proportion test which shows customer perceptions of hotel attributes from satisfied to dissatisfied. Meanwhile, in Firdauzi's research (2021) the Z-Score value from the binomial proportion test is used to indicate the order of preference of the performance attributes offered by resort hotels to customers. So in this study, binomial test analysis is used to show customer perceptions of hotel attributes from satisfied to dissatisfied while also showing the performance of the attributes offered.

Table 3. Binomial test results (Z-score)

Attribute	Samaya	Rank	Oberoi	Rank	Legian	Rank
Natural beauty	0.130744	2	1.28713	1	1.263479	1
Accessibility	-0.23037	3	0.752847	2	0.285137	3
Atmosphere	-0.81912	5	-0.86866	4	-1.21115	5
Food and beverage	1.650346	1	-0.99551	5	-0.80059	4
Service	-0.7316	4	-0.17581	3	0.463125	2

Source: Secondary data, processed (2021)

Based on the results above, it is known that the ranking generated from the Z-score value is the same as the ranking generated by the Jaccard score, then the order of ecotourism attributes produced by The Samaya Resort from satisfied to dissatisfied according to consumer preferences is Food and beverage , natural beauty, accessibility, service and atmosphere (ambience). Meanwhile, at The Oberoi resort , consumer satisfaction ratings for ecotourism attributes are natural beauty, accessibility, service , atmosphere, and food and beverage . At The Legian Bali resort , the satisfaction ratings for ecotourism attributes are natural beauty, service , accessibility,

Table 4. Matrix Correlation

food and beverage, and atmosphere. As explained by Lu and Stepchenkova (2012) that different attributes can contribute to customer satisfaction in different ways. So the differences in the attributes that dominate in each resort can be an opportunity for excellence in the competition between resorts.

3.3 Resort hotel competition level

The level of resort competition potential is analyzed by principal component analysis (PCA) based on Z-score normality test data. This analysis was carried out using the help of the Rstudio application with the following results:

	Samaya	Oberoi	Legian
Samaya	1.0000000	-0.2019843	-0.1421239
Oberoi	-0.2019843	1.0000000	0.9021449
Legian	-0.1421239	0.9021449	1.0000000

Source: Secondary data, processed (2021)

Based on the correlation analysis, it was found that there was a close relationship between resort hotels, the closest relationship between Oberoi resorts and Legian was the correlation value of 0.902. Meanwhile, the close relationship between the Samaya resort and the Legian and Oberoi resorts tends to be weak with a correlation value of -0.142

and -0.201. This indicates that there is a potential competition between Oberoi and Legian resorts based on the results of the analysis of ecotourism attributes. But that is not the case in the relationship between Samaya-Legian and Samaya-Oberoi, both of which tend to have no potential for competition. Next is the eigenvalue analysis in table 7.

Table 5. Eigenvalue

Component	Eigenvalue	Proportion variance	Cum proportion variance
1	1.96364503	65.454834	65.45483
2	0.94055588	31.351863	96.80670
3	0.09579909	3.193303	100,00000

Source: Secondary data, processed (2021)

Based on Table 7. it can be seen that there are 2 component factors that have an eigenvalue of more than 0.9, namely Comp1 with an eigenvalue of 1.96 and Comp2 with a value of 0.94. In addition, based on the cumulative value of the proportion of variance, the 2 components were able to explain the

variance up to 96.8%. This means that these 2 factors have been able to explain most of the variance of all variables, which is 96.8% of the total variance, therefore these 2 factors are sufficient and are the best for summarizing the predetermined variables.

Table 6. Structure coefficients attributes in principal components

	Comp.1	Comp.2	
Natural beauty	-1.9192092	0.63469685	
Accessibility	-0.8607364	-0.06631917	
Atmosphere	1.3681619	-1.30280501	
Food and beverage	1.8296268	1.44622905	
Service	-0.4178432	-0.71180172	

Source: Secondary data, processed (2021)

Table 6. describes the factor loading of 5 ecotourism attributes which are grouped into 2 preformed components according to their loading values. The value of these structure coefficients is used to ensure that the variables are grouped in certain factors that have the greatest correlation value from the components formed. Comp.1 is a basic level offering that is the consumer's preference in choosing a resort, while Comp.2 is an advanced offer. The attributes included in the basic level offer are natural beauty, accessibility, atmosphere, and food and beverage, while the attributes included in the advanced offer are service. Based on the results of the above analysis, resorts that have competitive potential are able to improve performance based on these two components, the greater the coefficient value, the attribute has a great influence on improving performance and has an effect on resort decision making. This is in line with the research of Nilashi et al. (2018) that the attributes that are the main focus of consumers in assessing the competence and performance of a resort are able to have a big impact on the resort 's decision-making process.

3.4 Research Implications

This research is expected to provide various managerial implications for related parties, including:

- a. The results of this study can be used as material for consideration and evaluation of the ecotourism attributes that are the flagship of each resort based on the assessment of consumer preferences so far. So that the resort is able to map the attributes that must be maintained and improved.
- Identification of ecotourism attributes that are considered satisfactory and unsatisfactory based on consumer preferences can be used as reference in improving attribute performance. At The Samaya and The Legian resorts, it is necessary to improve the performance of the atmosphere attribute (ambience) because based on the results of research these attributes are considered unsatisfactory by consumers. Meanwhile, The Oberoi resort is expected to be able to improve the performance of food and beverage attributes. In addition, related attributes that are considered satisfactory according to consumer preferences can be a distinct advantage for each resort in the face of competition.
- c. The potential for competition between resorts resulting from this research can be a reference for the management of the resorts concerned to optimize the performance of their offering components, both at basic level offers and

- advanced offers so as to produce competitive advantages from each resort.
- d. The results of this study are also expected to be a reference for the development of resorts in the Bali area which not only offers accommodation comfort but is also able to become part of an ecotourism object.

CONCLUSION

Based on the results of the research that has been described previously, the following conclusions are obtained:

- Ecotourism attributes that are consumer preferences based on User Generated Content include natural beauty, accessibility, atmosphere, food and beverage and service.
- 2. The ranking of superior ecotourism attributes based on consumer preferences with a jaccard score coefficient from each resort, including at The Samaya resort the rankings are food and beverage, natural beauty, accessibility, service, and atmosphere, at The Oberoi the rankings are natural beauty, accessibility, service, atmosphere, and food and beverage. While at The Legian, the rankings are natural beauty, service, accessibility, food and beverage and ambience. This rating also applies to the results of the binomial z-score test analysis which shows the level of consumer satisfaction with the ecotourism attributes at each of these resorts.
- Resort hotels that have potential for competition are between Legian and Oberoi, while other relationships do not have potential for competition, either between The Samaya and The Oberoi or between The Samaya and The Legian.

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