

The Difference in Eco-tourist Preferences to Marine Tourism Destination Base on Biocentrism Segments

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Abstract — Research aims to investigate the eco-tourist preferences based on biocentrism segmentation toward marine tourism destination. The research object is Pramuka Island as one of Thousand Island Marine National Park. First, cluster analysis to examine classify the eco-tourist divided into two groups based on biocentrism motivation, attitude and behavior that are soft and hard eco-tourist. Second, conjoint analysis produced the results of this study that showed that soft eco-tourist most like products attributes ecotourism combination on the Pramuka island tour activity with a kind of snorkeling and diving, accommodation in home stay, attractions with this type of artificial, transport to the type of speed boat, and modern facilities. The different level of preference for the group hard eco-tourist activity tourism product attributes combination type of snorkeling and diving, attractions with the kind of natural, traditional types, accommodation in home-stay, traditional facilities, and transportation of a ferry. While each Member of the two groups on the basis of average biocentrism motivation, attitude and behavior has a combination of tourist products are quite varied.

Keywords - *biocentrism segment; eco-tourist preferences; marine tourism destination; cluster analysis; conjoint analysis.*

I. INTRODUCTION

Indonesia as one of the archipelagic states has adopted this concept within two Indonesian cooperation laws which were intended to enable the Indonesian government to manage the coastal areas more responsibly and accountably in the aim for the improved environment for future generations. Since the endorsement of those laws, however, the implementation has been lagging and the Indonesia government's focus is rather on the land-based development despite the consequence of the negligence in the coastal and marine management [1]. One of the rapid interesting marine management in Indonesia is marine tourism industry, and due to the growth of the marine tourism industry has been attracted many researchers to recognize the urgent need for appropriate marketing management tools in understanding the market preference base on their characteristics. The marine tourism area is necessary to

managed not only to explore the market potential but also to preserve its unique and diverse biodiversity for a variety of high quality marine oriented tourism opportunities. Marine tourism conservation areas as special places our want to protect learn about and experience. Therefore, what is required of this place is ecotourism management. Ecotourism is a travel with not contaminate nature, just a view to admire and enjoy the beauty of nature wild animal or plant in its natural environment and as a means of education [2]. The most important thing in relation to ecotourism was an attempt towards the preserved natural and cultural environmental sustainability. The love of natural and cultural environment will resulting in threatened its environmental sustainability and culture itself. To avoid damage of natural and cultural tourism activities required the management of ecotourism attractions are good and professionally in accordance with the character of each tourist destination, as well as any restrictions on the scale of development and green marketing in the tourism sector.

The Pramuka Island is one of the examples of marine tourism destination which is one of the Thousand Islands National Park (TNKpS). In March 2013 Pramuka Island reached 4.164 tourists (www.parbudkepulauanseribu.com). Almost of visitors arrive to TNKpS are undergraduate student youth eco-tourist [3], until now the marine tourism provider catered tourism attraction followed the example of other places. But later this was considerable to manage inequality in terms of visitor characteristics and they preference in comparison with the tourism activities and facilities.

The research purpose and coming in useful benefit for:

- Researchers hope the results of this research can be used by government and tourism provider of the thousand islands, as the basis for consideration in identifying segments of eco-tourist based on psychographic bio-centric motivation means of nature-centered oriented [4] and also the attributes owned by the Pramuka Island in order to devise proper marketing strategies with market segmentation.

- As a source of information about a group of eco-tourist based on the psychographic segment of the motivation of student eco-tourist as well as what is product attributes are interested of visitors to the marine tourism destinations in the thousand islands.
- Research can be used to as a reference and consideration in doing similar research. In anticipation of this research can be further developed by subsequent researchers.

II. RESEARCH METHODS

This type of research is descriptive research, which is the research to gather information on the status of existing symptoms [5]. So the purpose of the descriptive research is to make the explanation in a systematic, factual, and accurate about the facts and the nature of the population or specific areas. The sample in this research is eco-tourist of undergraduate students who have been visited the Pramuka Islands in November 2012. According to Ertambang [6], students can be a subject of research if such research is indeed a highlight of Student Affairs or the world when research is still adequate for the study early (pilot study). Sampling technique used is a Non probability sampling is the sampling and purposive convenience sampling, which is a technique whereby the determination of samples with a certain consideration [7]. While convenience sampling is a method of sample selection based on convenience.

Data analysis techniques used in this research is a multivariate analysis. Multivariate analysis was measuring purposes, explains, and predicts the level of relations between the variants. So, not only are multivariate characters on a number of variables involved in observation or analysis, but also multiple combinations between variance [8]. The analysis is used to answer the hypothesis in this study using Cluster and Conjoint analysis. The first method is to Cluster Analysis, the sample which is taken to represent the population. According to Santoso [9] there is no provision of the representative samples, the number of samples required and it remains large enough so that the process of clustering can be done right. Thus, this research sampled as much as 105 respondents of undergraduate student. As for the method of conjoint analysis in the book *Multivariate Analysis of Data* written by Hair et al [10], said that the conjoint analysis can use a minimum of 50 respondents to get the preference in the desire by the consumer.

III. RESULTS AND DISCUSSIONS

A. Results of Cluster Analysis

The dissemination of the questionnaire phase 1 tested using analysis group or cluster analysis, which aims to classify a number of eco-tourists into two groups based of motivation, behavior, and attitude so it formed two groups of eco-tourist with different characteristics of Group first with a characteristic soft eco-tourist and group second is hard eco-tourist [4]. The test results of cluster analysis as bellow:

TABLE I. NUMBER OF CASES IN EACH CLUSTER

Cluster	1	65.000
	2	40.000
Valid		105.000
Missing		.000

From the Table 1 above, most respondents in cluster 1 (soft eco-tourist) consist of 65 respondents' soft eco-tourist with the distinctive characteristics based on segment bio-centric psychographic as follows:

1. Less strong commitment to the natural environment.
2. Lack of desire to develop ecotourism.
3. Have diverse purposes when conducting tours.
4. Take a trip in a relatively short time (short trips).
5. Travelling with the group in a number of relatively much (larger groups).
6. the passive in performing activities
7. Like the tourist activity.
8. Expect services on ecotourism destinations.
9. Less interact with nature.
10. Need mediation to gain knowledge about ecotourism destinations.
11. Rely on travel agents or tour operators in arranging travel plan.

While the cluster group 2 (hard eco-tourist) by the number of respondents' eco-tourist of as many as 40 people with traits of different characteristics, including the following:

1. Have a strong commitment towards the natural environment.
2. Have a desire to develop the potential of Ecotourism (sustainability).
3. Have a special tourist purposes.
4. Take a trip in a relatively long (long trips).
5. Relatively small number of (small groups).
6. active in tourism activities
7. Like a challenging activity.
8. Do not expect services on ecotourism destinations.
9. Strong interaction with nature.
10. Make a personal experience as a way to gain knowledge about ecotourism destinations.
11. Likes to concoct they own itinerary (independent).

Thus, all respondents a number of 105 people complete on both cluster and with no variables are missing (missing).

B. Results of Conjoint Analysis

According to Santoso [9] Conjoint Analysis in principle aims to estimate the pattern of the opinion of the respondents, called Part-Worth Estimates, then compare with actual respondents (Actual). High number of correlation between yield estimates with actual results is called predictive accuracy. From conjoint analysis results are also obtained the value of utility and importance attributes of each respondent as well as overall (aggregate). The utility of the analysis in aggregate shows how consumer preferences as a whole with respect to the product, while the value of the importance attribute value/importance of aggregate analysis shows how the relative importance of each of the attribute for consumers as a whole.

Next table show the results of conjoint analysis for soft eco-tourist as follow.

TABLE II. THE UTILITY AND IMPORTANCE OF ATTRIBUTES IN THE AGGREGATE FOR THE SOFT ECO-TOURIST

Attribute	Attribute level	Factor Importance	Utility
1. Transportation	Ferry	17,46%	1,180
	SpeedBoat		-1,180
2. Acommodation	Motel	25,15%	-1,252
	Home Stay		1,129
	Cottage		0,123
3. Facility	Traditional	10,26%	-0,623
	Modern		0,623
4. Tourism Activity	Snorkling	27,23%	0,867
	Diving		-1,058
	Fishing		0,480
	Cano		-0,289
5. Tourism Attraction	Nature	19,93%	-0,323
	Heritage		-0,101
	Building		0,424

In General (aggregate), respondents who were students or tourists in the Group 1 or a soft eco-tourist most like type of tourist activity considers the eco-tourist is the most important attribute in the select tourist destinations (27.23%), then the attribute type of tourist accommodation (25.15%), after which the attribute type of tourist attractions (19.92%), transport (type attribute 17.46%), and the least important is the attribute of the tourist facilities (10.26%)

According to Table 3 the conjoint analysis results the preferences base on hard eco-tourist bio-centric psychographics segment as follow:

TABLE III. THE UTILITY AND IMPORTANCE OF ATTRIBUTES IN THE AGGREGATE FOR THE HARD ECO-TOURIST

Attribute	Attribute level	Factor Importance	Utility
1. Transportation	Ferry	13,73%	0,553
	SpeedBoat		-0,553
2. Acommodation	Motel	22,16%	-0,300
	Home Stay		0,494
	Cottage		-0,194
3. Facility	Traditional	14,41%	-0,075
	Modern		0,075
	Snorkling		0,275
4. Tourism Activity	Diving	27,38%	-0,100
	Fishing		-0,150
	Cano		-0,025
	Nature		0,198
5. Tourism Attraction	Heritage	22,32%	-0,165
	Building		-0,033

In General (aggregate), respondents who were students or tourists in groups of 2 or a hard kind of eco-tourist activity is considered tourism the most important attribute in the select tourist destinations (27.38%), then the attribute type of tourist attractions (22.32%), after which the attribute type of tourist accommodation (22.16%), the type of facility (14.41%), and least important is tourism transport attributes (13.73%).

As for the measurement of Predictive Accuracy overall (aggregate) in each group (soft and hard ecotourist) can be shown in the table below

TABLE IV. AGGREGATE CORRELATIONS FOR SOFT ECO-TOURIST GROUP

	Value	Sig.
Pearson's R	.765	.000
Kendall's tau	.533	.002

TABLE V. AGGREGATE CORRELATIONS FOR HARD ECO-TOURIST GROUP

	Value	Sig.
Pearson's R	.705	.001
Kendall's tau	.550	.001

So through test significance above can be known that there is a real correlation between results conjoint with an opinion actual of respondents as a whole (aggregate) good to group eco-tourist soft and hard eco-tourist, where the relationship is powerful for value correlation both in Pearson or Kendall to group eco-tourist soft and hard eco-tourist produce numbers correlation a comparatively powerful namely above 0,5, auction on group soft eco-tourist produce value correlation of 0,765 to Pearson's R and 0,533 to Kendall's Tau. Results for the Hard Eco-tourist segment correlation amounting to 0,705 for Pearson's R and 0.535 to Kendall Tau.

IV. CONCLUSION AND RECOMMENDATIONS

A. Conclusions

Using the method of cluster analysis, eco-tourist can be classified into two groups, the Group of soft eco-tourist and hard eco-tourist with different characteristics based on bio-centric motivations, attitudes, and behaviors of tourist activities. The research indicates that many more eco-tourist number within the Group soft eco-tourist than hard eco-tourist group, so marketing strategies directed at this group to efficiency costs and appropriate guests.

Ranked the relative importance and utility of the product tours on the students eco-tourist in the aggregate for each cluster has a difference.

Conjoint analysis results indicated that tourist activity is the tourism attributes considered the most of important Ecotourism Destination for eco-tourist.

B. Recommendations

Based on the conclusions of clusters data analysis will guide the providers having an idea of segmentation eco-tourists who distinguished by bio-centric psychographic segments on motivation in doing tourism activity. The manager will capable of making marketing strategies corresponding to each segment.

Based on the conjoint in the aggregate different between the two groups eco-tourist, providers have a sense of a combination and attributes products tourism is important and favored by eco-tourist on every clusters. Information value interests and preference attributes products tourist attraction is can be used as basis in making planning of the sights in Pramuka Island and can get actual eco-tourist target.

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