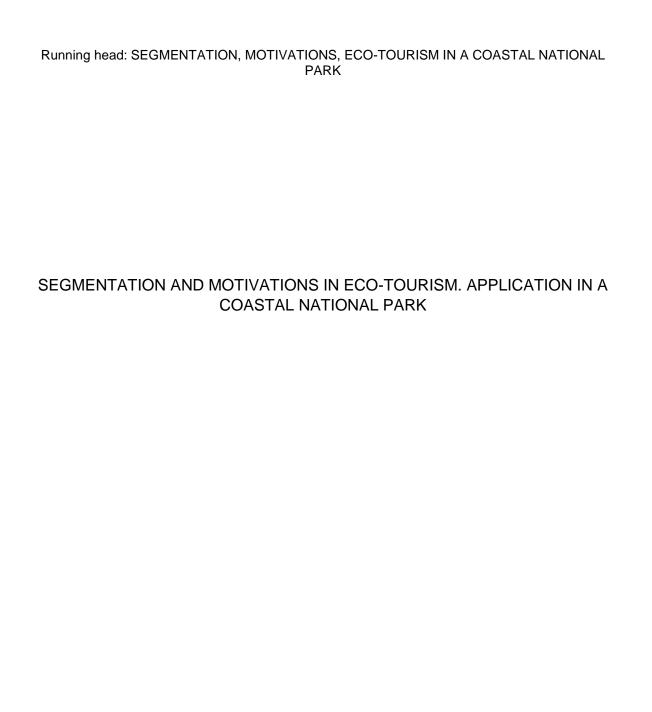The final publication is available at

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Additional Information

SEGMENTATION AND MOTIVATIONS IN ECO-TOURISM. APPLICATION IN A COASTAL NATIONAL PARK

ABSTRACT:

In recent years there has been a growing interest of tourists in the environment and the enjoyment of the natural environment, which causes ecotourism to grow in a greater proportion than conventional tourism. This study is designed to analyze the motivations and segmentation of the demand in ecotourism taking as reference the functional theory. The empirical analysis was conducted in the Machalilla National Park in Ecuador, which is a coastal protected area, where one of its main attractions is the sighting of humpback whales. The sample consists of 386 surveys, obtained in situ for convenience. For the analysis of the data, a factorial analysis and a non-hierarchical segmentation were performed. The results show that there are several motivational dimensions in ecotourism such as "Self-development", "Interpersonal relationships and Ego-defensive function", "Building personal relationships", "Escape", "Nature appreciation" and "Reward". In addition, the characteristics of the different segments are established according to their motivations, which is why three segments of ecotourists have been found, the "Nature", "Reward and Escape" and "Multiple motives". The present investigation will serve so that public institutions and private companies can improve the tourist offer, benefit the destination and develop a more efficient Marketing planning.

Keywords:

1. INTRODUCTION

Ecotourism has become one of the fastest growing sectors in the tourism industry (Das & Chatterjee, 2015). This type of tourism has an annual growth of 5% worldwide and grows three times faster than tourism in general (Hultman et al., 2015). Some authors even mention that their growth rate varies between 7% and 30% (Fennell, 2014). Also, by the year 2024, the number of travelers taking ecotourism vacations is expected to grow three times faster than those who choose the main trips, and it is projected to constitute 5% of the holiday travelers worldwide (Starmer -Smith, 2004). These developments seem to reflect a growing trend towards "environmentalism" or an "environmental movement" (Fennell, 2014, Lee, 1997).

On the other hand, the desire of tourists for greater individuality, activity and flexibility when planning a vacation has increased the demand for ecotourism products (Saarinen, 2005). In this sense, tourists are looking for significant experiences, such as getting in touch with local communities, learning about an ecosystem and participating in the conservation of natural resources (Balmford et al., 2009). In addition, ecotourism areas have become important destinations, due to their efficiency in protecting the environment, education, recreation and job creation (Tao & Wall, 2009). In this sense, tourists are more aware of the environment and have stronger motivations to attend attractions and activities due to content related to the environment (Luo & Deng, 2008). On the other hand, the planning of the tourist destination will have to begin with an investigation of the tourist behavior (Bansal & Eiselt, 2004). Understanding the reasons for choosing a destination and desires to experience something are important primary information that allow improving the quality of visitors' experiences and their satisfaction (Chan & Baum, 2005). However, not meeting the needs of the ecotourist could also affect the likelihood that they will return to their destination and / or recommend others positively (Rivera & Croes 2010). On the other hand, market segmentation has been widely used to identify the niche markets of different tourism products and services (Park & Yoon, 2009). In relation to ecotourism, segmentation of visitors based on motivations has been the most reliable method when trying to understand the different groups in trips to protected areas (Poria et al., 2004, Weaver & Lawton, 2002).

Motivation is defined by many researchers as the psychological needs and desires that provoke, direct and integrate behavior and activity (Pearce, 2013). It is the central factor in the decision-making process (Yolal et al., 2015). In this sense, tourists have different reasons to visit different attractions and destinations related to nature (Chikuta et al., 2017). Studying the motivations allows us to understand the choice, preferences and needs of a traveler (Bansal & Eiselt, 2004). Also, motivational factors are defined as psychological needs that play an important role in making a person feel a psychological imbalance that can be corrected through a travel experience (Crompton, 1979, Kim et al., 2000).

Kruger and Saayman (2010) found six reasons to travel for tourists visiting the Tsitsikamma National Park, located in the Indian Ocean in South Africa, which were: search for knowledge, experience of

nature, photography, escape and relaxation, park attributes and nostalgia. On the other hand, Queiroz et al. (2014) in Azores, Portugal, showed that the majority of tourists said they were attracted to the islands due to their "natural values", in relation to the landscape, biodiversity and geodiversity. The most practiced activities were whale watching, mountaineering / hiking, diving and other sports. On the other hand, Fonseca et al. (2014) in a study in the Natural Park of the island Pico in the Azores archipelago in Portugal, establish that tourists choose the holiday destination mainly for its landscape and natural values, maritime tourism activities and peculiarity. As for recreational activities during their stay, tourists mainly highlight: visits to museums, events, other cultural events, walking trails, bathing, mountain climbing and whale watching. In contrast, Rid et al. (2014) in a study in The Gambia, found the following motivational factors: First factor called "heritage and nature" motivational dimension that incorporates the items on the importance of natural and rural tourism, experience in national parks, and historical and cultural attractions. The second factor called "authentic rural experience" summarizes six attributes that reflect a great interest in the real social life of rural communities in the Gambia, including: rural agricultural production, sharing interesting Gambian experiences, staying among the rural population, strong feelings of experience, real dishes / meals from Gambia and the rural lifestyle of the Gambians. The third factor was called "learning", and combines four items that indicate interest in learning traditional dances, learning local languages, interest in myths and legends and interests in local handicrafts The fourth factor identified the "sun and beach" motivational dimension.

On the other hand, the theory used in this study is functional theory, introduced by Katz (1960), who proposed that there are four motivational functions: a knowledge function, a function of expressive value, a self-defense function and a function utilitarian. From the literature of sociology, Smith et al. (1956) added another function, a function of social adjustment. The knowledge function focuses on the desire to obtain information to understand the world. The ego-defensive function emphasizes the reduction of social pressure by participating in an event. The utilitarian function emphasizes the minimization of punishment and the maximization of rewards. Finally, the function of social adjustment describes a norm acceptable to other associates, including relatives, relatives and friends (Lee et al., 2014).

In relation to the segmentation of the demand, Dolnicar (2002) mentions that this is based on the notion that the market is composed of subgroups of people with different and specific needs and preferences. In addition, it identifies itself as the decisive criterion to determine which group of clients should be targeted and how to use resources more efficiently, as well as how to efficiently evaluate different competitive strategies (Ho et al., 2012). Some empirical research has considered motivation as an element of market segmentation research in tourism (eg, Bieger & Laesser, 2002; Ryan & Glendon, 1998). Therefore, the segmentation of tourists according to their motivations allows tourism providers to create products and services preferred and valued by the markets of the destination (Lee et al., 2004). In this sense, the segmentation strategy can be used to identify specific tourist groups, provide better tourism packages, increase benefits to destinations and develop a tourism policy or more efficient marketing planning (Nickerson et al., 2016).

Priskin (2003) in the Central Coast Region of Western Australia, concludes that tourists based on nature are not a homogeneous group and that the characteristics of the group vary according to the season. Visitors in the summer were occasional coastal tourists. Its activities were spatially concentrated along the coast and included various forms of recreation. In the spring, visitors were tourists of wild flowers that traveled predominantly in areas of the interior of the country and their activities were focused more on the appreciation of nature. In contrast, Kim and Weiler (2013) make a segmentation based on the environmental attitude in the coastal area of Charmouth, in the southwest of England, finding two different types of segments "high environmental attitude" versus "low environmental attitude", which are significantly different in terms of gender, age, and usage patterns of on-site interpretation. On the other hand, Rid et al. (2014) performs a segmentation based on motivations, finding four groups: The first group formed by the "Multi-experiences & beach seekers", wanted various types of motivations, including sun and beach and nature activities such as bird watching and fishing. The second group formed by the "Multi-experiences seekers", who do not show attraction in sun and beach activities, but value experiences as authentic rural experiences, heritage / nature or learning local dances and languages, and bird watching and fishing . The third group formed by the "Heritage & nature seekers", who show no interest in the sun and the beach but show a high motivation to experience natural and cultural sites such as experiencing wildlife, forests

and landscapes, as well as culture and the traditions. The fourth group is formed by the "Sun & beach seekers", which can be characterized mainly by the sun and beach motif. In another study, Cordente-Rodríguez et al. (2014) analyzed the visitors in the protected area of the Serranía Alta de Cuenca in Spain. They found two groups: "Nature", who present a unique motivation to enjoy nature and resources. "Multiple motive", who have a combination of several reasons, such as enjoying nature and gastronomy, and visiting villages to learn about cultures and traditions.

It is through demand segmentation that important advantages in ecotourism are obtained, because operators around the world experience clear pressures to ensure that consumers receive the experiences they anticipate (Zografos & Allcroft, 2007). However, the lack of information about the different ecotourism segments hinders efficiency in specifically targeted promotion programs (Park & Yoon, 2009). Despite this, segmentation has been used by managers to market a destination effectively (Pike, 2005). However, there are few demand segmentation studies that tend to find different ecotourism segments (Weaver & Lawton, 2002).

In this context the Machalilla National Park is a protected natural area located in the coastal area of the province of Manabí in Ecuador, which is visited by national and international tourists with land and marine territory, where its main attractions are the sighting of humpback whales, visit to beaches and islands, observation of marine and terrestrial fauna, and visit to communities. The objective of this article is to present an analysis of the segmentation of the demand for motivations in ecotourism to provide information to tourism marketers that will help them to plan efficient marketing strategies.

In addition, the study contributes to the debate on demand in ecotourism. The hypotheses to be examined in this study would be the following:

(H1): Segments with higher levels of motivation have higher levels of satisfaction by aspect.

(H2): The segments with higher levels of motivation have higher levels of general satisfaction, of intentions to return, to recommend and give positive comments about the destination.

The present article is distributed, after the introduction, of a second section where it is described where the study area is described, a third section that shows the methodology of the research, a

fourth section with the results. The manuscript ends with a sixth section with the discussion, conclusions, limitations and future lines of research.

2. ÁREA DE ESTUDIO

The Machalilla National Park is located south of the province of Manabí in Ecuador. It is the fifth most visited protected area in the country. In the year of 1979 it was declared a protected area with the purpose of protecting this coastal marine ecosystem with dry and semi-dry forests. Its name comes from the Machalilla culture, a pro-Hispanic culture that inhabited this area for 800 years (1800 BC - 1000 BC). There are also archaeological sites of various cultures from Valdivia to the Manteño-Huancavilca culture. Its extension is 41,754 terrestrial hectares and 14,430 marine hectares. The marine area of the Park was declared a Ramsar site in 1990. The marine area has bays and inlets with calm waters and a continental shelf from where the islands and islets that characterize this important protected area of Ecuador emerge. The land area of the park has five hydrographic basins: those of the Cantagallo, Jipijapa, Salaite, Buena Vista and Ayampe rivers.

The main tourist attractions of the Park are: Observation of humpback whales, from June to September you can see the mammals that travel from the cold waters of the Antarctic to reach the warm waters of the Ecuadorian coast to reproduce. The marine area known as the Cantagallo bass, which lies between the mainland and the Isla de la Plata, is one of its favorite areas; therefore, here it is more frequent to observe the humpback whales. Playa los Friles, is considered one of the beaches that preserves its natural characteristics. Isla de la Plata, located 40 kilometers from Puerto Lopez, is where you can see birds and you can see the cliffs of the island. On this site you can practice surface diving to contemplate marine biodiversity. In the Agua Blanca Commune you can find a museum with pieces of the Manteño-Huancavilca culture and a large pool of sulphurous waters to take a refreshing swim. (Figure 1)

INSERT FIGURE 1

In the Machalilla park you can find the four species of marine turtles registered in Ecuador: hawksbill, green, goliath and leatherback. In the submarine environments you can see rocky reefs and coral communities, especially around the Isla de la Plata. In this protected area there are lobsters, sea

cucumbers, snails like the two pututos and the spondylus or spiny oyster. There are 143 species of fish: sierra, grouper, white huayaipe, feather duster, several species of shark (including the whale) and the striking butterfly fish and parrotfish. A species of these waters is the giant blanket, this being a relative fish of sharks that can reach a size of eight meters.

3. METHODOLOGY

The sample was obtained from national and foreign tourists who visited the Machalilla National Park. The distribution of the surveys was carried out according to convenience. The questionnaires were taken between August and September of 2018. The surveys were conducted by students trained by the authors of this study. The variability of the population is estimated at 50% (p = q = 0.5). 400 questionnaires were applied, of which 386 were valid, this being the sample size, with a margin of error of +/- 5% and a confidence level of 95% (Table 1)

INSERT TABLE 1

The questionnaire consisted of Likert questions of 5 points, where 1 was little and 5 a lot. The measurement elements developed for this study were based on several previous studies of motivations in tourism (Crompton, 1979, Fodness, 1994, Weaver & Lawton, 2002, Galley & Clifton, 2004, Lau & McKercher, 2004, McGehee & Kim, 2004; Jang & Wu, 2006; Lee et al., 2014). The Combrach Alpha index reached the value of 0.96, which indicates a meritorious index on the scale.

The data were analyzed in two stages: First, a factor analysis was carried out that helped to identify the constructs that underlie the variables, providing a global view of the most substantive motivations using such constructs. Factor analysis has been widely used in visitor segmentation research (Formica & Uysal, 1998, Kastenholz, 1999, Johns & Gyimothy, 2002). Specifically, a Varimax rotation was used to facilitate the interpretation of the data. The kaiser criterion was used to find the number of factors, where only the factors with eigenvalues greater than 1 were used. The KMO index (Kaiser-Meyer-Olkin) and the Bartlett sphericity test were used to know if it was appropriate to perform the factorial analysis. The Alpha index of Cronbach was used to measure the reliability of the scale of measurement.

In the second stage, the K-means grouping method was implemented, which is commonly used in tourism segmentation research (for example, Formica & Uysal, 1998, Kau & Lee, 1999). The

differences between the groups in relation to the motivations were evaluated by means of adequate analyzes including ANOVA, and the Brown-Forsythe and Welch statistics. For the post hoc analysis the Games-Howell test was used. Finally, the Chi-Square analysis was used to explore the differences between the groups in terms of satisfaction variables, intentions to return and recommend the destination. The data collected were organized, tabulated and analyzed statistically using the SPSS 22.0 program for Windows.

4. RESULTS

4.1. Factorial analysis

A factorial analysis has been carried out that has allowed to extract six motivational dimensions. The analysis of the main component has been used as a technique used for data reduction. The Varimax rotation method was used to obtain a clearer interpretation of the factors, so that each one had loads of very high or low factors. For the number of factors that were used in the Kaiser criterion where factors that have eigenvalues greater than 1.00 are taken into account. Six factors are part of the solution and represent 68.70% of the total variance. The KMO index (Kaiser-Meyer-Olkin) is 0.893, so it is excellent to perform factor analysis. In addition, Barlett's sphericity test is significant <0.05, so the factorial analysis must be applied. The alpha index of general cronbach was 0.95, so the internal consistency of the items analyzed is high. Results are shown in table 2.

INSERT TABLE 2

According to the results of Table 2, the first factor was called "Self-development" and is the factor with the greatest explanatory capacity (42.07%) of the total variance. This first dimension is related to the motivations: To understand more about myself, to know what I am capable of, to have a sense of self-confidence, to be independent, to have the opportunity to know myself better, to obtain a new perspective on life, to think about the good times I have had in the past, to feel that I belong, for harmony and inner peace, and to gain a sense of self-achievement. In addition, it is related to the Utilitarian function according to functional theory. The second factor was called "Interpersonal relationships and Ego-defensive funtion" and meets 7.98% of the total variance. This second dimension is related to: family and friends who live in other places, strengthen the relationship with

my family, join the social discussion, reflect on the memories of the past, follow current events and remember the times of the parents. In addition, it is related to the Social-adjustive and value function and to the Ego-defensive function. The third factor was called "Building personal relationships", and includes 6.74% of the total variance. This third dimension is related to visitors motivated by meeting new people, by knowing the inhabitants of the place, by meeting people with similar interests, In addition, it is related to Knowledge function according to functional theory, the fourth factor was called "Escape", and it comprises 4.89% of the total variance. This fourth dimension is related to visitors motivated by being away from daily stress, by escaping from routine, to be away from crowds and to avoid interpersonal stress. Also, it is related to the Utilitarian function according to the functional theory.

The fifth factor was called "Nature appreciation", and comprises 3.91% of the total variance. This sixth dimension is related to visitors motivated by: being close to nature, appreciating nature better, experiencing new things. related to Knowledge function according to functional theory.

The sixth factor is called "Reward", and comprises 3.58% of the total variance. This fifth dimension is related to visitors motivated by having fun and getting good memories. It is also related to the Utilitarian function.

Therefore, there are six motivational dimensions that represent the five functions described by functional theory (Katz, 1960). These results are similar to those of (Lee et al., 2014) who obtained seven motivational factors in their study: Self-development, Interpersonal relationships, Reward, Building personal relationships, Escape, Ego-defensive function, Nature appreciation.

4.2. Segmentation of the demand

To make a segmentation of the demand, an analysis of non-hierarchical K-means clusters has been carried out. Under the criterion of maximizing the variance between typologies and minimizing the variance within each typology, the best solution that meets the criteria is that which establishes three conglomerates. The characterization of the clusters from the means of the motivation variables appears in table 3. The F statistic of the ANOVA allows us to contrast that the averages compared are not equal, but it does not allow us to specify where the detected differences are. To know which

mean differs from another, the contrast called multiple post hoc comparisons has been used. In order

to make these comparisons, it can not be assumed that the population variances are equal. The F

statistic of the ANOVA is based on the fulfillment of the homocedasticity assumption. Given that it is

not possible to assume that the population variances are equal, because the critical level associated

with the Levene statistic is less than 0.05, the Brown-Forsythe and Welch statistics are used as an

alternative to the ANOVA F statistic. Since the associated critical level in both statistics is less than

0.05, we can reject the hypothesis of equality of means and conclude that the averages of the

motivational variables of the three comparative groups are not equal. To be able to contrast the

significant differences between the different means, the Games-Howell test has been applied.

INSERT TABLE 3

As shown in Table 3, the first group is formed by visitors who have medium-high motivations

in aspects related to nature and fun, which is why these visitors have been called "Nature". At the

same time, this group is related to the nature dimension. The second group are visitors who have

high motivations related to nature, experience with new things, get good memories, have fun, escape

from routine and be away from daily stress, which is why this group has been called "Reward and

Escape". Also, this second group is related to the nature, reward and escape dimensions. The third

group are visitors who have high motivation in all motivational variables, which is why this group has

been called the "Multiple Motives". Also, this first group is related to the 6 dimensions found

previously.

4.3. Satisfaction variables in the three segments

For the relationship of the three segments with the satisfaction variables, a Chi-square

significance contrast was made, and in this way, finding the variables that are really relevant for the

analysis. A Likert scale of 5 points was used, being 1 little and 5 a lot. The results are shown in table

4.

INSERT TABLE 4

According to Table 4, the first "Nature" segment does not present variables with high

satisfaction, being the tranquility, and the conservation of the natural and cultural heritage the best

scored. So it is the segment that presents the lowest levels of satisfaction in relation to others. The second segment "Reward and Escape" presents high levels of satisfaction in the variables: tranquility, the conservation of natural and cultural heritage, and the humane treatment received. In contrast, the third segment "Multiple Motives" presents higher levels of satisfaction in the variables: tranquility, the conservation of natural and cultural heritage, the humane treatment received, road signs, parking and gastronomic quality. In addition, this segment has the highest level of satisfaction in relation to others. Therefore, these results allow to test the hypothesis proposed (H1): The segments with higher levels of motivation, have higher levels of satisfaction by aspect.

4.4 Overall satisfaction and intentions to return and recommend

For the relationship of the three segments with the overall satisfaction, and the intentions of returning and recommending, a Chi-square significance contrast was made to find the variables that are really relevant for the analysis. A Likert scale of 5 points was used, being 1 little and 5 a lot. The results are shown in table 5.

INSERT TABLE 5

As shown in Table 5, the "Mutiples Motives" segment has the highest levels of general satisfaction, intentions to return, intentions to recommend and to say positive things about the destination in relation to others. So these results allow testing the hypothesis (H2): segments with higher levels of motivation, have higher levels of overall satisfaction, intentions to return, recommend and give positive comments about the destination.

5. DISCUSSION AND CONCLUSIONS

The segmentation of the demand in ecotourism allows to find segments of tourists differentiated by their motivations, providing distinctive characteristics among them. So it is a tool that serves to make marketing planning more efficient, improves the supply of tourism products and increases the levels of satisfaction, loyalty, recommend and say positive things of a destination.

In ecotourism there are several motivational dimensions. The main motivational dimension is "Self-development", which has been understood and defined as the search for personal growth and / or the desire to interact with a host culture and its community (Crompton, 1979; Dann, 1981; Calantone

& Johar , 1984; Woodside & Jacobs, 1985). The second dimension is "Interpersonal relationships and Ego-defensive function", related to visitors motivated by strengthening relationships with family members and following current events. The third dimension is "Building personal relationships", related to a visitor motivated to behave according to socially desired problems (McGehee & Kim, 2004). The fourth dimension is "Escape", related to a visitor motivated by escape from routine (Crompton 1979, Lounsbury & Hoopes 1985, Woodside.Jacobs 1985). While the fifth dimension is "Nature appreciation", related to a visitor motivated by appreciating nature. The sixth dimension is "Reward", related to a motivated visitor to reward themselves and take a break (Broad & Jenkins, 2008). These findings are similar to those of (Lee et al., 2014).

In relation to the segmentation of demand, the groups identified in this study revealed strong similarities to two segments found in the study by Rid et al. (2014). The segment "Multiple motives" found in this research, with high motivation in all the motivational variables, is similar to the segment called the "Multi-experiences seekers", who do not show attraction in the activities of sun and beach, but they value the other activities such as authentic rural experiences, heritage / nature or learning local dances and languages, and bird watching and fishing. In addition, it is similar to the segment called "Multiple motive" found in the study by Cordente-Rodríguez et al. (2014), who show high motivations in all the variables. On the other hand, the segment "Nature" of the present study, which have high motivations in aspects related to nature, is similar to the segment called "Heritage & nature seekers", found in the study by Rid et al. (2014), who only show a high motivation to experience natural and cultural sites, such as wildlife, forests and landscapes, as well as culture and traditions. In addition, it is similar to the "Nature" segment found in the studies by Cordente-Rodríguez et al. (2014), who show motivations for nature. However, in this study we have found a third segment that differs from the related studies. This third segment has been called "Reward and escape", so it is recommended to adapt an offer of products or services related to fun, explore the unknown and escape from routine, this being the contribution of this research to literature existing.

In conclusion, there are three groups of visitors in ecotourism: the "Nature" that have medium-high motivations in aspects related to nature and fun. The "Reward and Escape" are visitors who have high motivations related to nature, experience with new things, get good memories, have fun, escape

routine and be away from daily stress. The "Multiple Motives", which are visitors who have high motivation in all motivational variables.

In relation to the satisfaction by aspect, the "Nature" does not present variables with high satisfaction. The "Reward and Escape" presents high levels of satisfaction in the variables: tranquility, the conservation of the natural and cultural heritage, and the humane treatment received. On the other hand, the "Multiple Motives" present higher levels of satisfaction in the variables: tranquility, the conservation of the natural and cultural heritage, the humane treatment received, road signs, parking and gastronomic quality. So the segments with higher levels of motivation, have higher levels of satisfaction by aspect. In addition, the "Mutiples Motives" segment has the highest levels of overall satisfaction, intentions to return, intentions to recommend and to give positive comments about the destination in relation to others. So the segments with higher levels of motivation, have higher levels of general satisfaction, intentions to return, recommend and to give positive comments about the destination.

Among the practical implications are that the findings of this study help tourism managers to establish marketing strategies and thus improve the service according to the main motivations of each segment, with the aim of increasing the drive to visit these protected areas. In addition, to be able to adapt the offer according to the motivations in order to increase the level of satisfaction, the interest to return, to recommend and to give positive comments about the destination. Finally, among the limitations of the study is the temporality with which it was carried out. As a future line of research, it is recommended to carry out a study of the offer of products that adapt to the proposed segmentation.

References

Figure 1. Geographic location of Machalilla National Park, Ecuador

Table 1. Research Overview

Population	Foreign tourists
Geographical area	Machalilla National Park (Ecuador)
Period of implementation	August to September 2018

Procedure	Sampling for convenience
Level of confidence	95%
Error Margin	+/- 5%
Valid Questionnaires	386

Table 2. Factorial analysis

Factores	Loading	Eigenvalue	% variance explained	Cronbach's alpha
Self-development		12.20	42.07	0.94

To understand more about myself	.786		
To know what I am capable of	.786		
To have a sense of self-confidence	.773		
To be independent	.723		
To have the opportunity to know me better	.719		
To gain a new perspective on life	.666		
To think about good times I have had in the past	.653		
To feel that I belong	.594		
To feel inner harmony/peace	.563		
To gain a sense of self-achievement	.513		
Interpersonal relationships and Ego-defensive funtion		2.31	7.98	0.87
To connect with family and friends who live elsewhere	.703		
To strengthen relationships with my family	.695		
To join the social discussion	.627		
To reflect on past memories	.622		
To follow current events	.605		
To reminisce about my parents' time	.603		
Building personal relationships		1.42	6.74	0.86
To meet new people	.813		
To know the locals	.750		
To meet people with similar interests	.748		
To experience different cultures	.659		
Escape		1.95	4.89	0.86
To get away from daily stress	.869		
To escape from routine	.822		
To get away from crowds of people	.741		
To avoid interpersonal stress	.709		
Nature appreciation		1.13	3.91	0.79
To be close to nature	.904		
To get a better appreciation of nature	.869		
To experience new things	.558		
Reward		1.04	3.58	0.60
To have fun	.759		
To have fond memories	.748		
Total variance extracted			69.18	
Cronbach's Alpha (Total)				0.95

Source: Authors' elaboration

Tabla 3. Characterization of the clusters based on the motivational variables

Variables	Cluster 1	Cluster 2	Cluster 3	Post Hoc
To be close to nature	3.8	4.3	4.5	All except 2-3
To get a better appreciation of nature	3.8	4.3	4.6	All
To experience new things	3.9	4.3	4.6	All
To have fond memories	3.8	4.3	4.5	All except 2-3
To have fun	4.2	4.5	4.7	All except 2-3
To gain a sense of self-achievement	2.3	3.4	4.4	All
To experience different cultures	2.9	3.8	4.6	All
To meet new people	2.5	3.6	4.5	All
To meet people with similar interests	2.2	3.3	4.3	All
To meet locals	2.3	3.4	4.4	All
To have the opportunity to know me better	1.8	3.5	4.4	All
To understand more about myself	1.7	3.3	4.5	All
To gain a new perspective on life	2	3.4	4.6	All
To think about the good times I have had in the past	1.7	3.2	4.5	All
To know what I am capable of	1.6	3.1	4.5	All
To have a sense of self-confidence	1.6	3.3	4.5	All
To feel inner harmony/peace	2.6	4	4.7	All
To be independent	1.8	3.2	4.3	All
To reminisce about parents' time	1.5	2.8	4.3	All
To contact family and friends who live elsewhere	2.2	2.9	4.4	All
To feel that I belong	1.4	2.9	4.4	All
To strengthen the relationship with my family	2.2	3.5	4.6	All
To reflect on past memories	1.6	2.8	4.5	All
To avoid interpersonal stress	2.7	3.9	4.8	All
To be away from the crowds of people	2.9	3.8	4.5	All
To be away from daily stress	3.5	4.2	4.7	All
To escape from routine	3.8	4.3	4.7	All
To join the social discussion	1.8	3	4.1	All
To follow current events	1.7	3.1	4.3	All

Source: Authors' elaboration

Tabla 4. Segments relationship with satisfaction by aspect

Variables	Cluster 1	Cluster 2	Cluster 3	Chi squared
Accessibility and infrastructure	3.35	3.39	3.84	20.187, p<0.05
Traffic signs	3.09	3.42	4.09	53.860, p<0.05
Parking	2.68	3.22	4.05	52.391, p<0.05
Accommodation	3.21	3.66	3.97	33.088, p<0.05
Prices	3.45	3.44	3.89	24.377, p<0.05

Guided tours	2.75	2.94	3.26	20.443, p<0.05
How locals treat tourists	3.63	3.94	4.21	22.652, p<0.05
Calmness	3.86	4.15	4.49	28.866, p<0.05
Conservation of natural and cultural heritage	3.76	3.98	4.37	27.543, p<0.05
Sport facilities	2.88	3.26	3.6	29.732, p<0.05
Gastronomy	3.34	3.75	4.02	26.970, p<0.05
Restaurant facilities/equipment	3.11	3.47	3.94	41.846, p<0.05
Tourist information and signs	3.08	3.47	3.96	44.118, p<0.05
Complimentary leisure activities	2.92	3.42	3.73	37.366, p<0.05

Table 5. Segments relationship with overall satisfaction and intentions to return and recommend

Variables	Cluster 1	Cluster 2	Cluster 3	Chi squared
Overall satisfaction	4.02	4.11	4.46	25.669, p<0.05
I have the intention to revisit this Coastal National Park	3.81	4.34	4.61	37.126. p<0.05
I have the intention to recommend this destination	4.22	4.47	4.68	28.122, p<0.05
When I talk about this destination, I will give positive comments	4.31	4.57	4.7	18.665, p<0.05

Highlights

The Machalilla National Park is a destination with coastal marine characteristics.

This study analyze the motivations and segmentation of demand in a national park.

In ecotourism there are several motivational dimensions in a coastal national park.

Segments found: Nature, Reward & Escape, and Multiple motives.

This study will contribute to improve the offer based on the different clusters found.