

Article

Market Segmentation by Motivations in Ecotourism: Application in the Posets-Maladeta Natural Park, Spain

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Abstract: Environmental awareness and carrying out tourism activities in nature are increasing today. Therefore, the present study has been conducted in a natural park, and its objectives are the following: (a) identify the motivation of ecotourism; (b) determine the segmentation by motivations of ecotourism; and (c) establish the relationship between the segments and variables of satisfaction and loyalty such as return, recommendation and saying positive things about the destination. The study was carried out in the Posets-Maladeta Natural Park located in Spain, in the center of the Pyrenees mountain range. The sample consisted of 341 surveys obtained in situ. To analyze the data, exploratory factor analysis, confirmatory factor analysis and nonhierarchical segmentation of K-means were used. The results in ecotourism applied to a natural park show seven motivational dimensions: self-development, interpersonal relations, construction of personal relations, escape, reward, appreciation of nature and ego defense function. The results also reveal the existence of three segments of ecotourists: “reward and escape”, “nature” and “multiple motives”. The “reward and escape” segment shows the highest score in satisfaction and loyalty variables. The results will serve as development guides for the administrators of the natural parks and in the elaboration of ecotourism products according to the demand found.

Keywords: motivation; demand segmentation; protected area; satisfaction; Pyrenees



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1. Introduction

Ecotourism is one of the tourism sectors that have grown the most compared to other types of tourism [1]. It grows 5% annually worldwide, and its growth is 3-fold faster than tourism in general [2]. In addition, the flow of tourists visiting protected areas has grown significantly in the last 40 years [3]. On the other hand, the environment and nature are the main motivations for traveling to a destination full of attractions ideal for ecotourism [4,5]. Likewise, visitors are motivated by novel experiences, such as being with local communities, learning about landscapes or ecosystems and participating in the conservation of natural wealth [6]. This means that tourists are more aware of environmental protection, and hence their reasons to enjoy the related activities increase [5]. Given their effectiveness in protecting the environment, and in promoting education along with the enjoyment of nature and job creation, protected natural spaces are increasingly visited [7]. Ecotourism, which is a type of tourism based on visits to nature, has as its main motivation the appreciation of nature in protected areas. It also includes the appreciation of traditional cultures in protected areas and the appreciation of pedagogical and interpretive aspects based on nature [8]. In this sense, protected areas are very important destinations for ecotourism due to their almost virgin environments and often unique natural forms. In countries with little economic development, the creation of natural parks is a way to boost tourism [9].

Therefore, if environmental awareness increases, the ecological conservation of protected areas will increase, thus contributing to the long-term development of ecotourism [10].

On the other hand, motivation is a determining factor in travel behavior that influences many reasons for tourism, especially tourists' motivations to travel and their overall satisfaction [11]. Visitors' motivations and preferences for a given destination may vary [12]. Therefore, ecotourists have motivations, profiles and behavioral characteristics that differ from those other types of tourists [13,14].

Demand segmentation has long been studied [15–20]. This instrument has been used to recognize the different market segments in tourism [21] and has become an important strategy recognized by tourism research [22–24]. Given this importance, several academics have studied the segmentation of markets over time [15–20] and have confirmed that there are many advantages to it.

Several research studies have used motivational variables as an important criterion in the segmentation of tourists [12,25–29]. Likewise, motivational segmentation has been the most reliable method that helps us understand the different groups of visitors that come to protected areas [14,30]. Tour operators are under pressure to guarantee that consumers' requested needs are satisfied [31]. However, the limited information available about the different demand groups in ecotourism makes it difficult to implement specific promotion programs [21]. Demand segmentation is an important tool for helping managers identify critical visitor motivation elements; knowing the right reporting criteria and targeting the right customer segments improves efficiency [32]. However, it is worth highlighting that few studies have investigated motivational demand segmentation in natural protected areas. They are scarce in Europe and in Spain.

Within this order of ideas, the Posets-Maladeta Natural Park (Spain) is a mountainous complex located in the heart of the Pyrenees, which is home to some of the highest peaks in the Iberian Peninsula. It is one of the most representative areas of the Pyrenean high mountains, with a great ecological, landscape and natural diversity. In this sense, ecotourism is important in protected areas; therefore, the characteristics that differentiate the different segments found in natural parks should be known.

Currently, the literature on the motivations and segmentation of demand for ecotourism applied in natural parks is still scarce. Therefore, the present study has been conducted in a natural park, and its objectives are the following: (a) identify the motivation of ecotourism; (b) determine the segmentation by motivations of ecotourism; and (c) establish the relationship between the segments and variables of satisfaction and loyalty such as return, recommendation and saying positive things about the destination.

This study will contribute to the scientific literature by finding the motivations of tourists in natural parks. In addition, this study will contribute to finding the segments of tourists in natural parks, including the segment with the highest satisfaction and loyalty when visiting natural parks. These findings of the motivations and segmentation of demand are not yet fully defined in the existing literature. This will also help institutions related to tourism to improve services in natural parks according to the motivations of the different segments found, benefiting ecotourists, natural parks and the community.

2. Literature Review

2.1. Motivations in Ecotourism

Motivation, which visitors possess internally and which allows them to achieve what they want, is part of the needs studied by psychology [4]. Motivation also causes visitors to have a psychological imbalance that can be improved through the experience of traveling to a destination [33,34]. Thus motivations encourage, drive and integrate activity and behavior [35]. They also establish a group of needs that intervene to make people participate in tourist activity [36]. Therefore, motivations are the central factor in the decision-making process [37]. The study of motivations also provides information allowing one to know travelers' needs, preferences and choices [38].

Visitors have different reasons to be interested in destinations and attractions related to nature [39]. Tourists are aware that they have motivations related to the experience of a destination [40]. Ecotourists identify themselves as “green tourists” who are motivated by nature tourism, dedicated to nature-based activities and motivated by the idea of protecting the environment [41].

The study on ecotourism and its motivations by Kruger and Saayman [42] found six motivations explaining why tourists visit national parks: experience nature, seek knowledge, escape and relax, take pictures, experience the attributes of the destination and nostalgia. The work by Panin and Mbrica [43] is very interesting. They discovered ecotourists’ motivations in the Republic of Serbia by grouping them into nature, social activities, cultural and educational activities and sports and health activities. They argued that the main ecotourism motivations are related to sports and recreation activities, improving health and hiking through observing forests and enjoying nature. Another noteworthy contribution is by Lee et al. [44], who studied tourists’ behavior in restored ecological parks located in South Korea. They revealed seven motivational dimensions: interpersonal relationships, reward, self-development, escape, ego-defensive function, building personal relationships and nature admiration. Another study, by Xu and Chan [45], found several motivational dimensions, namely relaxation and knowledge, self-enhancement, escapism from routine life, information and convenience, scenery of destination and fun activities. Iversen et al. [46] found five motivational factors: novelty, status, activity in nature, relaxation and social interaction.

Kamri and Radam [47] found four motivational dimensions: social trip, challenge excursion, getaway outing and nature tour. Jung et al. [48] conducted a study at the Kuang Si waterfall and Konglor cave and found four motivational dimensions: health, nature, cohesion and escape. Another study is that by Carvache-Franco et al. [49], who found six motivational dimensions in ecotourism: escape, building personal relationships, interpersonal relationships and ego-defensive function, nature appreciation, reward and self-development. Chow et al. [50] conducted a study in the Ramsar wetland. They found that the main tourism motivations were as follows: escape from daily life, relaxation and physical and mental health. Choi et al. [51], in a study conducted in Bali, Indonesia, found three motivational dimensions: healing (health and escape), nature and cohesion. In contrast, Carvache-Franco et al. [52], in a study conducted in the Arenal Volcano National Park and Caño Negro National Wildlife Refuge, found six motivational dimensions: interpersonal relationships and ego-defensive function, self-development, nature, reward, building personal relationships and escape. Previous studies of motivations in ecotourism are summarized in Table 1.

Table 1. Motivations in ecotourism from previous studies.

| Authors | Destination | Motivations in Ecotourism |
|---|--|---|
| Kruger, M.; Saayman, M. 2010 | Kruger and Tsitsikamma National Parks (South Africa) | Seek knowledge, experience nature, take pictures, escape and relax, experience the park’s attributes and nostalgia |
| Panin, B.; Mbrica, A. 2014 | Serbia | Nature, cultural and educational activities, social activities, sports and health activities |
| Lee, S.; Lee, S.; Lee, G. 2014 | Ollegil in Jeju (South Korea) | Interpersonal relationships, self-development, reward, escape, building personal relationships, ego-defensive function, nature admiration |
| Xu, J.B.; Chan, S. 2016 | Sai Kung Bus Terminus and Central Pier (Hong Kong) | Self-enhancement, relaxation and knowledge, escapism from routine life, scenery of destination, information and convenience, various fun activities |
| Iversen, N.M.; Hem, L.E.; Mehmetoglu, M. 2016 | Nature-based destination fjord (Norway) | Status, novelty, relaxation, activity in nature, social interaction |

Table 1. Cont.

| Authors | Destination | Motivations in Ecotourism |
|---|---|---|
| Kamri, T.; Radam, A. 2018 | Bako National Park (Malasia) | Challenge excursion, social trip, nature tour, getaway outing |
| Jeong, Y.; Zielinski, S.; Chang, J.S.; Kim, S.I. 2018 | Kuang Si waterfall and Konglor cave, Laos (Southeast Asia) | Health, nature, cohesion, escape |
| Carvache-Franco, M.; Segarra-Oña, M.; Carrascosa-López, C.S. 2019 | Protected areas in Guayas (Ecuador) | Building personal relationships, escape, interpersonal relationships and ego-defensive function, nature appreciation, reward, self-development. |
| Chow, A.S.; Cheng, I.N.; Cheung, L.T. 2019 | The Mai Po Inner Deep Bay Ramsar Site (Hong Kong) | Relaxation, escape from daily life, physical and mental health |
| Choi, G.; Kim, J.; Sawitri, M.Y.; Lee, S.K. 2020 | Bali (Indonesia) | Healing (health and escape), nature, cohesion |
| Carvache-Franco, M.; Carvache-Franco, W.; Viquez-Paniagua, A.G.; Carvache-Franco, O.; Pérez-Orozco, A. 2021 | Arenal Volcano National Park and Caño Negro National Wildlife Refuge (Costa Rica) | Self-development, interpersonal relationships and ego-defensive function, nature, building personal relationships, reward, escape |

According to Table 1, there are several motivations in ecotourism; these include not only the motivation for nature, but also other motivations such as social interaction, escape, novelty and self-development. Previous findings show that the existing literature on natural parks is scarce. The variety of motivations found in ecotourism and the scarce literature on natural parks encourages our first research question: RQ1: What are the motivations in ecotourism?

2.2. Segmentation in Ecotourism

Market segmentation is related to the division of people into subgroups based on different needs and preferences [53]. For this reason, it has become the main tool for grouping, efficiently distributing resources and proposing various specific strategies [54]. In this way, it will be possible to identify specific tourist groups to serve them with adapted tourist packages and thus contribute to the development of destinations through the implementation of more efficient tourism policies.

There are several segmentation methods: demographic segmentation [55,56]; types of activities [57]; travel expenses [58]; benefits [27,59]; and motivations [60]. In this regard, motivation is the most used criterion in segmentation [61–63]. Therefore, segmenting tourists using motivational variables allows tourism-related institutions to create products and services valued by tourists [64].

Regarding the research carried out on segmentation in ecotourism in protected areas, Perera et al. [65] analyzed the reasons for visiting ecotourism sites in the forests of Sri Lanka. The academics found four types of tourists according to their motivations: hikers, ecotourists, selfish tourists and adventure tourists. Similarly, Cordente-Rodríguez et al. [66] analyzed visitors to the Serranía de Cuenca natural park and determined two segments: the nature segment, those who wanted to be close to nature, and the multiple reasons segment, those with a mixture of motives such as being close to nature, enjoying gastronomy and learning about the local culture. Sheena et al. [67] analyzed tourists from the Kinabalu National Park in Malaysia and identified three segments: “hard”, those who seek challenging activities and want to learn; “soft ecotourist”, those with low motivation for physical activities and who prefer hiking closer to nature; and “structured”, those analogous to the “soft ecotourist” segment with preferences for services and learning.

Neuts et al. [68] conducted a study in Shiretoko of Hokkaido, Japan. Their analysis showed four groups: bear watchers, primarily interested in watching bears and hiking

waterfalls; landscape lovers, whose main reason to visit is being delighted by the landscape; organized tourist segments, motivated by the beauty of the landscape and by whale watching; and active explorers, visitors who prefer to explore elements in the park's landscape and fauna, especially bears and birds. The study carried out in the Paklenica National Park in Croatia by Barić et al. [69] is interesting as they found three segments of visitors: naturalists, who especially prefer enjoying nature; escapists, who wish to escape from routine; and ecotourists, who seek to be close to nature, have educational interests and wish to learn from new experiences. Ecotourists also show motivations for the other study variables. Another study is that by Jeong et al. [48], conducted at the Kuang Si waterfall and Konglor cave. They found four segments: "nature-seeking tourists", "nature- and cohesion-seeking tourists", "passive nature-seeking tourists" and "want-it-all tourists".

Another study on ecotourism is that carried out by academics Taczanowska et al. [70] in Kasprowy Wierch in the Tatra National Park (Poland). They identified four groups of visitors: The first group was motivated by recreation and mountain observation and considered the other visiting motivations to be irrelevant. On the other hand, the second group (contemplative tourists and not consumers) was motivated by leisure, landscape and contact with nature. The third group was divided into two subgroups: subgroup 1, "occasional visitors", motivated by enjoying the scenery, in addition to using the cable car, and subgroup 2, "fitness visitors", motivated by physical activity and enjoying the surrounding landscapes. The fourth group was visitors who were motivated by nature together with the landscape.

Another study is that by Phan and Schott [71], which was conducted in protected areas of Vietnam; the authors found four segments: "enthusiasts", who were highly motivated by learning and experience; "passive visitors", with lower motivation due to learning and experience factors; active learners, who had a very high level of learning and a very low level of experience; and novelty seekers, visitors who had a high level of experience and a low level of learning.

On the other hand, Choi et al. [51], in a study carried out in Bali, Indonesia, identified four groups: general tourists, responsible tourists who seek nature, tourists who seek the cohesion of nature and responsible tourists who seek well-being. Instead, Baniya et al. [72], in a study carried out in the Gaurishankar Conservation Area in Nepal, found three segments: local art and culture enthusiasts, nature adventurers, and escapists. Constantin et al. [73], in the ecotourism destinations in Romania, found four segments: nature travelers, culture travelers, leisure travelers and eclectic travelers. Previous studies on segmentation in ecotourism are summarized below in Table 2.

Table 2. Segmentation in ecotourism of previous studies.

| Authors | Destinations | Ecotourism Segments |
|---|--|---|
| Perera, P.; Vlosky, R.P.; Wahala, S.B. 2012 | Forest-based attractions (Sri Lanka) | Ecotourists, picnickers, egoistic tourists, adventure tourists |
| Cordente-Rodríguez, M.; Mondéjar-Jiménez, J.A.; Villanueva-Álvarez, J.J. 2014 | Serranía alta de Cuenca (Spain) | Nature, multiple motives |
| Sheena, B.; Mariapan, M.; Aziz, A. 2015 | Kinabalu Park, Sabah (Malasia) | Hard, soft ecotourist, structured |
| Neuts, B.; Romão, J.; Nijkamp, P.; Shikida, A. 2016 | Hokkaido (Japan) | Bear watchers, landscape lovers, organized tourist groups, active explorers |
| Barić, D.; Anić, P.; Macias Bedoya, A. 2016 | Paklenica National Park (Croatia) | Naturalists, escapists, ecotourists |
| Jeong, Y.; Zielinski, S.; Chang, J.S.; Kim, S.I. 2018 | Kuang Si waterfall and Konglor cave, Laos (Southeast Asia) | Nature- and cohesion-seeking tourists, nature-seeking tourists, passive nature-seeking tourists, want-it-all tourists |

Table 2. Cont.

| Authors | Destinations | Ecotourism Segments |
|--|--|--|
| Taczanowska, K.; González, L.M.; García-Massó, X.; Zięba, A.; Brandenburg, C.; Muhar, A.; Toca-Herrera, J.L. 2019 | Kasprowy Wierch, Tatra National Park (Poland) | Group 1, recreation and admiration of mountain views; Group 2, contemplative and nonconsuming tourists; Group 3, occasional visitors, fitness visitors; Group 4, nature and landscape |
| Phan, T.T.L.; Schott, C. 2019. | Cat Tien National Park (South Vietnam) | Enthusiasts, passive visitors, active learners, novelty seekers |
| Choi, G.; Kim, J., Sawitri, M.Y.; Lee, S.K. 2020 | Bali (Indonesia) | General tourists, nature-seeking responsible tourists, nature-cohesion-seeking tourists, wellness-seeking responsible tourists |
| Baniya, R.; Thapa, B.; Paudyal, R.; Neupane, S.S. 2021 | Gaurishankar Conservation Area (Nepal) | Local art and culture enthusiasts, escapists, nature adventurers |
| Constantin, C.P.; Papuc-Damaşcan, V.; Blumer, A.; Albu, R.G.; Suci, T.; Candrea, A.N.; Ispas, A. 2021 | Ecotourism destinations (Romania) | Nature travelers, culture travelers, leisure travelers, eclectic travelers |

According to Table 2, there are variations in the segments found in previous studies, so there is a gap in the literature related to the existing segments in ecotourism. Several studies found the naturalist segment. However, the other segments that make up ecotourism have yet to be defined. Based on these arguments, the second and third research questions are proposed. RQ2: What are the segments by motivations of the demand in ecotourism? RQ3: What is the relationship between the segmentation of demand and satisfaction and loyalty in variables such as return, recommending and saying positive things about the destination?

3. Methodology

3.1. Study Area

The Posets-Maladeta Natural Park located in Spain is located in the central part of the Pyrenees mountain range. Its name comes from the two massifs that are located in this natural park, the Posets massif and the Maladeta massif, whose two peaks are the highest in the Pyrenees: El Posets with a height of 3375 m and Aneto with a height of 3404 m. El Posets-Maladeta was declared a natural park in 1994. This site is one of the few natural parks that have the Q certification for tourist quality. For this reason, an adequate level of quality of its services to tourists and its facilities is guaranteed. It covers an area of 33,440 ha, around the Benasque Valley. The Posets-Maladeta Natural Park possesses special characteristics that warrant maximum protection according to Spanish legislation, namely the designation of “National Park” [74], but the inhabitants themselves resigned it in a public consultation to prevent it from becoming too overcrowded.

During the Ice Age in the Quaternary glaciation, U-shaped valleys were carved, giving the origin of the landscape of the natural park. Approximately 30,000 years ago, the glaciers reached their maximum extension, with an average thickness of 500 m. Since then, they have been receding, and many of them throughout the Pyrenees have disappeared. Today the last remains of the glaciers can be found in the Posets-Maladeta Natural Park. These glaciers are the southernmost in Europe and are protected by a special figure that makes up the Natural Monuments of the Glaciers of the Pyrenees.

Due to the retreat of the glaciers, numerous mountain lakes of glacial origin, which are known as “ibones”, can be found. In the park, there are valleys crossed by several rivers, such as the Ésera, the Cinqueta and the Noguera Ribagorzana. As a consequence of the height, the nature is very diverse. The park is located between 1500 m and 3404 m in altitude at the summit of Aneto. In its lower part, there are abundant birches and hazel trees, with pines, firs and beech trees in humid areas and black pine in the highest parts. Its flora includes cotton grass and carnivorous plants, such as flytraps and sundews. The fauna it hosts also vastly varies, including wild boar, Pyrenean mountain goat, ptarmigan,

griffon vulture, bearded vulture, golden eagle and some protected species such as small owl and grouse.

The Posets-Maladeta Natural Park belongs mostly to the municipality of Benasque. The Benasque area is one of the tourist spots studied by the Spanish National Institute of Statistics due to its importance, its tourist quality and the number of visitors. This institute provides the following information on overnight stays in hotels in the area in recent years: in 2021 it had 127,307 overnight stays, and in 2020 it had 161,335, data that reflect that the pandemic has reduced the influx of visitors.

The Benasque Interpretation Center in the Posets-Maladeta Natural Park organizes the following ecotourism activities: interpreted walks along various botanical trails to learn about the park's flora, animal tracking workshops to learn about the fauna and guided walks to learn about the insects that inhabit the park. We can affirm, according to the above, that the term ecotourism is correctly interpreted when visiting this natural park (See Figure 1).

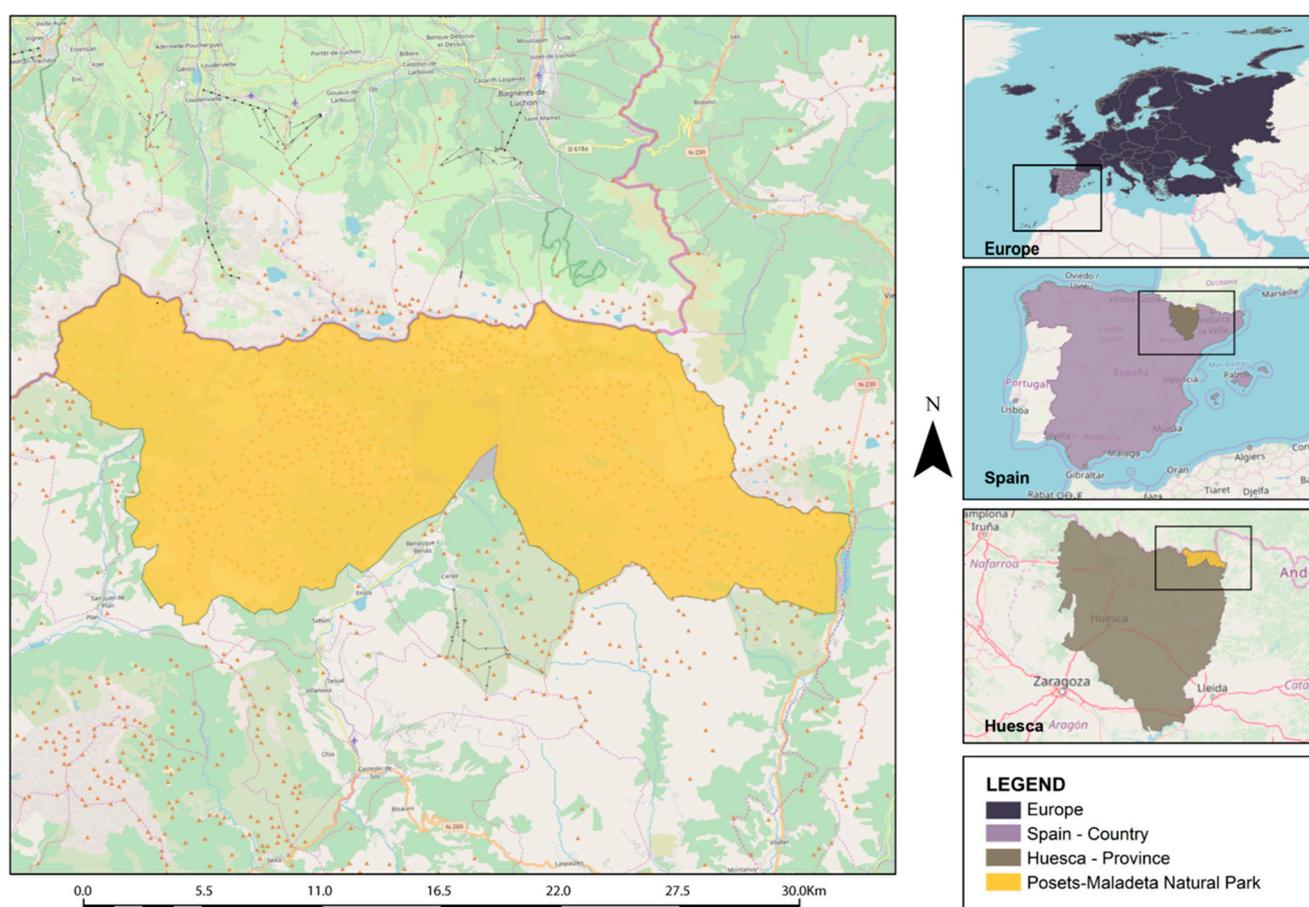


Figure 1. Posets-Maladeta Natural Park (Spain).

3.2. Survey, Data Collection and Analyses

The present study applied to a natural park proposed the following objectives: (a) identify the motivation of ecotourism; (b) determine the segmentation by motivations of ecotourism; and (c) establish the relationship between the segments and variables of satisfaction and loyalty such as return, recommendation and saying positive things about the destination. The study consisted of three phases. The first phase was the design of the questionnaire, the second phase was the collection of the sample, and the third phase was the statistical analysis of the results, ending in the preparation of the document.

To achieve the research objective, a questionnaire was designed that consisted of three parts, with the first sections containing detailed descriptions of sociodemographic

information of the respondents. The following variables were analyzed: gender, age, level of education, frequency of visits, with whom they travel and daily spending. The second part showed the motivations on a scale of 33 items, based on a five-point Likert-type scale, from 1 (very little identified) to 5 (fully identified). The motivation scale was made up of questions related to nature, personal and interpersonal relationships, self-development, rewarding oneself, escape and ego-defensive functions. The third contains questions related to general satisfaction, in addition to questions of intention to return, recommend and express the positive elements of the destination. The questions in this third section were based on a five-point Likert-type scale, from 1 (too little) to 5 (too much). To measure validity, the questionnaire was analyzed by a group of 4 experts who analyzed its content validity, which referred to whether the questionnaire covered all the important points related to motivations in ecotourism. In addition, they analyzed its construct validity, which referred to whether the items were grouped in adequate dimensions. Several questionnaires from previous studies were used for the design of the questionnaire [44,45,75]. To measure the reliability of the questionnaire, a pilot test was carried out on 15 tourists to find out if any of these tourists had any difficulty with any of the items. In addition, the Cronbach's alpha test was used as a measure of internal consistency; it reached a high value of 0.94 for the motivation scale, indicating an internal consistency between the elements that are part of the scale. Consent to be part of the study was included in the survey. The study was duly approved by ESPOL University.

The sample was obtained by asking the tourists visiting the Posets-Maladeta Natural Park at the time. The study was conducted through a survey. For this study, visitors over 18 years of age who visited the protected area between August and September 2019 were chosen. A convenience sample was used in relation to the tourists who were closer and more predisposed to complete the questionnaires. However, the sample was collected at various points in the protected area and at different times to reduce sampling bias. The sample was collected by the authors themselves, who were always willing to clarify any of the surveyed visitors' doubts or concerns. Tourists autonomously answered the questionnaire. For this study, data were considered on a 5-point Likert scale. Cochran's sample size equation for infinite populations was used: $n = Z^2 \times p \times q / e^2$, where "n" is the sample size, "Z" is the abscissa of the normal curve that cuts an area α in the tails ($1 - \alpha$ is equal to the desired confidence level, which would be 95%) and is 1.96 in this case, "e" is the desired level of precision or desired sampling error, "p" is the estimated proportion of an attribute that is present in the population and "q" is $1 - p$ [76,77]. The population had an estimated variability of 50% ($p = q = 0.5$). The margin of error in this study was $\pm 5.3\%$ with a 95% confidence level. The sample size was 341 valid questionnaires. In addition, this sample size was adequate for performing factor analysis. In this sense, when the factorial analysis technique is used, several authors recommend sample sizes greater than 100 [78,79], while other authors recommend sample sizes greater than 300 [80].

The collected sample was statistically analyzed using the SPSS IBM version 22 program for Windows.

Data were examined in two phases: In the first, an exploratory factorial analysis (EFA) was used, which helped us to identify the constructs underlying the variables studied. Factor analysis is used to obtain a preliminary overview of the most important motivations. Factor analysis is frequently used in demand segmentation studies [81,82]. Then, the interpretation of the data was facilitated with the varimax rotation. Following the method to find the number of factors, the Kaiser criterion was applied, where only factors with eigenvalues greater than 1 were used. To determine if it was appropriate to perform the factorial analysis, the data were confirmed with the Kaiser–Meyer–Olkin (KMO) index and the Bartlett sphericity test.

In the second stage, the K-means grouping method was used, which is normally a tool applied in tourism segmentation studies [31]. Using the Kruskal–Wallis H index, any significant differences between groups were analyzed. Significant differences between two groups were evaluated using the Mann–Whitney U index. To contrast the model of factors

found in the exploratory factorial analysis, confirmatory factor analysis (CFA) was applied, with maximum likelihood estimation, with the support of AMOS 21. To finalize the study, chi-square analysis was carried out, which helped us to explore the significant differences between groups in relation to the following variables: satisfaction, intention to return and recommendation of the destination.

4. Results

4.1. Aspects of the Sociodemographic Profile of the Sample

For the present study, a sample was taken whose sociodemographic profile is as follows: Regarding their gender, 57.5% were male and 42.5% were female. The majority age range was between 10 and 49 years with 29.9%, followed by respondents between 30 and 39 years with 21.1%. Regarding studies, the majority group had graduated from university with 46.9%, followed by those with secondary education with 25.5%. Regarding their occupation, mainly those surveyed were private employees with 34.3%, followed by the group of public employees with 21.4%. In relation to the number of people who traveled with visitors to the protected area, the majority group was made up of groups of 3 to 6 people with 57.8%, followed by those who traveled with fewer than 3 people with 29%. Regarding the number of visits, the majority group went once a year (40.5%), followed by the group that visited every 6 months (22.9%). Regarding spending, the majority spent between EUR 20 and EUR 40 on their visit (36.7%), followed by those who spent less than EUR 20 in the protected area per day (22.6%).

4.2. Exploratory Factor Analysis

An exploratory factor analysis has been used to interpret the different motivations in ecotourism. A factorial analysis is carried out as a tool to reduce and interpret the motivational items. Principal component analysis (PCA) was used as a data reduction technique. To order the factors, the varimax rotation method was used, which categorizes the factorial loads as high or low. The Kaiser criterion is used to find the factors that obtained eigenvalues greater than 1.00. Six factors representing 65.73% of total variance were found. The Kaiser–Meyer–Olkin (KMO) index was 0.90, indicating that the model is robust and its use is appropriate. Bartlett’s sphericity test resulted in a value of less than 0.05 (significant value), making it appropriate to use exploratory factor analysis. Cronbach’s alpha index reached values between 0.71 and 0.91, which means the model is reliable. Table 3 shows the results.

Table 3. Exploratory factor analysis of motivations.

| Factor | Factor Loadings | Eigenvalue | Variance Explained | Cronbach’s Alpha |
|--|-----------------|------------|--------------------|------------------|
| Self-development | | 10.915 | 33.077 | 0.912 |
| To have a chance to get to know myself better | 0.814 | | | |
| To understand more about myself | 0.807 | | | |
| To gain a sense of self-confidence | 0.783 | | | |
| To know what I am capable of | 0.750 | | | |
| To gain a new perspective in life | 0.693 | | | |
| To be independent | 0.623 | | | |
| To find my destiny | 0.562 | | | |
| To gain a sense of self-achievement | 0.512 | | | |
| Interpersonal relationships | | 2.665 | 8.075 | 0.826 |
| To reflect on past memories | 0.745 | | | |
| To strengthen relationships with my family | 0.678 | | | |
| To reminisce about my parents’ times | 0.671 | | | |
| To contact family/friends who live elsewhere | 0.610 | | | |
| To feel that I belong | 0.596 | | | |
| To think about good times I have had in the past | 0.546 | | | |

Table 3. Cont.

| Factor | Factor Loadings | Eigenvalue | Variance Explained | Cronbach's Alpha |
|---------------------------------------|-----------------|------------|--------------------|------------------|
| Building personal relationships | | 2.269 | 6.874 | 0.849 |
| To meet new people | 0.765 | | | |
| To meet people with similar interests | 0.760 | | | |
| To meet the locals | 0.704 | | | |
| To experience different cultures | 0.594 | | | |
| To be with others if I need them | 0.591 | | | |
| Escape | | 2.142 | 6.491 | 0.816 |
| To get away from daily stress | 0.859 | | | |
| To get away from crowds of people | 0.790 | | | |
| To escape routine | 0.780 | | | |
| To avoid interpersonal stress | 0.576 | | | |
| Reward | | 1.414 | 4.286 | 0.713 |
| To explore the unknown | 0.784 | | | |
| To experience new things | 0.720 | | | |
| To have fun | 0.560 | | | |
| To develop my personal interests | 0.553 | | | |
| Nature appreciation | | 1.246 | 3.776 | 0.795 |
| To better appreciate nature | 0.871 | | | |
| To be close to nature | 0.833 | | | |
| To learn about nature | 0.767 | | | |
| Ego-defensive function | | 1.037 | 3.142 | 0.837 |
| To join social discussion | 0.748 | | | |
| To follow current events | 0.702 | | | |
| To join people's interest | 0.574 | | | |
| Total variance extracted (%) | | | 65.723 | |
| Cronbach's α of all items | | | | 0.935 |

As shown in Table 3, seven motivational factors were found: "self-development", related to personal development, explained 33.08% of the variance; "interpersonal relationships", related to motivations about family and friends, explained 8.08% of the variance; "building personal relationships", related to meeting people with the same interests or from other cultures, explained 6.87% of the variance; "escape", related to escaping from daily routine, explained 6.49% of the variance; "reward", related to novelty and the unknown, explained 4.29% of the variance; "nature appreciation", related to nature, explained 3.77% of the variance; and "ego-defensive function", related to participation in society, explained 3.14% of the variance. These results allowed answering RQ1: What are the motivations in ecotourism?

4.3. Confirmatory Factor Analysis

A confirmatory factor analysis (CFA) has been used to confirm the factors found. The CFA allowed us to confirm the validity of the model. Maximum likelihood was used to ensure the reliability of the measurement model (See Figure 2).

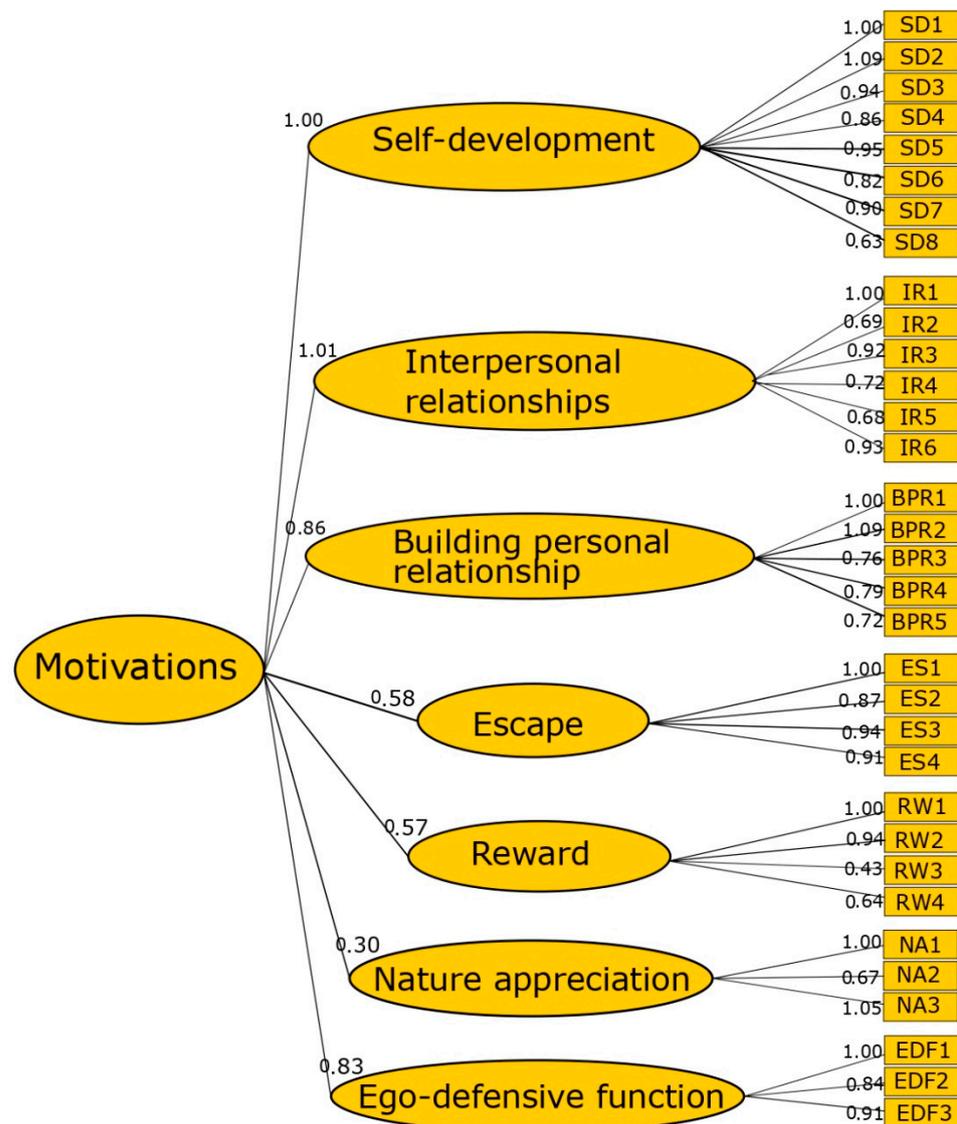


Figure 2. Confirmatory factor analysis.

In analyzing the fit indices, the chi-square on the degrees of freedom (CMIN/DF) reached a value of 3.590 and a DF of 488, and the p -value was 0.000; thus, the index was significant. Other suitable indices were analyzed for this study [83,84]. The comparative fit index (CFI) was used, which is an index with high performance. The index showed a value of 0.833, close to 0.9, which indicated an acceptable degree of adjustment. On the other hand, there is the root mean square error of approximation (RMSEA) index, which translates into the amount of variance not explained by the model by the degree of freedom. For this index, a value of less than 0.05 indicates an optimum degree of fit, and values in the interval between 0.05 and 0.08 indicate a reasonable degree of fit. In this study, the index reached a value of 0.078, indicating that the degree of adjustment was reasonable [83,85–87]. Therefore, the model was adjusted for the construct validity of the motivational factors found [88,89].

4.4. Demand Segmentation

Demand segmentation was performed with a nonhierarchical K-means cluster analysis so that variance between groups could be maximized and variance within each segment could be minimized. Three clusters were obtained. The Kruskal–Wallis H index was used to identify the significant differences between the groups according to the variables

(motivations). The Mann–Whitney U index was applied to detect significant differences between both groups. Table 4 shows the results.

Table 4. Segmentation and motivation in ecotourism.

| Factor | Reward and Escape | Nature | Multiple Motives | Kruskal–Wallis H | | Mann–Whitney U |
|---------------------------------|-------------------|--------|------------------|------------------|-------|----------------|
| | 1 | 2 | 3 | χ^2 | Sig. | Sig. |
| Nature appreciation | 4.5 | 4.1 | 4.7 | 104.942 | 0.000 | All |
| Reward | 4.1 | 3.4 | 4.3 | 81.147 | 0.000 | All except 2–3 |
| Escape | 4 | 3.4 | 4.7 | 54.430 | 0.000 | All except 1–3 |
| Self-development | 3.4 | 2.2 | 4.3 | 19.294 | 0.000 | All except 2–3 |
| Building personal relationships | 2.6 | 1.9 | 3.5 | 77.104 | 0.000 | All |
| Interpersonal relationships | 2.5 | 1.7 | 3.6 | 6.400 | 0.000 | All except 1–3 |
| Ego-defensive function | 2.3 | 1.8 | 3.4 | 21.278 | 0.000 | All except 2–3 |

As shown in Table 4, the three segments revealed a significant difference ($p < 0.05$) in relation to the mean. The first segment obtained high scores in the dimensions “nature”, with a score of 4.5 on a scale of 5; “reward”, with a score of 4.1; and “escape”, with a score of 4. This group was called “reward and escape”. The second group obtained a score of 4.1 in the “nature” dimension and was called “nature”. The third group had high values in several motivational dimensions at the same time, with scores higher than 3 in all motivational dimensions. Therefore, this segment was called “multiple motives”. These results allow answering RQ2: What are the segments by motivations of the demand in ecotourism?

4.5. Segmentation with Satisfaction and Loyalty in Ecotourism

Pearson’s chi-square coefficient was used to find a significant relationship ($p < 0.05$) between the segments and the variables of satisfaction and loyalty (intentions to return to, recommend and say positive things about the destination). A 5-point Likert-type scale was used, where 1 was too little and 5 was too much. Table 5 shows the results.

Table 5. Segmentation with satisfaction and loyalty in ecotourism.

| Variable | Reward and Escape | Nature | Multiple Motives | χ^2 | Sig. |
|---|-------------------|--------|------------------|----------|-------|
| Overall satisfaction | 4.66 | 4.43 | 4.56 | 12.644 | 0.013 |
| I intend to return to this protected area | 4.69 | 4.51 | 4.66 | 10.693 | 0.22 |
| I intend to recommend this protected area | 4.79 | 4.46 | 4.75 | 29.539 | 0 |
| When I talk about this protected area, I will say positive things | 4.85 | 4.61 | 4.84 | 22.426 | 0 |

According to Table 5, the “reward and escape” segment, with a score of 4.66, was that with the highest level of overall satisfaction. In addition, this segment had the highest score (4.66) in return intentions. Likewise, this group had the highest score in intentions to recommend (4.79). In addition, this segment had the highest score in saying positive things about this protected area (4.85). So, it should be maintained, and it is possible to improve services for visitors seeking novelty and escape. The “nature” segment had the lowest level of satisfaction and loyalty. Thus, the services that address nature lovers should be considerably improved. The “multiple motives” segment obtained an intermediate score for satisfaction and loyalty. Therefore, the services in this segment should be somewhat improved. These results allow answering RQ3: What is the relationship between the segmentation of demand and satisfaction and loyalty in variables such as return, recommending and saying positive things about the destination?

5. Discussion

The first objective of this study in a natural park was to identify the motivation of ecotourism. The results in response to RQ1 revealed seven motivational dimensions in ecotourism applied to a natural park, namely self-development, interpersonal relations, construction of personal relations, escape, reward, appreciation of nature and ego defense function. The seven motivational dimensions of this study were similar to those indicated by Lee et al. [44], who found self-development, building personal relationships, self-defensive function, escape, interpersonal relationships, nature and reward. Likewise, the dimensions of this study were similar to those of Panin and Mbrica [43], who found sports and health activities, social activities, natural-based motivation and cultural and educational activities. However, these authors did not include “self-development” and “reward” motivations in their study. These were analyzed in the present study. Likewise, the dimensions found were similar to those of Iversen et al. [46], who found status, novelty, relaxation, activity in nature and social interaction. However, these authors did not take into account self-development motivations. Furthermore, the motivational dimensions were similar to those found by Xu and Chan [45], who found relaxation and knowledge, self-improvement, escapism from routine life, destination scenario, information and convenience and fun activities. These authors included the motivation “information and convenience”, closely related to the destination.

The dimensions of this study were similar to those of Kamri and Radam [47], who found challenge hike, social trip, nature tour and getaway. However, these authors did not consider reward-related motivations, which were analyzed in this study. The dimensions of this study were equivalent to those of the study by Jeong et al. [48], who found the following motivations: nature, health, cohesion and escape. However, these authors did not consider reward-related motivations analyzed in these studies. This study was similar to that of Carvache-Franco et al. [49], who found six motivational dimensions in ecotourism: personal relationship building, ego defense function, escape, interpersonal relationships, nature, reward and self-development. Likewise, this study was similar to that of Chow et al. [50], who found the following motivations: escape from daily life, physical and mental health and relaxation. However, these authors analyzed each motivational item.

Another study found was that of Choi et al. [51], with motivations for healing (health and escape), nature, and cohesion, with only one segment (nature) being similar to our study. Carvache-Franco et al. [52] found six motivational dimensions: interpersonal relationships and ego-defensive function, self-development, nature, reward, building personal relationships and escape. Their results were similar to those of this study.

One of the contributions of this study to the scientific literature is to have found the motivations of tourists for visiting a natural park; these are relevant findings for the academic literature due to the little existing literature related to the visits to natural parks.

As a second objective, the study aimed to determine the segmentation by motivations of ecotourism. The results related to RQ2 show three segments: “reward and escape”, “nature” and “multiple motives”.

In this sense, a new segment called “reward and escape” appeared, related to novelty and escape; it is a group with different characteristics and does not resemble the segments found in previous research. When making a comparison with some studies, this segment was found to be somewhat similar to the “escapists” segment in the study by Barić et al. [69]. These authors found a group with high motivations related to escape, but no motivations related to reward. It was also somewhat akin to the “nature and novelty” segment of Iversen et al. [46], who found motivations related to “reward” and “nature”, but did not find motivations related to “escape”. It was also similar to Phan and Schott’s [71] “novelty seekers” segment, with a high level due to the experience factor. However, these authors did not include the motivations related to “reward” and “escape”. Therefore, this “reward and escape” segment has not yet been studied in the scientific literature, since it does not coincide with any of those found in previous studies.

The present study confirmed that the “nature” segment of this study had high motivations related to nature and coincides with the “nature” segment of Cordente-Rodríguez et al. [66], who found a segment motivated by nature. Likewise, the “nature” segment of this study is similar to the “naturalistic” segment of Barić et al. [69]. The nature segment of this study is also similar to segment 4 (nature and landscape) of Taczanowska et al. [70]. In addition, the nature segment of this study is similar to the nature travelers segment of Constantin et al. [73]. Therefore, for the “nature” segment in our study, the most important thing is to enjoy nature.

On the other hand, the “multiple motives” segment of this study is similar to the “multiple motives” segment of Cordente-Rodríguez et al. [66], who found a group with various motivations. It is also similar to segment 2 (contemplative tourists and nonconsumers) of Taczanowska et al. [70], with various motivations for the visit. It is similar to the “enthusiasts” segment reported by Phan and Schott [71], with a high level of motivation in all factors. However, the “reward and escape” segment of this study has not been studied by other authors.

On the other hand, Choi et al. [51] found four segments: general tourists, nature-seeking responsible tourists, nature-cohesion seeking tourists and wellness-seeking responsible tourists. However, the segments found by these authors are related to nature. Baniya et al. [72] found three segments: local art and culture enthusiasts, escapists and nature adventurers. However, these authors did not find a segment similar to the multiple motives segment found in this study. Instead, Constantin et al. [73] found four segments: nature travelers, culture travelers, leisure travelers and eclectic travelers. Therefore, the study of these authors found segments with characteristics specific to the trip. However, it did not find the segment related to reward and escape found in this study.

This finding means that this study contributes to the scientific literature on ecotourism in natural parks by providing information from a new ecotourist segment with characteristics that have not been previously encountered in the scientific literature.

The third objective of this study was to establish the relationship between the segments and satisfaction and loyalty variables such as return, recommendation and saying positive things about the destination. The results found related to RQ3 show that the “reward and escape” segment shows the highest score in satisfaction and loyalty variables such as return, recommendation and saying positive things about the destination. These results are a contribution to the scarce academic literature on satisfaction and loyalty in ecotourism applied to a natural park.

6. Conclusions

Ecotourism is a growing tourism type characterized by the offer of tourist activities in places surrounded by nature or in protected areas. Motivations in ecotourism are different from those of other tourism types because they are related to nature, along with other motivations, such as novelty, escape, social interaction and personal development. Segmentation in ecotourism is an important subject to study as it is a tool that allows more specific tourist services to be offered and achieves more tourist satisfaction and loyalty in ecotourism in protected areas.

There are several motivations in ecotourism applied to natural parks, and these are related to building personal relationships, escape, ego-defensive function, interpersonal relationships, nature, reward and self-development. Thus, ecotourism is not only made up of motivations for nature, but is also made up of other motivations such as learning about nature, social interaction with people of similar tastes and preferences, learning more about local people, discovering new or innovative things and learning more about the local culture. Likewise, there is a motivation for meeting other tourists with preferences related to nature conservation. This makes protected areas suitable sites for the practice of ecotourism. In addition, applying the segmentation by motivations in the natural park, three segments of ecotourism were confirmed: The first is “reward and escape”, made up of visitors motivated by novelty and escape from routine. This segment presents the

highest levels of satisfaction and loyalty versus the others. The second segment, “nature”, is made up of nature lovers. It has the lowest levels of satisfaction and loyalty versus the others. The third segment, “multiple motives”, brings together tourists with different motives for visiting protected areas. They have intermediate satisfaction and loyalty levels versus the others. Therefore, there are other segments in ecotourism that are motivated not only by nature, but also by various motivations, including self-development in learning, social interaction, meeting people with interests related to conservation and meeting other cultures and local people, as well as the reward and escape motivations. Therefore, these segments seek not only the enjoyment of nature, but also the practice of ecotourism in these protected areas. In addition, this study found a new segment, “reward and escape”, that seeks to discover sites that offer unique and innovative experiences, so protected areas must design products and services for this segment, sites that are innovative and attractive for the practice of ecotourism in natural parks.

Regarding the theoretical implications of ecotourism in natural parks, three segments with differentiated characteristics have been found. The first segment, “reward and escape”, has motivations for escape and novelty, presents the highest levels of satisfaction and loyalty versus the others and differs from the segments found by other authors. Therefore, the characteristics found in this new “reward and escape” segment, a group that does not resemble the other segments much, are different and have not been previously studied, which is this study’s theoretical contribution to the scientific literature. The other two segments, “nature” and “multiple motives”, present similar characteristics to other previously found segments. The “nature” segment, with high nature motivation, resembles the groups found by other authors [66,69,70,73]. The “multiple motives” segment, with several motivations at the same time, is similar to previously found groups [66,70,71].

The practical implications involve market segmentation offering benefits to operators and companies linked to tourism by allowing them to plan more efficient strategies that address each segment. In this way, administrators can plan strategies aimed at the conservation of landscapes and natural attractions and the zoning of recreation areas according to the motivations of each segment. This tool also improves the quality of the services in each segment by offering more specific services, which improve tourists’ satisfaction and loyalty by bringing benefits to the destination and community. For the “reward and escape” segment, services must be planned that include activities that really excite the tourist, providing new experiences and adventures to tourists that will remain in their memory. For the “nature” segment, activities related to learning, enjoying nature and other nature-related sports or adventure activities should be offered. For the “multiple motives” segment, novel nature-related activities should be offered. These activities should also include social or family interaction so that tourists can share experiences and reaffirm personal ties at the same time. Regarding public policies, government and social institutions can plan policies and action plans through market segmentation to develop ecotourism in a natural park by conserving natural attractions and heritage.

Finally, the main limitation of the present study is the specific time when the fieldwork was conducted. As future research lines, we propose broadening the focus to other protected areas to obtain more information on demand segmentation.

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