

From motivation to segmentation in coastal and marine destinations: a study from the Galapagos Islands, Ecuador

Abstract

National parks with marine reserves have great potential for coastal and marine tourism. In this regard, the Galapagos archipelago is an important coastal and marine destination in Ecuador declared a World Heritage Site by UNESCO. The objective of this empirical study was to analyze demand segmentation considering tourists' motivations in this destination. The research was carried out in situ, and multivariate statistical techniques were used to analyze the 407 questionnaires collected. The results show six motivational factors: learning, heritage and nature, sun and beach, sports, authentic coastal experience, novelty, and social interaction. Two different segments of visitors have also been found. The first group, called "Multiple Motives," is formed by tourists with high motivation in all the motivational variables that include sun and beach. The second group, called "Eco-coastal," is made up of tourists who have a great motivation to experience marine life and national parks, discovering new things they are not used to, and for knowing their flora and fauna. From these findings, useful recommendations emerge for service providers and institutions related to the tourist offer in this kind of coastal and marine destinations.

Keywords: Tourism, Sustainable, Satisfaction, Loyalty, Demand

1. Introduction

The recreational use of the coast and the sea is destined to grow in the future (Orams & Lück, 2013). The environmental impact of coastal and marine tourism is gaining the attention of firms, scholars, and institutions (Merli et al., 2019). In this sense, marine tourism includes those recreational activities that involve traveling a significant distance from the visitor's place of residence and for which the marine environment acts as a host or focus (Orams, 1999, p. 9). It now extends beyond beach-based activities, to include a wide spectrum of activities, which include scuba diving and snorkeling, windsurfing, jet skiing, fishing, sea kayaking, visits to fishing villages, marine parks, and aquariums, sailing and motor yachting, maritime events and races, as well as the cruise ship industry (Lück, 2007).

Maritime tourism constitutes a form of tourism totally connected and dependent on the sea and the marine environment (Lekakou & Tzannatos, 2001).

On the other hand, coastal tourism is also a typology that currently includes a wide variety of activities, like sports (beach volleyball, coasteering, surfing, kayaking), wellness stays (spa and wellness resorts, beach walking, beachcombing), nature-based and wildlife viewing (rock-pools, seabirds, turtles, pinnipeds), and volunteer and educational activities (beach clean-ups, invasive weed eradication, species counts, language schools, museums) (Orams & Lueck, 2016a). Geographically, a coastal area is defined as an area bordering the sea or one that has at least half of its territory within 10 km of the coast. (European Commission, 2014). In many cases, coastal tourism is closely linked to marine tourism, being considered as a subtype of it. The coastal area is a point of departure and return for most marine tourism activities (Orams & Lueck, 2016b). Van der Merwe et al. (2011) clearly state that a wide range of attributes correlates coastal sites and marine destinations with tourist experience. In this sense, Hall (2001) defined coastal tourism as a form of tourism where the water / sea element is predominant and is also considered to be the main asset and advantage. It involves the emergence of new activities in relation to the traditional sun and beach tourism. Since beaches are natural coastal features, successful beach destinations must consider both the quality of the environment and the quality of the tourist experience (Botero et al., 2013; Klein & Dodds, 2017).

The Galapagos Islands of Ecuador have two protected areas: The Galapagos National Park and the Galapagos Marine Reserve, which is one of the largest in the world in terms of biodiversity. The Galapagos Islands have a strategic location at the confluence of several marine currents, with a mixture of cold and warm waters, which has allowed the arrival and establishment of species from different areas of the Pacific Ocean. This makes the reserve an important sanctuary for marine life. During the Green Destinations event (2019) at the ITB Berlin Fair, the Galapagos Islands won first place in the 'Best of the Americas' category of the most environmentally friendly destinations. In the Twenty-sixth Awards Gala of the World Travel Awards Latin America chapter, which was held in La Paz Bolivia, the Galapagos Islands won two awards “Beach Destination of South America 2019” and “Leading Cruise Boutique of South America 2019”. These awards show that Galapagos’ enchanted islands are an important coastal and marine destination of worldwide

importance where tourists can carry out activities throughout the year such as flora and fauna sightings in a natural way, diving, snorkeling, sailing, surfing, visiting communities, swimming, among others. These islands, with coastal and marine characteristics, are surrounded by nature in its natural state, allowing their visitors to bathe on a beach next to sea lions, snorkeling and diving with marine fauna of different species, or sail on a cruise to visit different coastal and marine sites full of nature.

Given the extraordinary natural richness of this destination and the relevance of tourism for its economy, as well as the potential impact that visitors could exert on the environment that could jeopardize its sustainability, it is important to carry out studies that analyze the demand in this type of protected coastal and marine destination from the perspective of demand motivation and segmentation. This kind of study is useful for institutions and companies related to marine-coastal tourism to know the motivations of tourists in each segment, adapting their services to this demand over principles of sustainability to achieve a better level of satisfaction and return of tourists in the future. However, the scientific literature on-demand in national parks and marine reserves are scarce. That is why the objective of this study was to conduct an analysis of the demand segmentation in terms of motivations in this destination with coastal and marine characteristics, as well as to know how each segment relates to its satisfaction and probability of returning.

2. Theoretical framework

2.1. The motivation of demand in coastal and marine destinations

Within the field studied, motivation is a set of needs that make a person be involved in tourism activities (Swanson & Horridge, 2006). They can be considered as a key factor in the decision-making process (Yolal et al., 2015).

The coastal and marine motivations that have been found in the different destinations are varied, but some are recurrent such as the sun and the beach (Kassean & Gassita, 2013; Ramseook-Munhurrun et al., 2018; Rid et al., 2014; Yiamjanya & Wongleedee, 2014; Queiroz et al., 2014), nature, or social interaction (Kassean & Gassita, 2013; Rid et al., 2014; Saayman et al., 2009).

The “sun and beach” factor was first recognized by Rid et al. (2014) who segmented tourists in The Gambia, based on their motivations. More recently, the study of Carvache-Franco et al. (2018) also pointed out the “sun and the beach” as a motivational factor in the segmentation of coastal and marine demand at the National area of Villasmil Beach, Ecuador. Other studies have recognized similar motivational factors, although they have named them differently. It is the case of Koutra & Karyopouli (2013) who conducted a study in Cyprus to explore the motivations of visiting tourists and determined that the image of the “sun and the sea” prevails and determines the visits. Other studies, nevertheless, have emphasized only the “beach.” For example, Sastre and Phakdee-Auksorn (2017) analyzed the travel patterns of British tourists visiting Phuket, Thailand, and identified its “beaches” as the main motivation. Kassean and Gassita (2013) also found “exotic beaches” as a key motivation for tourists in a study on the island of Mauritius South Africa. Ekonomou et al. (2014), in their research on tourism in Greece, named this motivation “beach sites.” Undoubtedly the “sun and the beach” factor independently on how it is named, is one of the most relevant motivations normally found in coastal and marine destinations because they generally portray beaches, for recreational and sports activities, as their main tourist attraction.

Another relevant motivational dimension underlined by research on coastal and marine destinations is “heritage and nature,” according to Rid et al. (2014). For Kassean and Gassita (2013), in a study conducted in Mauritius, this motivation embraces the climate, the exquisite landscape, unique flora and fauna, the exotic environment, and the welcoming nature of locals’ hospitality. Also, Carvache-Franco et al. (2020b) identified this motivation in a destination in the Pacific Ocean called Salinas, in Ecuador. This factor was constituted by the motivations: experience marine wildlife sites and national parks, historical attractions experiences, real culture and traditions experiences, importance of Salinas history & culture, importance of coastal and marine tourism, and the relevance of tourism in natural areas. Ramseook-Munhurrun et al. (2018), also in the Island of Mauritius, identified the local culture and tradition, which are part of the heritage factor, as motivations. In another study, Yiamjanya and Wongleedee. (2014) explored the pushing and pulling motivations of international tourists visiting Thailand, and found the relevant role of “learning a new culture” as a motivator. With regard to the “nature” dimension of

this factor, Queiroz et al. (2014) in the Azores in Portugal, found that the majority of tourists claimed to be attracted to the islands due to their “natural values” (e.g., landscape, biodiversity, and geodiversity). The most practiced activities were whale watching and mountaineering/hiking, followed by diving and other sports. Similarly, Kruger and Saayman (2010) found that “nature experience” acts as a relevant motivator in tourists visiting the Tsitsikamma National Park, located in the Indian Ocean in South Africa. Ekonomou et al. (2014) identified this factor and named it “sustainability,” similar to Carvache-Franco et al. (2018), who categorized it as “ecotourism.” We establish that this motivation is mainly linked to nature-related activities, culture, and environmental preservation. In addition, it indicates that tourists not only look for coastal and marine destinations to enjoy their beaches but also to carry out other alternative activities related to the natural environment.

Another motivation addressed by research on this field is “novelty and social interaction,” according to Kassean and Gassita (2013). Similarly, Molera and Abaladejo (2007) mention five marine reasons to travel to Murcia, Spain, stressing the main role of “family” as part of the social interaction factor. Saayman et al. (2009), in their research of two marine tourism destinations in Africa, divided this factor into two, “socialization” and “novelty.” Jeong (2014), in a study carried out in Seoul, South Korea, on the push and pull motivations, identified “novel” as a push motivator in marine tourism destinations that focus on active activities. In trips to coastal destinations, visitors tend to interact with friends when they participate in the activities offered by the destination, making this social part a primary motivation for coastal and marine visits.

There is another motivation referred to as the “authentic experience of the destination,” although it is known by different names. Molera and Abaladejo (2007) mentioned it as “rural life;” Kassean and Gassita (2013) as “the authentic Mauritius culture,” Rid et al. (2014) as “authentic rural experience.” Similarly, Carvache-Franco et al. (2020b) found this factor and named it “authentic coastal experience”. This motivational factor is relevant when the tourist performs activities in the destination interacting with the local population, increasing their sense of authenticity as being part of the community and their particular culture.

Another motivation found is “learning,” highlighted in the studies by Rid et al. (2014) and Ekonomou et al. (2014). Kruger and Saayman (2010) identified it as “seeking knowledge” since the tourist not only tries to enjoy a destination but also wants to acquire knowledge of that destination, learning about its flora and fauna, local languages, history of the place, crafts, local cuisine, among others.

There is another motivation, known as “physical activities or sports,” which Kozak (2002) identified on a trip of tourists to Mallorca, Spain. Other authors such as Molera and Abaladejo (2007) mentioned it as “physical and cultural activities,” joining both motivations. Carvache-Franco et al. (2019) in the surf town of Montañita, Ecuador, identified it as “water sports and social visits.” Likewise, Güzel, et al. (2020) in Antalya on the Turkish southwestern Mediterranean coast, identified sport and active life as a travel motivation. This motivation appears when tourists arrive at a coastal destination with the intention of carrying out water sports or active activities on the beach. In some cases, this motivation is included in the “sun and beach” factor.

Previous research shows “escape and relaxation” as another relevant motivation (Jeong, 2014; Kruger & Saayman, 2010; Saayman et al., 2009; Van Der Merwe et al., 2011). Kassean & Gassita (2013) identified it as “rest and relaxation” and “escape,” differentiating two factors instead of just one. Also, Güzel, et al. (2020) identified it as escape. With “escape,” the tourists seek to leave their daily routine to relax in the chosen destination.

Another factor also recognized is “personal attachment” (Saayman et al., 2009; Van Der Merwe et al., 2011). With “personal attachment,” the visitors experience loyalty to that destination caused by memories of their vacations, and sometimes for owning property there. There are also other motivators that previous research underlined, but they are not so recurrent in the field and show the variation of approaches applied by each author based on the characteristics of every destination.

2.2. Segmentation of demand in coastal and marine destinations

According to Ho et al. (2012), market segmentation represents the decisive criterion to determine which groups of clients should be contacted. The segmentation strategy can be used to identify specific tourist groups, provide better tourism packages, increase the

benefits to destinations and develop a more efficient tourism policy or marketing planning (Nickerson et al., 2016). Therefore, market segmentation has been applied according to the characteristics of each destination, which could be described as cultural, ecotourism, gastronomic, urban, among others.

Previous research has found several clusters whose elements share similar characteristics that determine demand segmentation in coastal destinations. For example, Ferreira et al. (2010) found two segments, “sun and tranquility seekers” and “sun and night lovers” as recognized groups of tourists. Onofri and Nunes (2013), in a coastal and marine study around the world, identified “beach lovers,” tourists who have a great preference for the beach. The same as Ekonomou et al. (2014), who found “demanding beach users,” as the group of tourists who have the largest score on organized beach site dimensions and comprised the largest segment. Similarly, Rid et al. (2014) segmented tourists based on motivations and recognized the segment called “sun & beach seekers,” characterized mainly by the sun and beach motif. Compared with other groups found by this author, these tourists gave the greatest importance to the sun and beach and swimming dimensions. Another study is that of Valls et al. (2018), who segmented English tourists visiting the coastal destination of Costa Daurada and Terres de l'Ebre, Spain. Using a methodology based on ontology, they found the groups: “holidaying,” motivated by vacations on the beach and holidays destinations; “beaching,” whose main motivating factor is the beach; “sunbathing,” whose main concerns are to enjoy holidays, the beach and the sun; and “relaxing,” motivated by the beach, but associated with the beauty of the place and the landscape, well-being, and relaxation. Another related segment was that found by Carvache-Franco et al. (2018), named “beach lovers,” who have high motivation to enjoy the sun and the beach. Similarly, Carvache-Franco et al. (2020a) in the city of Manta in Ecuador identified again “beach lovers” as tourists with great motivation to rest and enjoy the sun, the beach, and entertainment activities. Similarly, Carvache-Franco et al (2020b) found the “beach lovers”, composed of tourists who are highly motivated by aspects related to the sun and the beach.

With similar characteristics, two groups were found by Carvache-Franco et al. (2019), “water sports tourists,” who visited the destination motivated by surfing and who enjoyed the sun and the beach, and the “sun and beach” tourists, who visited the destination motivated mainly by rest and relaxation, along with the criteria of the sun and the beach. This segment of “sun and beach” is the most common in coastal and marine tourism because several activities related to this type of tourism are carried out on the coast, such as sports, beach walks, beach games, sunbathing, among others. This recurring segment has varied motivations according to the natural characteristics of each destination and the tourist facilities that its visitors can find.

Another segment frequently found in the literature is “coastal nature or eco-coastal” tourists. For example, Onofri and Nunes (2013) named “green” tourists to those who choose a coastal destination because they have a strong preference for cultural and natural environments. Rid et al. (2014) labeled a similar segment, “heritage and nature seekers,” including tourists who exhibited a high motivation to experience natural and cultural sites. In another coastal and marine study, Carvache-Franco et al. (2018) found the segment “coastal nature,” as a group highly motivated to enjoy the typical gastronomy, the sun and the beach, tourist attractions and the flora and fauna. Similarly, the research conducted by Carvache-Franco et al. (2019) identified the “eco-coastal” segment, composed of the tourists motivated by the climate, sand, and contact with nature. From the same perspective, Carvache-Franco et al. (2020a) found the “eco-coastal” tourists who, in addition to their great motivations to rest, and the sun and the beach, also enjoyed the typical cuisine and the attractions offered by the city of Manta in Ecuador. To sum up, the cluster recognized as “coastal nature or eco-coastal” includes tourists mainly attracted to the nature and culture of a destination. They are motivated to carry out activities such as: visiting the local communities, hiking, flora and fauna watching, visiting museums, and enjoying local cuisine. This segment seeks alternatives to the traditional sun and beach tourism, guided by principles of sustainability, thinking about conservation and environmental care. The coastal and marine characteristics of a destination, in some cases, have attracted this group to the great variety of activities related to nature and culture and could be especially relevant in protected areas.

A third well-recognized segment of tourists in coastal and marine destinations is that related to “culture,” with characteristics different from the “coastal nature” group. For example, Ferreira et al. (2010), in their study on Spain, divided this segment into two, named “culture seekers” and “culture seekers oriented by low prices.” Valls et al. (2018) called them “visiting.” They are tourists motivated by culture, sightseeing, shopping, and well-being. Lee et al. (2018), in their study on the island of Liuqiu in Taiwan, called them “knowledge seekers,” this group had higher scores in the dimensions: aesthetic appreciation and learning experiences.

A fourth segment recognized by previous studies is the one called “passive tourists.” Rudež et al. (2013) in Portorož Slovenia, segmented them as “curious-passive,” including visitors who preferred to walk, to go out for eating, visiting historical sites, enjoying the nightlife and shopping. Ekonomou et al. (2014) named them “accommodation oriented visitors,” with the highest score in the accommodation factor. In their study, Carvache-Franco et al. (2018) called them “coastal passive,” showing medium and low motivations in all the motivational dimensions. In another research by Carvache-Franco et al. (2019), this group of tourists was named “indifferent,” since they showed low scores in almost all motivational criteria, not being clearly related to any of the three dimensions identified in the studied destination. This segment, found by several authors, involves visitors who often arrive at a coastal and marine destination to relax in a quiet environment and to perform activities that do not require much physical effort.

The fifth group of tourists recognized in coastal and marine destinations is called “multiple motives.” Rudež et al. (2013) called them “multifarious visitors,” including those who liked to walk, go out in the afternoon, eat, and visit historical sites. Rid et al. (2014) named this group “multi-experiences seekers,” considering those tourists who do not show attraction for sun and beach activities, but value, for example, authentic rural experiences, heritage / nature, and learning local dances and languages. The same authors also found the group named “multi-experience and beach seekers” with high motivation in almost all factors, including the sun and the beach. However, activities in nature, such as bird watching and fishing, were of moderate interest. Also, Carvache-Franco et al (2020b) found this segment labeled “Multiple coastal motives,” which grouped tourists who have high values in all the motivational dimensions. Caber et al. (2016), in a study in the port of

Kuşadası, Turkey, segmented cruise tourists for their travel motivations. One of the groups was labeled “variety focused,” characterized for being elderly, social and motivated tourists with needs of escape from their normal environment and everyday life. Lee et al. (2018), according to the recreational experiences of tourists, established the group “multi-experience recreationists,” who scored high rates on all the factors that were part of the study. Finally, a recent study of Carvache-Franco et al. (2020a) identified a group called “multiple motives,” who exhibited also high motivations in all the factors found. The previous findings show that in a coastal and marine destination, you can find visitors who want to enjoy the destination by doing the variety of activities that coastal and marine tourism offers.

There are other segments of tourists in coastal and marine destinations identified by previous research, but they have appeared in smaller proportions. It is the case of the “well-being group” found by Rudež et al. (2013); the “coast sensitive visitors” of Ekonomou et al. (2014); the “aestheticists and hedonists” of Lee et al. (2018); the “enjoying” group of Valls et al. (2018); the “utilitarian and ambitious tourists” of Caber et al. (2016), among others. When analyzing the previous findings of tourist segmentation in coastal and marine destinations, we have been able to identify a variety of segments, many of them sharing similar characteristics, but at the same time receiving different names, although most of the time, their similarities underline their common identity.

2.3. Satisfaction in coastal and marine destinations

Visitor satisfaction is one of the critical forecasts for loyalty, increasing the probability that tourists will return to a specific destination (Assaker et al., 2011; Yoon & Uysal, 2005). Previous findings have studied the elements that improve the intention to return. For example, Prayag (2012), trying to predict behavioral loyalty, highlighted three aspects: natural environment, reputation, and kindness of people. Similarly, Alipour et al. (2020) identified that images of 3S (sun, sand, and sea) tourism had a positive impact on tourist attitudes. Visit intentions and word-of-mouth intentions were enhanced by improving tourists' attitudes toward 3S tourism. Also, Pranić et al. (2013), analyzing micro cruises in Croatia, identified four factors related to satisfaction and loyalty, suggesting that those most satisfied with the “tourist destination product” factor were the most prone to

return. In a more recent study, Goffi et al. (2019) showed that sustainability affects the satisfaction of tourist segments of large-scale coastal packages and the intention to return, being these segments especially affected by sustainability as a reason to return. For Schuhmann et al. (2019) return decisions are sensitive to changes in all aspects of coastal and marine quality. A reduction in seawater quality discourages tourists' intention to return more than other environmental factors. In another study in Phuket Thailand, Sangpikul (2018) determined that two key factors of the tourist experience affect loyalty in the case of island destinations: beach attractions and local people. In addition, Hasan et al. (2019) in three coastal destinations in Bangladesh, identified that perceived destination risks do not affect the revisit. However, tourist satisfaction and the image of the destination directly affect both their attitudes and their intentions to visit again.

It can be seen, from the previous findings, that few segmentation studies in coastal and marine destinations show the relationship between the demand segments and satisfaction and loyalty, which emphasizes the need to have more evidence on this subject. This kind of analysis will be particularly appropriate in the case of protected areas where the role of sustainability is twofold, acting as an attractor element that prompts the loyalty of visitors, and at the same time suffering from the potential effects of massive tourism.

3. Methodology

3.1. Study area

The province of Galapagos is a set of islands located in the Pacific Ocean at 972 km (525 nautical miles) to the west of the coast of Ecuador. The islands are crossed by the equatorial line in the Wolf and Ecuador volcanoes on Isabela Island. It has a total area of 8,010 km², with an interior sea of 45,666 km², and an insular territorial sea of 17,392 km². These enchanted islands, as they are also known, comprise seven major islands (Isabela, Santa Cruz, Fernandina, Santiago, San Cristóbal, Floreana, and Marchena), 14 smaller islands, 64 islets, and 136 rocks. The Galapagos Archipelago includes two protected areas: The Galapagos National Park, which covers 97% of the archipelago's land surface, and the Galapagos Marine Reserve, which protects marine environments around it.

This archipelago's importance for humanity lies in its flora and extraordinary fauna, which, together with its geology and unique species, have made this destination an

important place to conduct scientific research in various areas of knowledge, including coastal and marine tourism. The Galapagos Islands were declared in 2001 as a World Heritage Site by UNESCO, which is why they are still one of the best-preserved archipelagos and a world reference for the management of fragile ecosystems.

This natural laboratory offers important attractions where a variety of coastal and marine activities are developed. In Santa Cruz Island, we can find Tortuga Bay beach, which is a paradisiacal beach of white sands and turquoise waters and the black turtle's nesting site. In San Cristobal Island, The Sleeping Lion, also known as the Kicker Rock, are two immense volcanic rocks, named for their characteristic shape resembling a sleeping lion, which rise for more than 100 meters above the sea. This place is famous for snorkeling and diving, where tourists can swim with stingrays, sharks, sea lions, and schools of fish. Another important site is the Lobería on the island of San Cristobal, being one of the most photographed spots of the Galapagos. It is a beautiful beach with coral sands and turquoise waters, which shelters a great number of sea lions that can normally be seen resting between the rocks or submerging in the sea. Another attraction is Playa Mann in San Cristobal, this being a white sand beach formed by the fragmentation of shells. The clarity of its waters allows the practice of surface diving, swimming, snorkeling, and observation of marine flora and fauna. On the island of San Cristobal, international surfing championships are held, such as Surf ALAS, Galapagos 2018. To get to know Galapagos, you can choose to stay at a hotel and take a daily navigable tour; or you can also navigate on a cruise and visit each Island according to the itinerary.

This destination was selected due to its specific particularities as a protected area, declared a World Heritage Site, where sustainability factors exert a relevant impact. At the same time, it is one of the few marine and coastal places in the world where visitors can have the opportunity to enjoy its natural attractions along with varied natural flora and fauna. It also has a coastal cultural wealth so you can visit communities, buy handicrafts with local products, see local customs, and enjoy its sea cuisine (Figure 1).

INSERT FIGURE 1

3.2. Data collection

In order to achieve the proposed objectives, fieldwork was carried out in situ based on a survey that contained 18 questions grouped into three blocks: sociodemographic, characteristics of the trip, and motivation of visitors. The target population was national and international tourists over 18 years of age staying in the Galapagos National Park.

Several previously published research papers were reviewed to create the questionnaire. The sociodemographic aspects and characteristics of the trip were developed based on the study of Lee et al. (2018), using closed questions. The motivation questions were constructed based on Rid et al. (2014). These questions were measured on a 5-point Likert-scale, where 1 was “not important” and 5 was “very important”. The satisfaction and return to destination questions were based on the Kim and Park (2017). In the case of satisfaction, a five-point Likert-type scale was used, where 1 was “not at all satisfied” and 5 was “very satisfied”. In the case of return intentions, recommendation and saying positive things about the destination, a five-point Likert-type scale was used, where 1 means “totally in disagreement” and 5 “totally in agreement”. The Cronbach’s Alpha coefficient regarding the motivation items was equal to 0.86 (close to 1), which indicates that the instrument used to analyze the motivations was reliable for obtaining stable and consistent measurements.

Tourists were surveyed at “Mann Beach,” on the island of San Cristobal while doing recreational activities related to coastal and marine tourism. The data collection was carried out between the months of January and February 2019. The interviewers were university students who were previously trained by the authors of this research. A convenience sampling was used in the beach. The sample size was 407 valid questionnaires, collected on a finite population, considering that the Galapagos Islands received just 271,238 tourists in 2019 of these, 67% are of foreign origin, compared to 33% of national tourist arrivals. (Galapagos National Park, 2020). A margin of error of +/- 4.85%, a confidence level of 95% and a variation of 50% was proposed. The data collected were organized, tabulated, and analyzed through the SPSS program, version 22.

Factor analyses were used to reduce the number of variables and take into account less factors but without losing a large amount of information. The Varimax rotation was used to facilitate the interpretation of the data. Kaiser's criterion served to find the number of factors, where only factors with eigenvalues greater than one were considered. The KMO index and Bartlett's Sphericity test were used to determine if factor analysis was

appropriate. Cronbach's Alpha coefficient was used to measure factor reliability and reliability for all items. In the second stage, the K-means grouping method was implemented, which is the most popular in tourism research to segment participants (Zografos & Allcroft, 2007). The significant differences between the mean values of the groups in relation to their motivations were evaluated by the Mann-Whitney U test. Finally, the Pearson's Chi-square test was used to explore the differences between the groups regarding satisfaction, intention to return, recommend and say positive things about the destination (Table 1).

INSERT TABLE 1

4. Results

The sample consisted of 15.7% foreign tourists and 84.3% national tourists. As for the origin, most were from Europe (38.6%). 55.8% were men, and 44% were women. Regarding their marital status, most of the tourists (59.2%) were single. The most representative age group was from 21 to 30 years old (42.15), followed by the group in the range of 31 to 40 years (35%). Concerning the level of education, most visitors had university studies with 62.9%, followed by those who had postgraduate, master, or Ph.D. studies, with 21.6%. About the professional activity, the larger group was composed of private employees with 30.7%. Finally, 26.3% traveled alone, and 26% with a partner (Table 2).

INSERT TABLE 2

4.1. Motivations of coastal and marine tourism

Factor analysis was carried out to extract six motivational dimensions. The analysis of the main component was used as the technique to reduce data. The Varimax rotation method was implemented to obtain a clearer interpretation of the factors, with very high or low factor loads. For the number of factors, the Kaiser criterion was used, where the factors having eigenvalues greater than 1 were taken into account. The six factors represented 63.75% of the total variance, this being a sufficient total variance value, due to that, if a factor with an eigenvalue of less than 1 was increased, this factor would not provide sufficient information to the model. Cronbach's Alpha for all the factors ranged from 0.640

to 0.852. The KMO index (Kaiser-Meyer-Olkin) was equal to 0.87 (close to 1), so the relationship between the variables was high, and factor analysis was very appropriate. In addition, the Bartlett Sphericity test for this case was significant (sig. <0.05), so it was advisable to perform the factor analysis. Table 3 shows the results.

INSERT TABLE 3

According to the results of Table 3, the first factor was called “learning” and is the factor with the greatest explanatory capacity (28.91%) of the total variance. This first dimension was related to interest in myths and legends, to learn the traditional dances, for the interest in local crafts, nightlife, learning the languages, and for the local gastronomy, all of them characteristics closely linked to the identity of the destination. The second factor was called “heritage and nature,” and it gathered 12.13% of the total variance. This second dimension was related to the importance of coastal and marine tourism and tourism in natural spaces, for the importance of the history and culture of Galapagos, for experiencing sites of marine fauna and national parks, and for experiences related to the coastal landscape of Galapagos, factors related to the environmental sustainability of the destination. The third factor was called “sun & beach, and sports,” and comprised 7.78% of the total variance. This third dimension was related to the value given to swimming, water sports, sun and beach tourism, and resting. The fourth factor was called “authentic coastal experience,” and it included 5.28% of the total variance. This fourth dimension was related to staying among the coastal population, with strong feelings of the experience, sharing with the local population, and experiencing the lifestyle of the coastal population. The fifth factor was called “novelty,” and it included 5.15% of the total variance. This dimension was related to a tourist motivated by the Galapagos archipelago’s flora and fauna, by wanting to see the things that the visitor does not normally see and its tourist attractions, both natural and cultural. The sixth factor was called “social interaction,” and comprised 4.53% of the total variance. This dimension was related to a visitor motivated by visiting family and friends, and for security and protection.

4.2. Segmentation of coastal and marine demand

A non-hierarchical K means cluster analysis was carried out, under the criterion of maximizing the variance between typologies and minimizing the variance within each

typology. The best solution that met the criteria established two conglomerates. Non-parametric tests have been used to know the difference between the means of the clusters, which do not need to fulfill the assumption that the population follows a normal distribution and are more used for ordinal and Likert scale data. The Mann-Whitney U test was used to know if the comparative means of the conglomerates were not equal. All the variables were significant at 5%, so the averages of the motivational variables of the two conglomerates were not equal. (Table 4).

INSERT TABLE 4

As shown in Table 4, the first group was formed by tourists who have high motivation in all motivational variables, which is why this segment has been called “multiple motives.” These tourists visited the destination for learning, for heritage and nature, for the sun and beach, for sports, for an authentic coastal experience, for novelty and social interaction. The second group was made up of tourists who have high motivation for experiencing marine wildlife sites and national parks, for wanting to see things they normally do not see, and for knowing the Galapagos archipelago’s flora and fauna, factors related to the environmental sustainability of the destination, receiving the name of “eco-coastal.” This segment is related to the dimensions “heritage and nature” and “novelty.”

4.3. Relationship between the segments with satisfaction

To know the relationship of the two segments with tourists’ satisfaction, the Chi-square test was implemented. In addition, a Likert-scale of 5 points was used, where 1 was a little satisfied, and 5 was very satisfied. Table 5 shows the results.

INSERT TABLE 5

As can be seen in Table 5, there is a relationship between the segments and the satisfaction of tourists ($p < 0.05$), so that the segment “multiple motives” has 56.3% of tourists with a high level of satisfaction, while the “eco-coastal” segment has 47.3% of tourists with high satisfaction, so the segments with higher motivation levels have higher levels of satisfaction in a coastal and marine destination.

4.4. Relationship between the segments with the intention to return, recommend and say positive things about the destination

To know the relationship between the two segments with the intention of returning, recommending, and saying positive things about the destination, the Chi-square test was implemented. In addition, a Likert-scale of 5 points was used, where 1 was a little, and 5 was a lot. Table 6 shows the results.

INSERT TABLE 6

As can be seen in Table 6, there is a relationship between the segments and the intentions of returning to the destination ($p < 0.05$), so that the segment “multiple motives” has 55.8% of tourists with a high level of intentions to return to the destination. The segment “eco-coastal” has 36.8% of tourists with high intentions of revisiting this place. Therefore, the segments with higher levels of motivation have higher levels of intentions to return to the coastal and marine destination.

Moreover, there is a relationship between the segments and the intentions to recommend the destination ($p < 0.05$), so that the “multiple motives” segment has 62.9% of tourists with a high level of intentions to recommend the destination. The segment “eco-coastal” has 61% of tourists with high intentions to recommend it as well. Therefore, the segments with higher levels of motivation, have higher levels of intentions to recommend the destination.

In addition, there is a relationship between the segments and the probability of saying positive things about the destination ($p < 0.05$), so that the segment “multiple motives” has 67% of tourists with a high level of speaking favorable things about the destination. Similarly, the segment “eco-coastal” has 67% of tourists with high levels of saying positive things about the place, which indicates the great potential of a destination when it has a wealth of nature and culture.

5. Discussion

Six motivational dimensions have been found in the Galapagos archipelago coastal and marine destination. The first one is “learning,” like in similar studies (Rid et al., 2014; Ekonomou et al., 2014). The second is “heritage and nature,” also highlighted in other studies on coastal and marine tourism (Carvache-Franco et al., 2018; 2020b; Ekonomou et

al., 2014; Kassean & Gassita, 2013; Ramseook-Munhurrun et al., 2018; Queiroz et al., 2014; Rid et al., 2014;). “Sun & beach, and sports” constitutes another motivational dimension in our case, analogous to other studies (Carvache-Franco et al., 2018; Ekonomou et al., 2014; Güzel, et al. 2020; Kassean & Gassita, 2013; Koutra & Karyopouli, 2013; Rid et al., 2014; Sastre & Phakdee-Auksorn, 2017), although this study adds the active component of sports. “Authentic coastal experience” constitutes the fourth motivational factor found, similar to previous studies in the field (Carvache-Franco et al. 2020b; Kassean & Gassita, 2013; Rid et al., 2014). The fifth dimension is the "Novelty" and as the last motivation in this destination is the "Social Interaction", which Kassean and Gassita (2013) found together, although other scholars separated them in two (Saayman et al., 2009), or only highlighted one of them as a relevant motivator (“novelty” in the study of Jeong, 2014).

In terms of motivations for visiting the Galapagos archipelago, the main contribution offered by this research is to have found a group of six dimensions that, in a marine reserve, gather the motivations of tourists to visit this type of coastal and marine destination. In addition, it has been found “sun & beach and sports” as a single dimension. It indicates that in a coastal and marine destination, that is a marine reserve, it is possible to find tourists who, in addition to going for the sun and the beach, also go with the desire to practice water sports such as snorkeling, diving, sailing, swimming or surfing. Another interesting contribution in the specific case of the Galapagos archipelago has been the relevance of two motivational factors, such as “learning” and “heritage and nature,” that capture characteristics closely linked to the identity of the destination and its environmental sustainability.

Regarding demand segmentation, the results show two groups of tourists. The first segment is called the “multiple motives,” like in other coastal and marine destinations studies (Caber et al., 2016; Carvache-Franco et al., 2020a; 2020b; Lee et al., 2018; Rid et al., 2014; Rudež et al., 2013). The second segment is called "eco-coastal," similar to groups of tourists also found in previous research (Carvache-Franco et al., 2018; 2019; 2020a; Lee et al., 2018; Onofri & Nunes, 2013; Rid et al., 2014; Valls et al., 2018).

The contribution of the present study, in this case, is that in coastal and marine destinations that constitute protected areas, like the Galapagos archipelago, the “multiple

motives” segment includes the “sun and beach” segment. On the contrary, in other coastal and marine destinations that are not marine protected areas; tourists seeking only the “sun and beach” normally constitute a separate group (Carvache-Franco et al., 2018; 2019; 2020a; 2020b; Ekonomou et al., 2014; Onofri & Nunes, 2013; Rid et al., 2014; Valls et al., 2018). This means that the “sun and beach” motivation does not appear to be as prominent in protected areas as it is in other coastal and marine destinations. Regarding the “eco-coastal” segment in a marine reserve destination, this group is highly motivated for experiencing marine wildlife sites and national parks, living unique experiences, and for knowing their flora and fauna, which indicate a high attraction for natural and cultural attractions in marine environments, as well as their sustainability.

“Multiple motives” was the segment with the highest satisfaction and also the one that had the greatest intention of returning, like in previous works (Hasan et al., 2019). Prayag (2012) also established three aspects that would improve the intention to return to a destination: natural environment, the reputation, and kindness of people being these factors highly valued for the “multiple motives” segment in this research. Likewise, our “multiple motives” are also attracted to the beach and local people, like in the study of Sangpikul (2018), who recognized their importance for loyalty. For Goffi et al. (2019), sustainability affects satisfaction, which is another relevant conclusion that emerged from our results. All these implications show that in a coastal and marine destination, satisfaction is related to the loyalty of the segments found.

6. Conclusions

Coastal and marine tourism offer a variety of alternative activities to the sun and beach tourism, which opens a set of opportunities for service providers to develop a portfolio of products according to the demand found. The present study in the Galapagos archipelago, which is a marine reserve of global importance, brings empirical results that contribute to the scientific literature on this subject that until now is scarce.

In a destination that has the characteristic of a marine reserve, the motivational dimensions are mostly related to nature and culture. The most relevant ones were “learning” and “heritage and nature,” which show the importance of its coastal community, its endemic fauna in its natural state, and its varied marine and coastal flora, elements

closely linked to the identity and environmental sustainability of this destination. The “sun and beach” factor does not appear as a motivator by itself nor as a demand segment, meaning that the beach in this kind of destination is more valued by its natural wealth, for doing sports, and other coastal activities, different from those linked to traditional coastal and marine destinations, where the natural resources are not so relevant. Thus, the type of tourists attracted is also different, being possible to differentiate two generic types, the “multiple motives” and the “eco-coastal,” but both of them are highly encouraged by activities related to enjoying nature, the local culture and heritage, showing their motivation by the environment, the culture, and their preservation.

The results show that there is a relationship between the types of tourists and their satisfaction and loyalty, meaning that tourists with higher levels of motivation, also have higher levels of satisfaction and intentions to return. Both demand segments showed also a high satisfaction and loyalty, although the “multiple motives” exhibited an even better percentage of satisfied and loyal tourists. This result could mean that the more generic tourist, perhaps also the less demanding one, is the most satisfied with the varied offer of activities and features provided by the destination where nature, environment, and culture are the main attractors. In the case of the “eco-coastal” tourists, their satisfaction and loyalty were also high, but perhaps their more focused orientation towards certain activities made them more demanding or have a higher expectancy about what they were going to find in the destination.

Besides these academic contributions, this research has also practical implications. This study will help tourism service providers to adapt their offer and products according to the characteristics of the demand found. This kind of destination does not attract the traditional “sun and beach” tourists, who want to rest on the sand and enjoy the sun, but on the contrary, it appeals to a tourist highly motivated by environmental and cultural aspects of the territory, with a predisposition to participate in authentic experiences, not contributing to change them as a consequence of the touristic activities in which they are involved. A tourist product that sells this image of preservation and respect for the environment and the culture, that allows tourists to be involved in activities on the coast and to enjoy the beach, but also to practice sports, like surfing, diving, and fishing, would be highly appreciated, as well as environmental education, experiencing the local lifestyle,

knowing the culture, the crafts of the area, and its flora and fauna. Likewise, tourists should be involved in environmental conservation programs feeling part of the sustainability of the destination.

This work, however, is not exempt from limitations. For example, the temporality in which it was carried out could imply differences in the demand if longitudinal data could be collected. It would be also very important to develop studies on the image of these coastal and marine destinations, which will constitute a research line for the future.

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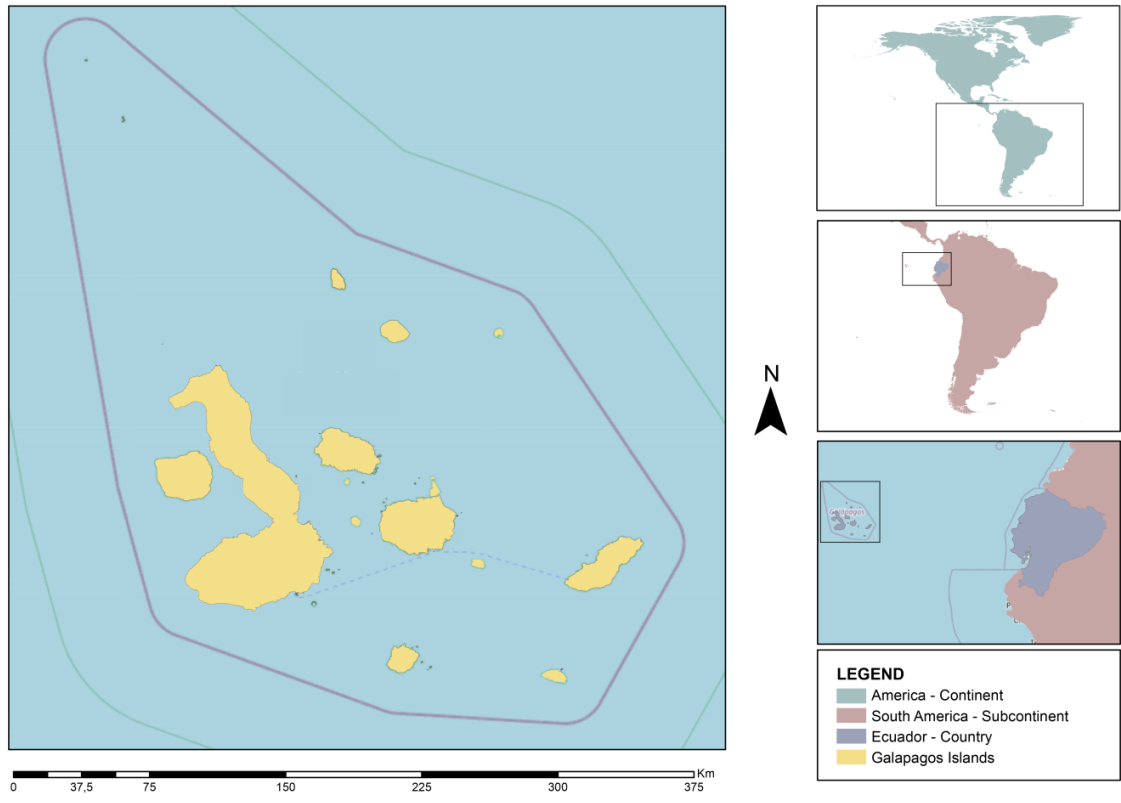


Figure 1. The geographic location of the Galapagos Islands (Ecuador)

Table 1. Research file

Geographic area	Galapagos Islands (Ecuador)
Population	National and foreign visitors
Completion date	January to February 2019
Process	Convenience sampling
Total population	271,238
Confidence level	95%
Error range	+/- 4.85%
Valid questionnaires	407

Table 2. Sociodemographic aspects and characteristics of the visit

Demographics	Categories	N=407	%
Origin	National	64	15.7
	Foreign	343	84.3
Origin by continent	North America	94	23.1
	Europe	157	38.6
	South America	122	30
	Asia	25	6.1
	Rest of the world	9	2.2
Gender	Man	179	44
	Woman	227	55.8
Marital status	Single	241	59.2
	Married	122	30
	Other	36	8.8
Age	<20 years old	23	5.7
	21 - 30 years old	171	42.1
	31 - 40 years old	142	35
	41 - 50 years old	44	10.8
	61 - 60 years old	18	4.4
Level of education	>60 years old	8	2
	Primary	11	2.7
	Secondary	52	12.8
	University	256	62.9
	Postgraduate/Master/Ph.D.	88	21.6
Professional activity	Student	105	25.8
	Researcher / scientist	19	4.7
	Businessman	64	15.7
	Private Employee	125	30.7
	Public Employee	58	14.3
	retired	12	2.9
	unemployed	8	2
	Other	16	3.9
Who you visit with	Alone	107	26.3
	With family	72	17.7
	With friends	75	18.4
	With a partner	106	26
	Other	46	11.3

Table 3. Factor analysis

Variables	Factor loads	Eigenvalues	% of Explained Variance	Cronbach's Alpha
Factor 1: Learning		6.938	28.908	0.762
Interest in myths & legends	0.775			
Learn traditional dances	0.751			
Interest in local handicrafts	0.722			
Nightlife	0.596			
Learn local languages	0.572			
Typical cuisine	0.513			
Factor 2: Heritage and nature		2.912	12.132	0.852
Importance of coastal & marine tourism	0.853			
Importance of tourism in natural areas	0.830			
Importance of history & culture	0.777			
Experience marine wildlife sites & national parks.	0.749			
Experience related to the coastal landscape	0.566			
Factor 3: Sun & beach, and sports		1.864	7.767	0.785
Importance of swimming	0.770			
Importance of water sports	0.750			
Importance of sun-beach tourism	0.677			
To rest and relax	0.624			
Factor 4: Authentic coastal experience		1.262	5.257	0.796
Stay among the coastal population	0.761			
Strong feelings of experiences lived	0.725			
Share interesting experiences with the local population	0.629			
The lifestyle of the coastal population	0.541			
Factor 5: Novelty		1.236	5.149	0.640
To know the flora and fauna	0.733			
I want to see the things that I normally do not see	0.73			
For its tourist attractions	0.69			

Factor 6: Social interaction	1.088	4.532	0.653
To visit family and friends	0.808		
Safety and protection	0.520		
Total variance extracted (%)		63.746	
Cronbach's Alpha (Total)			0.863

Table 4. Segmentation of the demand

Variables	Cluster 1: Multiple motives	Cluster 2: Eco- coastal	Mann- Whitney U	Sig.
Importance of tourism in natural areas	4.3	3.4	13549.0	0.000
Importance of history & culture	4.3	3.2	10881.5	0.000
Importance of coastal & marine tourism	4.3	3.3	12664.0	0.000
Experience marine wildlife sites & national parks.	4.4	3.8	15262.0	0.000
Experience related to the coastal landscape	4.3	3.5	12979.0	0.000
Share interesting experiences with the local population	4.2	2.9	7852.0	0.000
Stay among the coastal population	4.2	3	8544.0	0.000
Strong feelings of experiences lived	4.4	3.4	10843.0	0.000
Typical cuisine	4.4	3	7585.0	0.000
The lifestyle of the coastal population	4.3	2.9	7004.0	0.000
Learn traditional dances	3.9	2.2	6469.0	0.000
Learn local languages	4	2.3	7100.5	0.000
Interest in myths and legends	4.3	2.5	5593.5	0.000
Interest in local handicrafts	4.2	2.7	6473.0	0.000
Importance of sun-beach tourism	4.5	3.4	10997.5	0.000
Importance of swimming	4.5	3.5	10935.0	0.000
Importance of water sports	4.3	3.6	12898.5	0.000
To rest and relax	4.6	3.7	13082.0	0.000
Safety and protection	4.5	3.6	12254.0	0.000
I want to see the things that I normally do not see	4.5	4	15936.0	0.000
To visit family and friends	4	2.4	10006.5	0.000
Nightlife	4	2.6	10482.5	0.000
To know the flora and fauna	4.4	3.9	15229.5	0.000
For its tourist attractions	4.4	3.7	14639.5	0.000

Table 5. Relationship between the segments with general satisfaction

Variable		Multiple motives %	Eco-coastal %	Total %	Chi- square	sig.
General satisfaction	1	0.4	3.8	2.0	25.503	0.000
	2	0.9	7.7	3.9		
	3	8.0	14.8	11.1		
	4	34.4	26.4	30.8		
	5	56.3	47.3	52.2		
Total		100.0%	100.0%	100.0%		

Table 6. Relationship between the segments with the intentions of returning, recommending and saying positive things about the destination

Variables		Multiple motives %	Eco-coastal %	Total %	Chi- square	sig.
I have the intention to return to this destination	1	5.8	12.1	8.6	31.996	0.000
	2	4.9	11.0	7.6		
	3	8.0	21.4	14.0		
	4	25.4	18.7	22.4		
	5	55.8	36.8	47.3		
Total		100.0	100.0	100.0		
I have the intention to recommend this destination	1	1.3	3.3	2.2	25.835	0.000
	2	1.8	11.5	6.2		
	3	5.8	8.8	7.1		
	4	28.1	15.4	22.4		
	5	62.9	61.0	62.1		
Total		100.0	100.0	100.0		
When I talk about this destination, I will say positive things	1	0.4	3.3	1.7	11.997	0.017
	2	0.9	4.4	2.5		
	3	8.5	8.8	8.6		
	4	23.2	16.5	20.2		
	5	67.0	67.0	67.0		
Total		100.0	100.0	100.0		