Journal of Environmental Management and Tourism

Table of Contents:

Call for Papers
Winter Issues 2021
Journal of Environmental Management and Tourism

Journal of Environmental Management and Tourism is an interdisciplinary research journal, aimed to publish articles and original research papers that should contribute to the development of both experimental and theoretical nature in the field of Environmental Management and Tourism Sciences.

Journal will publish original research and seeks to cover a wide range of topics regarding environmental management and engineering, environmental management and health, environmental chemistry, environmental protection technologies (water, air, soil), pollution reduction at source and waste minimization, energy and environment, modeling, simulation and optimization for environmental protection; environmental biotechnology, environmental education and sustainable development, environmental strategies and policies, etc. This topic may include the fields indicated above, but are not limited to these.

Authors are encouraged to submit high quality, original works that discuss the latest developments in environmental management research and application with the certain scope to share experiences and research findings and to stimulate more ideas and useful insights regarding current best-practices and future directions in environmental management.

Journal of Environmental Management and Tourism is indexed in SCOPUS, RePEC, CEEOL, ProQuest, EBSCO and Cabell Directory databases.

All the papers will be first considered by the Editors for general relevance, originality and significance. If accepted for review, papers will then be subject to double blind peer review.

Deadline for submission:	30th October 2021
Expected publication date:	December 2021
Website:	https://journals.aserspublishing.eu/jemt
E-mail:	jemt@aserspublishing.eu

To prepare your paper for submission, please see full author guidelines in the following file: JEMT_Full_Paper_Template.docx, then send it via email at jemt@aserspublishing.eu.

Measurement of Competitiveness of Nature-Based Tourist Destinations: application to National Parks in Brazil

Francisco Antonio DOS ANJOS
University of the Itajaí Valley - UNIVALI, Brazil
anjos@univali.br

Sabrina DA ROSA
University of the Itajaí Valley - UNIVALI, Brazil
sabrinarosa@edu.univali.br

Abstract:

The theme of the competitiveness of tourist destinations is broad and complex, and so are the various evaluation models being tested for various destination typologies. Understanding destination competitiveness leads to the ability to increase tourism revenue, attract more visitors, and provide satisfying and memorable experiences. This study aims to evaluate the factors of Competitiveness of Nature-Based Tourist Destinations, from the perspective of demand. The matrix of attributes was submitted to 637 visitors from the 74 Brazilian national parks, in January 2019, through an online form containing the 59 attributes validated by experts in the area and managers. Data collected from visitors were used to create a structural method. The analyses involved three steps: demographic descriptive analysis, exploratory factor analysis (EFA), confirmatory factor analysis (CFA) and multiple groups confirmatory factor analysis (MGCFA). The results confirmed 26 attributes, organized into five factors: Cultural Attractions, Infrastructure and Supporting Factors, Destination Management, Sustainability and Residents' Quality of Life.

Keywords: destinations competitiveness; tourism competitiveness; competitiveness attributes; nature-based tourism; Brazil; national park.

JEL Classification: Z32; Q57; M31.

Introduction

Nature-based tourism is one of the most important tourism segments for many destinations (Huybers & Bennett 2003; Ramkisson & Mavondo 2014), and it takes place mostly in protected natural areas. Protected natural areas are categorized by the International Union for Conservation of Nature (IUCN), with management categories of global standards accredited by international organizations like the United Nations (IUCN, 2021).

Tourism is an alternative to enhance the protection of sustainable use of land and ensure the maintenance of biodiversity, which, in turn, can demonstrate the value of natural heritage and provide economic benefit as a result (UNWTO, 2018). In such situations, the competitiveness of these countries is directly related to the levels of preservation of natural resources and consequently raises awareness about the value of preservation (Boley & Green, 2016), with the possibility of adding value.

Globally, national park management agencies earn 84% of their funding through tourism. In developing countries, economic returns from protected areas are of national importance (Balmford *et al.* 2009; Watson, Dudley, Segan & Hockings 2014), contributing significantly to local and regional economies through tourism (Balmford *et al.* 2015). The number of visits to terrestrial protected areas is estimated to be 8 billion per year and

they generate approximately $600 billion in direct in-country expenditures (Souza, Thapa, Rodrigues & Imori 2019).

Natural resource sources closely influence climatic conditions, provide indispensable habitats for flora and fauna, are a source of livelihood for millions of people, and are a cornerstone of the tourism industry (UNWTO, 2018). The concern about the competitiveness of destinations is an alternative that can boost the effort to define long-term priorities and create proactive efforts to create virtuous circles between equality, sustainability, and growth (Schwab 2018). The competitiveness of tourist destinations has a multidimensionality construct, and it is a theme that has been increasingly studied by researchers around the world, looking for potential economic and social benefits of the tourism activity. It has been one of the most analysed economic phenomena over the last thirty years (Jován & Bradic-Martinovic 2014).

Tourism, the largest and fastest-growing economic sector in the world, accounted for, for 10% of world GDP, 30% of exported services and created one in every ten new jobs in 2017 (UNWTO, 2018). Despite a shortage of quantifiable and comparable data, nature-based tourism has often been reported to be a large and growing segment within the global tourism market (Hassan 2000; Balmford *et al.* 2015; Barić, Anić & Bedoy 2016; Hardiman & Burgin 2017). The sector encompasses most of the tourist attractions of developing countries (Bwalya-Umar & Mubanga 2018), being able to generate substantial income, both for the preservation of biodiversity and for the socio-economic development of local communities (Hardiman & Burgin 2017).

National Parks stand out among protected natural areas (Balmford *et al.* 2009), presenting diverse and unique characteristics, as icons and tourism destination brands (Puustinen, Pouta, Neuvonen & Sievänen 2009; Ramkisson & Mavondo 2014). Brazil is part of this context, and according to the World Economic Forum, it occupies the first place in natural resources and number of acknowledged species among the 136 countries analysed, according to the Travel and Tourism competitiveness index (WEF, 2018). The competitiveness of the destination relates to its ability to efficiently increase tourism revenue (Ritchie & Crouch 2003) with products and services (Heath 2003) that are of quality, innovative, ethical and attractive, in order to achieve sustainability within its global vision, increase added value of tourism, optimize its attractiveness and benefits for both visitors and the local community, in a sustainable way (UNWTO, 2018).

The new approaches to tourism planning and management take into account the growing competitiveness of tourist destinations (Sanz-Ibáñez; Anton Clavé 2014), particularly when it comes to managing destinations located in National Parks or their surroundings. The objective of this study is to validate destination competitiveness indicators, for Nature Based Tourism (TBN), using the Brazilian National Parks as a case study. .

Competitiveness is characterized by a destination's ability to use its resource effectively in the long term, which differs from comparative advantage, focusing on a destination's available resources. Thus, competitiveness refers to each park, avoiding recognizing the comparative advantages of one park over another, such as location, management or number of visitors.

Despite vast literature on the theme of competitiveness of tourist destinations, no validated model focusing on nature-based tourist destinations from the perspective of demand has yet been established. This study was based on classical models of competitiveness of tourist destinations found in the literature (Crouch & Ritchie 1999; Hassan 2000; Dwyer & Kim 2003; Huybers & Bennett 2003; Enright & Newton 2004; Gooroochurn & Sugiyarto 2005; Mazanec, Wöber & Zins 2007; Gomezelj & Mihalič 2008; Perles Ribes, Ramón Rodríguez & Sevilla Jiménez 2014; Bornhorst, Ritchie, Sheehan 2010; Crouch 2011) and also newer models tested in different situations (Zhang, Gu, Gu & Zhang 2011; Andrades-Caldito, Sánchez-Rivero & Pulido-Fernández 2013; Caber, Albaryrak & Matzler 2012; Bagarić & Žitinić 2013; Dwyer, Cvelbar, Mihalič & Koman 2014; Knežević Cvelbar, Dwyer, Koman & Mihalič 2015; Chin, Haddock-Fraser & Hampton 2015; Wong 2015; Augustin & Liaw 2017; Blanco-Cerradelo, Gueimonde-Canto, Fraiz-Brea & Diéguez-Castrillón 2018). Destaca-se que em quase todas as situações os modelos foram gerados na perspectiva do gestor. It is noteworthy that in almost all situations the models were generated from the manager's perspective. Based on these models, a matrix of factors was built, with a focus on measuring competitiveness, applied to nature-based destination, from the perspective of tourists.

To achieve the general objective of this study, a Competitiveness Assessment Model for Nature-Based Tourist Destinations was created, using National Parks as a reference. In addition to the managerial contribution, this research adds relevant theoretical content to different themes - such as competitiveness of destinations from the perspective of demand, nature-based tourism, and national parks.

To develop the next stages of this study, the following hypothesis was used:

The competitiveness of nature-based destinations can be measured from the perspective of tourists by seven factors found in a recurring way in the destination competitiveness literature based on the perspective of

managers: Core Resources and Attractions, Supporting Factors & Resources, Destination Management, Demand, Sustainability, Qualifying and amplifying determinants, Resident´s quality of life.

This research has a quantitative exploratory approach, and, to reach the designated aims, the following research techniques were used: exploratory factor analysis (EFA), confirmatory factor analysis (CFA), and structural modelling. Therefore, first, the introduction seeks to contextualize and justify the choice of the theme and, consequently, to present the goal of the study. Second, a literature review on nature-based tourism and competitiveness of destinations was carried out. The third section presents the materials and methods adopted in the construction of the work. The fourth part presents the empirical results of the proposed model, and the fifth part reveals the theoretical and managerial implications, and the conclusions regarding the study. Finally, the sixth section contains the references used in the theoretical framework.

1. Literature Review

Nature-based Tourist Destinations. Tourist destination is a broad concept (Dwyer, Forsyth & Rao 2000), traditionally regarded to as the unit of analysis, and it might be defined as geographical areas such as a country, island or city (Davidson & Maitland 1997). The tourist destination includes a significant number of stakeholders, who interact through the co-creation of experiences (Saraniemi & Kylanen 2011), who have a common goal - to improve competitiveness of the tourist destination (Crouch 2011). In this study, a tourist destination will be understood as the natural protected area studied and its immediate surroundings.

Nature-based tourism has a significant weight in the world's economy, but it has only recently been recognized (Buckley 2019). Tourism in a natural environment has been referred to in a variety of ways, such as "nature tourism", "tourism based on nature" or "tourism in natural areas" (Barić *et al.* 2016). In this research, we adopted the concept of nature-based tourism as a way of enjoying nature, based on the appreciation of fauna and flora, as well as its numerous integrations with the environment, natural landscapes and human landscapes (Soifer 2008). Much of Nature-Based Tourism is developed in a protected natural area, especially the National Parks.

In the context of protected natural areas, National Parks stand out as the most visited category (Balmford *et al.* 2009). The world classification of protected natural areas has an equivalent classification in Brazil, named conservation units (UCs). Units are categorized by the model developed by the IUCN, being ruled in Brazil by the Sistema Nacional de Unidades de Conservação (National System of Conservation Units) (SNUC), since the approval of Law no. 9985/2000. The SNUC divides conservation units into two groups, according to their management objectives and types of use: Integral Protection, which allows indirect use of resources; and Sustainable Use, which allows the use of natural resources directly.

Within the Integral Protection units, the National Parks category (PARNA) represents the largest extension over the Brazilian territory, with 53% of the area and the largest number of units (ICMBIO 2021). The National Parks have many gaps and weaknesses in their management, including pending land regularization, absence or lack of review of management plans and lack of staff and basic infrastructure (Medeiros & Young 2011; Oliveira 2017). Ultimately, problems at the different stages of management - planning, implementation and maintenance (management).

The relevance of this study is related to considering the competitiveness of destinations in these areas as a strategy for maintaining the resources of protected natural areas and their surrounding communities, being an alternative to avoid the degradation that tourism itself can cause.

The quality of natural attractions is a key component of a destination's attractiveness and can be determinant for its competitiveness (Hassan 2000; Mihalič 2000; Ritchie & Crouch 2003; Law & Lo 2016). Tourists are attracted to regions because of the quality of their natural resources (Huybers & Bennet 2003; Ritchie & Crouch 2003; Dwyer & Kim 2003), and realize that the greater the conservation of a region's natural resources, the greater its uniqueness (Boley & Green 2016). Thus, environmental protection can be an important demand driver (Huybers & Bennett 2003). It is then seen that one can recognize the importance of conservation as a means to increase demand, and, consequently, the increase of financial resources, being essential to realize the impact generated in communities around the protected natural areas. Tourism might is a strategy for providing resources to conserve biodiversity. National Parks are a major form of recreational opportunities for visitors of protected areas and have the highest rates of visitations.

Competitiveness of Destinations. The construct competitiveness emerged in the industrial sector, with the "diamond" model of National Competitive Advantage (Porter 1989). This model seeks to investigate the reasons that lead countries to achieve competitive advantages in certain sectors and their implications for strategy. Ritchie and Crouch (1993) first studied the transposition of this model into the field of tourism. Ritchie and Crouch (2003),

which understands that its understanding is related to the ability to increase spending on tourism, to attract more visitors and provide satisfactory and memorable experiences.

The competitiveness of a destination is essentially associated with the maintenance of cultural richness and natural heritage (Dwyer; Forsyth & Rao 2000; Ritchie & Crouch 2003; Heath 2003), preserving and improving environmental quality and attractiveness (Mihalič 2000) and increasing operators' ability to sell products with higher value-added. A competitive destination raises the quality of life and leads to residents' socioeconomic prosperity (Crouch & Ritchie 1999; Dwyer & Kim 2003; Ritchie & Crouch 2003).

In the systematic review, the factors determining the most recurrence in the Destination Competitiveness Models published over the last two decades were identified:

▪ Core Resources and Attractions: They are the main motivators for visiting the destination, considering in main resources "endowed/ inherited" or "created" (Dwyer & Kim 2003; Gomezelj & Mihalič 2008; Dwyer *et al.* 2014). Inherited resources are the natural resources, encompassing the natural landscape (Crouch & Ritchie 1999; Hassan 2000; Dwyer & Kim 2003; Gomezelj & Mihalič 2008), and several other competitive attributes that make up the attractiveness of a destination (Crouch 2011). One ofL these attributes is the cultural heritage and the history of the destination (Hassan 2000; Dwyer & Kim 2003; Crouch 2011; Ritchie and Crouch 2010; Dwyer *et al.* 2014), which can also be created, such as the Great Wall of China. Attractiveness is also related to the range of activities available (Hassan 2000; Dwyer & Kim 2003; Gomezelj & Mihalič 2008; Bornhorst; Ritchie & Sheehan 2010; Crouch 2011; Dwyer *et al.* 2014), which can include recreation and sports facilities, and events, ranging from local community to world exhibitions (Dwyer & Kim 2003; Crouch 2011; Dwyer *et al.* 2014). The more diverse the attractions, the greater the ability to attract different segments of the tourism market (Dwyer & Kim 2003).

▪ Supporting Factors & Resources: As resource factors, the general infrastructure of the destination includes drinking water, sanitation, communication systems, roads, like in any other economic and social activity (Crouch & Ritchie 1999; Dwyer & Kim 2003; Gooroochurn & Sugiyarto 2005; Crouch 2011; Ritchie & Crouch 2010; Dwyer *et al.* 2014). The supporting factors are accessibility, services, and hospitality. Accessibility includes a variety of influences, including frequency, ease and quality of the access to road, rail, waterway and air transport (Crouch & Ritchie 1999; Hassan 2000; Dwyer & Kim 2003; Gomezelj & Mihalič 2008; Crouch 2011; Caber & Albaryrak; Matzler 2012; Bagarić & Žitinić 2013; Dwyer *et al.* 2014), to the main services (Hassan, 2000; Dwyer & Kim 2003; Dwyer *et al.* 2014), and to auxiliary services. These services are increasingly vital to the tourism experience, depending on the quality and quantity offered (Dwyer & Kim, 2003; Gomezelj & Mihalič, 2008; Dwyer *et al.* 2014), including the hospitality perceived in relation to local welcoming and community attitudes towards tourists (Dwyer & Kim 2003; Gomezelj & Mihalič 2008; Bagarić & Žitinić 2013; Dwyer *et al.* 2014).

▪ Destination Management: Five types of destination management activities have a potentially significant influence on destination competitiveness: destination marketing management; destination planning and development; destination management organization; human resources development; and environmental management (Ritchie & Crouch 2003; Dwyer & Kim 2003; Ritchie & Crouch 2010). There is a distinction between public sector destination management and private sector destination management activities (Dwyer & Kim 2003; Huybers & Bennett 2003; Gomezelj & Mihalič 2008; Dwyer et al. 2014)

▪ Demand: While most of the discussion about the competitiveness of firms and nations, as it appears in the general literature, focuses on supply-related items, demand factors are of particular importance in determining the competitiveness of destinations (Dwyer & Kim 2003). The consumer survey is extremely important for competitiveness studies (Dwyer *et al.* 2014). Studies relate the perception of the destination image generated through marketing activities (Gomezelj & Mihalič 2008; Ritchie & Crouch 2010). The analysis of the impact of demand overload is also important (Hassan 2000; Huybers & Bennett 2003; Ritchie & Crouch 2010).

▪ Sustainability: The sustainable development of tourism is fundamental for the conservation of nature and the preservation of culture (Hassan 2000), as a long-term measure that recognizes the significance of the triple management of ecological, social and cultural resources (Dwyer & Kim 2003; Blanco-Cerradelo *et al.* 2018). The quality of the environment is also an important resource for a destination, especially due to the growing number of environmentally aware tourists (Gooroochurn & Sugiyarto 2005).

▪ Qualifying and amplifying determinants: The competitive ability of a destination also depends on the overall structure and positive environment in which the destination is located (Bagarić; Žitinić 2013). The determinants are related to safety and cost-benefit. The safety (Crouch & Ritchie 1999; Dwyer & Kim 2003; Ritchie & Crouch 2010; Caber & Albaryrak; Matzler 2012) of a destination can be related to terrorism and wars, crime issues, drinking water, natural disasters, quality of medical services (Crouch & Ritchie 1999). Also as a

qualifier, the cost-benefit of a destination is largely driven by much broader socio-economic and global forces, interfering with the cost of transportation, cost of living at a destination, exchange rate effects (Crouch & Ritchie 1999; Dwyer & Kim 2003; Gooroochurn & Sugiyarto 2005; Ritchie & Crouch 2010; Bagarić & Žitinić 2013).

  ▪ Resident´s quality of life: The quality of life in the destination contributes to the tourist experience, contributing to the tourist quality of the destination (Gooroochurn & Sugiyarto 2005). The tourism system not only covers suppliers of products and services, but also the interaction of visitors and residents at the destination (Bornhorst; Ritchie & Sheehan 2010) and may influence satisfaction (Blanco-Cerradelo *et al.* 2018). Even when the overall combination of products and services is strong, tourism success might not happen if the destination is difficult to reach or if residents of the host population do not support the tourism initiative and treat visitors with disdain (Bornhorst; Ritchie & Sheehan 2010). Quality of life is captured by the social development indicator, constructed by combining the UNDP human development index, which considers objective attributes (life expectancy, education, and income) and other available indices (Gooroochurn & Sugiyarto 2005) or subjective perceptions that involve sensations (Blanco-Cerradelo *et al.* 2018).

  At the macro level, many organizations and researchers have devoted efforts to creating indexes and attributes for ease of measurement, enabling comparisons, rankings, benchmarking, improvements or even facilitating the design of improvement strategies as an end goal. The characteristics that each indicator must have to be considered adequate: validity, reliability, accuracy, and measurability. Augustin and Liaw (2017) and Eddyono, Darusman and Sumarwan (2021) stated that attributes are often created without focusing on specific inherent characteristics of attributes and indices, such as validity and reliability, always generating a gap that needs to be resolved. The contribution of this study is to recognize from the perspective of tourists the attributes that compose the measurement of the competitiveness of a destination.

2. Methodology

The approach of this study was predominantly quantitative approach using statistical methods. The research tool used to collect the empirical data and the scales for measurement of the competitiveness destinations: Core Resources and Attractions (with 19 attributes), Supporting Factors & Resources (with 14 attributes), Destination Management (with 8 attributes), Demand (with 4 attributes), Sustainability (with 3 attributes), Qualifying and amplifying determinants (with 3 attributes), and Resident´s quality of life (with 8 attributes). The testing of the measurement matrix was carried out with visitors to national parks through a questionnaire. All items were measured using a seven points scale, ranging from -3 "totally disagree" to 3 "fully agree".

  As a first procedure, a list of 59 competitiveness attributes of tourist destinations was subjected to the analysis of two experts in destination management and one manager specializing in nature-based tourism, who carried out the preliminary validation of the matrix. Subsequently, the attributes were evaluated and approved by 36 managers of Brazilian National Parks (74 National Parks).

  As a second procedure, the set of attributes was presented to the visitors to the Brazilian National Parks using the online platform Google Forms. Disclosure of the forms was done using the authors' Facebook profile, as well as other social media, such as the WhatsApp groups of climbers "Trip da Montanha" (254 participants) and "ECOxperience" (119 participants), and in the WhatsApp group of a Brazilian network of travel "RBBV Oficial" (255 participants). The Instagram profile of the blog Rota Terrestre was also used. Data collection took place from January 14th to January 30th, 2019, totalling 628 valid questionnaires and completed by national park visitors.

  The sample size was considered by the authors as representative, considering that the population is infinite, with millions of visitors from unquantified parks, we will start using the calculation with a sampling error of 5%: $n = n_0 = 1 / 0.05)^2 = 1 / 0.0025 = 400$.

  In first, the respondent had to indicate the Brazilian National Park he/she had visited. The visitor was then asked to state his/her level of agreement with the variable presented that made the park visited more attractive than other similar destinations. Visitors were presented with a list of 59 destination competitiveness attributes, the respondent was asked to inform his/her socio-demographic profile, with questions on age, gender, city of residence, education level and income range.

  After the questionnaire, the data collected were selected, coded and tabulated for subsequent analysis and interpretation (Marconi & Lakatos 2001). The data from the completed questionnaires were extracted from the Google Platform to a Microsoft Office Excel 2010. Later, multivariate analysis was performed using the IBM Statistics (SPSS) 22 software, with an exploratory factorial analysis (EFA). The technique is that of multivariate interdependence, in which all variables are simultaneously considered, in order to condense information into several sets of statistical variables (factors) (Hair, Black, Babin, Anderson & Tatham 2009).

To evaluate the reliability and validity of the questionnaire and that of the sample of visitors, the following tests were carried out: Bartlett's Test of Sphericity, adequacy of the sample test (Kaiser-Meyer-Olkin - KMO), reliability of internal factor consistency test (Cronbach's Alpha) and Scree plot, where the percentage of variance explained to define the factors to be extracted (Hair Jr. *et al.* 2009). In the third stage, confirmatory factor analysis (CFA) was carried out for confirming a measurement theory for the construction of a theoretical model (Hair Jr. *et al.* 2009) using the statistical software JASP (version 0.12), the MPlus standard method (DWLS) for estimates and the robust method for error calculation. The data were later analysed by multigroup. The structural modelling was developed and analysed, complexities of models, especially the relations with the measurement of the competitiveness of nature-based tourist destinations from the perspective of tourism demand.

3. Case Studies

Sample profile. The social and demographic data obtained with the data collection instrument of this study made it possible to draw the profile of the respondents based on the total sample of 637 applied questionnaires. The sample is 55.73% female, 43.64% male and 0.63% others. In the sample, the predominant generation was Y, with 55.73%, followed by X (21.04%), Z (15.38%) and Baby Boomers (7.85%). Regarding the level of education, more than 40% of the sample revealed to have concluded higher education, followed by postgraduate (27.47%), Master's degree (12.40%), and Doctorate (5.97%). Only 14.13% of the sample did not attend higher education. When asked about the average family income, 33.59% of respondents revealed an average of 1 to 4 minimum wages and 32.81% reported income of 5 to 8 minimum wages, 18.52% 9 to 12 minimum wages, while 15.07% stated to earn more than 13 minimum wages per month.

The social and demographic characterization of the sample was very similar to the last broad survey conducted by EMBRATUR - Brazilian Institute of Tourism with 6000 visitors in the Natural Environments Conserved in Brazil. Held in ten Brazilian conservation units, being seven national parks, the sample indicated that the level of education of visitors is mostly higher education with 74.6%. The income data recognized that 70% of the visitors receive more than 15 Minimum Wages at the time of the study, which we could classify as medium and high income (Rabahy & Ignarra 2002). In more recent data, the study conducted by SEMEIA (2020), indicates that one of the barriers to visiting national parks in Brazil is the cost of travel and accommodation. The amount charged on tickets and the distance from the national parks influence the profile of visitors, most of whom are medium and high income and highly educated.

Case studies on national parks in Brazil, such as Itatiaia, in 2011, indicated that only 16% of the sample did not attend higher education (Barreto *et al.* 2013). In another study, related to the Chapada dos Veadeiros National Park, 16% did not attend higher education and 66% have an income higher than R$3,000.00(Gomes 2017).

Exploratory Factor Analysis. Analysis was based on a measurement process that identifies variables that "go together", that is, variables that present the same underlying structure (Tabachinick and Fidell 2007), something possible. Despite the previous structure of the matrix identifying the relationship between variables and factors recognized in the literature, it was decided to perform a preliminary exploratory factor analysis to provide more freedom in the arrangement of the variables arising from the models analysed.

In the Exploratory Factorial Analysis (EFA) stage, it was observed that the arrangement of variables converged to the generation of a set of five factors that enabled the measurement of the competitiveness of nature-based destinations from the perspective of demand. The Kaiser-Meyer-Olkin test (KMO), ranging from 0 to 1, with a threshold of 0.94, and the Bartlett's test of sphericity (BTS) being statistically significant ($p<0.005$).

A matrix of rotated components, containing correlations between factors and variable was generated. The variables were extracted one by one, also checking for commonality if it was above 0.5. At the same time, determining number of factors using Scree plot, retaining all factors with eigenvalue greater than 1.0 (Costello and Osborne, 2005) and with total variance explained accumulated above 50% and loading of 3 variables per factor (Hair Jr. *et al.* 2009).

In the EFA, 5 factors emerged: F1 - Supporting Factors & Resources (Alternative Transportation, Restaurants, Public Transportation, Traditional Accommodation, Road Transport, Alternative Accommodation, Internet Communication, Air Transport, Destination Marketing, Accessibility for Reduced Mobility Visitors, Communication Systems, Basic Sanitation, Safety, Waterway Transport, Cost, Drinking Water Supply), F2 - Destination Management, Sustainability and Demand (Environmental Education, Environmental Mitigation, Legislation, Management Plan, Environmental Accreditations, Visitor Satisfaction, Load Capacity, Visitors' Profile, Public/ Private Partnerships) - which grouped three factors indicated by the literature; F3 - Resident´s quality of life (Income of Residents, Housing of Residents, Education of Residents, Employment of Residents, Human

Development Index (HDI), Social Inequality, Cooperativism, Population Density) ; F4 - Cultural Attractions (Cultural Attractive, Festivals, Exhibitions, Gastronomic Culture, Architecture, Traditional Populations, Museum, Nightlife)and F5 - Adventure Activities (Water Activities, Land Adventure, Air Adventure).

Factors F3 and F5 can be considered to be derived from the Factor Core Resources and Attractions, considering that their attributes come from that factor. Qualifying and amplifying determinants, indicated by the literature, did not emerge in EFA. The Cronbach´s Alpha coefficients of the attributes ranged from 0.806 to 0.930, showing internal consistency of the items above the expected -0.7 lower limit (Hair Jr. *et al.* 2009). After re-specification, factors had reliability evaluated by Cronbach's alpha, presenting values above the expected minimum of 0.7, for works of this nature, according to Hair Jr. *et al.* (2009), and those that emerged from the analysis presented a maximum Cronbach's alpha of 0.930 and a minimum of 0.806.

It is noteworthy that five variables had the highest factor loads: Income of Residents (0.815), Housing of Residents (0.809), Water Activities (0.799), Land Adventure (0.787) and Festivals (0.776).

The factors emerging from the EFA were slightly different from what the literature has established. The variables listed as related to the Main Resources and Attractions were adjusted for two factors. One of the factors was related to Cultural Attractions and the other to Adventure Activities. The Supporting Factors & Resources emerged as a single factor, adding two variables of Destination Management (Internet Communication and Marketing) and two variables (of the three that the literature recognizes) of Qualifying and amplifying determinants (Security and Cost). The Quality of Life factor emerged as a single factor, adding a Qualifying and amplifying determinant variable (Social Inequality) and a Sustainability variable (Population Density). The variables related to Sustainability - Environmental Education, Environmental Mitigation and Environmental Certifications - Destination Management (Legislation, Management Plan and Public Private Partnerships), and - Demand (Customer Satisfaction, Load Capacity and Visitors Profile), emerged as a unique factor, which we now call Destination Management, Sustainability and Demand.

In the EFA stage, sixteen variables were extracted: fauna, flora, relief, climate and atmospheric conditions, scenery, hydrography, children activities, recreation activity, theme parks, travel agency, vehicles renting, pollution in the environment, medical assistance, destination image, human resources and promotions.

Cronbach's alpha coefficients indicated acceptable reliability of the constructs, demonstrating that the constructs can be used to perform a confirmatory factor analysis (CFA).

Confirmatory Factor Analysis and Measurement Model

The confirmatory factorial analysis (CFA) analysis that is related to Structural Modelling. At this stage, adjustments between the data collected, looking for the relationships between latent factors (unobserved variables) and their (observable) indicators variables. In CFA, theory comes first, hence the model is result of theory, and finally, the model is tested to achieve consistency with the data analysed, using a SEM approach (Hair 2009).

The evaluation of the measurement model was consistent, as shown by the latent variables, with their respective attributes of composite reliability (CR) and average extracted variance (AVE) in Table 1.

The measurement model was estimated using the JASP software, and the adjustment measures indicated that the data were aligned with the model. The adjustment of the model should present indices compatible with the expected standards, that is, a root mean-square error of approximation (RMSEA) between 0.013 and 0.025. The CFA confirmed 29 variables in 6 factors (Table 1). The resulting matrix presented adjustment indexes that follow the Hair Jr et al. (2009) determinations: Comparative Fit Index (0.996), Turker Lewis Index (0.995) and Root Mean Square Error of Approximation (RMSEA) of 0.020.

The CFA should provide validity to the competitiveness measurement model of Nature-Based Destinations. The result confirms that the observable variables that make up the matrix of competitiveness indicators converge to measure accurately using the five specified factors.

The seven competitiveness of destination factors showed composite reliability (CR) between 0.78 and 0.90, above the minimum recommended. All factors presented an AVE between 0.541 and 0.559, recommended by the literature.

The modelling made it possible to highlight some important situations when comparing the synthesis of the Competitiveness of Destination models (Research hypothesis) with the result from the application in Nature-Based Tourist Destinations.

Firstly, it is worth to emphasize that 4 factors were confirmed in a similar way to the structure proposed in the hypothesis of this research: Factor 2 - Supporting & Resources; Factor 3 - Destination Management, Factor 4 - Sustainability and Factor 5 - Resident's Quality of Life. We can also consider that a fifth factor of the hypothesis

was confirmed (Core Resources and Attractions), but in the case studied, only the variables linked to the cultural attractions were confirmed (Factor 1 - Cultural Attractions).

Table 1. Confirmatory Factor analysis of Competitiveness of Nature-Based Destinations

Factors	Attributes	Estimate	CR	AVE
F1 - Cultural Attractive	@7-Museum	0.754	**0.86**	**0.548**
	@12-Fairs	0.752		
	@8-Architecture	0.745		
	@9-Gastronomic Culture	0.732		
	@11-Festivals	0.718		
F2 - Supporting Factors & Resources	@33-Accessibility for Reduced Mobility Visitors	0.781	**0.90**	**0.541**
	@32-Restaurants	0.770		
	@29-Alternative Transportation	0.758		
	@31-Alternative Accommodation	0.741		
	@28-Public Transportation	0.731		
	@30-Traditional Accommodation	0.725		
	@21-Basic Sanitation	0.706		
	@22-Communication Systems	0.665		
F3 - Destination Management	@34-Internet Communication	0.756	**0.79**	**0.559**
	@35-Destination Marketing	0.753		
	@38-Human resources	0.733		
F4 - Sustainability	@48-Environmental Education	0.791		
	@46-Environmental Accreditations	0.736		
	@47-Environmental Mitigation	0.683	**0.78**	**0.545**
F5 - Resident´s quality of life	@56-Employment of Residents	0.823	**0.89**	**0.550**
	@55-Medical assistance	0.817		
	@57-Education of Residents	0.771		
	@53-Cooperativism	0.729		
	@52- Human Development Index (HDI)	0.693		
	@59-Housing of Residents	0.670		
	@58-Income of Residents	0.669		

Note: CR - Composite Reliability; AVE - Average Variance Extracted.
Source: Research data (2019).

We also highlight that the standard average estimator of the variables linked to the Demand factor did not allow its full validation. A similar situation occurred in the first CFA, in which these variables emerged in the EFA with an average factor load between 0.503 and 0.534 and linked to a factor that also brought together the variables linked to the Destination Management and Sustainability Factors. When seeking confirmation of the structure in the first CFA, the low factor load of these variables caused a low AVE to the emerging Factor (Destination Management, Sustainability and Demand), and therefore its non-validation as a factor. Furthermore, the Qualifying and amplifying determinants factor, which was part of the hypothesis, did not fit the model as a factor.

Detailing the results in relation to the factors, it is possible to highlight that 6 variables linked to Natural Attractions (Flora, Fauna, Hydrography, Relief Form, climatic and atmospheric conditions, and Landscape) are not confirmed in any of the EFA and CFA attempts. These were also identified in the literature as endowed resources, belonging to the Core Resources and Attractions Factor, are present in most models, from the classic Crouch models; Ritchie (1999), Hassan (2000) and Dwyer; Kim (2003) to the most recent ones such as Chin; Haddock-Fraser; Hampton (2017), Wong (2018) and Augustin; Liaw (2017). In the present study, the variables had low average and average load in all factors, demonstrating a high covariance. Such a result may indicate that, from the perspective of demand, such variables are perceived in a way that relates to all factors; or still, we can infer those natural attractions are fundamental elements for nature-based tourist destination - NBTD, and per se, they are not configured as a competitiveness indicator.

The variables related to attractiveness were also not confirmed: Theme Parks, Nightlife, Recreation and Sports Activity and Activities for Children. The first three appear in the classic models of Dwyer & Kim (2003) and Gomezelj & Mihalič (2008) and in the review by Dwyer et al. (2014). Only one variable linked to leisure activities was not confirmed, in the case Activities for Children; it appeared only in the proposal of Caber, Albayrak &

Matzler (2012). Although they have not been validated in this research, it is suggested that they should be tested again in similar contexts.

From the Supporting Factors & Resources, only the variables Drinking Water Supply, Travel Agencies and Car Rental were not confirmed. Such variables are present in almost all classic and current models of competitiveness, but in the case of NBTD, it was not possible to confirm them. However, due to the good indexes probably presented by the sample size and the application method, its confirmation might have not been possible.

From the Destination Management factor, three variables were not confirmed: Legislation, Management Plans and Awards. The legislation variable appears only in the classic models of Hassan (2000) and Dwyer & Kim (2003), and since then in none of the other models. It can be inferred this variable no longer responds to the contexts of the destination's competitiveness and, therefore, it also cannot indicate competitive behaviour in nature-based destinations. The two other variables were inserted by the authors, based on the discussions on the development of this type of destination, and possibly, their insertion still needs to be further investigated and adjusted with greater precision.

Regarding the Demand factor, the Load Capacity variable had a very low factorial load and was not even be taken to the CFA. Indicated as a variable that indicates competitiveness linked to the question of demand since the model of Hassan (2000), it was also indicated in more recent studies such as those by Hallmann, Müller & Feiler (2014) and Blanco-Cerradelo *et al.* (2018). Therefore, and in view of the strong thematic relationship of this variable with nature-based tourism, it needs to be tested again.

From the Sustainability factor, only the Population Density variable was not confirmed. This is another variable found only in the classic models of Hassan (2000) and Dwyer & Kim (2003) and possibly does not correspond to the contemporary context of destination competitiveness.

From the Resident's Quality of Life factor, only the socioeconomic inequality variable, which was included only in the NBT related literature, and not in the competitiveness models, was also not confirmed, requiring further study. The study of Croes, Ridderstaat and Valerya Shapoval (2020), shows that human development significantly affects tourism competitiveness, tourism growth resulting from arrivals and receipts seems to expand capabilities directly, suggesting that as average receipts increase, the population seems to have higher commands of resources (health and education), which in turn enhances tourism performance.

Finally, the Qualifying and amplifying determinants factor that has been addressed since Huybers, Bennett (2003), Gooroochurn, Sugiyarto (2005), Mazanec, Wöber, Zins (2007) and Gomezelj, Mihalič (2008), and even in recent studies by Wong (2018) and Augustin, Liaw (2017), was not confirmed. Not even the variables that hypothetically make it up fit other factors with a high factor load. The largest loads slightly exceeded 0.5, and were soon discarded, as the generated matrix needs adjustments. It should be noted that in the case of NBTD, the confirmation of variables that allow identifying the Qualifying and amplifying determinants of competitive behaviour, is the main gap to be filled, constituting a challenge for the field of research in tourism.

Based on the CFA results, in view of the diversity of Brazil's National Parks, the sample of 637 respondents was divided into four groups of parks visited using the criterion of number of visitors per year. Group 1 is formed by the parks PN Tijuca (RJ/RJ), PN Iguaçu (Foz do Iguaçu/ PR) and PN Jericoacoara (Jijoca de Jericoacoara/CE) which registered more than one million visitors in 2019 (ICMBIO, 2020). Group 2 is formed by 11 national parks (PN Serra da Bocaina (RJ/SP), PN Marinho de Fernando de Noronha (PE), PN Brasília (Brasília/DF), PN Serra dos Órgãos (RJ), PN Chapada dos Guimarães (Chapada dos Guimarães/MT), PN Lençóis Maranhenses (Barreirinhas/ MA), PN Restinga de Jurubatiba (Macaé/RJ), PN Aparados da Serra (Cânions SC/RS), PN Itatiaia (Itatiaia/RJ), PN Caparaó (Alto Caparaó/ MG) and PN Serra da Canastra (MG) which registered between one hundred thousand and one million visitors in 2019 (ICMBIO, 2020). Group 3 is formed by 14 national parks (PN Campos Gerais (Ponta Grossa/PR), PN Ubajara (CE), PN Serra do Cipó (Serra do Espinhaço/MG), PN Serra Geral (SC/RS), PN Chapada dos Veadeiros (Alto Paraíso de Goiás/GO), PN São Joaquim (SC), PN Ilha Grande (PR/MS), PN Anavilhanas (Manaus/AM), PN Chapada Diamantina (Palmeiras/BA), PN Serra da Capivara (PI), PN Saint-Hilaire/Lange (PR), PN Sete Cidades (PI), PN Superagui (Guaraqueçaba/PR) e PN Serra do Itajaí (SC) which registered between ten and one hundred thousand visitors in 2019 (ICMBIO, 2021). Group 4 is formed by 46 national parks that registered less than ten thousand in 2019 (ICMBIO, 2021).

Group 1 is characterized by national parks that have a strong tourist attraction such as the Christ the Redeemer (PN Tijuca (RJ/RJ); Iguaçu Falls (PN Iguaçu Falls (Foz do Iguaçu/ PR) and Jeri Beach and Village (PN Jericoacoara (Jijoca de Jericoacoara/CE) associated with excellent air and land access. From group 1 the survey had 182 respondents. Group 2 is formed by national parks that receive a large number of visitors every year, have good access or are close to large issuing markets, and have the Park itself as an attraction. From

group 2, the survey had 173 respondents. Group 3 is made up of parks that have little or no tourist infrastructure or have difficulty of access (infrastructure or distance from the issuing market).

From group 3, the survey had 178 respondents. Group 4 is formed by national parks that receive visitors for various motivations, such as educational and scientific, consisting of parks of low visitation, with little or no tourist attraction. From group 4, the survey had 104 respondents referring to 36 parks, and from 10 parks, no sample was obtained because they can only be visited for research.

From the division of the sample into three, a multi-group confirmatory analysis was performed, using the five factors and 26 variables confirmed in the CFA. Table 2 presents the groups' data in comparison to CFA data.

Table 2 - Confirmatory Factor analysis of Competitiveness of Nature-Based Destinations (Multiple Groups)

Factors	Attributes	Estimate				
		All	Grup 1	Grup 2	Grup 3	Grup 4
F1 - Cultural Attractive	@7-Museum	0.754	0.775	0.727	0.691	0.848
	@12-Fairs	0.752	0.749	0.700	0.727	0.854
	@8-Architecture	0.745	0.799	0.707	0.661	0.739
	@9-Gastronomic Culture	0.732	0.709	0.740	0.711	0.739
	@11-Festivals	0.718	0.751	0.700	0.694	0.775
F2 - Supporting Factors & Resources	@33-Accessibility for Reduced Mobility Visitors	0.781	0.695	0.636	0.681	0.841
	@32-Restaurants	0.770	0.687	0.680	0.668	0.849
	@29-Alternative Transportation	0.758	0.616	0.664	0.667	0.917
	@31-Alternative Accommodation	0.741	0.550	0.723	0.694	0.840
	@28-Public Transportation	0.731	0.634	0.654	0.648	0.843
	@30-Traditional Accommodation	0.725	0.588	0.711	0.651	0.790
	@21-Basic Sanitation	0.706	0.485	0.683	0.643	0.768
	@22-Communication Systems	0.665	0.496	0.558	0.584	0.861
F3 - Destination Management	@34-Internet Communication	0.756	0.759	0.630	0.743	0.841
	@35-Destination Marketing	0.753	0.735	0.653	0.701	0.842
	@38-Human resources	0.733	0.583	0.696	0.666	0.817
F4 - Sustainability	@48-Environmental Education	0.791	0.799	0.770	0.761	0.814
	@46-Environmental Accreditations	0.736	0.777	0.671	0.669	0.867
	@47-Environmental Mitigation	0.683	0.728	0.625	0.687	0.709
F5 - Resident´s quality of life	@56-Employment of Residents	0.823	0.769	0.794	0.808	0.911
	@55-Medical assistance	0.817	0.853	0.765	0.807	0.773
	@57-Education of Residents	0.771	0.776	0.740	0.732	0.804
	@53-Cooperativism	0.729	0.698	0.748	0.738	0.762
	@52- Human Development Index (HDI)	0.693	0.679	0.692	0.670	0.728
	@59-Housing of Residents	0.670	0.613	0.713	0.653	0.717
	@58-Income of Residents	0.669	0.632	0.681	0.638	0.725

Source: Research data (2019).

A good internal adjustment of the variables in the factors was noticed, with only two variables of Factor 2, loading slightly below the minimum expected (0.5) only in Group 1. It is noteworthy that these two variables have a lower load, both in the global CFA and in the other groups of parks, indicating that these variables do not have a strong attribute of competitiveness for the destination in the perception of visitors. In Factor F1 - Cultural Attractive, the variables that reveal the competitive attributes of @7-Museum and @12-Fairs, have greater factoring strength in Groups 1 and 4, while the variables @8-Architecture and @9-Gastronomic Culture, have greater prominence in Groups 2 and 3. In F2 - Supporting Factors & Resources, the data also reveals that the variable Alternative Accommodation has a strong factor load, indicating that such a competitive attribute stands out for the visitors of this group of parks. In this same factor, Group 4 visitors are more concerned with Alternative Transportation, and in Group 1 with Accessibility for Reduced Mobility Visitors. In factors 3 and 4, the behavior of the data is very similar to that of the global CFA, highlighting only the greatest concern of Group 4, the @46-Environmental Accreditations, probably linked to the type of visitors to such parks. In F5 - Resident's quality of

life, it perceives greater concern with health care in Group 1, while the variables linked to @56-Employment of Residents and @57-Education of Residents have greater concerns for Groups 2, 3 and 4.

Table 3 presents the Composite Reliability (CR) and the explained variance (AVE) of each factor per Park Group. It is noted that the CR of all groups is above the recommended, demonstrating that the factors confirmed in the global CFA remain consistent if each group is analyzed, and thus the hypothesis for Brazilian parks is also confirmed in each of the park groups, regardless of whether they receive large numbers of visitors, and can be recognized as highly touristic. As is the case with Group 1, in the parks in the process of being turistified, in the cases of Groups 2 and 4, or even in those that present potential for the development of tourism.

Table 3. Confirmatory Factor Analysis (Multi Grups) – Indices de Consistência e Variância

	All		Visitantes 1		Visitantes 2		Visitantes 3		Visitantes 4	
Factors	CR	AVE	CR	AVE	CR	AVE	CR	AVE	CR	AVE
F1 - Cultural Attractive	0.86	0.548	0,87	0,573	0,84	0,511	0,83	0,486	0,89	0,628
F2 - Supporting Factors & Resources	0.90	0.541	0,81	0,358	0,86	0,443	0,86	0,429	0,85	0,705
F3 - Destination Management	0.79	0.559	0,74	0,485	0,70	0,436	0,75	0,496	0,87	0,695
F4 - Sustainability	0.78	0.545	0,81	0,591	0,73	0,478	0,75	0,500	0,84	0,639
F5 - Resident´s quality of life	0.89	0.550	0,88	0,521	0,89	0,539	0,88	0,524	0,91	0,603

Note: CR - Composite Reliability; AVE - Average Variance Extracted.
Source: Research data (2019).

In the case of AVE, some groups of parks in specific factors presented interesting data that will require new surveys, with greater sampling. Parks in Group 1 presented a covariance beyond that recommended by the literature among the factors F2 - Supporting Factors & Resources and F3 - Destination Management, demonstrating that these factors are strongly related, and are seen together by visitors, when perceiving the competitive behavior of the Park. In groups 2 and 3, the perception was also similar, even with AVE closer to that recommended by the literature, strengthening such inference. On the other hand, the F1 - Cultural Attractive, F4 - Sustainability and F5 - Resident's quality of life factors remain as a good, explained variation, which confirms these factors as fundamental for assessing the competitiveness of the destination, and that each factor individually influences the perception of the competitiveness that visitors have of the destination.

To recognize the discriminant validity of latent variables, they were generated by MPlus, using the DWLS robust method estimator and comparing the inter-correlations between the factors and the square roots of the AVEs. Table 04 shows the matrix of correlations between the factors.

Table 4. Discriminant validity and measurement model global

Factors	F1	F2	F3	F4	F5
F1 - Cultural Attractive	0.548				
F2 – Supporting & Resources	0.401	0.541			
F3 - Destination Management	0.355	0.697	0.559		
F4 – Sustainability	0.176	0.221	0.249	0.545	
F5 – Resident's Quality of Life	0.287	0.279	0.230	0.368	0.550

Source: Research data (2019).

Based on the criteria of Fornell and Lacker (1981), which indicates that the discriminant validity between factors occurs when latent variables with reflective indicators load more on their construct than on others, the demand factor does not present discriminant validity of constructs (F2) Supporting & Resources, (F3) Destination Management and (F5) Sustainability. This situation was already expected, due to the non-confirmation of the Demand Factor in the other adjustment and validation indexes.

In view of this, structural modelling was performed, using the internal model, checking the structuring of the competitiveness measurement matrix, highlighting factors that did not have convergent validity (Figure 1).

Figure 1. Competitiveness measurement model of NBTD (with correlation factors)
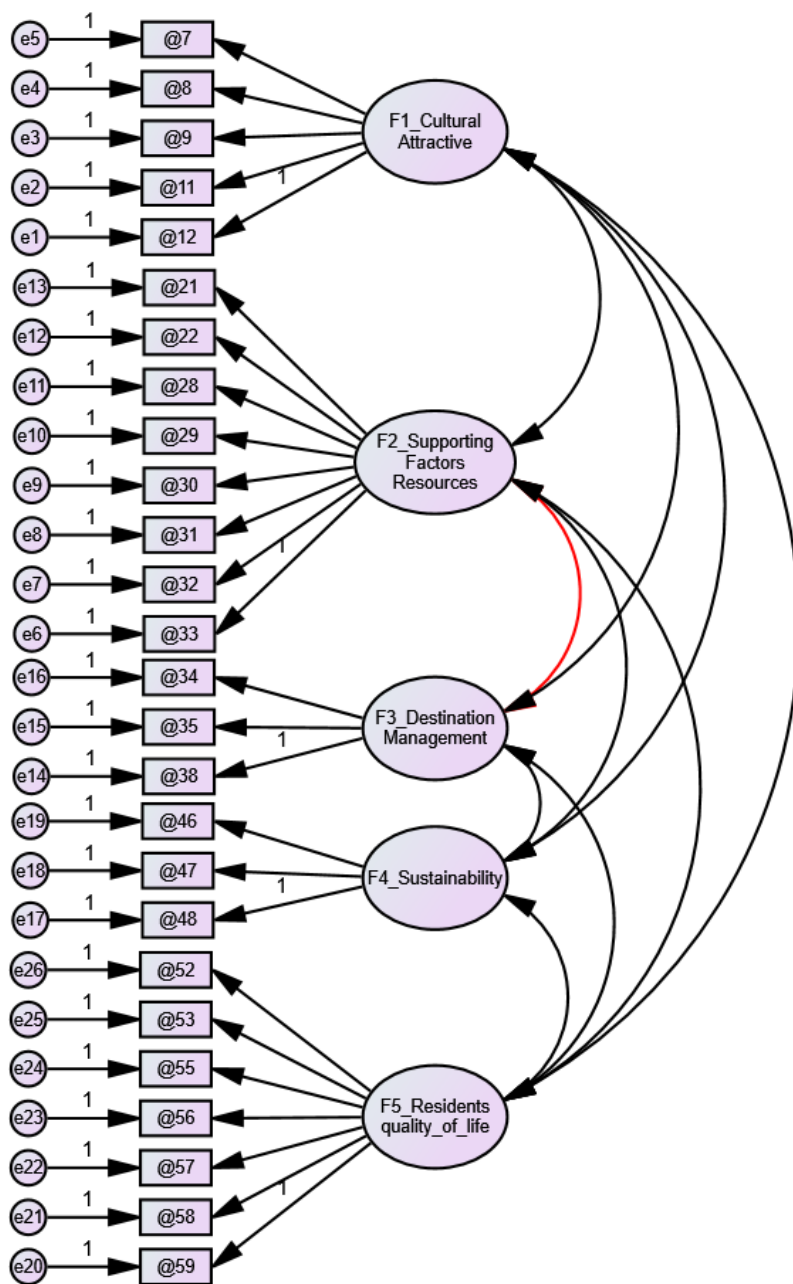
Source: Research data (2019).

Conclusion

The classical competitiveness models of tourist destinations are based on the perspective of supply since their origin was in industrial competitiveness. This research was presented as an alternative to the quantitative analysis to improve the theory of competitiveness of tourist destinations, focusing on the perspective of demand, and applying it to natural areas, contributing to filling the existing theoretical gaps.

The study from this perspective reinforces the classic factors of the assessment models of destination competitiveness, such as the emerging factors Cultural Attractions, Supporting Factors & Resources, Destination management, Sustainability and Resident's Quality of Life. It is noteworthy that only in Andrades-Caldito, Sánchez-Rivero & Pulido-Fernández (2013) and more effectively in Blanco Cerradelo, Diéguez-Castrillón & Gueimonde-Canto (2018), such variables begin to receive attention, but still only partially.

Cultural Attractions, strongly related to the surrounding Natural Areas, are among the factors validated in this study. The cultural landscape involves the areas adjacent to national parks, reinforcing the need to have comprehensive analysis, not limited within the perimeter of the National Parks. Tourists perceive the context,

since they stay in the area around the National Parks, and frequently take advantage of attractions located in the vicinity.

The Support Factors & Resources was also identified as essential for the visitor's selection of a National Park as a tourist destination. The broad concept of tourism lists infrastructure as fundamental to the development of tourism, corroborating the results of this research. Thus, the results also reinforce the basis of the destination competitiveness theory, which considers infrastructure as a fundamental factor, as in Dwyer and Kim (2003) and Crouch (2011). Cronjé and Plessis (2021) in review on tourism destination competitiveness indicated infrastructure of a destination considerado o indicador mais utilizado nos modelos de competitividade na perspectiva da oferta e da demanda.

Based on the exposed above and on the discussions of results, natural resources per se, even though seen as essential elements of National Parks, are not potential competitive advantages from the tourist perspective. Data show that natural attractions, key factors in the attractiveness of National Parks, do not fully explain the choice of tourists.

The most visited Brazilian national parks are in different biomes (Atlantic Forest, Coastal Marine, Cerrado, Caatinga and Amazon), some of them have a distance of up to 360 kilometers from a city with at least 100 thousand inhabitants. For further research, we suggest applying the validated indicators to different groups of parks by location and management, as well as an individual survey with each group of parks by the number of visitors.

References

[1] Andrades-Caldito, L., Sánchez-Rivero, M., and Pulido-Fernández, J. I. 2013. Differentiating competitiveness through tourism image assessment: an application to Andalusia (Spain). *Journal of Travel Research* 52(1): 68-81. DOI: https://doi.org/10.1177/0047287512451135

[2] Augustin, J. L. P. M., and Liaw, S. Y. 2017. Tourism competitiveness index of the Asia-Pacific region through consistency analysis. *Asia Pacific Journal of Tourism Research* 22(12): 1295-1307. DOI:https://doi.org/10.1080/10941665.2017.1391855

[3] Bagarić, L., and Žitinić, D. 2013. Competitiveness of Kvarner region: challenges for destination management and branding. *Tourism & Hospitality Management,* 19(2): 217-31. DOI: https://doi.org:/10.20867/thm.19.2.5

[4] Balmford, A. *et al.* 2015. Walk on the wild side: estimating the global magnitude of visits to protected areas. *PLoS biology,* 13(2): e1002074. DOI: https://doi.org/10.1371/journal.pbio.1002074

[5] Balmford, A., *et al.* 2009. A global perspective on trends in nature-based tourism. *PLoS biology,* 7(6): e1000144. DOI: https://doi.org/10.1371/journal.pbio.1000144

[6] Barić, D., Anić, P. and Bedoya, A. M. 2016. Segmenting protected area visitors by activities: A case study in Paklenica National Park, Croatia. *European Journal of Tourism Research,* 13: 103-121.

[7] Barreto, C. G., *et al.* 2013. Plano de manejo do Parque Nacional do Itatiaia. *Encartes,* 1(2): 3.

[8] Blanco-Cerradelo, L., Gueimonde-Canto, A., Fraiz-Brea, J. A. and Diéguez-Castrillón, M. I. 2018. Dimensions of destination competitiveness: analyses of protected areas in Spain. *Journal of Cleaner Production,* 177: 782-794, DOI: https://doi.org/10.1016/j.jclepro.2017.12.242

[9] Boley, B. B., and Green, G. T. 2016. Ecotourism and natural resource conservation: the 'potential' for a sustainable symbiotic relationship. *Journal of Ecotourism,* 15(1): 36-50. DOI:https://doi.org/10.1080/14724049.2015.1094080

[10] Bornhorst, T., Ritchie, J. B., and Sheehan, L. 2010. Determinants of tourism success for DMOs & destinations: An empirical examination of stakeholders' perspectives. *Tourism Management* 31(5): 572-589. DOI: https://doi.org/10.1016/j.tourman.2009.06.008

[11] Buckley, R., *et al.* 2019. Economic value of protected areas via visitor mental health. *Nature Communications* 10(1): 1-10. DOI https://doi.org/10.1038/s41467-019-12631-6

[12] Bwalya-Umar, B., and Mubanga, K. H. 2018. Do locals benefit from being in the 'tourist capital'? views from Livingstone, Zambia. *Tourism and Hospitality Research,* 18(3): 333-345. DOI:https://doi.org/10.1177/1467358416663817

[13] Caber, M., Albayrak, T., and Matzler, K. 2012. Classification of the destination attributes in the content of competitiveness (by revised importance-performance analysis). *Journal of Vacation Marketing,* 18(1): 43-56. DOI: https://doi.org/10.1177/1356766711428802

[14] Chin, W. L., Haddoc-Fraser, J., and Hampton, M. P. 2015. Destination competitiveness: evidence from Bali. *Current Issues in Tourism,* 20(1): 1265-1289. DOI: https://doi.org/10.1080/13683500.2015.1111315

[15] Costello, A. B., and Osborne, J. 2005. Best practices in exploratory factor analysis: Four recommendations for getting the most from your analysis. *Practical assessment, research, and evaluation* 10(1): 7. DOI:https://doi.org/10.7275/jyj1-4868

[16] Croes,R, Ridderstaat, J. and Shapoval, V. 2020. Extending tourism competitiveness to human development. *Annals of Tourism Research,* 80. DOI: https://doi.org/10.1016/j.annals.2019.102825

[17] Cronjé, D. F., and du Plessis, E. 2020. A review on tourism destination competitiveness. Journal of Hospitality and *Tourism Management,* 45*:* 256-265. DOI: https://doi.org/10.1016/j.jhtm.2020.06.012

[18] Crouch, G. I. 2011. "Destination competitiveness: An analysis of determinant attributes. Journal of travel research, 50(1): 27-45. DOI: https://doi.org/10.1177/0047287510362776

[19] Crouch, G. I., and Ritchie, J. B. 1999. Tourism, Competitiveness, and Societal Prosperity. *Journal of business research,* 44(3): 137-152. DOI: https://doi.org/10.1016/S0148-2963(97)00196-3

[20] Davidson, R., and Maitland, R. 1997. *Tourism destinations.* London: *Hodder & Stoughton.*

[21] Dwyer, L., and Kim, C. 2003. Destination Competitiveness: Determinants and Indicators. *Current Issues in Tourism,* 6(5): 369-414. DOI: https://doi.org/10.1080/13683500308667962

[22] Dwyer, L., Cvelbar, L. K., Mihalič, T. and Koman, M. 2014. Integrated destination competitiveness model: testing its validity and data accessibility. *Tourism analysis* 19(1): 1-17. DOI:https://doi.org/10.3727/108354214X13927625340073

[23] Dwyer, L., Forsyth, P. and Rao, P. 2000. The price competitiveness of travel and tourism: a comparison of 19 destinations. *Tourism management* 21(1): 9-22. DOI: https://doi.org/10.1016/S0261-5177(99)00081-3

[24] Eddyono, F., Darusman, D., Sumarwan, U. and Sunarminto, T. 2021. Performance of Tourism Competitiveness in National Park Area of Indonesia. *Journal of Environmental Management and Tourism,* 12*(*4): 1099-110. DOI: https://doi.org:/10.14505//jemt.v12.4(52).22

[25] Enright, M. J. and Newton, J. 2004. Tourism destination competitiveness: a quantitative approach. *Tourism Management, 25(*6): 777-788. DOI: https://doi.org/10.1016/j.tourman.2004.06.008

[26] Fornell, G. and Lacker, R. N. 1981. *Introduction to linear regression analysis.* Wiley.

[27] Gomes, P. O. 2017. Contribuições econômicas e financeiras do turismo no Parque Nacional da Chapada dos Veadeiros, Phd diss, Brazilian University. (in Spanish)

[28] Gomezelj, D. O. and Mihalič, T. 2008. Destination competitiveness—Applying different models, the case of Slovenia. *Tourism management,* 29 (2): 294-307. DOI: https://doi.org/10.1016/j.tourman.2007.03.009

[29] Gooroochurn, N. and Sugiyarto, G. 2005. Competitiveness indicators in the travel and tourism industry. *Tourism Economics 11(*1): 25-43. DOI: https://doi.org/10.5367/0000000053297130

[30] Hair, J. F., et al. 2009. *Análise multivariada de dados.* Porto Alegre, *Bookman Editora.*

[31] Hallmann, K., Müller, S. and Feiler, S. 2014. Destination competitiveness of winter sport resorts in the Alps: how sport tourists perceive destinations? *Current Issues in Tourism,* 17*(*4): 327-49. DOI:https://doi.org/10.1080/13683500.2012.720247

[32] Hardiman, N. and Burgin, S. 2017. Nature tourism trends in Australia with reference to the Greater Blue Mountains World Heritage Area. *Journal of Sustainable Tourism* 25(6): 732-745. DOI:https://doi.org/10.1080/09669582.2016.1231807

[33] Hassan, S. S. 2000. Determinants of market competitiveness in an environmentally sustainable tourism industry. *Journal of travel research* 38*(*3): 239-245. DOI: https://doi.org/10.1177/004728750003800305

[34] Heath, E. 2003. Towards a model to enhance destination competitiveness: A Southern African perspective. CAUTHE 2003: *Riding the Wave of Tourism and Hospitality Research* 500.

[35] Huybers, T. and Bennett, J. 2003. Environmental management and the competitiveness of nature-based tourism destinations. *Environmental and Resource Economics 24(*3): 213-233.

[36] Jovan, Z. and Bradić-Martinović, A. 2014. Competitiveness of Nations in selected SEE Countries. *Procedia Economics and Finance* 8: 755-762. DOI: https://doi.org/10.1016/S2212-5671(14)00154-3

[37] Knežević Cvelbar, L., Dwyer, L., Koman, M. and Mihalič, T. 2015. Drivers of destination competitiveness in tourism: a global investigation. *Journal of Travel Research*, 55(*8): 1041-1050. DOI:https://doi.org/10.1177/0047287515617299

[38] Law, F. Y. and Lo, M. C. 2016. Rural Tourism Destination Competitiveness of Kubah National Park in Sarawak: Tourists' Perspective." *Asian Academy of Management Journal,* 21: 127-148. DOI:https://doi.org/10.21315/aamj2016.21.supp.1.6

[39] Marconi, M. D. A. and Lakatos, E. M. 2001. Metodologia científica. São Paulo: Atlas.

[40] Mazanec, J. A., Wöber, K. and Zins, A. H. 2007. Tourism destination competitiveness: from definition to explanation? *Journal of Travel Research, 46(*1): 86-95. DOI: https://doi.org/10.1177/0047287507302389

[41] Medeiros, R., and Young, C. E. F. 2011. *Contribuição das unidades de conservação brasileiras para a economia nacional. Brasília:* UNEP. 2011

[42] Mihalič, T. 2000. Environmental management of a tourist destination: A factor of tourism competitiveness. *Tourism management* 21(*1): 65-78. DOI: https://doi.org/10.1016/S0261-5177(99)00096-5

[43] Oliveira, A. G. C. 2017. Unidades de conservação: desafios e alternativas de gestão econômica dos parques nacionais, Phd diss, Brazilian University.

[44] Perles-Ribes, J. F., Ramón-Rodríguez, A. B. and Sevilla-Jiménez, M. 2014. La cuota de mercado como indicador de competitividad en los destinos turísticos: sentido y limitaciones. *Cuadernos de Turismo,* 34: 265-285.

[45] Porter, M. E. 1989. The competitive advantage of nations. *Harvard business review*, 68(*2): 73-93.

[46] Puustinen, J., Pouta, E., Neuvonen, M. and Sievänen, T. 2009. Visits to national parks and the provision of natural and man-made recreation and tourism resources. *Journal of Ecotourism*, 8(*1): 18-31. DOI:https://doi.org/10.1080/14724040802283210

[47] Rabahy, W. A., and Ignarra, L. R. 2002. Estudo sobre o Turismo Praticado em Ambientes Naturais Conservados. Retrieved from http://www.terrabrasilis.org.br/ecotecadigital/images/abook/pdf/Set.14.66.pdf On Out 01 2020.

[48] Ramkissoon, H. and Mavondo, F. 2014. Proenvironmental behavior: The link between place attachment and place satisfaction. *Tourism Analysis 19(*6): 673-688. DOI:https://doi.org/10.3727/108354214X14146846679286

[49] Ritchie, J. B. and Crouch, G. I. 1993. *Competitiveness in international tourism: A framework for understanding and analysis.* World Tourism Education and Research Centre, University of Calgary.

[50] Ritchie, J. B. and Crouch, G. I. 2003. *The competitive destination: A sustainable tourism perspective*. Cabi.

[51] Ritchie, J. R., and Crouch, G. I. 2010. A model of destination competitiveness/sustainability: Brazilian perspectives. *Revista de Administração Pública* 44(*5): 1049-1066. DOI: https://doi.org/10.1590/S0034-76122010000500003

[52] Sanz-Ibáñez, C. and Anton Clavé, S. 2014. The evolution of destinations: towards an evolutionary and relational economic geography approach. *Tourism Geographies* 16(4): 563-79. DOI:https://doi.org/10.1080/14616688.2014.925965

[53] Saraniemi, S. and Kylänen, M. 2011. Problematizing the concept of tourism destination: An analysis of different theoretical approaches. *Journal of travel research,* 50(*2): 133-43. DOI:https://doi.org/10.1177/0047287510362775

[54] Schwab, K. 2018. *The global competitiveness report 2018.* In World Economic Forum.

[55] Soifer, J. 2008. *Empreender turismo e ecoturismo.* Qualitymark Editora Ltda.

[56] Souza, T., Thapa, B., Rodrigues, C. G. D. O. and Imori, D. 2019. Economic impacts of tourism in protected areas of Brazil. *Journal of Sustainable Tourism* 27(6): 735-749. DOI:https://doi.org/10.1080/09669582.2017.1408633

[57] Tabachnick, B. G., Fidell, L. S. and Ullman, J. B. 2007. Using multivariate statistics (Vol. 5, pp. 481-498). Boston, MA: Pearson.

[58] Watson, J. E., Dudley, N., Segan, D. B., and Hockings, M. 2014. The performance and potential of protected areas. *Nature,* 515*(*7525): 67-73. DOI: 10.1038/nature13947

[59] Wong, P. P. W. 2018. Role of components of destination competitiveness in the relationship between customer-based brand equity and destination loyalty. *Current issues in tourism*, 21*(*5): 504-52. DOI:https://doi.org/10.1080/13683500.2015.1092949

[60] Zhang, H., Gu, C. L., Gu, L. W. and Zhang, Y. 2011. The evaluation of tourism destination competitiveness by TOPSIS & information entropy–A case in the Yangtze River Delta of China. *Tourism Management,* 32*(*2): 443-451. DOI: https://doi.org:/10.1016/j.tourman.2010.02.007

[61] ICMBIO. *Painel Dinâmico de Informações*. http://qv.icmbio.gov.br/QvAJAXZfc/opendoc2.htm?document=painel_corporativo_6476.qvw&host=Local&anonymous=true

[62] IUCN. *Category II: National Park*. https://www.iucn.org/theme/protected-areas/about/protected-areas-categories/category-ii-national-park.

[63] SEMEIA Parques do Brasil: Percepções da População. http://www.semeia.org.br/arquivos/2020_PercepcoesdaPopulacao_V6.pdf /

[64] UNWTO - WORLD TOURISM ORGANIZATION Tourism for Development. Volume I: Key Areas for Action, 2018. https://www.e-unwto.org /doi/pdf/10.18111/9789284419722/

[65] WEF – WORLD ECONOMIC FORUM. The Travel & Tourism Competitiveness Report 2017. https://www.weforum.org/reports/the-travel-tourism-competitiveness-report-2017

ASERS

ASERS
Publishing