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Marketing for Sustainable Tourism

Edited by

Umberto Martini and Federica Buffa

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Federica Buffa is an associate professor of economics and business management at the Department of Economics and Management, University of Trento (Italy). Since 2001, she has been a member of the eTourism research group and since 2013 of the EMASUS (Economics, Management and Sustainable Consumption) research group (University of Trento). She is actively involved in economics and business management studies; her research activities focus on destination management, strategy and management of small and medium tourism enterprises (SMTEs), sustainable tourism, and relationships and networks in community destinations. Recent research is focused on the sustainability management of multi-stakeholder territorial systems, with a particular emphasis on stakeholder engagement and networks in community destinations and on environmental management practices of SMTEs. She is author and co-author of scientific contributions in national and international publications. She is a lecturer for the master course on destination management (Dept. of Economics and Management) and of the bachelor courses on business administration and business organization (Dept. of Humanities) at the University of Trento.

Preface to "Marketing for Sustainable Tourism"

The Special Issue entitled "Marketing for Sustainable Tourism" deals with a topic currently debated both in the scientific community and inside business organizations at the global level. From the supply side, the adoption of sustainable business models has become vital to competition in the market. The interpretation of new trends, needs, and behaviors of tourists is essential both for business organizations and destinations to be the first movers in the definition of new products, services, and experiences. The tourism industry involves multiple sectors (e.g., hospitality, restaurant, transport, entertainment, and information and communication technology (ICT)) and the question of sustainability cannot be avoided. In addition, the tourism industry affects the economic growth of the destinations, as the offer of tourism products and services involves various stakeholders (public entities, private actors, and local communities) with different roles and amounts of power. Within this scenario, sustainable tourism must find a balance between the needs of stakeholders and the needs of tourists. Given this scenario, the complexity and the cross-disciplinary approach needed for sustainable tourism management and marketing are evident. Such complexity emerges from the variety of topics discussed in the 14 papers published in this Special Issue. The contributions analyze the marketing strategies adopted by tourism destinations and/or tourism enterprises to avoid overtourism, to manage mass sustainable tourism, and to encourage and promote sustainable tourism products and services. The different studies examine both choices and strategies of the actors involved in the tourism offer, and the choices, behaviours, and/or satisfaction levels of tourists, to identify the factors that can support and/or redefine business and destination marketing strategies. The papers provide a wide range of case studies conducted in various international tourist destinations (situated in Europe, USA, and Asia) based on many different research methods, techniques, and empirical analyses.

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Editorial

Marketing for Sustainable Tourism

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In the last twenty years, the tourism industry has been transformed by several global trends [1–3]. Among these, sustainability has become a priority for both the scientific community (countless international conferences, academic journals and research projects have been devoted to the subject) and for international organisations. The UN's "Sustainable Development Goals" are a vital part of this picture, and sustainable tourism has been flagged up as having a potentially valuable role to play in their attainment: "Tourism has the potential to contribute, directly or indirectly to all of the goals. In particular, it has been included as targets in Goals 8, 12 and 14 on inclusive and sustainable economic growth, sustainable consumption and production (SCP) and the sustainable use of oceans and marine resources, respectively" (http://tourism4sdgs.org/tourism-for-sdgs/tourism-and-sdgs/).

The tourism industry involves multiple sectors, from hospitality to transport; from commerce to entertainment; from tourist agents to ICT, to mention but a few. Hence, the industry cannot avoid the question of sustainability and must work on two fronts: both to encourage the organisations and businesses with which it engages to adopt sustainable practices (best practice research) and to motivate consumers/tourists to consume and behave as sustainably as possible. This is the context currently shaping the World Tourism Organisation's plans and activities (see for example [4,5]). Policy makers, organizations and businesses which adopt a sustainable tourism approach find themselves having to rethink their development and/or business models: the triple bottom line approach [6] and a focus on the medium and long-term are key to the creation of a lasting reciprocity between the economic benefits of tourism and the conservation of the non-renewable resources upon which tourism depends [7,8]. A territory's tourism development thus influences the local development model and involves choices around the use of resources, the production methods and degrees of social and business change, all of which involve the resident population. As such, sustainable tourism must find a happy balance between the needs of the different local stakeholders (organisations and public entities, businesses, the community) and the tourists who come to the area [9–13]. The quest for this balance highlights at least two of the issues driving the current scientific debate and the efforts of international organisations: overtourism and global warming.

The uncontrolled growth of tourist flows and the failure to regulate or manage their access has impoverished many territories and allowed the businesses in their tourism chains to continue to operate inefficiently; the quality of life of local residents has, moreover, invariably deteriorated (for a review see [14–16]). Overtourism has also increased tourist dissatisfaction levels [17] with tourists finding it impossible to experience the authenticity of the "hospitality atmosphere" [18], or the "host–guest relationship" [19,20].

Turning to global warming, it is indisputable that rising temperatures are affecting how tourist destinations manage their offers [21]. The impact on Alpine winter tourist destinations is paradigmatic [22]. Climate change is modifying the current and future accessibility of ski stations, the latter's capacity to guarantee snow, their water management choices (and the issue of competing claims for water resources)—these are only the most obvious effects to date [23]. In the face of these changes, businesses and organisations are having to assess all available environmental management practices (regarding

water and energy conservation, waste management, etc.), to plan for partnerships with other firms in order to introduce new services (i.e., integrated transport), or to identify new tourist products (so that the winter tourism offer includes more than just downhill skiing, for example). The need to consider new realities and to reimagine tourist offers and traditional business models is not confined to mountain areas: these trends are being experienced globally, and in diverse environments (see the research by [24] on the Coral Reefs and the study by [25] on Mediterranean, among others).

The transversality of sustainable tourism emerges clearly from the above overview. This feature is also evident in the multiplicity of arguments dealt with in the contributions to the Special Issue which focuses on the most critical of today's main concerns around marketing for sustainable tourism, for both territories (i.e., tourism destinations, protected areas, parks and/or natural sites, UNESCO World Heritage Sites, rural regions/areas, etc.) and tourism enterprises and/or organisations (i.e., destination management organisations, hospitality and restaurant enterprises, cableway companies, travel agencies, etc.). In destinations where natural resources are pull factors for the development of tourism, the relationships among local actors (public, private, the community), and the marketing choices that these actors make, are crucial elements in the creation of sustainable tourism products.

The 14 papers in the Special Issue analyse the marketing strategies adopted by tourism destinations and/or tourism enterprises to avoid overtourism, to manage mass sustainable tourism (as defined by [26]) and to encourage and promote sustainable tourism in marginal areas.

In the papers, topics are analysed from two different perspectives: five of the contributions focus on the themes of the special issue, analysing the choices and strategies of the actors involved in the tourist offer (contributions 2, 5, 9, 10, 14), the other nine examine the choices, behaviours and/or satisfaction levels of tourists, in order to identify the factors that can support and/or redefine business and destination marketing strategies (contributions 1, 3, 4, 6–8, 11–13).

Evidencing the current scientific interest in the subject of Marketing for Sustainable Tourism, the papers provide a wide range of case studies conducted in very diverse international tourist destinations, including territories in Europe (Spain, Italy, Portugal, Poland), the USA (Florida, Indiana) and Asia (China, Taiwan, South Korea).

Many different research methods have been employed. Some contributors have adopted the quantitative approach, reflected in their choices and criteria (i.e. Luque Martínez et al.; Zhang and Cheng; Choe et al.), others have adopted a qualitative approach (Ecker and Pechlaner; García-Madurga et al.; Santos et al.; Szromek and Herman).

The analysis techniques, too, are multiple, and include, for example, content analysis (Kim et al.), structural equation modelling (Ryu & Park), regression analysis (Choe et al.; Zhang & Cheng), interpretive structural modelling (ISM) (Mi et al.) and Partial Least Squares Structural Equations (Vázquez-Martinez et al.).

Among the papers which investigated the themes of the special issue from a supply side perspective, Ecker and Pechlaner (contribution 2) presented the case of Lanzarote (Canary Islands) and examine complementary strategies towards achieving sustainable tourism. The data collected by interviewing tourism stakeholders were analysed according to the GABEK®-method (German abbreviation for "GAnzheitliche BEwältigung von Komplexität": holistic coping with complexity). The research shows the negative impact on the island of mass tourism and suggests alternative product development as a new approach towards sustainability in tourism.

Luque Martínez et al. (contribution 5) focus on mountain and snow tourism. Specific attention is given to ski-resorts and to their marketing management practices. The research carried out at ski resorts in Spain and Italy highlights the strengths and weaknesses of their marketing management and discusses social media usage. The research classifies different resort types on the basis of their performance against indicators from Twitter and Facebook, makes recommendations for the marketing management of ski resorts.

Santos et al. (contribution 9) discuss the role of cruise terminal ports on destinations' economic and socio-cultural sustainability. This qualitative study analyses the dynamics that can facilitate

sustainable cruise-land visit. The field research considers two key transit ports in the Mediterranean: Lisbon in Portugal and Livorno in Italy. The results from both destinations, while demonstrating differing patterns, reveal genuine concern for sustainability and reduced congestion.

The study by Szromek et al. (contribution 10) discusses the basic types of business transformations in post-industrial heritage sites. The field study was carried out in Poland, investigating 42 post-industrial tourism objects on the Industrial Monuments Route (part of the European Route of Industrial Heritage). Three types of business model transformation were identified, of which the post-production organization model appears to be the most popular. The authors underline that businesses and cultural institutions built on this model today service tourists only. In light of the research results, the valorisation of this kind of heritage is coherent with a sustainable development approach.

One other contribution, by Zhang and Cheng (contribution 14), analyses marketing for sustainable tourism from a supply side perspective. Their study investigates whether and how tourism can stimulate economic growth after a disaster like an earthquake. The observed case is the Wenchuan Earthquake in the P.R.C. and its effects in the years 2008–2016. The empirical results show that tourism significantly contributes to economic growth (different conditions of tourism specialization and industrial structure produced diverse results). Differences among the 36 disaster-stricken counties are also revealed through the lens of the Tourism Area Life Cycle theory (TALC). Theoretical and practical implications are discussed and the study makes suggestions on how policymakers can support economies in disaster-affected destinations.

Among the papers that examine this special issue topic from the demand side, García-Madurga et al.'s (contribution 3) analyses tourist demand in order to determine optimal positioning strategies for destinations. The authors carried out exploratory research using secondary data and focus group sessions with the aim of defining the positioning axes of Aragón (Spain) as a sustainable tourist destination.

The study by Choe et al. (contribution 1) analyses differences in tourist behaviours across seasons, discussing the case of Northern Indiana. The aim is to understand seasonality at both the aggregate market and individual traveller levels. In the light of their collected data, the researchers emphasize the importance for destination marketers of understanding the influence of seasonality on traveller behaviour and travellers' responses to advertising. Knowledge of tourist behaviours enables destinations to define tourism products/services appropriate to current and potential target markets.

Many of the papers focus on customer satisfaction (CS) analysis. Mi et al. (contribution 6) explore the determinants for improving a hot spring's CS by analysing online reviews about Nanjing Tangshan Hot Spring Resort in China. The study has adopted a novel methodological approach. Its findings reveal implications for hot spring management and suggest practices to attract new customers and retain current demand. Meanwhile, Yeh et al. (contribution 13) focus on CS, experiential marketing and service innovation in an investigation of tourism factories in Taiwan which takes the Changhua County Rice Museum (a tourism factory of rice) as a case study. The research reveals that experiential marketing and service innovation have positive effects on CS and suggests ways in which a corporation's image and product packaging can be designed in order to strengthen purchase intentions. Park et al. (contribution 7) also consider CS in their analysis of the structural relationships between destination image, tourists' multi-attraction travel behaviour patterns, their satisfaction and their behavioural intentions (to revisit and recommend). The survey involves tourists visiting multiple attractions in Seoul (Korea). Indices of social network analysis (density and degree centrality) were applied as indicators of tourists' multi-attraction travel behaviour. Indicators are positively related to tourist satisfaction: the academic and practical implications of this are discussed. Ryu and Park's case study (contribution 8) on the Incheon International Airport (IIA) in South Korea considers the dimensions of satisfaction, pleasure and image. The authors surveyed IIA users to explore the effects of the airport's experience economy on the three dimensions. Their findings highlight the positive effects of (aesthetic and escapist) experience on pleasure, of pleasure on satisfaction and airport image, and of satisfaction on airport image. In light of the above, implications for the future activities of airports are presented.

Kim et al. (contribution 4) and Vázquez-Martinez et al. (contribution 11) investigate tourist perceptions of some key destination attributes/factors. The former examines destination attributes perceived as impacting positively on tourist experience, analysing online tourist reviews (comments on TripAdvisor). The case study is a historic tourist site on the north east coast of Florida: it is known as the Nation's Oldest City and it is listed as a National Historic Landmark by the National Park Service. Among the destination attributes investigated, the (high) quality of the tour guide (as a storyteller and re-enactor) is the most important and has a positive influence on tourist intentions to revisit and recommend the destination. The findings' contribution from a theoretical point of view are pointed out (referring to the literature on co-creation in tourism) and their managerial implications are discussed. Vázquez-Martinez et al., in turn, devote themselves to gastronomy, and whether and how food tourism can play a role in sustainable tourism. The research considers the case of Spain. Data were collected through an online survey designed to investigate tourist perceptions of Spanish gastronomy. The findings confirmed the research hypothesis that Spanish gastronomy impacts positively on the Spanish country brand. The managerial implications focus on the opportunities for the sustainable development and strengthening of Spain's brand.

Finally, Xu et al. (contribution 12) discuss the determinants and mechanisms of environmentally responsible tourist behaviour in China. The methodology is based on an extended Value-Identity-Personal (VIP) model. Data were collected through self-reported questionnaires on an online survey platform. Five latent variables were investigated: biospheric values (BV), environmental self-identity (ESI), personal norm (PN), environmental self-efficacy (ESE) and tourists' environmentally responsible behaviour (TERB). Specific items were identified for each variable. All the research hypotheses were supported by the collected data. Any managerial implications for practitioners (including government authorities and DMO managers) of relevance to sustainable development in tourism destinations were highlighted.

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Article

Positioning Axes of Sustainable Tourist Destinations: The Case of Aragón

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Abstract: The purpose of this research is to determine the optimal positioning strategies of Aragón as a sustainable tourist destination. An exploratory research is carried out based on the analysis of statistical information sources, the identification of global and multisectoral macro-trends with direct impact on the evolution of the tourist sector, and the use of the qualitative technique of the focus group. The main and secondary axes to provide a basis for the positioning strategy of the autonomous community are presented as a result.

Keywords: sustainable tourism; positioning; destination marketing; tourist intelligence

1. Introduction

The extraordinary economic boom experienced in Spain at the beginning of the 21st century had a demographic reflection in the depopulated rural areas. However, the economic crisis that broke out in 2008 had a clear demographic impact that remains. Expansion stopped and depopulation has reappeared with strong intensity. In addition, these depopulated areas show a high degree of specialization in the agricultural sector, which currently has a low capacity to generate employment, little structural diversification, and a significant impossibility to replace, in the short term, the active population close to the age of retirement.

The tourist activity is deeply rooted in the economic structure of the autonomous community of Aragón, representing an important source of income, creating employment, and serving as the backbone of the region. Tourism, and especially rural tourism, is seen as an attractive way of retaining the population in the territory [1–4], even if the reconciliation of interests and objectives of tourism and nature conservation is not that obvious [5]. Aragón is an inland community with no access to the sea, a high mountain area with small ski resorts, several regions with wide plains and mountains, numerous little rural centers dispersed all around, and the presence of the fifth Spanish city of population right at its heart: Zaragoza. In light of this reality, developing a tourism model different to the mass tourism of sun and beach so characteristic of the Spanish coastal areas becomes essential. The delay in the incorporation of Aragón as a tourist destination offers, at present, a great opportunity to introduce a model of tourism more in line with the paradigm of sustainability.

Sustainable tourism must follow three principles: Environmental sustainability (meeting the needs of the current generation without jeopardizing those of future generations), respect for the culture and livelihoods of the receiving place without the imposition of new models, and contribution to the generation of employment and income for the local population. Therefore, it is not a type of

tourism but a way of organizing and practicing tourism that equally engages tourism agents, public institutions, and consumers.

The challenge to be faced by tourism in Aragón is, therefore, creating and developing specific tourism activities and services based on the natural resources of the territory aimed to support the preservation of the landscapes and, at the same time, allow the development of an alternative economic activity with the biggest possible potential to generate employment and settlement for the population in the territory. However, to be sustainable, a tourist destination must also have the capacity to induce and attract a certain amount of demand that is able to maintain that economic activity over time. Research on tourist marketing is considered relevant to identify positioning strategies as well as the most popular products based on the sustainability principles that the autonomous community of Aragón must boost.

In 2018, there were 3,716,071 travelers who visited Aragón, with this being 1.22% more than in 2017 and representing an increase of more than 1 million compared to 2013. Overnight stays exceeded the 8 million barrier in 2018 [6]. According to these data, Aragón occupies the ninth position among the autonomous communities of Spain in the reception of tourism, even though it is not a beach destination.

Aragón has the capacity and infrastructure to support a significant growth in tourism demand. It is far from reaching the saturation level presented by other regions or areas of Spain. Hotels are the most chosen places by visitors (2,909,289), followed, with a significant difference, by campgrounds (372,749), rural houses (196,447), tourist apartments (196,060), and hostels (41,528) [6]. The indicators of tourist occupation linked to these figures are substantially lower than the national average.

The main characteristic of innovative tourism lies in having a continuous contact with the client. Just by knowing the opinion of tourists, public and private actors can design actions and programs that are both effective and efficient. Therefore, knowledge of the perceptions, attitudes, motives, and experiences of tourists is key to establishing the optimal positioning axes and configuring an offer that has an impact on the acquisition and loyalty of demand and allows greater use of the region's potential. The identification of the needs and desires of the tourist allows one to identify niche markets for the development of the positioning strategy of a destination [7]. Marketing is postulated in this context as a mechanism to achieve the strategic objectives of the destination regions [8], facilitating, with the help of its promotion mechanisms, the consolidation of positioning and effective market penetration [9] and emphasizing the set of specific attributes that represent dominant images of a destination that highlight its uniqueness [10]. The positioning process is essential for effective strategic marketing [11] because the tourist needs are increasingly wide [12].

Countries, regions, and cities compete for tourists in an increasingly aggressive way [13]. This soaring competition and pressure between destinations, the growing importance of the tourism sector in global, national, and regional economies, and the fact that the benefits of short-term tourism can be clearly analyzed, even if they are not so evident in the long term, have led to a significant increase in the production of literature on tourism competitiveness in recent years [14], which focuses on strategies for the introduction and promotion of tourism products and on market diversification.

Tourist destinations are amalgams of products that offer an integrated experience to consumers [15]. Although they are traditionally linked to very defined geographical areas, such as a city or an island, destinations can also be perceptual concepts, which tourists interpret subjectively according to the itinerary of their trip, the purpose of their visit, their educational level or past experiences [8], and the combination of functional or tangible and psychological or abstract attributes that they possess [16].

Destinations are relatively substitutable. In order to gain competitive advantages and to attract tourists, they must build images and offer unique benefits. The image of a destination is the holistic construct that derives from attitudes towards tourist attributes that are perceived from that destination [17]. Following Gunn's seminal contributions [18], the process of image formation implies, in this order, an organic image, which derives from the accumulation of mental images about the destination; an induced image, from the information obtained through different sources; and a final image, a consequence of the experience in the destination. Most tourism products are intangible

and can often only compete through images, so these are the best basis for a tourism destination management model, due to their relative simplicity, dynamism, versatility, integration capacity, and its impact on the purchase process [19]. In addition, the image of the destination directly influences the intentions of revisiting and recommending it to others [20].

Positioning is the process of study, definition, and implementation of a differentiated offer of value whose attributes provide a sustainable advantageous position in relation to competition in a competitive scenario, from the point of view of a target audience [21]. It implies developing the offer and the image so that they occupy a different and valued place in the minds of the target consumers [22]. It is a polysemic term. In the field of strategic planning, "positioning" is understood as the process of developing competitive strategies that focus on the identification of potential advantageous positions regarding competition and the creation of a unique and valuable position, composed of a different set of activities aimed at sustaining it [23]. Two apparent distant worlds, perceptual and strategic positioning, are linked, and they must not be mistaken but approached in an aligned manner.

The essence of positioning is to accept perceptions as reality and to restructure them in order to create the desired position: A battle for the mind of the consumer [24]. Positioning theory is based on three propositions. First, we live in a society bombarded daily with large amounts of information. Second, the consumer's mind has developed a defense system against this disorder. Third, the only way to go through this system is the use of simplified and highly focused messages, whose acceptance has previously been tested with potential consumer groups.

The positioning of a tourist destination specifies the way in which customers are intended to notice, think, and feel in front of others. It refers to the individual perceptions of the client and has a high level of subjectivity, dealing with three themes: Adequate segmentation, the image and the selection of the characteristics of the destination to be emphasized [25], and its endowing with a unique identity [26]. Tourist destinations should be positioned around attributes that are significant for tourists, reflect the strengths of the destination and, finally, can be met by tour operators [27]. Thus, to ensure the success of the positioning strategy of a destination, it is imperative to identify the image and specific attributes needed to satisfy the customer [28]. The scientific literature collects numerous examples of attributes around which the various territories have built their positions [29–31].

An important objective of any target positioning strategy will be to reinforce the positive images that the target audience already has, correct negative images, or create a new image [32]. Destinations have therefore been involved in a brand building process [33]. Positioning is a dynamic process; it requires regular proactive efforts aimed at periodic reviews in order to maintain the desired brand image in a changing environment [34]. The monitoring, study, and interpretation of trends in global and sectoral environments and their influence on chance become critical: The consequences of making decisions based on incomplete, inadequate, or outdated information are severe [35].

Public policies, responsible for the planning, development, and promotion of destinations, coexist with private initiatives aimed at attracting tourists and developing goods and services to meet their needs [36] and those of their hosts [37]. The management of tourist destinations, including their commercialization, is complicated due to the complexity of the relationships between local stakeholders [38]. Marketing strategies affect the positioning of the brand and the theoretical demand of the tourist destination, but the real demand also lies in an optimal management of the offer: Price strategies, reservation channels, accessibility policy, security and protection to target level, etc. [39]. These factors have a prominent influence on market participation and cause relevant changes in the competitiveness of the destination so, finally, the fulfillment of the objectives of profitability and sustainability of tourist destinations goes through a comprehensive approach to their strategies, tactics, and operations.

The analysis of academic literature of marketing on sustainable tourism leads to the conclusion that, to boost a destination of this nature, the public actors must promote a tourism policy based on the three principles of sustainable tourism presented above. This public policy should be specified, at least, in the implementation of environmental measures for the prevention of climate change, programs

that facilitate the population's access to the resources and benefits of the tourist destination, citizen information plans about responsible tourism, fair trade development, accessibility plans, responsible economic management, programs of conservation and improvement of cultural heritage, and aids for the economic and social promotion and development of the local community. These principles shape the theoretical framework of the research presented below.

This study aims to define the strategic positioning lines that will facilitate the growth of Aragón as a sustainable tourist destination. This is a field where research opportunities are not yet exhausted: Despite the enormous documentation generated around the segmentation of tourism demand, the results are rarely translated into positioning strategies, new products, or brand customization or pricing [40]. In order to achieve this general objective, three specific previous objectives have been set: First, to establish and analyze the profile and activities of the tourist in Aragón; second, to examine the environment in order to identify trends of high impact on tourist destinations; and third, to determine the attributes of Aragón's positioning as a tourist community, describing experiences and actions that can facilitate the competitiveness of the Aragonese tourism offer.

2. Materials and Methods

It has been decided to opt for a qualitative research of exploratory nature, which combines the following methods and techniques in this order:

1. Collection and analysis of statistical information from sources of official information for the identification of the profile and activities of the tourist in Aragón. To design the optimal positioning, it is necessary to know the profile and activities of the current tourist. This requires having demographic, social, economic, and cultural information about travelers, calculating the average stay at the destination, knowing what they mainly do for their stay (resting, leisure, visits, shopping, activities, etc.), and discovering what type of activities they demand and perform (cultural visits and visits to monuments, nature hikes, visits to points of singular interest, sports practice, carry out workshops, etc.).

There are various sources of statistical information on the characteristics and evolution of the occupation in tourist accommodation for both the whole region and by provinces, main tourist regions, and the city of Zaragoza. The main sources of information are the National Statistics Institute (INE Madrid, Spain), which publishes the Hotel Occupancy Survey monthly, and the Aragonese Statistics Institute (IAEST, Aragón, Spain), which offers Excel information on incoming travelers (total, Spanish, foreigners), overnight stays (total, Spanish, foreigners), degree of occupancy by places in %, average stay in days, and staff employed. The IAEST also publishes a Tourist Situation Bulletin every month with all these data by provinces and by regions in Excel and pdf format, and an annual summary of the data on tourist occupation in the annual Basic Data of Aragón report.

Going down to a regional analysis level allows one to obtain deeper knowledge of the characteristics and motivations of tourists and discover the dominant profiles. The 132 tourism offices in Aragón have the obligation to register each of the information requests they receive in person. They collect information on people that have attended, which includes their autonomous community, country, age, form of travel, days of stay, motivation of the visit, type of information requested, type of accommodation, and how they knew about the area. The records are entered into a computer program of the General Board of Tourism of Aragón. This generates estimations based on adding data by regions, months, and years and disaggregating by profiles, origin, motivations, and behavior of travelers.

2. Analysis of the environment through tourist intelligence techniques. During the months of November and December 2018, the authors conducted, through seminars, several sessions of sharing and analyzing the main conclusions of different studies of public access on global trends of general type or sector specialization (economics, geopolitics, society, technology, etc.) published by intelligence companies such as Stratfor [41] and government organizations such as the National Intelligence Council [42]; and of the still few prospective reports on the evolution of

the tourist situation, highlighting those of the World Tourism Organization [43], the Organization for Economic Cooperation and Development [44], and the European Travel Commission [45]. A good exploration of the environment with a prospective orientation based on the technique of constructing scenarios can warn of trends or critical events before the changes have developed a discernible pattern, allowing one to adopt a reactive rather than proactive stance [46].

This allowed the identification and analysis of environmental trends with potential impact on the tourism sector in general and on the optimal positioning in particular.

3. Qualitative research technique: Focus group. During the first quarter of 2017, six focus group sessions were held with people residing in the high-density population centers closest to Aragón: Basque Country, Catalonia, Valencian Community, Madrid, and the French area of Midi Pyrenees and Aquitaine.

A discussion group or focus group is an organized and interactive discussion [47,48] with great potential as a collective and social activity [49,50], which allows one to know the various discursive positions of each participant, and to observe their ways of understanding and their own awareness about them [51]. So, it is a framework that allows one to combine reality and episteme, that is, to know the ways of perceiving (cognitively and pragmatically) through a fluid exchange of views.

The recruitment of the participants followed a specific filter that especially considered their knowledge of Aragón from the point of view of a tourist. In the focus group sessions, there were Spanish and French citizens between the ages of 25 and 65 years who, as tourists, had made stays in Aragón, provided information on the tourist offer and their concept about it, both currently and desired for the future. The size of the groups, eight people, stimulated the generation of adequate dynamics of communication between them [52] and the interaction of the reporting subjects; hence, conclusions have been established based on the analysis of their speeches. The simultaneous existence of intra-group homogeneity (similar experiences and socio-economic and cultural situations) and intra-group heterogeneity (existence of differences and contradictions that were homogenized in the consensus process) was assessed.

The sessions were held in rooms with a spy mirror of unilateral vision and were recorded in audio-video. A semi-open script was used, closing the researcher to those items of interest highlighted after the bibliographic investigation, but leaving open the interaction of the group members, with the following structure:

- Projective technique. Spontaneous evocation of the tourism offers of the communities: Andalusia, Aragón, Catalonia, Madrid, the Basque Country, and Valencia.
- Aragonese tourism demand. Motivation and reasons to visit Aragón.
- Aragonese tourism offer. Experience lived in Aragón. Positive and negative aspects.
- Perceptual memory and image of Aragón from the tourist point of view.
- Current and future identity of tourism in Aragón (real position versus aspirational).
- Positioning axis of Aragonese tourism.
- Expected concept of Aragonese tourism.
- Communication aspects of the tourist offer.

Following the recommendations of McNamara [53], the sessions advanced while generating useful information, respecting the following three basic rules: Stay focused, keep the momentum, and close issues. For the analysis of the obtained information, the description, the explanation of the reality studied, and the establishment of relationships between the phenomena were used. In all cases, a triple analysis of the discourse has been carried out as a means of converting the information into knowledge: Together with the merely literal transcription of the informants discourse, the tone in which everything has been said and gestures and emphasis of the participants have been analyzed.

3. Results

3.1. Identification of the Profile and Activities of the Tourist in Aragón

According to the INE, in 2017, a total of 3,671,259 travelers visited Aragón, without counting data on hikers, second homes, and tourist homes. With respect to the origin of the travelers, 78.53% were Spanish and the remaining 21.47% were foreigners.

As Figure 1 shows, the 2,882,906 national travelers were distributed as follows: 22.12% came from Catalonia, 18.78% from Aragón, 18.09% from Madrid, 13.04% from the Valencian Community, 7.24% from the Basque Country, 4.5% from Andalusia, 3.32% from Castilla y León, 2.66% from Navarra, and 10.25% from the rest of the autonomous communities. The tendency of Catalonia, Madrid, and Aragón itself to be the three main markets was maintained, adding to 58.99% of national tourism and 47.3% of the whole.

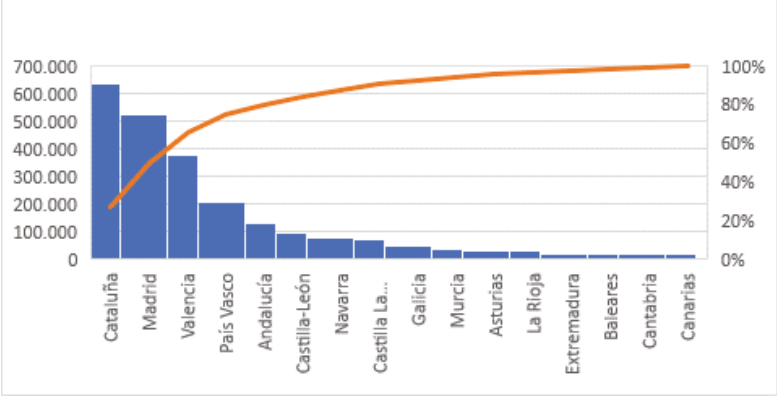

Figure 1. Origin of Spanish travelers to Aragón, 2017. Source: Own illustration, based on Reference [6].

Regarding the origin of the international tourist, as seen in Figure 2, France stands out with 27.81%, followed by the United Kingdom with 9.6%, and Germany with 7.69%.

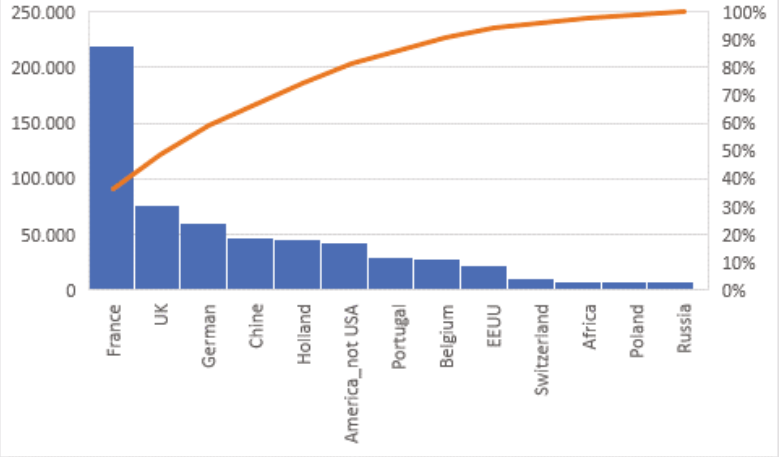

Figure 2. Origin of international travelers to Aragón, 2017. Source: Own illustration, based on Reference [6].

The mainly national character of Aragonese tourism stands out, with approximately four out of five travelers. It is very relevant to note that 54.87% of all tourism that Aragón receives comes from its Spanish border regions, together with Madrid, La Rioja, and the Basque Country; that is, more than half of the tourists inhabit less than a 4 h trip from the main Aragonese tourist destinations by road transport. As a matter of fact, participants in the focus groups noted that the main reason for travelling to Aragón was its closeness, something foreseeable considering the strategic localization of the community, set at 2–4 h from the main visitors' communities. It is also interesting to appreciate that throughout the last five years, an internationalization of Aragonese tourism has been taking place, since the growth rate of foreign tourists is higher than that of Spaniards (in 2017, a 10.1% increase compared to a 7.35% rise of nationals), there is a greater diversification of the country of origin, and an increase of the presence of extra-European tourists (15.78%, 2017).

Knowing what tourists are looking for in a destination and designing the activities that can be offered requires considering the number of days of their stay in the territory, if they are traveling through different tourist areas within Aragón during a trip, and what their budget is.

The average stay of visitors in Aragón in 2017 was 2.17 days, differently distributed by type of accommodation: 1.94 days in hotels, 3.04 in campsites, 3.07 in tourist apartments, 2.83 in rural tourism, and 3.05 in shelters. This observation was ratified by the participants in the focus groups, who argued that "*visiting Aragón means one long weekend trip, as it is close enough to go for three days but not as far as to spend one entire week*".

The average for the period 2014–November 2018 also shows different behaviors depending on the areas visited: 2.25 days in the province of Huesca (2.31 in the Pyrenees), 1.74 days in Zaragoza (1.66 in the capital), and 1.76 in Teruel. As shown in Figure 3, the highest average daily stay corresponds to high Aragón destinations and in particular to the region of La Ribagorza with 2.63 days.

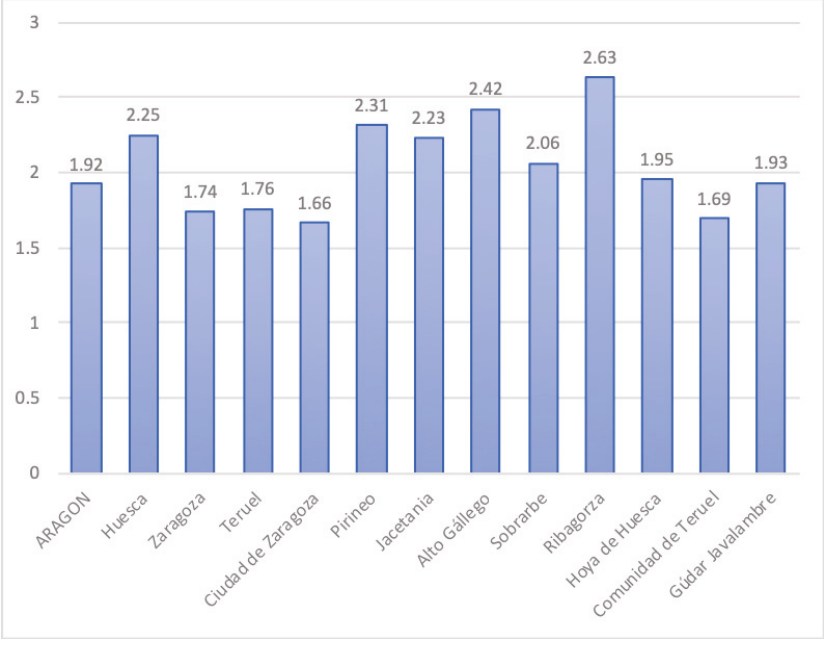

Figure 3. Average stay in hotels by tourist areas of Aragón, 2014–Nov 2018. Source: Own illustration, based on Aragonese Statistics Institute (IAEST).

The degree of occupation also shows differences by areas. Figure 4 displays that Zaragoza city has the lowest average stay, but the highest degree of hotel occupancy.

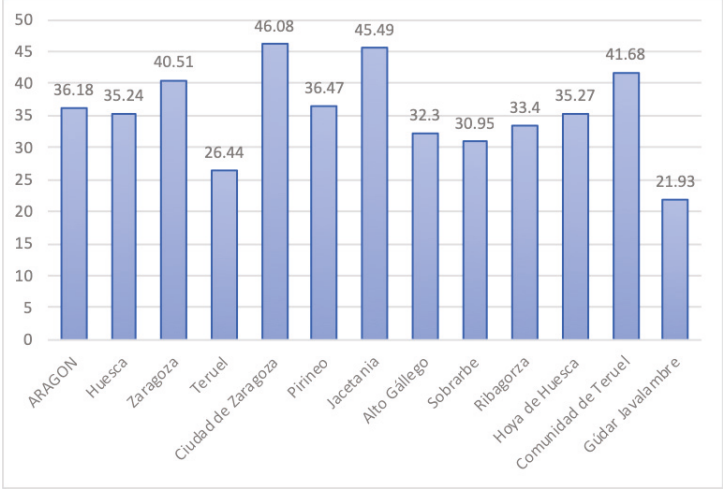

Figure 4. Average degree of occupation by tourist areas of Aragón, 2014–2018. Source: Own illustration, based on IAEST.

Average daily spending per person has a seasonal pattern, but is inversely proportional to the average length of stay (Figure 5).

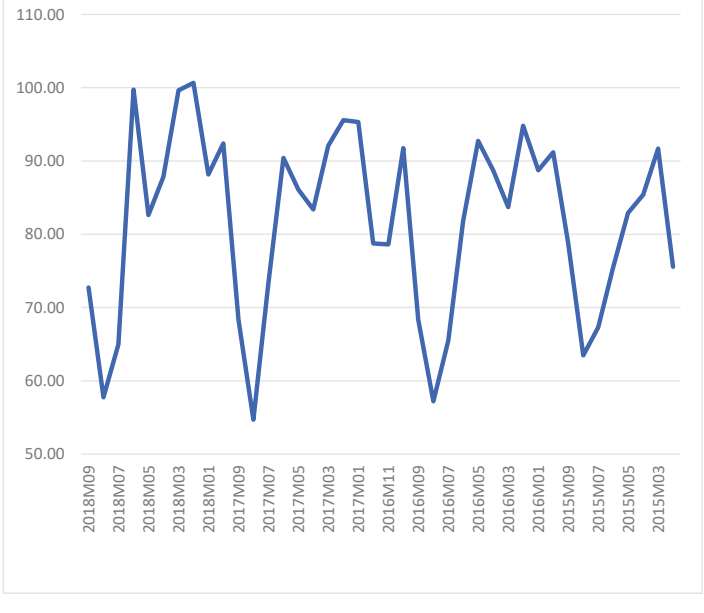

Figure 5. Average daily expenditure per person of trips to Aragón 2015–2018. Source: Own illustration, based on National Statistics Institute (INE).

As for the specific places for which information is requested, in 2017, they were in the following order: National Park of Ordesa and Monte Perdido, the valleys of Tena and Benasque, the Natural Park of Moncayo, the Matarraña, the Sierra de Guara, the Canfranc Station, the castles of Loarre and Peracense, the monasteries of San Juan de la Peña and Piedra, Zaragoza, and the towns of Jaca, Aínsa, Alquézar, Tarazona, Daroca, Sos del Rey Católico, Teruel, and Albarracín.

The National Park of Ordesa and Monte Perdido leads the ranking of demands, confirming that it is one of the biggest tourist attractions in Aragón. Its number of visitors has stabilized in recent years to a little over half a million people a year: 590,050 in 2014, 598,950 in 2015, 608,950 in 2016, and 566,950 in 2017. In 2018, the Centennial year, this figure had risen to 660,000 people. It should be considered that these figures are determined by the park being closed to saturation during the central summer days: In 1996, the visitors were 624,503 and in 2001, the maximum was reached with 657,045 people. Its evolution has been different from the rest of the national parks, since its total number of visitors has almost doubled during the last 20 years: From 8,469,074 people in 1996 to 15,439,502 in 2017, according to data from the Spanish Ministry for Ecological Transition.

The castles of Loarre and Peracense occupy a prominent place. Loarre Castle has accumulated nearly 2,000,000 visitors since 2006, when this influx began to be registered (with a significant number of foreign tourists from France, Germany, Belgium, and England), of which 30,000 correspond to the months of July and August 2018. For its part, Peracense Castle, during its 233 opening days of 2017, had 21,941 visitors, which is 14% more than the previous year. This upward dynamic is maintained during the last four years, with an increase of 67% in that period. The months of greatest arrival were the first week of August and holy week. The tourists came mainly from Zaragoza with 5277 visits, Valencia with 3810, Teruel with 3376, Madrid with 2005, and Barcelona with 1379. The percentage of foreigners remained around 2.4% of the total, coming from European countries such as France, Holland, and Germany, but also the USA and other exotic origins such as Japan, China, or Australia.

The historical urban complexes and the great monuments of Aragón follow the great natural places as tourist interests. After El Pilar and La Aljafería, the places located in the Pyrenees and the Pre-Pyrenees get the attention of the tourists, first and foremost attracted by nature. Thus, the castle of San Pedro (The Citadel) of Jaca, a pole of attraction for tourists and residents in the area who come to discover its exhibitions, theatrical visits, the deer that inhabit its moat, or the recreations that take place inside, received 90,000 visits during 2018.

It is also important to underline the interest generated by the reopening of other monuments thanks to public investment and the concerted activity of various administrations. Around 12,000 people have visited the Royal Monastery of Santa María de Sijena (Huesca) during the year since the return of the artistic works that were retained in the Museum of Lleida. The Royal Monastery of Our Lady of Rueda, near Sástago, one of the greatest exponents of the Cistercian order in Aragón together with Veruela, Piedra, and Casbas, had already been visited by 6806 people since its reopening at the end of January 2018 until September. La Cartuja de las Fuentes, close to Lanaja (Huesca), already exceeded 12,700 visits since its opening by the Provincial Council of Huesca, of which 5355 correspond to the year 2018, with tourists from 44 Spanish provinces, although they are mainly residents in Zaragoza, followed by those from Cataluña, Navarra, and Madrid.

At last, visits to the different centers of the paleontological and leisure complex Dinópolis in Teruel increased 2018 by 10.83%, reaching a figure of 192,949 visitors, which has already reached almost 3 million visitors since its opening in 2001.

A projection of the information requested in 2017 at the tourist offices informs that the main activities carried out by tourists in Aragón are, in addition to requesting information about the town to visit: Hiking trails, river walks, nature excursions (including natural bathing areas), the network of protected natural areas, heritage and monuments in the area, guided tours, museums and interpretation centers, charming villages, and gastronomy [6]. There is, therefore, a greater interest after the knowledge of a locality for nature tourism.

It is interesting to indicate that the study carried out at the request of the Chambers of Aragón in 2010 already showed, as seen in Figure 6, a balanced distribution between cultural visits, the practice of sports in nature, and establishing a contact with the rural world. That same study concluded that there were no significant differences by age segment in the type of tourist activities demanded [54].

Figure 6. Reason for the tourist visit to Aragón during Easter 2010. Source: Own illustration, based on Reference [54].

3.2. Environment Trends

The strategies to be designed and developed by public and private tourism agents must be aligned with the dominant trends in the environment to succeed, especially the ascending ones: Swim against the current and try to make reality come true to desires, and more in a global world, usually leads to failure. The methods and techniques of tourist intelligence are very useful because they allow us to obtain applicable ideas for the development of innovative products and services and to increase the presence in the markets.

The study has made it possible to obtain results as relevant as the fact that the evolution of the tourism sector is conditioned by the direct impact of the following global macro-trends of a global and multisectoral nature:

- Continuous and rapid advances in information and communication technologies (ICT): Promotion of mobility, dependence on mobile telephony, creation of new ways of communicating, increasing conversion of any social and mobile activity, interaction between machines without human intervention, appearance of virtual and augmented reality, creation of fingerprints of the actions of people, machines, and natural phenomena as data that can be exploited, etc.
- Incorporation of new regions to the consumer society such as the Chinese, Arabic, Russian, Indian, and Latin American, contributing hundreds of millions of people to the global market for mass consumer goods, including tourism.
- Globalization, diversification, interconnectivity, speed increase, and cheaper transport systems.
- Concern about the environmental impact of economic activities.
- Rise of the collaborative economy: Choice and planning of activities, means of transport, consumption of goods and services, offer of products and services by economic agents, creation of product clubs, etc.
- Variations in the social and demographic profile of consumers: Incorporation of millennials, seniors, and single or single-parent families, emergence of better-informed people with greater quality requirements, generalization of the prosumer, etc.

- Social and cultural changes in the consideration of leisure and rest: Travel as the main way to dedicate free time, demand for new experiences, narration and sharing of actions and emotions through social networks, etc.

These global macro-trends are manifested in macro-trends in tourism, among which the following stand out:

- Complete digitalization of tourism: In the design, management, and sale of the tourism product from the capture and processing of millions of data through the help of artificial intelligence throughout the value chain; and in the choice, planning, and purchase (websites and online marketplaces) of the travel package by the tourist himself and in the enjoyment (app) and communication of the travel experience (social networks) through the use of ICT.
- Cosmopolitanism and the interconnection of markets and destinations: There are no limits for a destination to be attractive for a new market and all destinations can be exotic for a consumer sector.
- Seasonally adjusted tourism: A growing number of people become travelers; more tourists want to alternate their work and travel time more frequently, even combine both; and destinations try to be attractive and profitable throughout the year, even if the intensity of the high season is decreasing in order to provide better services.
- Diversification of demand: The segmentation of the tourism market in niches both internationally and in each state is growing, with the incorporation of all demographic strata with their specific demands, the request for new tourism products and services, the search for unique experiences, and the option for multiple consumption on the same trip.
- Concern for the sustainability of tourism both by tourism agents and by consumers in three aspects: Environmental, social, and cultural. It is linked to the search for local and unique experiences.
- Emergence of intelligent tourist destinations: Creation of innovative, widely accessible spaces that use cutting-edge technology in search of sustainable development and the integration of tourists into the environment, in order to achieve a quality tourism experience. It is about combining the concepts of innovation, sustainability, accessibility, and technology around a tourist destination, in order to provide it with greater competitiveness and improve its positioning on the national and international tourist map. Spain is at the forefront with the recent publication of the standard UNE 178501: 2018 Intelligent tourist destination management systems, which lays the foundations for the design and development of these destinations.

The purpose of sustainable tourism is to develop specific tourism models for each destination area, taking into account the social, economic, and environmental implications. This way of understanding tourism is aligned with three of the above tendencies, mainly in western societies, the main consumers of tourism: Development of an ecological conscience, respect for cultural diversity, and appreciation of the exotic and the singular. In this sense, current visitors of Aragón affirmed that activities such as craft workshops performed by the local people within the cultural and rustic environment would be a very interesting tourist experience.

3.3. Perceptions and Attitudes towards Tourism in Aragón

The methodological approach of qualitative analysis allows one to preserve the original language of the subjects, investigate their definition of the situation, and the vision they have of their own history and the structural conditioning [55]. Therefore, although the focus groups do not allow for obtaining measurable data [56], they have been an appropriate technique since they have made it possible to know and understand, in detail, the opinions, habits, motivations, attitudes, and beliefs about the subject of study.

During the focus groups, the interaction between the participants was favored through different dynamics and games, as well as projective techniques that have allowed for the identification of the insights with which Aragonese tourism is related and the attributes and images that best symbolize

the tourist offer. Specifically, after requesting the participants to examine a series of images, they were asked to group them according to what, by group consensus, they considered reflected what Aragón could be in a better way and what they would like Aragón to say of itself.

The consensus by unanimous practice of the sample of all the localities under study, selected the images of Figure 7 as representative of the Aragonese tourist offer. In fact, the travelers that participated in the focus groups perceived Aragón as a "living nature", and confessed that this was precisely what they were looking for when visiting it: *"a quiet natural place where you can find an authentic and wild nature surrounded by a countrifield environment in which is possible to rest and to do active sport at the same time"*.

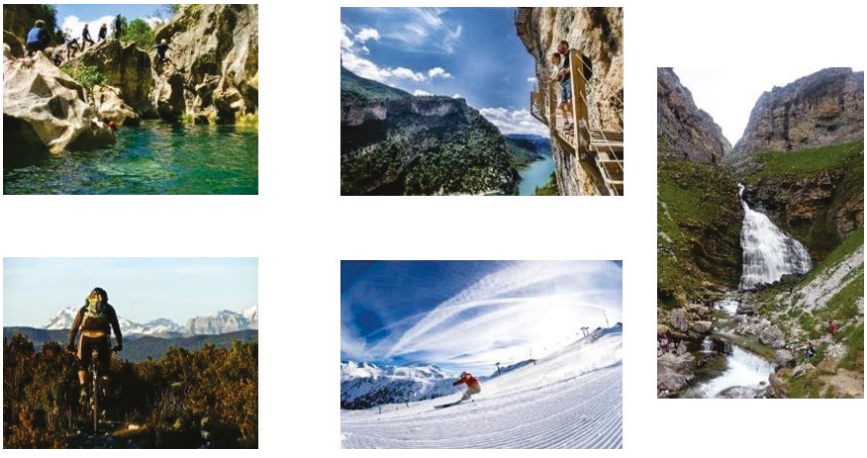

Figure 7. Representative images of the Aragonese tourism offer. Source: Own illustration.

Regarding the rest of the images presented during the sessions (Figure 8), they were considered interesting and a good complement to the tourist experience. This was expressed in terms like: "*they are places that are great and are a good complement to the trip you are doing*"; "*if you are there, then fantastic, because it is another attraction, but someone has to give you information about it*." In this respect, these destinations could be part of the backbone of the communication that must be done to enhance tourism in Aragón and that is represented by the previous images (Figure 7).

Figure 8. Representative images of the Aragonese complementary tourist offer. Source: Own illustration.

This work with images condenses the desired characteristics of the Aragonese tourist offer: Nature, landscapes, hiking, active tourism, and snow.

Further, the analysis of the speeches highlighted that, compared to other autonomous communities, Aragón can claim a defined position and provide it with differentiation. This positioning can be articulated around a triple axis formed by the concepts of "Authentic nature", "Active tourism", and "Rest and disconnection".

- The territory "Authentic Nature" is shaped by the idea of a wild nature, not spotted and alive, where the tourist can feel the emotion of a real and vivid nature through the contemplation of landscapes of unparalleled beauty. The almost universal presence of sustainability in tourism discourses runs the triple risk of banalizing the concept, of identifying it with rural tourism, and of reducing it exclusively to ecotourism or the enjoyment of nature. Nature tourism is not the same as sustainable tourism. Tourism practiced in nature is only ecotourism when it is sustainable.
- The territory "Active Tourism" refers to the wide range of activities that meet in Aragón. This is related to snow and adventure and other discovery activities for all audiences.
- The territory "Rest and disconnection" constitutes a fundamental element for a tourist who "flees from the city" and seeks authenticity and rest in a non-massified environment where he can disconnect from the daily routine. Disadvantages such as depopulation or connectivity problems in some areas can become opportunities, since many travelers seek loneliness and silence, to get a few hours or days of infoxication, so they do not consider whether there is coverage or access to quality Internet to be a decisive factor for the decision to purchase that in the place of destination.

The three territories are intimately connected, so that the generic communication of Aragón's tourism offer can be combined or treated separately depending on the market segment to which certain specific actions are directed. Lastly, as participants declared, the main reason to visit Aragón is its nature, landscapes, and protected natural parks, but the opportunity of exploring a rustic location and meeting its inhabitants and their way of life and history is an added inducement that must be promoted.

The focus group sessions conducted led to evidence of the high potential that agrotourism has to integrate these three dimensions (authenticity, action, and disconnection) and give an answer to the demands formulated in this respect. The physical characteristics and the human and economic geography of Aragón are revealed as a great strength to develop this sustainable tourist practice. Aragón can be leader in the organization of short stays or even family holidays with children or friends sharing authentic rural experiences, where rest and tranquility are compatible with discovering other ways of living in nature, producing food, enjoying the landscape, and cohabitating with the local population. The proposals on agrotourism are integrated in the family structure, they are part of the agrarian, livestock, or artisan activities, and they include didactic, entertainment, and exhibition activities related to the resources and jobs on the holding. Agrotourism also offers the possibility of supplementing many rural families' incomes, thereby combating depopulation, one of the focuses of Aragonese tourism policy.

This generic positioning strategy must be accompanied by complementary axes that reinforce it considerably. In this sense, accommodation and catering services, historical and artistic heritage, and Aragonese folklore represent clear incentives that help to configure a global positioning from which the region will be directly benefited.

4. Discussion

The macro-trends identified with the help of the tourist intelligence together with the analysis of the opinions of the participants regarding the knowledge and perception of the Aragonese tourist offer, their motivations, and the possible reasons for their demand and potential loyalty have facilitated the identification of the axes of ideal positioning of Aragón as a tourist destination, as shown in Table 1.

Table 1. Tourism positioning axes in Aragón.

Axis	Main Axis	Secondary Axis	Tendency
Authentic nature	Nature alive, wild and preserved, not stained by the footprint of man.	• Landscapes of extreme beauty; • Lack of massification; • Tranquility.	• Concern about the environmental impact of economic activities. • Search for local and unique experiences.
Active tourism	Wide range of activities for all audiences.	• Routes and excursions; • Sports and adventure activities for everyone: hiking, canyoning, canyons, biking, canoeing, theme parks, etc.; • Mudejar and Romanesque art; • Aragonese folklore: festivals, traditions, commerce and crafts.	• Variations in the social and demographic profile of consumers. • Demand for new experiences, • Narration and sharing of actions and emotions through social networks. • Option of multiple consumption on the same trip.
Rest and relaxation	Rest and total disconnection from the daily routine.	• Non-existence of massification; • Hotels and rural houses with resorts, spas and restaurants; • Friendly, hospitable and welcoming people.	• Social and cultural changes in the consideration of leisure and rest: travel as the main way of spending free time.

The crossing of the results and the analysis of the information obtained during the investigation also guides the formulation of recommendations with strategic objectives and guidelines for action:

1. Align the offer with a strategy aimed at the customer, sensible to the emergence of a demand of diverse and sustainable products and services. Tourism actors must promote the specialization and differentiation with the presentation of an offer bounded to the characteristics and values of the Aragonese territory, as requested by the tourists from the focus groups. This offer must also be presented to be consumed in a short and intense period of time or as a complement in periods devoted to rest and leisure tourism. The reports of the tourist offices and the qualitative research developed agree that most tourists visiting Aragón aim to complement experiential and relax tourism.
2. Search for emerging market niches linked to experiential and sustainable tourism; especially those related to the organization of ecotourism products of a photographic nature, agritourism type "live like a countryman", gastronomy for specialized niches (vegetarians, vegans, foodies, etc.), literary and cinematographic routes, spiritual and inner growth experiences, discovery of slowness, and getaways for groups of women.
3. Identify each tourist area with a specific type of experience tourism, promoting the preferential realization of activities of that type and the creation of an own brand for each tourist area.
4. Specialize the main towns and cities in the sustained realization of cultural activities, in order to promote transnational thematic tourism products, taking advantage of the synergies between tourism and the cultural and creative industries.
5. Promote investment in inland tourism, understanding it as a strategic economic activity for the future of the Aragonese economy and the fight against depopulation, which needs a determined public–private collaboration, the promotion of a specific line of financing and public aid, and the introduction of tax benefits, such as the granting of incentives, from local and regional administrations, to companies that make the effort to open in the middle and low season.

6. The empowerment of agrotourism highlights one of the main strategies to keep sustainability from the tourism activity of Aragón in the future, together with an effective instrument to fight against depopulation.

5. Conclusions

The method and techniques used in this research have allowed us to achieve the objective, so it is considered that similar works can be replicated in other geographical regions or administrative political units by agents interested in understanding the phenomenon of the positioning of tourist destinations.

Obtaining, processing, and analyzing relevant data and information about the environment for its conversion into intelligence that supports strategic planning and tourism decision making is essential. Therefore, the implementation of tourism intelligence systems of a territorial nature within public agencies with responsibility for tourism, and their convergence in a macrosystem encouraged by the Regional Administrations, is urgent. These territorial tourism intelligence systems must be able to equally identify risks and threats to the sector within the territory, in order to prevent them, and opportunities that guide the design of innovative products and services, the exploitation of strengths to capture loyal tourists, or the access to new markets. They should rely on two complementary pillars: Big data and competitive intelligence. Big data provide advanced tools of artificial intelligence software for the capture and massive analysis of structured and unstructured digital data from multiple sources, the results of which can be displayed in comprehensive scorecards. Intelligence offers the design and implementation of an early warning system appropriate for the needs of the organization and the peculiarities of the environment, the collection and analysis of non-digital information, and, in particular, the application of advanced human analysis techniques to evaluate and interpret the information provided by informatics with orientation towards prospective, recommendations, and support for operations.

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How Can a Destination Better Manage Its Offering to Visitors? Observing Visitor Experiences via Online Reviews

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Abstract: Destinations are competing every day to attract more tourists and increase tourism receipts. In order to maintain tourists' interests in the destination and expect sustainable income from tourism, understanding tourists' perceptions of the destination is a critical task for destination managers. Tourists' continuous visitation can be ensured when destinations are perceived to be positive and attractive. Therefore, this study examines destination attributes that are fundamental elements of the destination and tourists' experiences. More specifically, this study investigates the destination attributes that are perceived to be positive by tourists using online reviews. Online reviews were analyzed with content analysis techniques and the quantified content was statically compared with the star rating provided by tourists. In addition, the influence of destination attributes on other conation dimensions-attitude and behavior-was analyzed. Destination attributes that have an influence on the star rating showed similar results to the attitude. However, behavior dimensions only had a significant influence for tour guides' quality of the destination.

Keywords: destination offering; destination attribute; visitor experience; online review; micro-scale destination; local attraction; UCG; economic sustainability

1. Introduction

Destinations, regardless of their size, have focused on developing tourism for the economic benefits that tourism brings to the destination [1]. This phenomenon led to intense competition amongst destinations for building tourism infrastructure to both attract and support more tourists. This short-sighted perspective to tourism development, which emphasized the economic benefits of tourism, has resulted in unsustainable consequences that ultimately damage the environment and host community of destinations across the globe [2,3]. To address the negative impacts of tourism, in more recent times, researchers and practitioners have increasingly shown great interest in sustainable tourism development [4]. Sustainable tourism development is built around a triple bottom line framework, which includes the economic, social, and environmental dimensions [5,6], to ensure that locals have long-term sustainable benefits from tourism while still providing a satisfactory experience to tourists [7,8]. A key tenet of sustainable tourism is that there must be balance between the three dimensions. Therefore, rather than shifting from overemphasizing the economic impacts of tourism to overemphasizing the social and environmental impacts of tourism, economic value is as important as social and environmental values. This is evidenced in practice, as the UN World Tourism Organization (UNWTO) publishes "Tourism Highlights" annually and reports on income

earned, tourist arrivals, market shares, and jobs created by tourism [9]. Without tourists visiting the place and the subsequent economic activity, there is no tourism and there cannot be positive or negative impacts. Thus, understanding how to attract tourists and how to ensure continual tourism demand is critical for destinations to ensure sustainable earnings. This can be achieved, in large part, by understanding tourists' perceptions and experiences. When a destination attracts a stable numbers of tourists, the destination is better equipped to survive intense competition with other destinations. To be a sustainable destination, it is critical that the destination also minimizes the negative impacts of tourism on the host community and environment.

The success and failure of a destination depends, in part, on tourists' evaluation of the destination. Destination attributes are what a destination can offer and what the destination has offered. Prior to travel, people choose a destination based on their expectations of the destination. In other words, people consider what the destination can offer and the potential experience they will have at the destination [10]. Post travel, people evaluate the destination based on what the destination offered them during their visit [11,12]. Destination attributes are one of the most fundamental elements of tourists' evaluation a destination. Hence, destination managers need to understand the importance of a destination's attributes. They should able to determine which destination attributes offer better value to tourists and make the destination more attractive. Academics in tourism have utilized destination attributes in many contexts, ranging from defining a destination [13], to constructing destination image [14–16], to examining importance and destination performance [17,18], to understanding competitiveness of a destination [19]. Furthermore, tourism academics have also examined the impact of destination attributes on tourists' satisfaction, intentions to visit, and word of mouth (WOM) recommendations [20]. While each research context is different, the goal of investigating destination attributes is to better understand a destination and to distinctively position it in an increasingly saturated global tourism market. More importantly, accessing what are the destination attributes that make destination attractive and competitive is critical for the destination to achieve economic sustainability [21].

Until recently, researchers examining destination attributes have relied on conventional survey methods with structured formats and pre-established dimensions that tourists were asked to rate (i.e., [20–22]) based on their expectation and experience with destination offerings. However, the structured evaluation method may hinder tourists from freely expressing their experience [23,24]. On the other hand, tourists' reviews and comments are more realistic in that tourists write based on their true experience in a specific destination [25]. Therefore, examining destination attributes from tourists' online reviews may provide an opportunity to more accurately capture the attributes from the tourists' perspective. Determining destination attributes through online reviews can be particularly beneficial to micro-level destinations, where management faces difficulty in securing the financial and human resources needed to investigate and analyze the destination attributes offered. Macro-level destination management organizations, such as national tourism organizations, may also lack the budgetary resources needed to conduct a comprehensive destination attribute survey for all of their key tourist origin markets [26–28]. Regardless of the size of the destination management organization, destination managers are responsible for offering valuable destination attributes that, in turn, can result in the enhancement of tourists' experiences in the destination.

This study primarily examines the destination offerings of a micro-level destination by identifying salient destination attributes from tourist' comments about a destination that they posted on an online travel community. Specifically, this study aims to determine which destination attributes are positively influencing the tourists' behavior and attitudes by exploring the attributes in relation to intention to visit/recommend, overall positive attitude, and overall ranking given in the online travel community. One of the purposes of this destination- and context-specific study is to serve the micro-level destination's need to analyze its current offerings to the tourist and to develop an effective experience management strategy.

2. Study Background

2.1. Destination Attributes for Evalutating Destination

Destination attributes are a fundamental research concept in tourism because a destination consists of multiple destination attributes [29]. Coltman [13] defines a destination as "an area with different natural attributes, features, or attractions" (p. 4). It can be simply understood that destinations in many different levels—a micro attraction like a site to a macro attraction like a city and a country—in any areas with its unique attributes are destinations. More specifically, "a destination at a very local level" [30], like a single attraction, is a destination that tourists can evaluate based on intangible and tangible attributes [1]. It is important to remember that regardless of the size or locale of tourist destinations, all destinations are based on the destination attributes they offer.

As a fundamental research concept, destination attributes have been investigated in relation to many other focal research concepts in tourism. Most tourism researchers view destination attributes as a key element to the construct of destination image [31–34]. In that regard, Ritchie and Crouch [35] explained destination image as a result of evaluations based mainly on the destination's physical attributes. Thus, when investigating the destination image, scholars use multiple sets of destination attributes to measure the construct. However, depending on the scholars, there have been differences in how destination attributes have been classified ([27,33,34]). Echtner and Ritchie [29], in their most cited destination image research, classified destination attributes on a continuum of functional (physical) to psychological. Some may support the view that destination image is based on an evaluation of physical attributes [35], which is a cognitive component of destination image [36]. However, according to Baloglu and McCleary's [31] definition of the cognitive and affective image in relation to place attributes, attributes are a foundation for both images of destination attributes that are cognitively evaluated and then the affective response to the cognitive destination attribute evaluation. One other classification of destination attributes is based on functional (tangible), psychological (abstract), and conative components [37]. This classification is consistent with Echtner and Ritchie's [29] classification, but also includes a conative component (i.e., tourists' behavioral intention to visit and to recommend the destination to others).

The critical role of destination attributes is also evidenced in other popular research concepts in tourism. Destination attributes can also be a reason for tourists to decide to visit a destination. Scholars have researched this perspective in terms of destination motivation [38–40]. This perspective is described in one of the most popular motivation theories—push and pull [39,41,42]. The pull side of motivation, in particular, is closely related to destination attributes. The theory explains that tourists' motivation to travel are based on a combination of pull factors, such as socio-psychological motivation (i.e., escaping, relaxation, relation, self-esteem, and others) [17,38], and push factors, which are related to destination attributes (i.e., natural and historical resources, tourism infrastructure and facilities, transportation, climate, and others) [41,43,44]. According to Klenosky's [45] explanation of the push and pull theory, push factors answer "where to go" and pull factors answer "whether to go". Destination attributes may not be a sole reason for people to travel; however, it is important to determine the role of destination attributes role in tourists' decision to travel to a specific destination (i.e., destination choice).

Almost all destinations aim to achieve destination competitiveness by attracting potential tourists and increasing tourist visitation, which will consequently lead to tourist expenditures [35]. While researchers agree that being a competitive destination is important, they have not agreed on determinants for measuring destination competitiveness [46,47]. The determinants used in destination competitiveness studies include attributes such as price competitiveness [48], environmental competitiveness [49], strategic destination marketing and management [50,51], and destination positioning [52]. Utilizing these determinants, researchers have either diagnosed the destination competitiveness of a single destination [19,53,54] or compared two or more destinations [20,55–58]. While there are various ways to measure destination competitiveness, destination attributes have

consistently been included as an integral factor in each measurement. Ritchie and Crouch [35]'s competitive destination model includes physical destination attributes in their 'supporting factors and resource' and 'core resources and attractors' sections. The resources in their model are conceptualized to be a foundation of destination competitiveness. Similarly, Dwyer and Kim [56] and Dwyer et al. [37] included natural, heritage, created, and supporting resources as a primary factor of destination competitiveness. These two models also showed that destination management, policy, planning, and development are important factors as well. However, they indicated that these come after the existence of resources (i.e., destination attributes).

Another area of study in tourism that uses destination attributes as a foundation is the Important and Performance Analysis (hereafter, IPA) concept. The model has been favored by various public and private tourism service providers to determine their positioning and performance in the market [59]. The IPA, based on the salient destination attributes that a destination offers to tourists, allows tourists to evaluate how important those destination attributes are and then judge how well the destination performed on the same destination attributes [17,60]. The difference between importance and performance helps destination managers identify destination attributes that they can enhance to achieve competitive advantage, as well as destination attributes that should be improved [59]. Further, the result of IPA can be a useful tool for the marketing and management strategy [61–63]. Like the competitive destination model, destination attributes have been found to be an essential element in determining the destination importance and performance.

The review of the aforementioned concepts in tourism research has evidenced the critical role of destination attributes in assessing tourists' perceptions of a destination. In summary, tourists' evaluation of destination attributes has been used in determining destination image, destination choice motivations, destination competitiveness, and destination importance and performance. Thus, destination attributes have served to be an excellent indicator for better managing a destination. Specifically, destination managers can identify which attributes contribute to the current destination attractiveness and to negative tourist experiences. Regardless of the context, investigations of destination attributes can provide meaningful implications for the industry by providing strategic direction, as well as to the destination literature by utilizing theoretically driven destination attributes.

2.2. Tourists' Experiences and Destination Attributes on Social Media

The evolution of web 2.0, which enables users to process digital content, changed tourists' travel patterns. As a result, tourists can now share their travel experiences by writing reviews and posting photos and videos on a social media site instantly and frequently. This can be done during two phases of the travel experience- while they are the destination and after they return home. Consequently, the role of the tourist has shifted from the tourist as an information receiver to the tourist as an active player that creates and generates information about the destination [64]. A major implication of this shift is that the destination content that is generated by the actual visitor can reach the 'tourist-to-be' [23], who may view the content and may decide to go to the destination featured in the content. While destination management organizations' (DMOs) primary task is to provide information and promote the destination to the 'tourist-to-be,' tourists validate and trust the tourist's review more than service providers' content. Traditionally, word of mouth (WOM) was found to be influential in potential tourists' decisions. As a result of web 2.0, the tourist review served to be the new word of mouth, which is referred as e-WOM because it is shared electronically. In the age of e-WOM, tourists have started to plan their own trips and customize it, rather than relying on travel agents [65]. The tourist-to-be pays attention to the other tourists' description of the destination attributes and expressions about their experience with those attributes. In this digital age, tourists have become their own tour agency, content provider, receiver, and reviewer. The phenomenal change, has had a significant influence on DMOs and tourism businesses. Both product and service providers are challenged with promotional and quality issues. The immeasurable amount of information that tourists provide on the Internet and social media cannot be controlled by tourism suppliers [66]. Thus, the DMO and tourism businesses

do not have much room for "place-myths" [67,68] to make a destination more favorable. Examples of this include slight exaggerations and photo editing images [69].

The aforementioned challenge has been examined in some tourism studies by investigating the content generated by tourists and DMOs. For example, a study conducted by Svetlana and Zhan [70] compared the content generated by both tourists and the DMO to identify the difference in destination image, using pre-identified destination attributes. The study findings indicated that DMOs acknowledged that what tourists may see as attractive in a destination may be different from what the DMO promotes on the Internet. The researchers concluded that while DMOs may attempt to promote the destination as well-rounded, by featuring various destination attributes, tourists exhibit strong interest in specific characteristics of the destination. Additionally, a recent study illustrating the important role of tourist-generated content in destination marketing and promotion suggests that tourism providers acknowledge that tourists are opinion makers and include their opinions when shaping their destination promotional strategy [66]. In this case, tourists are viewed as co-creators. Inclusion of tourists' opinions in business and business strategy is encouraged by the mainstream consumer research [71]. This notion is called co-creation. The core concept of co-creation is to take consumers' opinions and use them to improve a product, service, and quality control [72].

Furthermore, in the digital age, the consumer has a strong voice and it is inevitable that user generated content (UGC) will be shared by other people in the world [2]. In tourism, the tourist can shape a strong opinion and voice their opinion via online reviews on TripAdvisor, a photo shared on Instagram and Facebook, and posts made on a personal blog [73]. In each of these examples, tourism businesses have no control over the dissemination of information related to their destination, which can influence others' perceptions of the destination. Thus, tourism product and service providers should also utilize tourists' opinion on the Internet and social media to analyze their current business status. The results should then be utilized to enhance and improve their product or service. This type of analysis is a great tool for tourism business to diagnose their product competitiveness and attractiveness from the important perspective of the tourist. In particular, a small tourism business or local DMO with limited resources to hire an expert to diagnose their management and marketing strategy can benefit from the freely available data on the Internet and social media, if they know what and how it should be analyzed and interpreted.

Use of digital data generated by tourists in research can serve as a substitute for the structured survey, which is completed based on pre-established dimensions [74]. Survey methodology has received a fair share of criticism because it limits the tourists' response about their perceptions of and experiences in destination within the provided structure [23,24]. Survey methodology has also been criticized because the respondent can become exhausted [75]. This, in turn, can result in poor response rates [75,76]. On the other hand, examination of UGC has been favored by researchers because of its ability to capture tourists' real opinions about and perceptions of the destination experience (c.f. [74,77]). Accordingly, UGC may be a better tool to observe the fundamental source of tourists' satisfaction and dissatisfaction with their trip and the destination. In this sense, identifying the destination attributes that tourists discuss in their review of a destination can help both researchers and practitioners better understand tourists' experience in the destination. More specifically, researchers and practitioners may better understand the source of tourists' negative and positive experiences.

2.3. Purpose and Research Questions

The primary purpose of this study is to investigate tourists' perceptions of destination offerings for a micro-scale tourist site based on their written review of their experience on social media. In this study, a micro-scale tourist site—a local attraction—was chosen as a destination because, (1) by the definition of destination given by Coltman [13], an attraction is also a destination; and (2) micro-destinations have received relatively less attention than macro-scale destinations [1]. By conducting this study, the researchers hope to demonstrate how destination managers can identify the destination attributes that are critical to the visitors' experiences and use it in their strategic planning. This could, in turn,

enhance the destination's competitive edge. To address the purpose, this study aims to answer the following research questions:

(1) What are the destination attributes that are salient in tourists' reviews of the tourist site on social media?
(2) What are the destination attributes offered by the tourist site that tourists have a positive experience with? Further, how are these positive destination attributes associated with one another?
(3) How do tourists with different experiences on each destination attribute (positive vs. not-positive) evaluate the tourist site based on a star-rating system?
(4) Is there consistency between tourists' satisfaction based on star ratings and their expressed opinions in the written reviews? More specifically, do tourists' overall star ratings match the behavior and attitudes expressed in their written reviews?

2.4. Study Location

The study location is a historic tourist site (hereafter called HTS) located at the heart of a city that is on the Northeastern coast of Florida (hereafter called CITY). This city is known as the Nation's Oldest City and is listed as a National Historic Landmark by the National Park Service for the longest continually inhabited European-founded city in the United States [78]. The city's rich history has been linked to Spanish, English, Greek, Native American, and African American inhabitants since the sixteenth century. The HTS is located in the city's historic district. Visitors to the HTS can experience the heritage of the city's Spanish and English settlements with guided tours or self-exploration of the architecture, reenactments, and era-specific exhibitions. The HTS offers visitors the opportunity to climb a watch tower where they can see the town and the waterfront fort, which is a significant historic tourist attraction in the city. The HTS also has an extra sitting space with a stage under a large oak tree where a small-to-medium sized meeting or event can be hosted. Additionally, there is a restaurant and bar that is part of the HTS' property and management, which is open to the city's main historic street. The HTS was chosen to assist the local administration in its improvements efforts to enhance the visitor experience for an increasing number of visitors. The improvement efforts were also linked to the local administration's goal of ensuring sustainable economic impacts of tourism. As requested by tourism stakeholders, the name of the HTS will not be revealed.

3. Method

This study investigates the destination attributes experienced by visitors to the study site. It examines destination attributes visitors highlighted in their written comments on social media. The narratives based on real experiences provided the researchers with a unique opportunity to understand the predominant attributes that emerged in online discussions among visitors. The research design consisted of several processes. First, the researchers collected the comments about the study site posted on a travel-related social media site. Data were then coded in accordance with pre-established coding themes. The coding process followed a content analysis approach based on Echtner and Ritchie's [29] continuum of functional (physical) to psychological attributes. After ensuring the reliability of the coded data, a series of analyses were performed. Further details about the methodology employed in this study are explained in the following subsections.

3.1. Data Source Selection

TripAdvisor (www.tripadvisor.com) was chosen to retrieve reviews written by visitors. TripAdvisor is one of the most recognized and active online travel communities [73,79,80] that is visited by 435 million visitors monthly on average and the reviews on 7 million businesses (e.g., hotels, restaurants, and attractions) are accumulated to the total of 390 million [81]. The information about the business and reviews on Social Networking Service (SNS) has a significant influence on tourists' decision making process [82].

For the study data, the most recent 500 TripAdvisor reviews posted by visitors to the HTS and the site's overall rating score given by these reviewers were collected. These data were posted between 12 March 2014 and 12 October 2015. A total of 487 reviews were used for the analysis. Thirteen reviews were excluded from this study because they were irrelevant (e.g., some reviews were not written about the HTS, but were overall reviews for the city and the city's main historic street).

3.2. Category Development

The authors used the studies conducted by Echtner and Ritchie [29] as the theoretical grounding when formalizing the category sets used in the content analysis to determine the destination attributes expressed in the reviews. Based on Echtner and Ritchie's work, categories were developed based on the functional and psychological characteristics of the destination. Additionally, to determine the influence of the characteristics on the behavior and attitude of visitors, a third category was added. As a result, there were three main categories—"psychological characteristics" for intangible attributes; "functional characteristics" for tangible attributes; and "conative characteristics" for attitude and behavior-related attributes. Psychological and functional characteristics had three broad first-tier categories, with several second-tier categories. For psychological characteristics, "Quality of Experience", "Atmosphere", and "Target Market" were identified as the first-tier categories, while "Attractions", "Activities", and "Amenities" were identified as first-tier categories for functional characteristics. The coding categories are provided in Table 1.

Table 1. Coding categories for Psychological, Functional, and Conative elements.

	Category		Category
Psychological (Intangible)	**Quality of Experience**	Functional (Tangible)	**Attractions (Seeing)**
	Tour Guiding Excellence		Architecture/Building (Design)
	Educational Experience		Watch Tower (View)
	Value for Cost/Time		Ship Building Process (Exhibition)
	Other *		Demonstrative Activities
	Atmosphere		Other
	Historic and Authentic		**Activities (doing/experience)**
	Other		Historic Adventure Tour Participation
	Target Market		Tea-Time Tour Participation
	Family-Oriented		Interactive Activities
	Child-Friendly		Self-Guided Tour
	All Age Groups/Adult		Other
	Other		**Amenity**
Conative	**Behavior**		Food and Beverage/Restaurant
	Attitude		Extra Service Quality
	TripAdvisor Star Rating		Additional Service Amenity

* Zero count occur. Therefore removed from the further analysis.

3.3. Data Coding

All data were coded by two coders who followed the formal coding guide. Each review was first evaluated to determine whether the post fit within the psychological (intangible) or functional (tangible) attribute categories. If the review fit within the category, it was coded as "1" (present). If the review did not fit within the category, it was coded as "0". Next, the reviews were evaluated to determine whether the post fit within the behavior or attitude categories. If the review fit within the category, it was coded as "1" (present). If the review did not fit within the category, it was coded as "0". Reviews coded as "1" present were then coded again based on the favorability. If the review had

a negative tone when mentioning the category, it was coded as "1" (negative). If the review had a neutral tone when mentioning the category, it was coded as "2" (neutral). If the review had a positive tone when mentioning the category, it was coded as "3" (positive). Therefore, when taking the two coding processes together, the coding ranged from 0 to 3 for behavior and attitude (see Table 2).

Table 2. Coding instruction summary.

Coding Approach I [1]		Coding Approach II [2]		
Coding Category	**Coding Value**	**Coding Category**	**Sub-Coding Category**	**Coding Value**
Present	1	Present	Positive	3
			Neutral	2
			Negative	1
Not present	0	Not present		0

[1] Coding approach employed for functional, psychological, and conative category; [2] Coding approach employed for conative category (behavior and attitude).

Krippendorff's Alpha was used as the reliability measure to assess the agreement between two coders with respect to the clarity and consistency of coding. During the preliminary category development, the coders re-examined the categories with low reliability. After the re-evaluation of intercoder reliability, the categories and coding guide were considered satisfactorily objective (Table 3). The coefficient of 0.81 or greater is almost perfect and the range of 0.61 to 0.80 is substantial [83].

Table 3. Inter-coder reliability results.

	Category	Reliability		Category	Reliability
Psychological (Intangible)	**Quality of Experience**		Functional (Tangible)	**Attractions (Seeing)**	
	Tour Guiding Excellence	0.967		Architecture/Building (Design)	0.936
	Educational Experience	0.883		Watch Tower (View)	0.986
	Value for Cost/Time	0.881		Ship Building Process	0.982
	Other [1]	1.000		Demonstrative Activities	0.928
	Atmosphere			Other	0.934
	Historic and Authentic	0.955		**Activities (doing/experience)**	
	Other	0.975		Historic Adventure Tour Participation	0.889
	Target Market			Tea-Time Tour Participation	0.998
	Family-Oriented	0.936		Interactive Activities	0.947
	Child-Friendly	0.893		Self-Guided Tour	0.940
	All Age Groups/Adult	0.957		Other	0.996
	Other	0.959		**Amenity**	
Conative	**Behavior**	0.832		Food and Beverage/Restaurant	0.951
	Attitude	0.900		Extra Service Quality	0.977
	TripAdvisor Star Rating	N/A		Additional Service Amenity	0.957

[1] There were no contents to be counted for "Other" in Quality of Experience. Thus, coders all recoded "0". Therefore, the intercoder reliability was 1.000. For further analysis, the category was removed.

4. Results

4.1. Representation of Destination Attributes

The coding results, as illustrated in Table 4, revealed that some of the site's attributes were more salient than others. The quality of tour guides (Tour Guiding Excellence) and being a part of a historic tour (Historic Adventure Tour) were mentioned noticeably more often (both over 340 counts) than the other attributes. Both of these categories are related to the HTS management company's tour program. Of all of the attributes, the quality of the tour guide was the most noticeable attribute that visitors discussed. As the HTS offers a historic walking tour, visitors to the HTS reflected on their tour program experiences in their reviews. The next most frequently mentioned attributes were Educational Experience and Child-Friendly (both over 100 counts). This clearly illustrates that visitors often associate the HTS with providing opportunities for learning. This educational attribute could be related to the child-friendly attribute, as visitors may think that the HTS is a good place to bring children because it has opportunities for children to learn about history. Following the abovementioned attributes, Historical/Authentic, Value for Cost/Time, and Family-Oriented were mentioned more frequently than the rest of the site attributes. It is not surprising that visitors perceived the HTS to have a historic and authentic atmosphere. The attraction includes a real historical building and other buildings that look like they are from the historical era, as well as some replica artifacts. It is likely that the historical setting of the HTS and the accompanying guided tour lead the visitor to perceive that the place is historic and authentic. It is common for visitors to discuss whether the HTS is worth the money or not when the site has an admission fee. The results also reveal that visitors value the HTS as a place where families can visit.

The most frequently mentioned site attributes primarily fall within the psychological attributes category. A relatively smaller proportion of the site attributes fall within the function attributes category. Except for the Historical Adventure Tour Participation category, visitors mentioned physical attributes almost as frequently as the Demonstrative Activities, Food and Beverage/Restaurant, Architecture/Building, Self-Guided Tour, and Interactive Activities categories. Comparing the frequency of the Self-Guided Tour category to the Historic Adventure Tour Participation category indicates that the HTS has a strong identity as a site where the guided tour is worth it. Based on the initial coding approach, not many details about the physical aspects of the HTS were mentioned. Rather, it revealed that the guided tour and the quality of the tour guide are the most salient site attributes.

The initial coding process for the conative attributes showed that visitors mentioned their behavior in terms of whether they will come back to or recommend the HTS. In order to better understand visitors' behaviors and attitudes, the reviews were categorized as having a negative, neutral, or positive tone. For the Behavior (except reviews without any indication of behavior) and Attitude categories, a majority of the reviews were written in a positive tone. Additionally, visitors' star ratings were evaluated. This evaluation revealed that visitors mostly rated their experience at the HTS as excellent. At face value, the star ratings seem to reflect the positive behavior and attitude captured in visitors' written reviews.

Table 4. (**A**) Frequency of coding approach I. (**B**) Frequency of coding approach II.

(A) Coding Approach I

	Variable	Freq. of Positive (N = 487)	Percentage		Variable	Freq. of Positive (N = 487)	Percentage
Psychological (Intangible)	**Quality of Experience**			Functional (Tangible)	**Attractions (seeing)**		
	Tour Guiding Excellence	343	70.4%		Architecture/Building (Design)	41	8.4%
	Educational Experience	128	26.3%		Watch Tower (View)	27	5.5%
	Value for Cost/Time	79	16.2%		Ship Building Process	10	2.1%
	Atmosphere				Demonstrative Activities	55	11.3%
	Historic and Authentic	98	20.1%		Other	40	8.2%
	Other	12	2.5%		**Activities (doing/experience)**		
	Target Market				Historic Adventure Tour Participation	342	70.2%
	Family- Oriented	76	15.6%		Tea-Time Tour Participation	7	1.4%
	Child-Friendly	141	29.0%		Interactive Activities	38	7.8%
	All Age Groups/Adult	42	8.6%		Self-Guided Tour	39	8.0%
	Other	19	3.9%		Other	1	0.2%
Conative	**Behavior**	131	26.90%		**Amenity**		
	Attitude	432	88.70%		Food and Beverage/Restaurant	42	8.6%
	TripAdvisor Star Rating *	N/A	N/A		Extra Service Quality	22	4.5%
					Additional Service Amenity	25	5.1%

(B) Coding Approach II

	Behavior		**Attitude**			**Star Rating**	
	Freq.	**Valid %**	**Freq.**	**Valid %**		**Freq.**	**Valid %**
0 = Not present	338	69.4	5	1.0	1 = Terrible	6	1.2
1 = Negative	7	1.4	27	5.5	2 = Poor	8	1.6
2 = Neutral	11	2.3	23	4.7	3 = Average	39	8
3 = Positive	131	26.9	432	88.7	4 = Very Good	90	18.5
					5 = Excellent	344	70.6
Total	487	100.0	487	100.0	Total	487	100

* TripAdvisor star rating ranges from 1 = terrible, 2 = poor, 3 = average, 4 = very good, to 5 = excellent.

4.2. Destination Attributes Mapping for Co-Occurrence

In visitors' reviews of the HTS, certain attributes were captured concurrently. To understand the composition and connection of these attributes in visitors' minds, the co-occurrences were visualized in Figure 1. This approach was employed following the work of Li and Stepchenkova [84] and Stepchenkova, Kim and Kirilenko [85]. The bubbles indicate the frequency presented in Table 1. The bubbles for attributes with frequencies over 100 were colored in grey and those with less than 100 were colored in white. The lines indicate the probability of the actual co-occurrence of any two attributes different from the probability of the expected co-occurrence. To estimate the probability of co-occurrence between Attribute 1 (A1) and Attribute 2 (A2), first the probability that p_{a1} of Attribute 1 and p_{a2} of Attribute 2 appear independently in a TripAdvisor review is calculated as the ratio of the frequency of Attribute 1 (f_{a1}) and Attribute 2 (f_{a2}) appearing in the total TripAdvisor review sample size (c.f. sample size is denoted as N). This is estimated as f_{a1}/N and f_{a2}/N, respectively. Second, the probability of both A1 and A2 appearing simultaneously in a TripAdvisor review, indicating the probability of co-occurrence between A1 and A2, is calculated by $p_{a1} * p_{a2}$ and denoted as $p_{a1}\ p_{a2}$. Further, based on the assumption of independence of any two attributes, A1 and A2 and the number of A1 and A2 co-occurrence is random, variable f_{a1a2} that is binomially distributed, probabilities of A1 and A2 ($p_{a1}\ p_{a2}$), and sample size can be used to calculate the expected value and variance [86]. Expected value (E = N$p_{a1}\ p_{a2}$) and variance (Var = N$p_{a1}\ p_{a2}$ (1 - $p_{a1}\ p_{a2}$)) were used, yielding the z-score, which is the determinant to judge whether the actual co-occurrence score of two attributes (f_{a1a2}) is significantly different from the expected co-occurrence score of two attributes. Accordingly, a z-score is calculated using the following formula:

$$Z = \frac{f_{a1a2} - E}{\sqrt{Var}}.$$

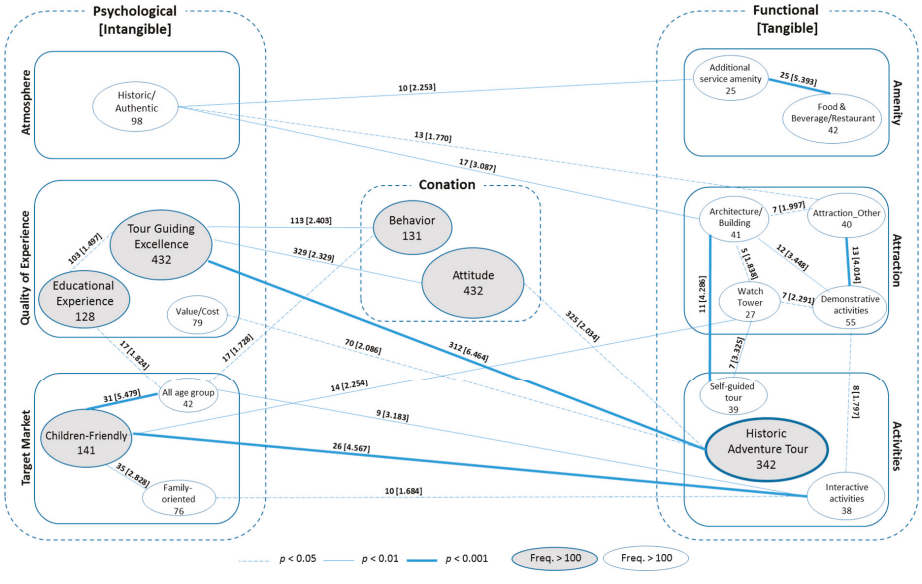

Figure 1. Destination co-occurrence map based on Psychological, Functional, and Conative dimensions.

Assuming normally distributed random variables, the z-scores were compared with critical z-scores for non-directional hypotheses at the significance level of 0.001, 0.05, and 0.01 (zcrit = 3.5, 2.58,

and 1.96, respectively) [87]. Larger z-scores in absolute value would indicate that the independence of the two attributes is unlikely, meaning that visitors are likely to mention two attributes when they write about their experience at the HTS. In Figure 1, thick solid lines represent the link between the pairwise relationships among the attributes when the z-score is greater than 3.5 ($p < 0.001$). Additionally, a pairwise association with a z-score greater than 2.58 ($p < 0.01$) and 1.96 ($p < 0.05$) are presented as a thin solid line and a dashed line. The two numbers presented above the line are the frequency of co-occurrence between pairwise attributes and a respective z-score. The square box with a dashed line indicates the distinction between HTS attribute groups—Psychological, Functional, and Conative. Additionally, the box with a thin solid line within the dashed line, square box represent the sub-attribute dimension.

Figure 1 reveals some distinctive relationships between two pairs of attributes presented. The most noticeable link shown is between Tour Guiding Excellence and Historic Adventure Tour. Specifically, when visitors mention participation in a Historic Adventure Tour offer at the HTS, they significantly talk about the Tourist Guiding Excellence. Another significant link shown is between Child-Friendly and Interactive Activities. This indicates that when visitors encounter interactive activities at the HTS, they associated the HTS with being a child-friendly place. Being a child-friendly place in the visitors' mind is also closely associated with All Age Groups. This indicates that visitors perceived the HTS as a place for all ages to visit. The strong association between Self-Guided Tour and Architecture/Building indicates that visitors who toured the HTS by themselves like to discuss the exterior aspects of the HTS' buildings more than other attributes.

Other links that are associated with the most frequently mentioned attributes are the association between Historic Adventure Tour and Value/Cost because of the visitors' tendency to comment about the value of the admission fee for the guided tour. Educational Experience was associated with both Tour Guiding Excellence and All Age Groups. This indicates that educational value can be provided to visitors of all ages and the quality of the tour guide can contribute to the educational experience.

Finally, in terms of the association with conative dimensions, there were a few links that indicate a significant association. Tour Guide Excellence and Historical Adventure Tour were linked to Attitude in that when visitors indicate that they participated in a historic adventure tour and mention the quality of the tour guide, they tend to express their attitude related to their experience. Behavior also shows a few links between All Age Groups and Tour Guiding Excellence. It is mentioned that the HTS is worth revisiting and recommending to others when the HTS is perceived to be for all age groups. Additionally, the quality of the tour guide was significantly associated with visitors' intentions to revisit and recommend the HTS to others. At least one attribute from Quality of Experience, Target Market, and Activities were linked to the Conative dimension. Atmosphere, Amenity, and Attraction were not found to have a significant association with the Conative dimension. This indicates that visitors discuss these attributes in relation to others; however, they may not be the central focus of visitors' attitude and behavior.

4.3. Destination Attribute Differences and Influence

Mann–Whitney U test was conducted to determine the level of satisfaction between the positive group and non-positive group based on the star rating given by reviewers on TripAdvisor. The result of Mann–Whitney U, shown in Table 5, indicated that there was a significant difference in satisfaction for Tour Guiding Excellence, Education Experience, Historic Adventure Tour Participation, and two of the Conative variables—Behavior and Attitude ($p < 0.001$). Additionally, groups showed a marginal difference for Historical/Authentic and Family-Oriented ($p < 0.01$). However, most of the attributes were not found to differ between the positive and non-positive groups.

Table 5. Positive vs. negative group on destination attributes and behavioral/attitudinal consequence.

		Positive Group (1)		Negative Group (2)				
	Variable	**N**	**Mean Rank**	**N**	**Mean Rank**	**Mann–Whitney U**	**Z**	***p*-Value**
Psychological (Intangible)	**Quality of Experience**							
	Tour Guiding Excellence	343	269.40	144	182.92	15,901.000	−7.753	0.000
	Educational Experience	128	258.73	359	238.75	21,090.500	−1.723	0.000
	Value for Cost/Time	79	252.62	408	242.33	15,435.000	−0.743	0.457
	Atmosphere							
	Historic/Authentic	98	261.04	389	239.04	17,391.000	−1.676	0.094
	Target Market							
	Family-Oriented	76	263.57	411	240.38	14,131.000	−1.648	0.099
	Child-Friendly	141	250.06	346	241.53	23,538.000	−0.758	0.488
	All Age Groups/Adult	42	269.00	445	241.64	8295.000	−1.505	0.132
Functional (Tangible)	**Attractions (seeing)**							
	Architecture/Building (Design)	41	230.39	446	245.25	8585.000	−0.808	0.419
	Watch Tower (view)	27	224.70	460	245.13	5689.000	−0.916	0.360
	Demonstrative Activities	55	258.96	432	242.09	11,057.000	−1.046	0.296
	Other	40	239.38	447	244.41	8755.000	−0.271	0.786
	Activities (doing/experience)							
	Historic Adventure Tour Participation	342	267.30	145	189.06	16,828.000	−7.009	0.000
	Interactive Activities	38	249.29	449	243.55	8330.000	−0.301	0.763
	Self-Guided Tour	39	238.10	448	244.50	8510.000	−0.335	0.738
	Amenity							
	Food and Beverage/Restaurant	42	260.20	445	242.47	8664.500	−0.975	0.329
	Additional Service Amenity	25	269.52	462	242.62	5137.000	−1.163	0.245
Conative	**Behavior**	131	275.69	356	232.34	19,166.500	−3.766	0.000
	Attitude	432	264.34	55	84.24	3093.000	−11.168	0.000

To evaluate the influence of all of the attributes on the Behavior and Attitude expressed in the reviews, a regression analysis was conducted. The result in Table 6 indicated that only Tour Guiding Excellence positively influenced Behaviors ($p < 0.001$). Visitors' intention to revisit and recommend the HTS to others was only influenced by the quality of the tour guide. For the TripAdvisor star rating and Attitude captured in visitors' reviews, the findings indicated the same result. Both were positively influenced by Tour Guiding Excellence, Historic/Authentic, Historic Adventure Tour Participation, Food and Beverage/Restaurant, and Additional Service Amenity ($p < 0.05$). This result indicates that visitors' rating of the HTS reflects their attitude toward the HTS; however, they may not rate the HTS based on their behavioral intention.

Table 6. Influence of destination attribute on conation.

	DVs:	Star Rating		Behavior		Attitude	
	IVs	*t*	*p*	*t*	*p*	*t*	*p*
INTANGIBLE	**Quality of Experience** Tour Guiding Excellence	4.517	0.000	4.858	0.000	4.967	0.000
	Atmosphere Historic/Authentic	3.256	0.001			2.890	0.004
TANGILBLE	**Activities (doing/experience)** Historic Adventure Tour Participation	3.219	0.001			3.250	0.001
	Amenity Food and Beverage/Restaurant	2.463	0.014			2.407	0.016
	Additional Service Amenity	2.262	0.024			1.989	0.047
		F = 23.099 *p* = 0.000 R2 = 0.194 Adj R2 = 0.185		F = 23.602 *p* = 0.000 R2 = 0.046 Adj R2 = 0.044		F = 21.325 *p* = 0.000 R2 = 0.181 Adj R2 = 0.173	

5. Conclusions

Destination attributes are a fundamental concept that underpins destination image, destination competitiveness, importance and performance, and many other tourism studies. As much as destination attributes have been used in tourism studies, the first step to many previous studies was to identify the measurement of destination attributes. There have been mainly two approaches to pre-identify the destination attributes as a measurement. One is to find a more generalizable set of destination attributes scale that is reliable and parsimonious [29]. The other is to adopt the destination attributes scale from previous studies and modify it to apply to the specific destination characteristics [17]. There is no consensus on which approach should be used. However, the generalizable scale serves as a guideline and modification is needed because no destination in the world is exactly the same as another destination. This study considered both aspects of destination attributes, by using Echtner and Ritchie's [29] attributes as a guideline and identifying the specific sets of attributes that capture the uniqueness of the destination characteristics.

This study also answers Meng et al.'s [17] question, "are there any other influential factors that should be included to give a more holistic picture of measuring tourist satisfaction?" (p.53). The study first identified destination attributes that are specific to the destination by observing tourists' real experiences, as presented in an online travel community. Through this observation, the findings indicated the salient destination attributes from the perspective of the tourist. Further, associations between the attributes and the visitors' satisfaction, attitudes, and behavioral intentions were found. In this destination context, in visitors' minds, attributes related to the tour program were found to be influential to their positive attitudes toward the destination and result in satisfaction. The quality of a tour guide as a storyteller and re-enactor were found to be the most important attributes, as the quality of tour guides was the most frequently mentioned attribute and was found to be influential to all three conative components. The findings of this study are meaningful because it revealed what is important to the visitors based on their real experiences in this destination. This viewpoint is supported by Litvin and Ling [34], as they stated that identifying the important destination attributes to a guest based on an understanding of their real experience is critical in destination marketing.

The findings from this study contribute to the co-creation literature in tourism. Recent tourism studies applying the co-creation concept have advocated that tourists are a co-creator and that tourists' involvement can enhance products and services at a [66,88]. Prebensen et al. [88] argued that tourists travel to fulfill their needs and wants; and are likely to satisfy their needs and wants. This, therefore, results in positive experiences when their opinion is reflected in the creation process of tourism products and services. This study views tourists as active agents who can provide valuable and honest feedback about a destination, which can be used to improve the destination's offerings for potential tourists. Moreover, this study supports the co-creation studies that have indicated that online communities such as social media sites are a great tool for engaging consumers [66,89]. Further, Tussyadiah and Zach [90] and Oliveira and Panyik [66] argued that having to understand consumer generated content and include the knowledge gained by investigating the content in a destination's product and brand development is co-creation; and that this co-creation process can increase the capacity of tourism service providers in the destination.

The significant contribution of this is in providing managerial implications. This study was designed to find the destination attributes of a micro-scale tourism attraction that is important to tourists so that the attraction's management can identify which attributes should be enhanced or improved to provide a better experience for future visitors. By providing services and experiences that tourists can enjoy, tourism service providers can attract more tourists. The increased tourist demand can contribute to sustainable earnings from tourism that destination can expect continuous earning throughout the year rather than sporadic seasonal earning. These earnings can help destinations improve physical and social conditions within the host community [2]. For example, revenue earned through tourism can contribute to building community infrastructure and support educational and social programs. The study findings indicate that monitoring online communities can provide valuable information that managers can use in the strategic planning process. In the case of the study location, the attraction had thought of removing the guided tour program due to the financial resources put into the program to hire a qualified guide. However, the findings clearly revealed that the guided program and guided quality are the attributes that make the attraction valuable to visitors. While this study focused on a specific destination, this case was able to demonstrate to the destination service providers how a simple act of observing the tourists' online discussion can help them diagnose their current performance and manage the attraction effectively.

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Investigating the Effect of Experience in an Airport on Pleasure, Satisfaction, and Airport Image: A Case Study on Incheon International Airport

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Abstract: This study aimed to empirically explore the effects of the experience economy of Incheon International Airport (IIA) on pleasure, satisfaction, and airport image. A survey was conducted with a total of 416 airport users at IIA, and the collected data were analyzed using a structural equation model. Among the four realms of experience, esthetic experience and escapist experience had positive effects on pleasure. In addition, pleasure had a positive effect on satisfaction and airport image, and that satisfaction had a significant effect on airport image. It is expected that the results of this study can serve as fundamental data to enhancing the satisfaction level of airport users and increasing the sustainable development of IIA.

Keywords: experience economy; pleasure; satisfaction; airport image; sustainable development of airport

1. Introduction

Traditionally, airports have been mere transportation bases carrying passengers and cargo. Today, however, airports offer high added value as locations where various services and industrial activities are carried out. In addition, they are recognized as an important means of securing a national competitive advantage, evolving into active service providers that create positive experiences for visitors through diverse experience programs and an efficient use of spaces. An airport terminal also serves as a cultural complex offering a variety of experiences to visitors, including cultural experiences, shopping, and art performances, departing from the traditional concept of a place where passengers simply wait for boarding. By providing these unique, high-end customer experiences, airports are able to cultivate strong images and increase customer satisfaction, differentiating themselves from their competitors [1]. Therefore, enhancing the level of experience can be an important factor in maintaining a competitive advantage and differentiating one airport from neighboring competing airports [2].

Experience is a key factor in forming positive memories; therefore, there is a growing emphasis on the importance of experience [3–5]. In line with this, Pine and Gilmore [6] presented the experience economy theory, which emphasizes the importance of experience as the driving force of the market, in which competition is fiercer than ever. Many experience-related studies based on the experience economy theory have been aggressively performed in Korea, but there is a lack of studies regarding the emotional reactions of airport users from the perspective of the experience economy despite the importance of experience in non-optional physical environments. From the perspective of airport experience, airports are able to contribute to the formation of tourism destinations and an airport brand image by applying a sense of place [7]. Additionally, unique customer experiences at airports are an important factor that positively impact each airport's image and financial performance [1].

Therefore, this study aimed to fill a gap in the literature by identifying the effects of airport experience elements on the satisfaction of airport users through a case study of Incheon International

Airport (IIA), the representative airport of Korea. An empirical analysis was conducted on the effects of such emotional reactions on customer satisfaction levels with the airport and image formation, and the relation between satisfaction levels and airport image. It is believed that this study can expand the experience economy theory of Pine and Gilmore [6], and its results can be used to establish strategies to enhance sustainable development and competitive advantage, as well as create a positive airport image and enhance the satisfaction level of airport users.

2. Literature Review

2.1. Experience Economy Theory

As market competition intensifies, the focus of corporate competitive advantage has swiftly moved from the financial perspective centered on products and enterprises to the individual experience-oriented perspective. Moreover, with increased competition, the focus on services has grown, placing an emphasis on the importance of experience [8,9]. Experience is based on the interactions related to service and refers to the close relationship between a company and consumers, along with the emotional interactions with unique and memorable services [8,10–12].

In this context, Pine and Gilmore [6] developed their experience economy theory. This is a new approach for surviving in the market environment of commoditization. The authors introduced experience as a higher-level concept of products and services that are derived from the interactions between a company and individual consumers and defined experience as all of the events that consumers encounter while directly participating in the production process. They argued that companies should prioritize the value of experience as part of a strategy to prevent the commoditization of services and products and to raise their competitive advantage [6]. Experience evolves throughout the four stages of commodity–goods–service–experience along the progression of economic value, and it can be perceived as an impressive next-generation product. As it progresses to higher levels, the value of an economic product rises and is endowed with unique characteristics differentiated by competing products.

Experience is largely divided into the two categories of individual factors (passive and active) and environmental factors (absorption and immersion). Moreover, depending on the level of impact of each factor, it can be further classified into four dimensions of experience: educational, entertainment, esthetics, and escapism. Each of the dimensions can be described as follows. An educational experience is absorptive and active, and it requires customers to actively participate in the event. In other words, consumers play a vital role in experiential events. Therefore, the educational experience occurs when people directly participate in activities and improve their knowledge levels, as is the case with the traditional costume experience and the craft class at IIA [13,14]. The entertainment experience is the oldest and most common type in which people passively absorb experiences such as observing others' activities or performances, including live shows, parades (e.g., the royal promenade), and music concerts. Therefore, customers tend to passively engage in entertainment experiences and absorb the experiences rather than immerse themselves in them. The esthetic experience occurs through visual or audio elements and does not involve giving or receiving any influence to or from the surrounding environment. That is, customers interpret the physical environment around them, and existing in that environment pleases the customers [6,13]. Therefore, service providers should create a consistent, attractive, and fully immersive environment for customers to perceive esthetic experiences as reality [6]. IIA provides such esthetic experiences within its Korean Cultural Street and other exhibition areas. Finally, the escapist experience refers to a participation-immersion experience through which people forget about reality by being immersed into the environment to which they are exposed [13–15]. Thus, escapist experiences are highly immersive compared to educational and entertainment experiences. Customers participating in escapist experiences engage in the possibility of moving toward a worthwhile place where they spend time and garner satisfaction from that time. This phenomenon is reflected in the transition of services shown in the progression of economic value to the experience economy [6]. This may include cultural experience pavilions or duty-free shopping.

Most of the previous studies related to the experience economy theory have identified the relationship between four dimensions of experience and emotional responses. A positive emotional response to experience can be explained by pleasure. Previous studies have also shown positive emotional responses through educational, entertainment, esthetic, and escapist experiences [15–18]. Therefore, this study set the following hypotheses based on the literature.

Hypothesis 1 (H1). *Entertainment experience has a positive effect on pleasure.*

Hypothesis 2 (H2). *Educational experience has a positive effect on pleasure.*

Hypothesis 3 (H3). *Esthetic experience has a positive effect on pleasure.*

Hypothesis 4 (H4). *Escapist experience has a positive effect on pleasure.*

2.2. Pleasure, Satisfaction, and Airport Image

Pleasure can be defined as the result of positive interactions as well as a basic emotional experience [19,20]. It can be further defined as the feeling of satisfaction and reward arising from participating in or performing certain activities and, in turn, it is an important factor in maintaining those activities [21]. Finally, it is a multidimensional variable that includes excitement, affect, and perception of competence [22]. Pleasure is also considered to be a component of the theory of motivation, which is an emotional element that can indirectly affect the willingness to participate in activities (Gardner et al., 2016, MacCarthy et al., 2008). This emotional element is deemed to be more essential than verbal interpretations, as it helps to understand the impact of consumer behavior. Therefore, pleasure plays an important role in behavior analysis. Bigne et al. [23] and Ha [24], in their studies analyzing the relation between the four dimensions of experience and pleasure and satisfaction, confirmed that pleasure from experience had a significant impact on satisfaction. In addition, it was found that positive emotions toward a corporate brand were remembered as a pleasant experience, and such pleasant experiences affected the formation of a positive image toward that brand [25]. In this study, the following hypotheses were set based on previous related studies.

Hypothesis 5 (H5). *Pleasure has a positive effect on satisfaction.*

Hypothesis 6 (H6). *Pleasure has a positive effect on airport image.*

Satisfaction is a core marketing concept that is still studied intensively. It refers to the comprehensive mental status or consumer reactions arising from the gap (or lack thereof) between an individual's expectations and the actual experience [26–28]. It can also be explained as the overall reactions to a series of situations or the prompt reactions to a situation [29]. In other words, if perceived performance is higher than expected, a positive discrepancy is built in which the customers will be satisfied. On the contrary, if the customer expectation is much higher than the perceived performance, a negative discrepancy is formed, resulting in a negative emotional response in the form of disappointment [23,30]. Satisfaction, therefore, can be defined as an overall response to a series of situations or experiences, or an immediate response to a certain situation as well as an evaluation experience after the decision making takes place for a certain choice [29,31]. Anderson et al. [32] argued that satisfaction was the overall evaluation of the entire consumption experience for products and services, and therefore was a basic indicator of the past, present, and future achievements of a company. Satisfaction is particularly important because it is one of the factors that influences customer loyalty and corporate profitability, which are regarded as the main objectives of the sustainable development strategy [33–35].

Previous studies on image were mainly conducted with a focus on corporate image and brand image [36]. Considering that IIA implements a consistent image branding strategy through various

corporate social responsibility (CSR) activities, this study, based on previous studies on corporate and brand image, defined airport image as follows: a multi-dimensional reaction that reflects the thoughts and emotional aspects of airport users and a unique image differentiated from other airports. Moreover, the airport image includes the goals and plans of the airport, which are also important factors in differentiating the airport from competing airports [37]. Abdullah et al. [38] and Johnson et al. [39] studied the relationship between satisfaction and image using the customer satisfaction index and confirmed that satisfaction had a direct impact on image. It was found that the more positive an individual's experience, the higher the satisfaction, which led to the creation of a positive image. Consequently, the following hypothesis was proposed:

Hypothesis 7 (H7). *Satisfaction has a positive effect on airport image.*

3. Methodology

3.1. Research Model

Based on the theoretical background examined earlier, an empirical verification of the relationship among the dimensions of experience (entertainment, education, esthetics, escapism) of IIA, the pleasure and satisfaction of airport users, and airport image was conducted. To achieve this aim, the following research model was established (Figure 1).

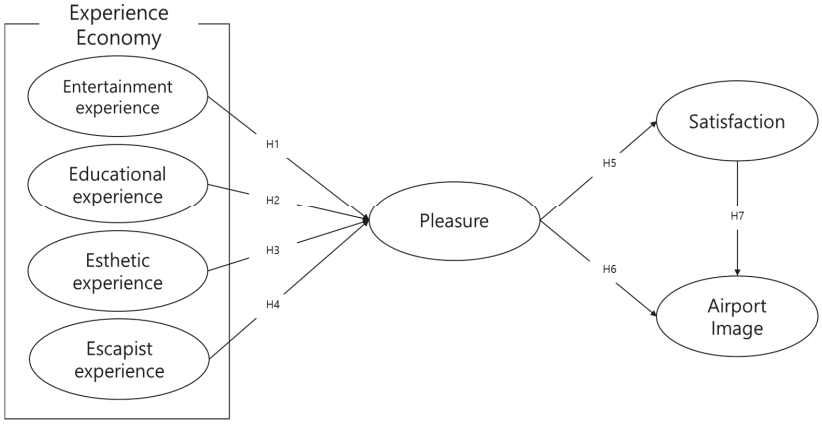

Figure 1. Research Model.

3.2. Data Collection and Data Analysis

A survey was conducted in this study with individuals who had visited or used IIA during the prior year. The survey was carried out from 27 April to 13 May 2017 at IIA through a self-administered questionnaire with a total of 416 questionnaires used for the final data analysis. The measurement items on the questionnaire were structured based on previous studies and categorized into the four dimensions (entertainment, education, esthetics, and escapism), and it focused on pleasure, satisfaction, airport image, demographic characteristics, and general characteristics. There were 13 questions regarding airport experience, and four questions assigned each to pleasure, satisfaction, and airport image, respectively. These questions were measured using the Likert 5-point scale (1 point = strongly disagree~5 points = strongly agree) (Table 1).

Table 1. Measurement items.

Measure		Variables
Experience Economy	Entertainment experience	The IIA terminal had a special event. The IIA terminal offered various attractions. The IIA terminal had an entertainment element. The IIA terminal had an element that entertained me.
	Educational experience	I could experience Korean culture in the IIA Terminal. The IIA terminal had an element that stimulated my curiosity. The IIA terminal had an element that elicited my creativity.
	Esthetic experience	Overall, I liked the design of the IIA terminal. The environment of the IIA terminal was attractive. The IIA terminal fits well with the image of the airport.
	Escapist experience	I felt like I was out of my daily life when I spent time at IIA terminal. The IIA terminal refreshed me. The IIA terminal offered me a new experience.
Pleasure		I really enjoyed the time I spent at the IIA terminal. I felt happy while I spent time at the IIA terminal. I felt interested while I spent time at the IIA Airport terminal. I felt joy while I spent time at the IIA terminal.
Satisfaction		I am satisfied with the overall experience at the IIA terminal. IIA was as good as or better than I expected. I was satisfied with IIA to a greater extent than with other airports. It was a good experience to visit IIA.
Airport Image		IIA has a distinct image. IIA has a unique image. I can clearly imagine the image of IIA. IIA is different from other airports (e.g., Kimpo Airport).

In order to analyze the data, SPSS 18.0 and AMOS 21.0 were used. Structural equation modeling (SEM) was conducted to test the hypotheses as SEM provides a better analytical method of empirically examining a theoretical model by including the measurement model and structural model in a single analysis [40]. Confirmatory Factor Analysis (CFA) was also conducted before SEM to verify how well the measured variables represented the individual constructs.

4. Discussion

4.1. Demographic Characteristics

Table 2 presents the characteristics of the research sample. The gender composition of the sample consisted of 241 females (57.9%) and 175 males (42.1%). Regarding age, 179 participants were in their 20s (43.0%), 87 were in their 30s (20.9%), 60 were in their 40s (14.4%), 72 were in their 50s (17.3%), and 18 were aged 60 or higher (4.3%). The responses indicated that 219 participants graduated from (were studying at) a university (24.5%), 102 graduated from (were studying at) a graduate school (24.5%), 74 graduated from (were studying at) a community college (17.8%), and 21 graduated from (were studying at) a high school or lower-level educational institution (5.4%). Therefore, more than 80% of the sample had a college or higher-level degree. The survey results showed that 301 respondents visited the airport 1 to 2 times within the prior year (72.4%), 83 visited 3 to 5 times (20.0%), 17 visited 6 to 10 times (4.1%), and 15 visited 11 or more times (3.6%). Regarding the purpose of the airport visit, departures and arrivals comprised the majority with 377 participants (90.6%), followed by business (e.g., business meeting) with 24 people (5.8%), other purposes (e.g., picking up people from the airport) with 11 (2.6%) and transfer with 4 respondents (1%). The length of time at the airport was dominated by 2 to 3 h for 198 of the respondents (47.6%), followed by 1 to 2 h for 120 participants (28.8%), 3 h or longer for 72 people (17.3%) and less than 1 h for 26 respondents (6.3%).

Table 2. Sample Characteristics.

Classification		N	%
Gender	Male	175	42.1
	Female	241	57.9
Age	20 to 29 years old	179	43
	30 to 39 years old	87	20.9
	40 to 49 years old	60	14.4
	50 to 59 years old	72	17.3
	60 years old or older	18	4.3
Number of visits	1–2 times	301	72.4
	3–5 times	83	20
	6–10 times	17	4.1
	11 times or more	15	3.6
Purpose of visits	Arrival or departure	377	90.6
	Transfer	4	1
	Business	24	5.8
	Other	11	2.6
Time spent at the airport	less than 1 h	26	6.3
	1–2 h	120	28.8
	2–3 h	198	47.6
	3 h or more	72	17.3
Monthly income	KRW 1,000,000 or less	124	29.8
	KRW 1,000,000–1,900,000	51	12.3
	KRW 2,000,000–2,900,000	102	24.5
	KRW 3,000,000–3,900,000	63	15.1
	KRW 4,000,000–4,900,000	38	9.1
	KRW 5,000,000 or more	38	9.1
Total		416	100

4.2. Reliability and Validity Test

This study conducted a CFA to analyze whether the measurement variables and the factor structure of the potential variables based on verified theories from previous studies were appropriate. The absolute fit indices show how well the model indicated by the researchers reproduces the observed data [40]. The Goodness-of-Fit Index (GFI), Adjusted Goodness of Fit Index (AGFI), Normed Fit Index (NFI), Tucker Lewis Index (TLI), Comparative Fit Index (CFI), and Root Mean Square Residual and Root Mean Square Error are used in this study. The GFI, AGFI, NFI, TLI and CFI ranges between 0 and 1, with higher values suggesting better fit [40,41]. The RMR with good fit have values that less than 0.05, and approach 0 [41] while the RMSEA is possible between 0.03 and 0.08 with 95% confidence [40]. The goodness-of-fit model analysis results (X^2 = 810.189, df = 253.978, CMIN/DF = 3.190, RMR = 0.038, GFI = 0.861, AGFI = 0.822, RMSEA = 0.073, NFI = 0.893, TLI = 0.910, CFI = 0.924) were good overall, but the GFI and AGFI values did not reach the standard value of 0.9. However, as GFI and AGFI can be affected by the inconsistency attributable to the sample characteristics [41], and CFI is free of those characteristics, the goodness-of-fit of the model could be assessed at an acceptable level because CFI was 0.924. Moreover, the squared multiple correlations (SMC) value (which indicates the explanation power of the measurement item on the latent variable) of each variable was not less than the standard value of 0.4, and the critical ratio (CR) value exceeded 2 by a large margin in all cases, showing that the potential variables aptly explained the variations of the relevant measurement variables. Therefore, the measurement model proposed in this study was found to be acceptable. The results of CFA are shown in Table 3.

Table 3. Results of Confirmatory Factor Analysis.

Configuration Concept	Measurement Items	Non-Standardized Estimate	Standardized Estimate	S.E	C.R. [a]	SMC	C.R. [b]	*a* [c]
Entertainment	Entertainment1	1.086	0.75	0.071	15.393	0.5	0.859	0.848
	Entertainment2	1.002	0.768	0.063	15.816	0.7		
	Entertainment3	1.000(Fix)	0.774	-	-	0.762		
	Entertainment4	1.065	0.765	0.068	15.745	0.758		
Education	Education1	0.971	0.808	0.049	19.616	0.719	0.793	0.775
	Education2	1.000(Fix)	0.881	-	-	0.605		
	Education3	0.885	0.781	0.047	18.718	0.791		
Esthetics	Esthetics1	0.877	0.774	0.05	17.409	0.726	0.903	0.848
	Esthetics2	1.000(Fix)	0.867	-	-	0.683		
	Esthetics3	0.893	0.786	0.05	17.749	0.725		
Escapism	Escapism1	0.998	0.707	0.072	13.796	0.652	0.86	0.859
	Escapism2	1.000(Fix)	0.767	-	-	0.499		
	Escapism3	0.925	0.72	0.066	14.069	0.728		
Pleasure	Pleasure1	0.953	0.852	0.044	21.789	0.752	0.934	0.906
	Pleasure2	1.006	0.827	0.048	20.775	0.599		
	Pleasure3	0.968	0.808	0.048	20.015	0.519		
	Pleasure4	1.000(Fix)	0.853	-	-	0.588		
Satisfaction	Satisfaction1	0.933	0.848	0.049	21.799	0.61	0.942	0.901
	Satisfaction2	0.977	0.89	0.041	23.581	0.776		
	Satisfaction3	0.872	0.778	0.046	18.977	0.652		
	Satisfaction4	1.000(Fix)	0.852	-	-	0.618		
Airport Image	Image1	1.028	0.871	0.044	23.364	0.585	0.913	0.89
	Image2	1.000(Fix)	0.873	-	-	0.6		
	Image3	1.002	0.837	0.046	21.848	0.59		
	Image4	0.791	0.707	0.047	16.737	0.562		

Note: [a] Critical Ratio; [b] Construct Reliability; [c] Cronbach's α.

4.3. Hypotheses Test

From the analysis results of the structural equation research model, it was observed that the goodness-of-fit indexes of the model were CMIN = 943.960, RMSEA = 0.079, RMR = 0.062, GFI = 0.842, AGFI = 0.803, NFI = 0.876, TLI = 0.893, and CFI = 0.906. Most of the indexes were within the range of the goodness-of-fit, with the exception of the NFI and TLI values, which only deviated slightly out of range. Therefore, it was concluded that the measurement model of this study was appropriate.

The path coefficient between potential variables was confirmed through the structural equation model. As can be seen in Table 4, the impact of entertainment experience on pleasure was $\beta = 0.105$, CR = 0.938 ($p < 0.001$), and the impact of educational experience on pleasure was $\beta = 0.102$, CR = 0.836 ($p < 0.001$), indicating no statistically significant impact. Meanwhile, the impact of esthetic experience on pleasure was $\beta = 0.201$, CR = 3.632 ($p < 0.001$), and the impact of escapist experience on pleasure was $\beta = 0.507$, CR = 10.285 ($p < 0.001$), verifying that they had a statistically significant impact. This showed that due to the unique characteristics of the airport, airport users were more affected by psychological elements, including the surrounding environment, than by entertainment or educational elements. The impact of pleasure on satisfaction and airport image was $\beta = 0.624$, CR = 14.681 ($p < 0.001$) and $\beta = 0.229$, CR = 3.526 ($p < 0.001$), respectively, showing a statistically significant impact. This meant that the more pleasure an airport user derived, the greater their satisfaction and the more positive their image of IIA. This result was similar to that of previous experience economy studies. In addition, the impact of satisfaction on airport image was observed as $\beta = 0.71$, CR = 8.786 ($p < 0.001$). From this, it can be said that the higher the satisfaction level of airport users, the more positive the airport image was in their minds.

Table 4. Results of hypothesis testing.

Hypothesis Path				Standardized Estimate	C.R.	Result
H1	Entertainment experience	→	Pleasure	0.105	0.938	Rejected
H2	Educational experience	→	Pleasure	0.102	0.836	Rejected
H3	Esthetic experience	→	Pleasure	0.201	3.632 ***	Cannot be Rejected
H4	Escapist experience	→	Pleasure	0.507	10.285 ***	Cannot be Rejected
H5	Pleasure	→	Satisfaction	0.624	14.681 ***	Cannot be Rejected
H6	Pleasure	→	Airport image	0.229	3.526 ***	Cannot be Rejected
H7	Satisfaction	→	Airport image	0.71	8.786 ***	Cannot be Rejected

*** $p < 0.001$.

5. Conclusions and Implications

This study aimed to identify the relationship among the four dimensions of experience presented by Pine and Gilmore [6] and the pleasure, satisfaction, and airport image derived by airport users using IIA. The empirical analysis results of the hypotheses of this study can be summarized as follows. First, it was revealed that among the four dimensions of experience, entertainment experience, and educational experience had no impact on pleasure, whereas esthetic experience and escapist experience did. Escapist experience, in particular, had a significant influence on pleasure. This result suggested that airport users place more importance on experiences through which they can refresh themselves than they do on educational and entertainment programs in the airport. Second, it was confirmed that pleasure had a positive influence on satisfaction and airport image. The more pleasure airport users derive, the higher their satisfaction with the airport, and this enhanced level of pleasure instills a firm impression of IIA. As a result, this can help create a unique airport image differentiated from other airports. This supported the studies by Oishi et al. [42] and Wirtz et al. [43], which analyzed the direct impact of pleasure on satisfaction, as well as the study by Isotalo and Watanen [25], which argued that pleasant brand experience had a positive influence on the formation of brand image. Finally, satisfaction was found to have a positive impact on airport image. This was in line with the results of the study by Abdullah et al. [38] and Johnson et al. [39], which used the customer satisfaction index to verify the relationship between satisfaction, company image, and service image.

In identifying the relationships between experience elements and diverse variables, this study offers the following implications for the future activities of airports. First, it examined the importance of experience in a non-optional physical environment, which had not been previously studied, and analyzed the impact of experience on image. Most previous experience economy studies were restricted to optional events, such as festivals, and usually focused on customer satisfaction and its relationship with behavior intention, but no previous studies analyzed the influence between images. Against this backdrop, this study identified the experience characteristics of IIA based on the experience economy theory, and analyzed and verified the relationships among pleasure, satisfaction, and airport image derived by airport users through an empirical approach. Second, this study provided the data required to establish strategies to enhance user satisfaction and raise the sustainable development of IIA. This is important as these factors are closely related to the competitive advantage of the airport. The findings of this study showed that among the experience dimensions of IIA, escapist experience had the most significant impact on pleasure. Therefore, airport practitioners should provide more diverse experience programs containing escapist elements through which airport users can refresh themselves. This will enhance the level of pleasure and satisfaction of airport users. For example, it is necessary to actively develop content for experience activities along with technology such as virtual reality (VR) experience events or a traditional cultural complex. In addition, as the second-most important factor, it is important to enhance the level of esthetics because airport users place value on a pleasant indoor environment and attractive and sophisticated interior design. With the development of the airport's automation system, the immigration process has become faster. However, due to the particularities of air travel, air

travelers still need to stay at the airport for three to five hours. Therefore, it is necessary to strengthen services in terms of upgrading the quality of the experiences offered to travelers. For this service improvement, airport practitioners should be able to deploy artwork by world-renowned artists, and/or deploy a wide variety of artwork, to provide psychological rest and healing for airport visitors and travelers. Creating an environment using diverse colors, lighting, and artwork and applying a visually and physically satisfying design for airport users will help create unique experiences and have a positive impact on airport image. Finally, expanding experience-oriented activities in which airport users can directly participate and providing services that foster a pleasurable experience are critical to providing a competitive advantage.

This study had the following limitations. This study was restricted to IIA, and it did not compare the experience dimensions of IIA with those of other advanced airports across the globe. Because some advanced airports in other countries offer experience-oriented services, including exhibitions, to establish airport brand strategies and increase user satisfaction levels, it is necessary for IIA to establish a development plan that incorporates comparisons with other airports. To that end, it is important for future studies to draw out the specific characteristics of experience elements and experience programs by comparing and analyzing other advanced airports around the world based on the experience economy theory, and then apply the results to IIA. Moreover, constructs such as memory, interests, and behavioral intentions could be tested in future studies as additional variables. This would allow for a better understanding of the relationships between experiences and those variables, and it also could extend the theory of experience economy, particularly in an airport context.

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Port's Role as a Determinant of Cruise Destination Socio-Economic Sustainability

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Abstract: This article argues that the cruise terminal ports play a crucial role in the economic and socio-cultural sustainability of destinations, bridging the onshore tourism offered among cruise companies, global operators, and local business and infrastructures. They support the promotion of local brands and reduce congestion. The impact of crowds on the identity of coastal cities triggered the attention of academia and media, alerting for their negative impact, specifically from the Mediterranean cruises. In parallel, it raised the research interest on cruise tourism carrying capacity and ports planning the integration of cruise tourists' flow. However, previous studies focused on the residents' and passengers' perception of a specific destination, neglecting the port management role. This study aims to clarify the underneath dynamics that allow sustainable cruise–land visit. Employing a qualitative case study approach, it compares data obtained from secondary sources and port executives' structured deep interviews from two leading transit ports connected with the Mediterranean. Lisbon is amongst the most popular tourism destinations and international cruise terminals; Livorno is a gateway port to Tuscany, mainly Florence and Pisa. Despite their different patterns, in both ports of call, a strong concern with sustainability and a reduced congestion effect are observed from the management actions on promoting the local offer and on revitalizing the terminal infrastructures in order to provide comfort shopping and entertainment amenities to passengers.

Keywords: sustainability; responsible tourism; transit port; port of call; Mediterranean cruise destinations

1. Introduction

There is a rising trend toward larger and more frequent cruise ships, showing the globalizing nature of the cruise industry. The literature on cruise tourism highlights the perception of a cruise ship as a "floating hotel" [1], as well as an example of a "tourist bubble" [2], where cruisers enjoy tranquility and staying in a safe environment. Each ship hosts passengers of diverse nationalities with a wide range of services including hospitality, entertainment, and itineraries, which take place both onboard (concerts, theatres, activities, shopping, etc.) and inland (excursions, shopping, visiting historic sites, museums, etc.), under a controlled, safe, and pleasant environment. Nevertheless, passengers desire to discover different opportunities, which may be offered also at the destination ports and not only on board [3]. The cruise companies build their competitive offer by putting together passengers' tourist needs and the appeal of ports' brands, attractions, and inland assets, through relationships developed with several stakeholders (port authority, logistic companies, tour operators, etc.).

The increasingly frequent flows of cruise excursionists affect the ports of call significantly, where ships are usually docked less than one day, requiring port authorities and port cruise terminal managers to engage in active outreach, not only with the cruise companies, but also with local businesses. In particular, in mature and/or historic destinations, the services and facilities of the ports

are the cruisers' first contact with the city, as well as the first protection and gateway from the cruise ships to the city. Therefore, they are an important stakeholder given the complexity of achieving a pleasant and sustainable experience, while keeping the balance between the interests of the residents, the visitors, and the cruise ship industry [4].

The research on cost/benefit trade-off is scarce, as the studies addressing environmental sustainability are still limited and far from being well established [5]. The debate on the major positive and negative consequences of cruise tourism is still not consensual in most venues of impact analysis, namely, environmental, socio-cultural, and economic. Both research and media show contrasting perspectives regarding the socio-economic benefits of cruises in general, whereby the benefits of cruise tourism are geographically concentrated in locations attracting excursions and tourist walks. Seminal studies emphasized the positive impacts while acknowledging the environmental costs and large asymmetries between the local benefits and national spillovers [6]. Recent case studies such as Nanaimo in Canada [7] and Napoli in Italy [8] illustrate the importance of a "responsible cruise tourism" vision leading the port governance to handle the interrelationship with the community stakeholders in order to capture socio-economic benefits. In general, the literature shows that coastal residents and local businesses accept the coming of huge cruises ships as they bring economic development, although some studies also identified that, for the residents, the high expectations of potential—and sometimes promised—benefits from the cruise port were not met [9].

The cruise tourism research remains quite fragmented and based on economic impact studies prepared for industry stakeholders [10]. Regarding destination planning and attraction, cruise tourism research analyzed the residents' perception [4,9,11–14], the tourists and cruise passengers' crowd perception and satisfaction [15–17], the destination communities' driver and stakeholder interrelationships [11,18,19], or the ports' strategies of carrying capacity and competitive factors [7,8,20,21]. Studies highlighted the importance of ports developing marketing strategies to promote lengths of stay [22], the port terminals' factors that matter to the cruise ships and passenger itinerary choice, such as the infrastructure [23], the integration of the port and city [8], the services offered [24–26], the experience of the "local flavor" [27] or the cultural capital [11], the local business socio-economic value [9,20,28], and the revitalization of the ports, in order to increase the comfort of the embarking/disembarking which may be difficult to access and, thus, an unfriendly place, eliminating port choice [29].

Many port cities in the Mediterranean enjoy the benefits of cruise tourism, triggering their strategic positioning as "tourist ports" [24], leading some, like Lisbon (Portugal) and Livorno (Italy), to invest significant amounts in building or rebuilding cruise terminals [7,8,25]. In spite of the positive assessment by industry associations and the European Commission reports, there is concern about the loss of historic towns' authenticity and the congestion, especially in the most crowded towns targeted by different transport alternatives. We think of Barcelona, Venice, and Lisbon, but this even includes Florence, which is reachable via cruise dock in Livorno.

The present article attempts to enrich the understanding of the port managers' contribution to destination competitiveness and the asymmetric framing of cruise stakeholders, i.e., the active participation of the port authorities and the cruise terminal managers in pulling communications of local businesses and terminal facilities. Given that the influence of the ports (and port cities) and the port terminals on the cruise organization's offer is understudied [30], this study innovates because it includes the port managers' perspective, as well as observing the port managers' actions in order to integrate local businesses in the terminal cruise facilities and in the onshore tour range. Although local businesses may contribute to the destination competitiveness in parallel with the proximity of world touristic attractions [30], excursions are mostly bought on board via global travel operators, which the port may have difficulty in controlling. This study contributes to the analysis of how port managers may bridge the relationships between local businesses and global companies, as well as attract land visitors to terminal cruise facilities, thereby helping to reduce tourism congestion.

A comparative–qualitative approach is followed, supported by secondary data, observation of the ports' infrastructures, and deep interviews with executives of tourism public entities and the

ports' administrations. The comparison is between two ports of important historical areas (Lisbon in Portugal and Livorno within the Tuscan region in Italy), located at the beginning and in the middle of Mediterranean tours, both facing rising mass tourism, which provides a rich context for the study of this phenomenon. Some differences are evident. Lisbon is an important destination town, the capital of Portugal, where cruise tourism awareness is quite recent, but consciously managed by the local municipality in collaboration with a variety of stakeholders (port authority, international associations, local businesses, etc.). Livorno is a "middle" town, traditionally a trading and ferry harbor which developed into the role of "gateway" toward inland attractions, such as Florence and Pisa. In common, both ports are investing in infrastructure innovation and in cooperative relationships with industry associations, cruise companies, and local businesses in order to reduce the tourism flow and the local consequences of the oligopolistic role of global cruise companies and travel business agents.

This introduction presents an overview of the literature reflecting the trend of the environmental, economic, and socio-cultural sustainability of ports of call that are in Mediterranean coastal historic towns. Section 2 provides a literature review examining the complexity of stakeholders in cruise itineraries, the port typology, and their impact offshore, onshore, and inland. Section 3 proposes a framework analysis reflecting the factors that may be considered in port management in order to reduce the destinations' dependence on the cruise industry's global players, necessitating a strategic collaboration among different actors in order to gain an advantage for every player involved: the port, the cruise line, and the destination. In Section 4, the materials and the qualitative case study method are described. Finally, after presenting the results, the discussion and concluding remarks are drawn, which appoint the research limitations and managerial and academic implications.

2. Literature Review

2.1. The Development of Cruise Tourism

Cruise tourism is very peculiar since it combines "tourism" and "hospitality" to offer a whole leisure experience while traveling from different coastal towns [31,32]. Today, the segments and product ranges in cruise ships are quite large and diverse, a far cry from the cruise concept as a holiday targeted to seniors searching for a relaxed experience, and a social and cultural combination. Contemporary cruises are affordable for families and even for millennials traveling alone.

Over the 10-year period, from 2007 to 2017, global tourist arrivals, mainly land-based tourists, rose from 930 million in 2007 to an estimated 1323 million in 2017, approximately 42% overall [33]. The international demand for cruises had an annual growth rate of 5.4% corresponding to an overall rate of 68.5%. European cruise tourism increased by 71.9% versus the North American increase by 25.6% [34]. After the Caribbean, Europe is the world's second largest cruise ship destination. Port-of-call passenger visits rose by 22% over the 2009–2014 period, growing from 23.76 million to 28.96 million [35].

According to the Med Cruises report [36], a substantial growth in passenger movement happened over the last decade: the 10-year growth stands at 27.6%. At the beginning of the century, this number stood at 4.3 million passenger movements, confirming the growth that cruise activities in the Mediterranean experienced since then. The ratio of transit passengers to passengers' homeporting from Med Cruise member ports stands at 71/29. This ratio remained stable over time, as it was almost the same throughout the last 10 years.

Mediterranean destinations led the mentioned worldwide growth, recording extraordinary results with 8% more international arrivals than in 2016. As a result, the Mediterranean stands today as the second biggest cruising region, following the Caribbean. Combined, the two major cruise regions, Caribbean and the Mediterranean, host 51.2% of the global cruise fleet capacity. In the Mediterranean, the scale of cruise passengers exceeded 27 million movements per year three times during the last five years, with 2013 being the first time ever that this total exceeded 27 million movements [36].

2.2. Coastal Destination Cost/Benefit Trade-Off

The fast increase in the number and diversity of passengers, in parallel with the bigger dimension of ships and the large range of their entertainment offers, drew attention to the need for a congestion management approach, not only with regard to the host destination, with port and cruise industry stakeholder analysis [7,8,19,21,28] and the perceptions of the residents and the local businesses [11,12,14], but even with regard to the cruise passengers [15,17].

Cruise tourism is just one of the several coastal tourism segments, but it is the fastest growing and the most dynamic, showing an increasing trend and resilience to the economic crisis [37]. According to this study, the global economic impact of the cruise industry is high in Europe and especially in the Mediterranean regions, where Italy holds a consolidated leadership position. Italy is the largest cruise ship manufacturer in Europe and the largest turnaround port country.

Over the past 10 years, the cruise industry expanded over 69%, exceeding land-based tourism (42%) [34]. The cruise industry generated about 137 million passenger and crew visits at ports around the globe. European ports count for less than half of the number of passengers and crew from the North American leading destination. By purchasing pre- and post-cruise vacations, shore excursions, souvenirs, and other retail goods, passengers spent an estimated $17.7 billion, representing 29% of total cruise sector direct expenditures. In 2015, the cruise industry generated about 16.9 billion euros derived from four sources: the passengers, the ships' procurement of goods and services to support their operations, the compensation of the administrative staff of the companies and crew, and finally the construction and maintenance of cruise ships, which alone accounts for around 15% of the total direct economic contribution.

The socio-cultural impact and the risk of cruise congestion are being discussed in academic research in spite of the increase in the global economic contribution of the cruise sector. According to the Cruise Lines International Association (CLIA) (2018) [34], the combined direct, indirect, and induced contributions generated by cruise tourism were estimated to be $134 billion in 2017, showing an increase of 6.3% from 2016. Although the European Commission recognized the economic impact of cruise line activity and its contribution to the European Union (EU) economy [35], many researchers questioned the short-term economic benefit to the destination [19]. Johnson (2002) [38] estimated that cruise passengers' outlays in local economies are small. Studies showed that the economic benefits of cruise tourism are greater in homeports or turnaround destinations [39]. Others revealed that, despite the existence of fees (docking and passengers) and revenue from visitor and crew expenditure on souvenirs, food, and shore excursions, the economic benefits are typically less than for land-based tourism, since stopover tourists spend on average 10–17 times more than cruise ship tourists [11,28,40]. Local benefits failed to materialize when cruise tourism was undertaken without investment in an involvement of destination communities, when comparing four towns close to a new port in Trujillo, Honduras [11].

Regarding previous studies [11,39,41], economic benefits are not so evident as the cruise tourists tend to eat, sleep, and even book onshore excursions on board, as in some coastal towns the tours are organized to other nearby towns which are more historic or interesting. Cruise tourism may be an important development driver for port-cities, depending both on the operational profile of the market and on the domestic conditions, such as the size and facilities of the ports [19]. Particularly for places in a low economic context, the socio-cultural impact should also be a key factor to consider before proceeding with big investment for cruise terminals or increasing the wharf dimensions to receive bigger vessels [21]. Nevertheless, accurate studies on the local impacts of cruise tourism are still rare [8], and the studies measuring the cost/benefit trade-off are still in their infancy [41].

2.3. The Cruise Sector Structure and Drivers

The contemporary cruise industry began in the late 1960s and early 1970s with the founding of the Norwegian Cruise Line (1966), Royal Caribbean International (1968), and Carnival Cruise Line (1972), which emerged as the largest cruise lines. The early goal of the cruise industry was to develop

a mass market since cruising was, until then, an "elite" activity. A way to achieve this was through economies of scale as larger ships were able to accommodate more customers, as well as creating additional opportunities for onboard sources of revenue [34].

By the 1980s, economies of scale were further expanded with cruise ships that could carry more than 2000 passengers. The current large cruise ships have a capacity of about 6000 passengers, but the bulk of cruise ships are within the 3000–4000 passenger range. The market for the cruise industry was by then established and recognized as a full-fledged touristic alternative directly competing with well-known resort areas such as Las Vegas or Orlando.

The market drivers of the contemporary cruise industry are similar to those that fostered the growth of tourism after World War II, particularly the rising affluence of the global population and the growing popularity of exotic and resort destinations. For some analysts, what is novel with cruising is that the ship represents in itself the destination [42], acting as a floating hotel (or a theme park) with all the related facilities (bars, restaurants, theaters, casinos, swimming pools, etc.). This permitted cruise lines to develop a captive market within their ships, as well as for shore-based activities (e.g., excursions or facilities entirely owned by subsidiaries of the cruise line).

As described by Rodrigue and Notteboom (2013) [43], the cruise industry has a very high level of ownership concentration, since the four largest cruise shipping companies account for 96% of the market as measured by the number of passengers (Carnival Lines, Royal Caribbean, Norwegian Cruise Line, and Mediterranean Shipping Company—MSC Cruises). High levels of horizontal integration are also observed, since most cruise companies acquired parent companies but kept their individual names for the purpose of product differentiation. For instance, Royal Caribbean Cruises, the world's second largest cruise company behind Carnival Lines, accounts for 24% of the global market serviced under six different brands such as Celebrity Cruises (which caters to higher-end customers) and Azamara Club Cruises (smaller ships servicing more exotic destinations with shore stay options) [34]. The cruise industry, thus, presents an illusion of diversity with the bulk of the market firmly in the hands of large players.

The cruise industry over time became oligopolistic as high levels of concentration emerged [44]. Although the penetration into new markets occurs through alliances and collaboration with local brands, there is a dominant power of the cruise companies and a concentration of itineraries, leading to the overload of a small number of ports, whether homeports or ports of call [19].

The organization of onshore itineraries is difficult for the host ports to control due to the increasing asymmetry of bargaining power between port managers and cruise ship operators. The importance of a port can, therefore, be different based upon the commercial strategies of its users, primarily, in this specific point of view, the cruise companies.

The cruise industry sells itineraries, not destinations [45], underlining the core importance in the selection of a sequence of ports of call. Cruise operators are challenged to develop competitive cruise packages but, at the same time, they must optimize the deployment of their cruise ship fleet in view of minimizing operating costs and/or maximizing revenue per passenger slot. As such, vessel deployment strategies and itinerary design are affected by market circumstances and requirements such as the seasonality in demand [45], the optimal duration of a cruise vacation, the balance between sailing time and shore time, the existence of "must see" destinations, and overall guest satisfaction. Cruise lines adapt itineraries to different regions and passenger segments [42]. The itinerary and the port infrastructures are key factors for the cruise owner's decision [23]. Also, the length of stay of cruise ships in ports is influenced by the attractiveness of the port of call and the distance between the previous and the following ports [22].

Several port-cities are investing in order to fit the tangible basic requirements imposed by the cruise companies. Competition among coastal cities to be part of the cruise market is fierce; thus, a region/destination/port needs attractive, special, unique, or iconic characteristics to attract cruise lines and get cruise passengers from abroad. There are, therefore, important intangible requirements such as the destination's brand, reputation, and inland potential tourism attractiveness, where port-cities

and local institutions should invest if they would like to be part of the global cruise circuit. Observing that trend, Rodrigue & Notteboom (2013) [43] suggested that a next step will involve the development of new cruise terminals, and a closer integration between the cruise port and the cruise line.

Being part of the "global cruise circus" is not always a "must". Each port-city should base its own market position according to several variables, usually linked with the history, cultural background, socio-economic humus, social milieu, strategic vision, mission of the local government, and so on.

Therefore, several governments and port authorities, especially those in developing countries aiming to become new tourism destinations, are investing massively in re-qualifying, building, or extending cruise terminals [8,11], even if entry barriers are very high.

2.4. Port Categories and Their Role in the Cruise Destination Developmement

Ports have to meet some key requirements of cruise lines in order to be considered potential cruise destinations (ports of call). Indeed, the specific cruise sector structure implies that not every port can be suitable and included in this particular segment of tourism. To be considered a port of call, there are some tangible requirements [46], such as the existence of a cruise terminal or an alternative docking facility, docks of sufficient length, water of sufficient depth (cruise ships generally require between 8 and 9 m of water to operate safely), the possibility for cruise ships to turn around, a constant level of access regardless sea conditions, good facilities at the terminal or docking facility such as luggage handling space, gangways, parking area, airlift, customs area, waiting facilities, toilets, and information centers, and professional, qualified ground handlers such as inbound tour operators and transport operators. Capacity building is, therefore, very important for destinations that consider developing cruise tourism, involving at least an international airport in the region where cruise passengers can be flown in and out (in the case of "fly and cruise"). Competitive pricing is another important issue, as cruise lines focus on the balance per port when developing itineraries, taking into consideration excursion revenues, port fees, tugboat tariffs, taxes, and agency fees. Safety and security requirements represent another factor, as a port must be able to accommodate cruise ships and their passengers safely. Because of its international nature, the cruise tourism industry is subject to the mandates and guidance of the International Maritime Organization (IMO) which is responsible for establishing international standards for cruise ship safety, design, and construction.

The actual categorization of ports at the international level defines the port's role according to specific dimensions and dynamics between industry stakeholders, such as the cruise companies, the ports, the passengers, the international trade channels, and the global travel agents. The competitiveness of homeports in the Mediterranean actually show different strategic priorities in investment and marketing [20]. London & Lohman (2014) [18] provided a theoretical contribution of the relationships between the cruise destination stakeholders and the cruise companies. The authors identified key stakeholders and the power that underpins their commercial relationship in the context of the cruise industry. Their proposed framework identified five elements that guide the destination's development: (1) the type of port (homeport, port of call, or hybrid); (2) the stakeholders and their interest (cruise line owners and operators, gatekeepers as regulatory officials and transport providers, the port-side stakeholders as the port owners and operators and ship service providers, and the shore-side stakeholders as the government, investors, tour operators, and local transport and other business providers); (3) the stage of development of the cruise destination; (4) the port characteristics; (5) the origin of the proposal for cruise infrastructure.

Marti (1990) [47] classified three port categories according to their position in the cruise itinerary, for which the investment required is different: the homeport (or turnaround), the port of call (or transit port), and the hybrid port.

A port of call is an intermediate port where ships customarily stop for supplies, repairs, or transshipments of cargo. As it relates to the cruise industry, a port of call is a stopover destination included in an itinerary.

A homeport (or turnaround) is the starting and/or ending point for a cruise itinerary. There are some major conditions that a cruise port must fulfil in order to become a home port. The first condition is the presence of adequate port infrastructure (operational depth at the dock, the length of the pier, the existence of a passenger terminal, etc.). The second one is the efficient provision of an extensive range of services to the cruise ship, the passengers, and the crew: security equipment, warehouse and baggage handling equipment, parking area for coaches, taxis, and private autos, supply provision, and ship repairs. The third condition is the connectivity with other transport modes, such as the existence of a well-connected international airport, the existence of a train station, and the connection of the cruise port with road networks. The fourth condition is the ability of the port-city to host the cruise passengers. Most cruise passengers choose to stay at the port-city prior to their embarkation or after their disembarkation from a cruise ship. As such the port-city must have the necessary infrastructures able to accommodate the cruise passengers. These infrastructures include hotels and restaurants. The hybrid port respects both sets of characteristics. The homeport is also referred to as a hub port [45], although in the sense that its demand is very high.

A hub port is a central location in a transportation system with many inbound/outbound connections of the same mode. The hub-and-spoke system is growing as a result of the advent of large vessels in the cruise industry. Whereas, in the past, most vessels stopped over in all route ports, large vessels are only stopping at large hub ports where anchoring would be feasible. This translates into an increase in the so-called transshipment freights. Generally, in logistics, the freights are unloaded in the main hub in the territory, and then the small vessels carry the freights from the hub ports to the neighboring ports.

The ports may be classified into three categories depending on the role they serve within their regions: destination cruise port, gateway cruise port, and balanced cruise port [43].

A destination port is a place where the city overlaps with the tourist offers. It is usually a "must see" city that cruise companies wish to include in their itineraries. There are several reasons why the cruise port area can be the sole destination. In the case of cities such as Venice and Barcelona, the cultural amenities offered are world class to the point that tourists have little incentive to see anything else in the vicinity. The cruise terminal and its immediate area essentially act as a tourist bubble [2].

A gateway port is a location (terminal) where major flows of passengers, goods, and ships converge. It is a transit place, where carriers stop over for oil and other service procurement. It has many inbound/outbound connections of different modes (e.g., maritime and land). At the same time, the tourist destination is not the port city, but the surrounding territory. It is, therefore, a kind of "corridor" to reach other inland attractions.

A balanced port is a location quite attractive, where the port can be a destination, but where excursions to other places not far are also available.

3. Materials and Methods

3.1. The Proposed Framework

The literature shows that many ports are undertaking investments in their berths, maritime stations, reception logistics, transportation, events, inland connections, and so on. The focus of our research is the influence of the port authority and cruise terminal management on the sustainability of cruise service management when the boats are docked. Sustainability should be achieved through investment and socio-economic decisions that preserve local identity from standardization and congestion.

For sure, the services and the infrastructures necessary for a port of call are different from those of a homeport, a destination, or a gateway. The cruise companies choose the port to touch and dock according to logistics and other factors [18]. The competitive dynamics in the geographical area and the target customer see the cruise company building the cruise service from one side to pick up the opportunities of the chosen port's infrastructures, accessibility, positioning, facilities, cruise tariffs to dock, reputation, brand promotion, and popularity of the port's name. However, ports that decide to

interact with and play a role in cruise tourism organize their assets and investments in order to match the cruise companies and the passengers' demand.

Since the cruise sector development is recent, different ports show a clear imitation process. Moreover, according to the scope of cruise tourism, specific stakeholders in the territory are involved to enrich the supply with local identity content and experiences able to overcome the flat mass tourism flows. The trend is to involve cruise industry stakeholders as terminal operators [43]. The development of associations such as CLIA or Med Cruise allow for much more dynamism, as well as the trade international fairs, where port managers can present their natural, cultural, and technical characteristics, as well as promote local businesses and receive financial and other support. It is important that the attractive capability of each port is not passive and dependent upon the oligopolistic power of cruise companies. Ports must be able to identify their specific and unique advantages to bargain with travel global agents and cruise companies. The port cruise terminal business model is based on this bargaining power, its association membership, and the offer of different services, reflecting its uniqueness, either through the shopping services, or through the entertainment or cultural characteristics. Thus, port investment policies should take into consideration the interactions portrayed in Figure 1.

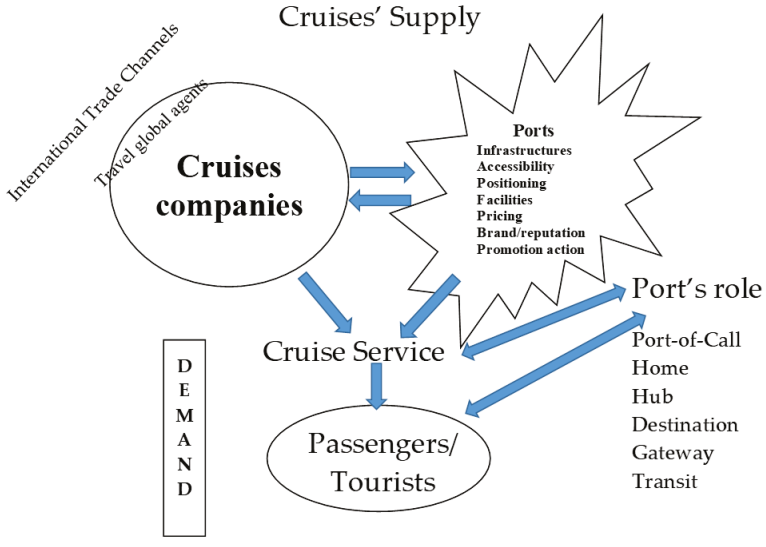

Figure 1. Cruise supply strategic process.

Moreover, each port of call needs to be aware of the fierce competition with other nearby ports and with the other ports of call that compose the cruise itinerary, as well as their co-location. Port characteristics and their services offered have a strategic role in ensuring the inclusion of peripheral ports within the cruise network. If a port does not have attractive natural/historical characteristics or a wide range of services, it may nevertheless become a cruise destination, due to its proximity to world touristic attractions and the organization of excursions [30].

The ports we chose to analyze—Lisbon and Livorno—have different specific roles. In spite of its ocean location, Lisbon is a key cruise destination, connecting the Mediterranean and the Atlantic coast. Livorno is a key stop—a "gateway", as the Carnival cruise company calls it—close to very attractive touristic destinations like Florence and Pisa, and it is one of the main attractions in cruise packages in the central Mediterranean Sea.

According to the literature review and the abovementioned meta-analysis, we developed a tentative theoretical framework for analyzing the role of the ports for a sustainable supply (Figure 2). As members of the industry, according to the itineraries and their strategies of development, port

managers act as ambassadors of the town and region, as well as promote local brands and cultural tours. They may reduce congestion by interfering with ship schedules or length of stay, acting as an interface between global tourism operators and cruise companies with local businesses.

The framework incorporates the technical, logistic, and economic features of the port, looking at the socio-economic dimensions and the relationship with the stakeholders that promote the destinations and the inland experience. Indeed, cruise companies will choose destinations according to logistic and other factors [18]. The cruise terminal ports' governance influences the cruise companies' choice, depending on their infrastructure characteristics and the promotional campaigns regarding the destination sightseeing uniqueness [7,8,19,21,48].

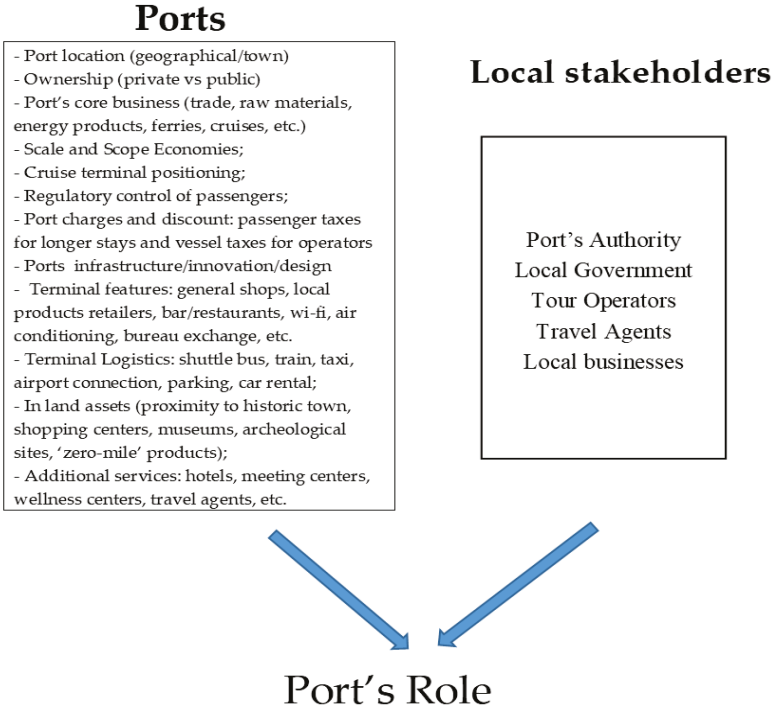

Figure 2. The theoretical framework.

The ports' bargaining power depends on the industry associations that they can gather to support the investment. Both these associations and the ports' governance will take part in the commercial and sales fairs of the global industry, to promote the destination ports and the local businesses. Cruise companies make direct contact with these marketing strategies and may achieve complementary partnerships with the local businesses. The ports may not directly sell onshore excursions, but they should actively promote the competence and differentiation of the local businesses.

3.2. Research Methodology: A Qualitative Case Study Analysis

The understanding of the abovementioned relationships was achieved through an exploratory qualitative method based on a comparative case study, the data for which were collected from structured deep interviews addressed to port managers, as well as observations at the cruise terminal, combined with studies gathered by port offices and the public published by consultants, the media, and other secondary data. Two mainly transit ports were compared based on their offer of tourism services: Livorno in Italy and Lisbon in Portugal.

To build the Livorno case study, the main secondary dataset used was the Instituto Regionale Programmazione Economica della Toscana (IRPET) report "Cruising in Livorno and its economic impact on Tuscany" [37]. The IRPET report includes the port operation statistics, services offered to tourists, the integration and accessibility of the territory, and a benchmark analysis from the main cruise ports, as well as the results from a survey addressed to 2288 passengers onshore, chosen randomly on the basis of a sample pre-stratified by the tourists' nationality, rating of the ship, and time of year. This sample covered 77% of the passengers who went ashore from the 807,935 passengers of 403 ships that were docked in the port of Livorno in 2016.

The Lisbon case study was mainly based on the cruise passengers' survey coordinated by Tourism of Portugal and the port report available on its website [49]. Also, industry reports were used, such as the one produced by Deloite [50]. Lisbon data were obtained from a survey conducted on 998 passengers from 52 ships docked in Lisbon from April to November 2016 and 1003 passengers from 49 ships for the corresponding period in 2017.

3.2.1. Lisbon: A "Destination" Port

The Port of Lisbon (Porto de Lisboa) is a wide European port and the largest in Portugal, located at the interface between the Atlantic Ocean and the vast estuary of the Tagus, 362 nautical miles away from the Gibraltar strait [49]. where the Mediterranean Sea begins. Its geo-strategic centrality and a water basin of 32,000 ha, sheltered and deep, give the Port of Lisbon a high stature in the logistics chain of international commerce and on the main cruise circuits, offering the best navigating conditions both for large ships of great depth, namely, transoceanic vessels, and for nautical sport. Integrated in the trans-European network of transports, it is the "meeting port" of maritime, railway, and road transport. The Port of Lisbon is still mainly a port of trading general cargo (56%) and mineral and food raw materials (15%), but the passenger traffic is growing, accounting for 15% of the port's business [49].

Together with its own favorable geographical position and a population of around 510,000 inhabitants, the metropolitan area accounts over 2.8 million people. Lisbon is an important town to visit and a destination port with a cruise harbor layout able to easily host the cruise ships. The city serves as a cultural hinge with the Atlantic coast of Europe, the western Mediterranean, and northern Europe, as well as Africa, Madeira, and the Canary Islands. Previous studies focusing on the cruise passengers' motivations in Lisbon found that they considered it a cultural visit [51].

In the last decade, tourism (and cruise tourism) expanded significantly. The town became a very successful touristic destination for visitors, who arrive mainly by plane (94%) from all over the world [50]. The number of foreigners staying in hotels in the Lisbon metropolitan area was more than four million, where 70% stayed in the city.

Lisbon has three cruise terminals, which easily allow direct immersion into the town. At the *Santa Apolonia* terminal, opened in November 2014, and *Jardim do Tabaco Quay*, cruise passengers can walk directly to the center of the city.

Close to the cruise terminal, there are four recreational docks—the Alcantara Dock, the Belem Dock, the *Bom Sucesso* Dock, and the *Santo Amaro* Dock—with security equipment (hand and cabin luggage X-ray machines), able to offer a wide range of services such as tourist information, a post office, public phones, public toilets, souvenir shops, wine shops, car park, coach park, taxis, and a shuttle to the city center. Lisbon supplies approximately 1500 m of quay with depths between 8 m and 12 m allowing the berth of cruise vessels from the smallest to the largest. In order to increase the capacity, the port authority is undergoing works to add 670 m of berthing quay near *Santa Apolónia.*

Figure 3 shows that Lisbon differs from Livorno as a gateway port. For passengers, the city of Lisbon is the prime destination and they rarely undertake further excursion. A large majority of cruise tourism reaches Lisbon as an elective destination where visitors can easily walk downtown. Considering the short amount of time of cruise stops, most tourists prefer to visit the city, on their own or through a guided tour, to discover the town in an organized way. Regarding the passengers who responded to the survey in 2017 and 2018, only 26% bought a guided tour before landing and fewer

than 30% chose excursions out of Lisbon city. In this case, the most visited places were Cascais (18% of respondents) and Sintra (28% of respondents), in the metropolitan regions of Lisbon and Obidos (21%) and Fatima (10%), where the latter is a religious destination.

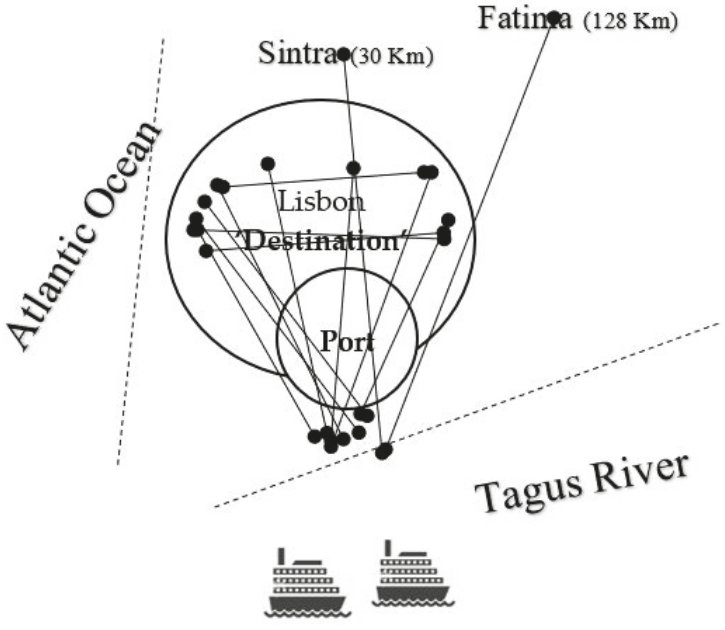

Figure 3. Lisbon as a destination port.

Although Lisbon hosted cruise ships for a long time, only in the last decade did the municipality and port authorities consider the cruise business as strategic. Since 2014, the concession of cruise terminal management was granted to a private association, pursuing the so-called "landlord" model: the port's jurisdiction is managed in order to open the port's area to the city. Management, coordination, facilitation, and essential promotions for the maintenance and improvement of the competitive levels of the port and the partnerships are entrusted to the Lisbon Port Community. Both banks of the Tagus gave rise to many restaurants, bars, and outdoor cafés. An important part of the Lisbon nightlife also takes place by the river. Today, the merchant port of Lisbon has a large area that is a stage of entertainment and culture, hosting musical concerts, with both open air and covered spaces.

From January to October 2018, the Port of Lisbon hosted 281 cruise ships and about 487,000 cruise passengers, rises of 1% and 11% compared to the previous year. Between October 2017 and 2018, the number of cruise passengers in transit grew by 48%, while the turnaround went up by 43%.

The strategy of the "landlord" model is to make the Port of Lisbon [49] the following: (i) a functionally diversified port, with three core activities—container cargo, bulk agri-food stuffs, and tourism and leisure—closely tied to the development of the Lisbon metropolitan region and the surrounding area, which will form a potential hinterland; (ii) an integrated port, in harmony with the surrounding areas and city life; (iii) a comfortable and easy destination. In the frame of this strategy, the Port of Lisbon is a member of global associations, such as CLIA, Cruise Europe, and Med cruises, where international stakeholder relationships are considered by private companies that manage the port and by the port authority. The Port of Lisbon negotiated an extension of the number of days the cruises are docked. The extension of the stopover in town is an effective strategy aimed at reducing congestion carried by short-term tourism. The local government, together with national and regional

stakeholders, is attempting to activate a shared policy in order to respond to tourism crowding and its effects on the local communities and environment.

3.2.2. Livorno: A "Gateway" Port

The town of Livorno compared to other millenarian areas in Tuscany is relatively "new", as it was started as a port to serve Pisa. The historical maritime republic located at the outfall of the Arno River slowly lost its sea front. Consequently, the coast where Livorno was built in the 14th century became the port of Pisa. The importance of this port for the entire Tuscan region introduced the Lorena Duke in 1575, entrusting Bernardo Buontalenti to design the port enlargement and the new town of Livorno.

At the beginning of the 1600s, by promoting a special hosting legislation called "*Livornine*" that encouraged free cult and free commerce, many Jewish, Portuguese, Greek, Dutch, etc. travelers started moving in from the Mediterranean and European countries. Livorno in a few years became quite a significant multiethnic port town with a key role in serving Florence, the Tuscan region, and central Italy. Venetian technicians able to remove land water and build huge dry dock storage supported the town and its port's growth.

At the end of the 1700s, the Duke of Tuscany liberalized maritime trade and Livorno became an important "free port" with 30,000 residents, where each community could practice their cult, tradition, and cultural activities. It became very significant for international trading between Holland, Europe, and the Mediterranean countries.

The actual town of Livorno accounts for 135,000 residents and it is the second town of Tuscany.

This short historical reference points out the following:

- Livorno was born as a trading port supporting all the inland Tuscan economy;
- Pisa at the beginning and obviously Florence were strategically the main reference points for political and economic decisions;
- Livorno is a strategic location for connecting the Italian peninsula with islands like Sardinia, Corse, Elba, Sicily, and the south Mediterranean (Tunisia, Morocco); many traders and passengers use the quite impressive ferry network departing from Livorno.

With cruise tourism unavoidably appearing, Livorno was identified as a key port of call, a real gateway to allow tourists to briefly visit Florence, Pisa, and Lucca, important international tourism attractions., which is illustrated at Figure 4.

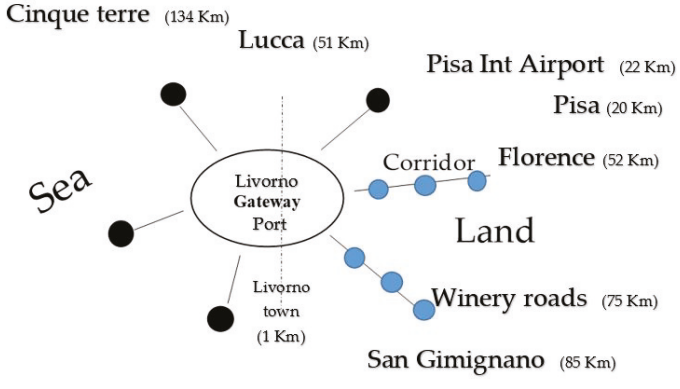

Figure 4. Livorno gateway port.

Livorno still has its role as a trading and ferry port. The cruise component is relatively new and accounts for 786,000 passengers, compared to the ferry movement with 2.65 million persons per year. The port has 11 berths for ferries and cruise ships, and it is basically connected with a short transit

area for passengers, with terminal features offering not just a ticket office and waiting area, but also additional services (info points, security, internet point, Wi-Fi, cafeteria, etc.).

The logistic terminal has a shuttle bus to the town center, as well as a taxi, car rental, and "fly and cruise" service. The "fly and cruise" service connects the port with Pisa airport; in principle, this great asset of being very close to an international airport could allow Livorno to take the role of a homeport. Tourists could fly into Pisa and depart for cruises without carrying their luggage. Furthermore, the role of a homeport entails many shore services for cruises, that over time were developed by other nearby ports, such as Barcelona and Genova. Among port competitors, there is already a division of roles. It is not easy to combine the role of being a traditional trading and ferry movement port without high specific investments and great stakeholder ability to displace competitors already in the homeport role.

Inland tours chosen by Livorno cruise passengers see 90% of the total excursions going to Florence, Pisa, and Lucca, while Cinque Terre accounts for 4.37% (Porto Livorno 2000, 2019). In the last few years, the inland assets offered even many other possibilities to visit the Etruscan coast and towns, including wine and oil areas, and the unique Tuscan countryside. It is a very important excursion supply that offers the opportunity to discover Tuscany's specific identity, while "decongesting" the most requested and visited towns. The latest report on tourism in Tuscany accounted Florence with more than 26 million visitors in 2018 [37].

There is a historical "path dependence" of the port of Livorno on Florence and Pisa, which seems to be confirmed by the cruise sector's choices. Now, the number of town destinations is uneven, adding people to the already crowded famous towns.

Livorno is a gateway port, and it would be profitable to try enriching this role in a conscious way in order to invest in and develop assets that can allow the town to be appealing and desirable for tourists when arriving via ferry or disembarking from cruises.

The ferry terminal and two cruise terminals in Livorno—the *Alto Fondale* and *Porto Mediceo*—which accommodate larger cruise ships and highlight the historic fort, are walking distance from downtown (only 8 min by foot). Several itineraries to explore the historical part of the city are proposed, such as for example a ride to the beautiful area with canals called *La Venezia*, built during the 15th century based on a Venetian architect's project.

Of course, to be "a first choice" in the territory, many conditions need to be developed. First of all, the proposed excursions should be promoted through a segmented marketing and communication strategy in order for Livorno to become a demanded destination. Moreover, it would be necessary to put together cruise plans with a stop lasting at least a couple of days in Livorno.

For this, we would need to discuss the cruise package decisions taken by these gigantic oligopolistic companies, which is a huge and difficult bargain for local stakeholders. It is not surprising that, despite the unusual history of Livorno, just a very small number of tourists disembark and visit the town (0.62%) [37]. The vocation of Livorno was never a tourist one and putting value into its history and its monuments, museums, and identity is a process that just recently started.

In Livorno, the local government suffers from a weak public policy and weak management practices. The integration of tourism into a local strategic planning framework is still absent; we can highlight the lack of consultation between the tourism industry, private companies, the port authority, trade organizations, and public institutions that, instead, should be essential for enhancing local economies and promoting the discovery of social and cultural context. Moreover, the new majority private property of Porto Livorno 2000 did not clarify its own strategy.

Regarding cruise sustainability means measuring and calibrating the effort and stakeholder involvement to strengthen the port's role and designing new appealing services and activities able to attract people for a longer time than the cruise stops.

4. Results

In light of the empirical research that led to the designing of the two case studies of Lisbon and Livorno, we developed a tentative "model" for the different ports' roles. Table 1, built from different

sources of information, such as interviews with executives and secondary data gathered by port offices and the public published by consultants and official websites, summarizes the accessibility, characteristics, and main supply of each port according to the variables presented in our theoretical framework (see Section 3).

Table 1. Comparison between the roles of the ports of Lisbon and Livorno.

Variables	Livorno (Italy)	Lisbon (Portugal)
Type of Port	**Gateway Port**	**Destination Port**
Ownership/ management	Until 2018, the proprietary majority was public. Since 2019, 66% is privately hold by Moby (main ferry company) + 34% by the Chamber of Commerce and Port Network Authority of the Tyrrhenian Sea	The Administração do Porto de Lisboa (APL), the administration of the Lisbon Port, is an association that has the grant to the cruise terminal activity for the last 35 years. Since 2014, the APL has a private ownership.
Port location	-West-Med Route: Morocco–Livorno -North Tyrrhenian Multi-Port Gateway -Northern Italy -Central–Eastern Europe -West Mediterranean/Eastern Europe "land bridge" -North–South America	Switching point or base port for -Atlantic coast of Europe; -Western Mediterranean; -Northern Europe; -Africa, Madeira, and the Canary Islands
Port core business *	Cargo shipment: 748,000 TEU movements (+1.9%) Ro-Ro (cars) sector: 507,000 movements (+13.2%) Energy Products: Long tradition in chemical and gas and oil sector: 11 million tons (+10%) Ferry: 2.65 million passengers (+5.2%) Cruises: 786,000 passengers (+12.5%)	Container cargo: 56% Bulk agri-food stuffs and liquid and solid raw materials: 29% Tourism and leisure: 15% Cruises: 487,000 passengers (+11% compared to 2018)
Cruise terminal positioning	Alto Fondale and Porto Mediceo; independent management; market position as premium/luxury cruises tours. In expansion, but still interstitial.	3 cruise terminals: Alcantara, Santa Apolonia, and Jardim do Tabaco Quay. Market position as a turnaround port for large international cruises companies Exponential growth, but still niche business segment
Port infrastructures	11 Berths for cruise ships and ferries (3.5 km of port berths) 2 cruise terminals 1 ferry terminal Shore-side electric power supply plant	Port's main access channel has 14 m depth 1500 m of berth quay (depths between 8 m and 12 m) 13,800 m^2 of terminal facilities over 3 floors 1490 m of pier for multi length ships 3 cruise terminals (north bank of the River Tagus) 4 recreational docks: Alcantara, Belem, Bom Sucesso, and Santo Amaro
Terminal features	Waiting area Info point Check-in desks Security check Ticket offices Cash dispenser Internet Point Wi-Fi Parking Bar and cafeteria Shopping center Self-service restaurant	Waiting area Wi-Fi Info tour for experiencing Lisbon Duty-free stores Ship storage area Onsite equipment (forklift, crane, and others) Supplying services (water, provisions, and others) Fully automated gangway system Post office Public phones Souvenirs shops Wine shops

Table 1. *Cont.*

Variables	Livorno (Italy)	Lisbon (Portugal)
Type of Port	**Gateway Port**	**Destination Port**
Terminal logistics	Bus to Pisa international airport (fly and cruise) Car rental booth (drive and cruise) Taxi parking Chauffeur service parking Shuttle bus to Livorno city center	Connection to Lisbon railway station; 80 bus parking spaces at Alcantara terminal Taxi parking Cars rental 360 car parking spaces Coach park Shuttle bus to Lisbon city center
Inland assets	Florence–Pisa–Lucca (90% of total excursions) Cinque Terre (4.37%) San Gimignano/Volterra Etruscan coast excursions, wine and oil roads, Tuscan museums, wine tasting, truffle hunting, farmhouse visiting, etc.)	City of Lisbon ** (90%) Sintra (28%) Cascais (17%) Fatima (10%)
Additional services	-Event and exhibition centers -Tour operator booth	-Panoramic view terrace -Music concert hall

* For Livorno, data were taken from the port authority (2019 compared with 2018); for Lisbon, the main source of information was the Lisbon port website. ** Multiple choice answers. Data released from Observatorio Turismo de Lisboa, "Survey to cruise passengers, Porto del Lisboa", 2017.

The roles that Lisbon and Livorno assume with regard to cruise packages is are as a destination port and gateway port, respectively.

Lisbon is amongst the most popular tourism destinations in the world and one of the main international cruise terminals, experiencing a growth in cruise demand [52]. People docking in Lisbon are driven by the cruise companies to visit the town. City tours are usually directly organized by the cruise line companies and promoted by their connected travel wholesalers. Instead, Livorno is considered a true "gateway" to the wonders of Tuscany (Florence, Pisa, Cinque Terre, Etruscan coast, and so on). Not surprisingly, Livorno is presented in many cruise line itineraries as the "port of Florence". The city of Livorno serves as a jump-off point for daytrips elsewhere; Florence is no doubt the primary destination, but even other cities like Pisa, Lucca, and San Gimignano are also options.

Despite the growing importance of cruise tourism and passenger traffic in Lisbon and Livorno, both towns were born as merchant ports. Lisbon has a tradition in container cargo shipment, together with the movement of solid and liquid raw materials. Nevertheless, Lisbon is globally known "city break" destination; the local attractions, the strategic location, and the mild climate stimulate a growing number of tourists to visit the town throughout the year. Thus, the tourism and leisure segments became progressively important for the port.

Livorno was historically devoted to the shipment of goods and to ferry transportation, while cruises are still an interstitial activity. Indeed, in terms of the contribution to the port town economy, in Livorno, freight traffic is the most relevant, followed by people embarking on and disembarking from ferry boats, involving three-quarters of passenger turnover, the most significant category of the Livorno port. Cruise passengers are increasing but, as of now, they account for one-quarter of total passenger traffic.

Although both harbors are in the town, in Lisbon, the different segments of port activity are very clearly separated, and the cruise ships are also in a quite isolated area from the cargo. Instead, in Livorno, where freight traffic and ferry passenger embarkment/disembarkment is still prevalent compared to cruises, this separation is not so evident, and there are some areas forbidden to pedestrians. To ease the accessibility of cruisers to the town and transport facilities (car, taxi and bus parking, car rentals, etc.), some specific investments would be required. For instance, there is an issue with cellulose raw material deposited on the trade berth too close to the passenger dock. This kind of contamination would require new security investments to protect passengers from pollution.

For both ports, cruise tourism is not their core business. In spite of that, Lisbon and Livorno largely invested in different specific proportions to extend new cruise terminals, in order to offer core and additional services. They are rebuilding and expanding the infrastructures and facilities to host larger and more numerous cruises vessels, as well as provide comfort and entertainment amenities.

In both cases, those massive investments promoting the expansion of cruise tourism seem to be strictly connected to the recent privatization of the two port authorities (PortoLivorno2000 and APL-Administração do Porto de Lisboa). Still, some differences are emerging. In Lisbon, the port is strategically investing in cruise terminals and in their positioning to appear as a unique and competitive destination, even boosting the authenticity of local businesses, such as local product providers (local shops, small restaurants, etc.). Lisbon APL is working on creating a direct networking and communication process with local associations and private cruise companies. On the contrary, in Livorno, the main interest of the port's new majority private owner is the ferry port's facilities and services in order to boost the passenger traffic in the port, instead of developing a shared wider strategy to enhance Livorno as a tourist destination. It is clear that, in both ports, the core business is freight traffic, while cruises are a growing but still niche segment of tourism.

5. Conclusions Remarks and Discussion

This comparative study showed similar sustainability challenges for significantly different ports. We started by analyzing the cruise sector, the ports' structure and assets, and the state of the art regarding cruise destinations, carrying capacity, and port categories.

Socio-cultural and *economic sustainability* occupies an important role in the cruise industry. Key concerns include the cooperation between and co-location of close ports, as well as the inhabitants' quality of life, the accessibility to recreation, the management of local infrastructures, public transportation, and road congestion, the protection of the cultural heritage of the city, the reduction of the pressure on main attraction areas through the implementation of diversified offers, the promotion of local economies (small enterprises, typical food, product manufacturing, etc.), and the control of service prices (taxis, shops, restaurants, museums, etc.).

Although cruise tourism accounts for a low percentage of the overall number of visitors, as reported by industry reports [37,50], and is, thus, a minor contributor to crowd tourism, the concept of socio-economic and cultural sustainability appears to be connected to the simultaneous presence of huge numbers of people—sometimes about 2000–4000 passengers—disembarking simultaneously and moving around in limited areas for a few hours. Furthermore, the surveys applied in the Lisbon and Livorno ports showed that cruise visitor expenditure is relatively low, which is aligned with research concerning passengers [16].

In Lisbon, the coincidence of being a mass tourism destination and a cruise port is especially delicate in terms of sustainability. The city government is facing an impressive increase in tourism flow, even higher than Amsterdam or Barcelona. In response to this situation, Lisbon is undertaking a leading role in the process of coordination and exchange with multiple actors involved in the tourism *filiére* (private companies, cruise associations, port authority, local government, not-for-profit organizations, etc.), trying to intervene in the regional and local tourism planning and mass tourism management [52].

Conversely, the city of *Livorno* is an *intermediate location*; it developed a unique geography where its importance is derived from its accessibility (as a gateway to inland and/or air transportation through the Pisa and Florence airports) rather than its town's intrinsic characteristics. A port like Livorno has advantages deriving from its logistic strategic position, as well as providing access to more attractive surrounding places. It is a port-city which is not yet considered a well-known tourist attraction, and it is identified as "very interesting for its genuineness". In preserving that, Livorno would need to support its competitiveness through a balance of local and international tourist operators. This could help reduce the onshore excursions to crowded sites (e.g., Florence), diversifying the cruise excursion destinations. It would be strategic to include the port's historic town and other Tuscan attractions in a customized way, building a supply able to attract more selective and demanding visitors. Livorno

should offer a distinctive "cruise shore scape", i.e., integrated land-based components of both the urban port and adjacent hinterland [19], in order to propose an authentic inland experience.

The strategic vision, the revitalization of the port infrastructure, and the innovative communication campaigns by cruise companies and industry associations and travel global operators, undertaken by port terminal Livorno 2000 in order to attract cruise tourists to its historic parts, resulted in increased local visits and longer cruise ships stays. In Lisbon port, the active participation in trade international meetings is also allowing cruise tourism development. However, the government actions of these two ports reflect a cooperation among stakeholders, in alignment with strategies considered to change the ports' configurations and achieve an upper positioning as hub ports [44,46]. Also, from the sustainability point of view, the research builds on previous research, highlighting that the identification of the port role in the cruise *filiére* is a key aspect to understanding where the high numbers of people disembarking are spending their time inland; however, this research also contributed through a comparative approach of two quite different ports in their characteristics but with quite similar strategies and management actions (attracting cruise ships in a responsible way, as well as reducing crowd visitors to be most demanded touristic places).

From both cases we analyzed, it emerges that the most demanded tourist towns (Lisbon and Florence) suffer from "*over-tourism*" with a carrying capacity which is close to collapse regarding services for visitors and the quality of life of the local citizens. A possible strategy could be, therefore, the implementation of a kind of "coopetition" with other local places, in order to try spread the number of visitors among inland cities. Respecting the specificities of the cruise port towns, creating a joint identity with its surroundings, and proposing dynamic experiences and routes for niche visitors should be effective marketing strategies for Lisbon and Livorno/Tuscany in order to find a balance between challenges, such as visitor pressure, and caring both for the local community and the destination's stakeholders.

Furthermore, we suggest that cruise visitors and local brands could share and experience, in the terminal, a quickly available sample of the best regional experiences in gastronomy, products, and culture. This could motivate longer and repeated tourist visits, while pleasantly enjoying the regional offers. We suggest that a much deeper cruise terminal concept designed as a top-quality and genuine sample of the products and gastronomy from the region would add value to both residents and visitors. Indeed, a new cruise terminal concept should combine all the above, reducing the percentage of land services for cruise lines [41] and increasing the safety of cruise passengers. This emerging trend of combining port terminals, local offers, and city congestion was suggested in some previous studies [19,42] and from the innovation in some ports [8] or the building of new ones [7], where they adopt the duty-free style from airport shopping.

6. Study Limitations and Future Research

The main limitation stems from the fact that the questionnaires were not designed to answer the questions raised by the cruise tourism literature, and our focus was instead on the ports' role in achieving greater sustainability. We hope that this study and methodology inspires other researchers in designing more specific databases and extending the study to other locations and experiments.

Specific data on cruise tourism segmentation and consumption were not available. In both ports, the surveys prepared by the authorities show the passengers' socio-demographic and nationality profiles, as well as their cruise trip choice motivations and behavior aligned with industry reports such as CLIA and Med Cruise, in addition to previous research focusing on visitors. The majority of passengers experienced cruise tourism, booked the trip mainly from a travel agency to the Mediterranean or Caribbean lines, staying about two weeks on the cruise trip, where the itinerary was a key motivation, and in which cultural visits and shopping accounted for the major consumption of time and cost when inland, showing an overall high level of satisfaction, although it was lower in the terminal services and offices in Livorno.

However, we could not compare and carry out a cross-analysis between the segments' expectations, or evaluations of the ports' services (entertainment and shopping) and the towns' offers.

A quantitative study on the importance of reducing crowds and the number of visits to the town's port services and infrastructures was obtained from a survey addressed to the passengers, as well as the industry stakeholders (cruise companies and tourism operators). Although, in both ports' terminals, managers are attracting cruise ships to increase the length of stay, on average, cruise visitors do not stay long enough to find the characteristics and genuine products and brands of the town. These findings were in conformity with academic research [22]. Also, these studies quantified the cost/benefits for each stakeholder (cruise companies, businesses, and ports terminal management), or at least to have a deeper perspective of the other two stakeholders regarding the potential use and concept designed for the cruise terminal's commercial and entertainment area. Studies on how to benefit from the port areas for local businesses (public and private ones) and port terminals is a developing research stream [26]. It would be important to analyze how the ports' cruise terminals could be a tool to reduce congestion for shorter visits.

Furthermore, an understanding of the passengers' and residents' opinions concerning the value added in the ports' role with regard to the co-destination concept between cruise ships and ports of call, as introduced by Whyte et al. (2018) [42], can enhance the knowledge on port policy that can reach a sustainable future for the industry.

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Differences in Tourist Behaviors across the Seasons: The Case of Northern Indiana

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Abstract: Seasonality is an essential factor influencing tourism demand and traveler behavior at the destination. As such, seasonality (i.e., the influx of tourists) needs to be managed by destination marketing organizations. Most tourism studies have focused mainly on the forecasting methods/metrics and the effect of seasonality at the aggregate level rather than understanding seasonal differences in the nature of the traveler and travel experience. The purpose of this study is to understand seasonality at both the aggregate market level and individual traveler level. As such, this study first utilizes the concept of the gravity model to understand seasonality in the number of inquiries through an official website. This study, then, uses seemingly unrelated regressions to estimate simultaneously the effect of various trip-related factors on overall trip expenditures and the length of the trip. The results show that the impact of seasonality on aggregated demand is surprisingly consistent across the seasons; however, individual-level analyses indicate that traveler behavior and travelers' responses to advertising differ significantly across seasons. Thus, destination marketers need to understand the nature of seasonality of their specific markets more accurately to provide appropriate tourism products/services to their current and potential travelers.

Keywords: Seasonality; tourism demand; expenditure; seemingly unrelated regression; destination marketing; tourism advertisement

1. Introduction

Seasonal variation in tourism demand is a critical issue when managing a destination. Defined in terms of the temporal and spatial imbalances in the numbers of visitors, and their behaviors between seasons, the resultant flux of tourists directly influence revenue for tourism businesses within the destination [1–3]. Thus, understanding the effect of seasonality on market structure is indeed essential for destination management organizations (DMOs). By doing so, they can develop effective and suitable specific management strategies based on an economically sustainable method. From DMOs' perspective, destination marketers must prepare and design an appropriate destination management plan to manage tourist demand visiting a destination in both low and high-peak seasons [3,4]. With its practical importance, many researchers have focused on several different issues related to tourism demand and its fluctuation, mainly focusing on causes, impacts, and possible solutions of seasonality [4–10]. These studies document the importance of understanding tourism seasonality and its close connections to all aspects of tourist behaviors at the destination. Furthermore, Parrilla, Font, and Nedal [11], Jang [1], and Segota and Mihalic [10] showed that many DMOs often invest substantially to mitigate seasonality effects through variable pricing, development, or redesigning tourism and hospitality products, and other strategies.

Seasonality in the destination of tourism can be an imbalance in the distribution of tourist flows throughout the year [7,12]. Therefore, developed and mature tourism destinations often focused

primarily on the adjustment of imbalance of tourist flows and the reduction of seasonality by developing various development plans and consolidation strategies [10,13]. Indeed, earlier studies showed that tourism destinations often required effective counter-seasonal responses to manage the negative impact of seasonality [1,6,7]. For example, DMOs and their marketing specialists have prepared and applied various strategies and policies such as diversification of the product mix, pricing incentives, new market segments, and holiday regulations [10]. Besides, DMOs sometimes hold a temporary special event that attracts more tourists during the shoulder seasons to cope with seasonality issues [14]. In recent years, seasonality has become a more critical problem as it potentially connects with over-tourism issues. Therefore, DMOs and tourism businesses attempt to achieve a balance and redistribute the incoming tourist flows. By doing so, DMOs eventually alleviate the negative impact of tourism seasonality and then solve some social issues related to the tourism industry (e.g., crowding during the peak season and over-tourism).

Tourism seasonality is a very complex social phenomenon that requires diverse solutions for DMOs and marketers to manage both positive and negative issues [15]. In turn, it requires much effort by DMOs to focus on both at the destination level and the individual level. However, it is interesting to note that only a few studies have examined seasonality and its impact on tourist behaviors at the individual level. For example, studies by Bonn, Furr, and Uysal [16], Connell, Page, and Meyer [15], and Yoon and Shafer [17] have explicitly focused on individual travelers and the differences in traveler characteristics and their behaviors between seasons; unfortunately, these studies are mostly descriptive in nature and provide limited insight into travel behavior and the response of travelers to destination advertising. Similarly, not many studies have been conducted to understand the performance of DMOs' marketing and management efforts that respond to seasonality [18]. In this vein, understanding the effect of destination advertising as a solution for seasonality issues would be a vital issue as DMOs often use destination advertising for promoting their destination to overcome seasonal effects to bring more visitors, extend the length of stay, increase tourist expenditures at the destination, and ultimately increase the positive economic tourism impacts [19–22]. It is also able to help redistribute tourist flows across seasons, thereby alleviating the negative impact of seasonality and then eventually enhancing the sustainability of a particular tourism destination.

As such, this research focused on tourism seasonality and its effect on tourist behavior (e.g., length of stay and spending) within the destination. In particular, this study analyzed the impact of seasonality on tourists' behaviors (e.g., information searching, advertising response, length of stays, and expenditure) at both aggregated (e.g., destination) and disaggregated (e.g., individual travelers) levels. Heterogeneity of tourists' behaviors and their responses to destination advertising across different seasons will be expected from our results, which will help DMOs and marketers to design a better destination marketing and management strategy. Therefore, the results will have implications for policymakers and tourism marketers who want to manage their destination in an economically successful way as well as sustainably. This study is structured as follows. Section 2 reviews previous literature including seasonality in tourism, the relationships between seasonality and tourists' behaviors and between seasonality and DMOs activities; Section 3 describes the research design and explains the process of the data preparation; Section 4 presents the results of empirical analyses; and finally Section 5 concludes the current study.

2. Literature Review

2.1. Seasonality in Tourism

The term seasonality has been applied to situations where there is a temporal and a spatial imbalance in the number of travelers, expenditure, and admissions to attractions [7]. Irregularity (or regularity) is one of the essential characteristics to explain tourism seasonality wherein tourism demand and supply fluctuate simultaneously (most likely every year) with more or less the same timing and magnitude in a systematic way [6,23]. The most central aspect of seasonality and its effect

on tourism demand is the concentration of tourist flows in a short period of the year, and the constant recurrence of the fluctuation of tourist flows throughout the year [9,24]. As such, seasonality potentially creates inefficiencies in resource utilization as it produces an excessive burden on the resources of the destination within a relatively short period of a given year. With this practical importance, many earlier studies have focused on the reasons and consequences of seasonality in tourism and travel industry [1,6,7,25]. Besides, some studies have been conducted on its measurement and methods to detect the possible seasonality issues in tourism from the perspective of tourism economics or forecasting [13,14,26–29]. Besides, many earlier studies used the destination as a unit of analysis for the study, rather than individual tourist [15–17].

Seasonal tourism demand and its variations are the consequences of several interrelated natural and institutional factors [7,9,12]. First, natural seasonality includes the effect of changes in natural resources and the environment throughout the year [30–32]. In these studies, climate change, and weather conditions (i.e., temperature, rainfall, the sunshine) are recognized as major and critical forces affecting tourist flows and tourism revenues within a particular destination. Second, institutional seasonality reflects the differences in religious, social, cultural, and ethnic factors that are caused by human actions and policies [7], which are closely related to the social norms and practices of societies [33]. Public holidays and other special events at the specific times of the year such as Christmas and vacations of schools and workplaces are the most common forms of 'seasonality effects' in this category; for example, cultural holidays in some countries generate high volumes of tourism demand and supply, e.g., Thanksgiving Day in the United States, the Golden Week in Japan and the October labor holiday in China. Certain holidays such as Easter or Thanksgiving Day also create variability from year to year because their dates vary and, therefore, may cause changes in its effect on tourism supply and demand [12]. Lastly, other factors have been proposed to create seasonality in travel such as social fashion (e.g., hunting and fishing), sporting event (e.g., Olympic, professional sports), and individual traveler inertia or tradition [7].

2.2. Seasonality and Travel Behavior

Seasonality has a vital role in determining tourism demand and travelers' on-site behaviors during the trip. A thorough review of literature in tourism and hospitality also reveals that the notion of push and pull factors in tourism motivation supports the role of seasonality on tourism demand and behaviors [25,34]. In this regard, some factors that cause push motivations (e.g., calendar holidays, inertia and tradition, accessibility, and climate in origins) and pull factors (e.g., the climate in destinations, events, and sport) are potentially generating tourism demand from origins to destinations. Moreover, Butler and Mao [25] and Lee [34] argued that the roles of an origin and a destination within the context of tourism and tourist behaviors should be understood differently while understanding the seasonal variations across the time. Tourists may change their travel-related decisions (i.e., whether he/she travels and which destination they would choose) due to various factors which relate to seasons. Institutional seasonality creates (both facilitating and constraining) tourism demand and traveler movements usually solely at an origin throughout the year, whereas natural seasonality influences at both an origin and a destination, which in turn, alter the relative attractiveness of tourism destination over time. For example, school vacations would increase tourism demand for family tourists, but it does not influence any factors related to destinations. Weather-related factors (e.g., hurricane, typhoon, and rainy season) would make tourists to change their travel demand and their potential destination. Besides, seasonality factors would influence tourist behaviors at the destination simultaneously. For example, if tourists living in a colder area visit a sun and beach destination, he/she would participate in different activities than those of residing in a hot area. Or, family tourists with young children would visit a destination with historical attractions for educating their children through travel experiences during their children's vacation and holidays.

Variations in tourism demand cannot be solely explained by the direction (i.e., push/pull) but also by several individual factors that cause changes in the impact of seasonality on tourism demand

and tourist behaviors [25,34–36]. The purpose of the trip cause changes in the potential choice set of a tourism destination and its attractiveness [25,36]. For example, a vacation/pleasure trip might be highly related to institutional and natural seasonality as well as DMOs' mitigating effects, whereas a business trip is generally influenced by the business cycle and the resource of the destination. At the same time, visiting friends and relatives may induce additional variations in tourism demand wherein those trips may utilize a discretionary time fitted to their vacation schedule. One's travel distance from the origin to the destination also has an essential impact on changes in destination attractiveness due to seasonality and ultimately tourist behaviors (i.e., travel distance and travel cost) at the destination [25,34,36]. Indeed, distance decay is one of the critical factors affecting tourists' decision-making and actual behaviors across the entire trip experience [37–39]. In general, travelers might have different time budgets and desires for traveling to a destination across the year depending on institutional and natural seasonality. Thus, there might be considerable variations in the choice of potential destination as well as averaged travel distance throughout the year. In a similar vein, travel costs, partly associated with tourism seasonality, is another important influencing factor that influences the volume of visitation [36]. A popular tourist destination may cost a lot during the peak-season even if the destination sometimes lowers their prices to attract more travelers, whereas promotional activities during the shoulder season enable travelers to visit the destination more due to decreased travel costs. All these factors potentially alter the decision context of each individual by changing the condition of origins and destinations based on tourism seasonality and, thus, cause changes in mobility both from origins to destinations and within the destination. As such, this study argues that seasonality in tourism demands hugely impact on the tourist behaviors (e.g., the volume of visitation, behaviors at the destination) and possibly reflects the attractiveness of a particular tourism destination and attraction in a given period.

2.3. Seasonality and Destination Management Organizations (DMOs)

Butler and Mao [25] further argued that the mechanism of tourism seasonality is not a simple linear relationship but rather the demand (i.e., push factors), supply (i.e., pull factors), and modifying (i.e., modifying activity by DMOs) processes are continuously interacting with each other. Therefore, the dynamic characteristics of tourism demand can be explained by both the effect of seasonality and the mitigating efforts of the DMOs. As such, destination marketers and tourism companies actively respond to these changes in tourism demand and tourists' behaviors due to seasonality. Similarly, an extensive number of studies have examined the impact and consequences of seasonality for destination management [5–9]. Among them, few studies reported that the effects of seasonality are indeed positive to the tourism destinations from the perspective of sociology and economics because it allows tourism destination to be recovered and decentralized during the shoulder season [30]. However, the majority of this research emphasized the negative consequences of seasonality (e.g., instabilities of resource consumption, overcrowding, difficulties in investment, employment, and revenue fluctuations) [5–9]. Importantly, these studies found that seasonality not only alters tourism demand (e.g., number of visitors) but also affects the composition and the characteristics of incoming travelers and related behaviors [36,40].

As such, seasonality has been considered as one of the most essential issues in destination marketing and management to maintain a destination competitive and attractive enough throughout the year. To do so, DMOs often use two distinctive ways of handling the seasonality issues in tourism: (1) lessening seasonality itself and (2) reducing the harmful effects [1,2,7,11]. The example of former strategies is developing new tourism products (e.g., attractions, places, events) to generate a new source of tourism demand [1,8,15]. Often, destination marketers and tourism companies intentionally create additional tourism demand by holding a promotional event, regardless of its size, during their shoulder season [15]. The latter strategies may require the additional efforts of DMOs and practitioners to manage their internal capacities, such as part-time employees, sharing carrying capacity, investing in expansion projects, and ultimately maximizing their marketing and management efficiency [1,30,41].

However, both approaches necessitate large investment and effort among stakeholders within the destination [23,42,43]. Consequently, marketers try delivering travel information to their potential customers to promote their destination in order to attract visitors throughout the year. As such, DMOs and marketers utilized tourism advertising as a popular promotional tool in that, it is relatively cheaper than other marketing and promotional strategies and makes travelers change perceptions, attitudes, behavioral intention, and even actual behaviors [44–46]. Thus, destination marketers are more likely to adopt various marketing and promotional activities to shape tourism demand and traveler behaviors responding to tourism seasonality.

3. Methodology

3.1. Study Context

This study applies two different approaches to investigate the effect of DMOs' efforts (i.e., destination promotional activities) responding to tourism seasonality on tourism demand and travelers' behaviors. In doing so, several DMOs in Northern Indiana were selected as a case study. Northern Indiana is a typical Midwestern tourist destination that provides various natural and cultural attractions. The primary target market of Northern Indiana tourism is Metropolitan Chicago as well as small Midwestern cities/towns. The influx of tourists for this destination focuses mainly on the spring and summer seasons (from May to September; approximately 77% of visitors based on annual visitor surveys). Northern Indiana has diverse tourism products—both natural and cultural attractions, which make Northern Indiana one of the popular tourist destinations in the mid-western part of the US. Thus, this destination represents a typical example of numerous tourism destinations within the United States, which has a diverse composition of different tourism sectors, stakeholders, and attractions within the destination. Lastly, tourism has recently been one of the main economic forces in the destination.

3.2. Data Preparation for the Aggregated Analysis

This study first investigates the effect of tourism seasonality on tourism demand at the destination level (e.g., aggregated market demand) by applying a gravity model [47,48] to capture the structure of incoming tourist flows (i.e., tourism demand) from origins to the destination throughout the year. The data used in this analysis were obtained from the local DMOs located in the Midwestern United States and modified as follows. This study first categorizes those populations into the 210 designated market areas (DMAs) based on their physical address (zip code), which describe the geographic area of broadcasting markets [49]. Then, population and the median income for each DMA region were obtained from the United States Census Bureau (www.census.gov) and the United States Department of Labor (www.bls.gov) for each zip code and then aggregated into a data set based on individual DMA regions within the United States. Thus, the final dataset included a set of variables (i.e., total population, median household income, and the number of information inquirers for 10 separate time points) reflecting the characteristics of individual DMA regions which provide the basis for estimating travel demand. This study considers the number of information inquirers as a proxy for tourism demand (incoming tourist flows). Indeed, many travelers in the US visit various websites for their trip planning [50] and, therefore, many studies in tourism have utilized those online traces (e.g., web traffic, search engines) as valuable predictors of their forthcoming travels [51,52]. Therefore, this study used the number of information inquirers from the official website for further analyses.

3.3. Data Preparation for the Individual Analysis

The study then conducts a series of cross-tabulation and analysis of variance to identify the differences in demographic and trip characteristics, advertising responses, and trip outcomes (expenditures, the length of trip, satisfaction) between seasons. Seemingly unrelated regression (SUR) is also used to simultaneously estimate the effect of the trip and individual characteristics and advertising response on overall trip expenditures and the length of the trip in that both dependent variables (i.e.,

expenditure and length of trip) are the outcomes of travelers' behaviors and at the same time, highly related to each other. In this situation, SUR provides more efficient and accurate estimated parameters in that the disturbances of the two equations are correlated [53].

The individual-level data were also drawn from advertising evaluation studies during September 2011 to January 2014 (i.e., three surveys per year) and obtained using an online survey of American travelers who had requested travel-related information about the destination from the DMOs' official website and information centers. After excluding invalid and redundant email addresses, a total of 67,209 email invitations were sent out to complete the online survey over the three-year study period. The survey employed the following three-step process to increase the response rate: First, an initial invitation was sent out on Friday along with the URL of the survey so that the respondent would have the weekend to complete the online survey; Second, four days later (on Tuesday) a reminder was delivered to those who had not completed the survey; and, third, the final request for participation was sent out two days later (on Thursday) to those who had not completed the survey. In total, this study received 6058 responses, which equates to a 9.0% response rate. Of these responses, this study focuses on those respondents who visited the destination, reported participating in activities within the destination, and indicated they spent some money at the destination. As a result of removing the extreme cases (e.g., most prominently for visitor expenditure) and non-visitors, the final sample size was 2444 (40.3% of total responses).

The questionnaire first asked respondents to indicate whether or not they traveled to or through the destination after requesting travel information. Respondents were then asked to answer questions related to gender, income, trip purpose, the number of previous destination visits, travel party size, the timing of trip planning, and the number of previous destination visits so as to identify travelers and their trip characteristics [20,45,54,55]; all variables were measured using single items and then coded into dummy (0/1) variables. Distance from origins to destination was created based on zip code, and their nationality reported by respondents and then coded into a series of four dichotomous (0/1) variables (e.g., lives within the state, lives in the next state, lives far from the state but within the United States, and lives outside of the United States). Trip outcomes were measured in terms of overall trip expenditure, the length of trip, overall satisfaction compared to similar trips, and revisit intention. Additionally, the questionnaire included two different types of questions to measure travelers' advertising response depending on trip-related decision facets. Specifically, respondents were asked: "When did you first decide to travel to/through [Destination] before/after regarding the official tourism bureau materials?" For these responses, "After I saw it" was coded a value of 1 and those responding, "Before I saw it", or "Not sure" were coded values of 0. For the other trip-related decisions (i.e., attractions, restaurants, events, shopping, and accommodations), however, the respondent was asked whether or not they visited a featured place as the result of tourism destination advertising; a dichotomous (0/1) variable was created whereby those responding "yes" were given a value of 1 and those responding "no" or "not sure" were coded values of 0.

4. Results

4.1. Aggregated-Level Analysis

The aggregated data analysis used regression analysis to apply a gravity model based upon 10 seasons separately to estimate the tourism demand (i.e., the number of inquiries) from an origin to a destination. The purpose of this analysis is particularly to identify variation in the regression coefficients (i.e., the factors affecting tourism demand) across the different years. The results showed that the coefficients of independent variables appear to be quite stable across the year (see Figure 1).

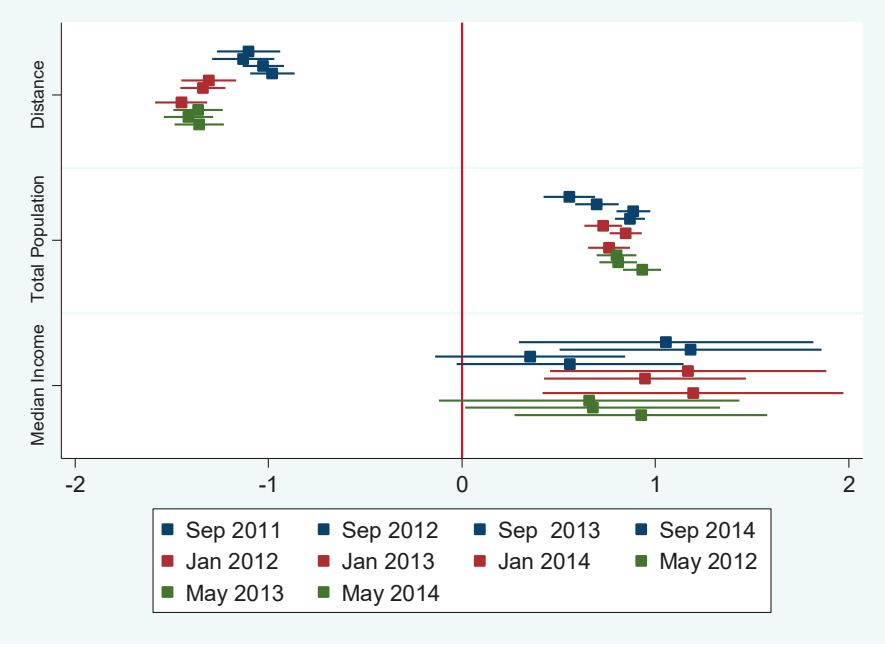

Figure 1. Variation in the regression coefficients across the different years and seasons.

The second step in this process was to investigate the effect of season on tourism demand by combining the data into three separate seasons: Season 1. January–May; Season 2. June–August; and, Season 3. September–December. This categorization of the season follows marketing strategies of the DMOs and historical tourism trends within the study area. Table 1 describes the regression coefficients for three seasons across the year. In general, the gravity model explains the tourism demand well enough (the range of R^2 is between 85 and 90) based on distance, population, and median income. As expected from previous studies, the physical distance from an origin to a destination has a greater effect on tourism demand, followed by population size and the median income. All explanatory variables (i.e., distance, population, and the median income for the season between January and May between September to December) turned out to be significant predictors explaining the number of inquiries, although the median income for the season between June and August was not statistically significant. Also, a comparison of coefficients using a Z-test [56] reveals that only the effect of physical distance for the season between September and December have a relatively weaker impact on tourism demand, as compared to other seasons.

Table 1. Regression results for three seasons.

	Season 1 (Jan.–May)		**Season 2 (Jun.–Aug.)**		**Season 3 (Sep.–Dec.)**		**Difference (Z-Test)**		
	B	**SE**	**B**	**SE**	**B**	**SE**	**1 vs. 2**	**1 vs. 3**	**2 vs. 3**
Constant	−8.78 **	3.05	−5.14	2.99	−8.96 ***	2.51			
Ln (Distance)	−1.41 ***	0.06	−1.45 ***	0.06	−1.12 ***	0.05	3.75 ***	4.55 ***	0.53
Ln (Population)	0.88 ***	0.04	0.93 ***	0.04	0.90 *	0.04	0.32	−0.49	−0.76
Ln (Median Income)	0.84 **	0.30	0.45	0.30	0.64 ***	0.25	−0.51	0.48	0.91
Adjusted R^2	0.85		0.89		0.89				

Note: DVs: log-transformed (number of information inquirers), *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

4.2. Individual-Level Analysis

The second stage of the analysis focuses on the effect of seasonality at the individual level. Table 2 summarizes the characteristics of the respondents and their differences between seasons. As can be seen, the majority (73.5%) of the respondents are female, and approximately half (47.6%) of the sample have an annual household income of at least $50,000. About 50% of the respondents live in the adjacent state, and approximately one-fourth of the sample lives within the state or far from the state but within the United States (25.6%, 23.7%, respectively). Analyses indicate that there are significant differences between seasons in terms of gender ($\chi^2 = 6.67,\ p < 0.05$) and distance from an origin to a destination ($\chi^2 = 21.00,\ p < 0.001$), but no statistical difference in annual household income ($\chi^2 = 19.12,\ p > 0.05$). Based on the pairwise comparisons, those groups visiting between June and August have a slightly higher proportion of female visitors and travelers living far from the state but within the United States. Also, a group visiting between January and May has a higher proportion of tourists living within the state than those of a group visiting between June and August. Based on these results, we can conclude that travelers' characteristics had little impact on travelers' decision to visit the destination across the seasons, but the physical distance to a destination certainly had an important role in determining the decision to visit the destination.

Table 2. Demographic characteristics of survey respondents (n = 2444).

	Season			Total	χ^2 Value
	Jan.–May	Jun.–Aug.	Sep.–Dec.		
	(21.0%)	(49.3%)	(29.7%)		
Gender (%)					6.67 *
Male	27.3	24.3 [c]	29.7 [c]	26.5	
Female	72.7	75.7 [c]	70.3 [c]	73.5	
Annual Household Income (%)					19.12
Less than $20,000	2.7	2.4	2.2	2.4	
$20,000–$29,999	6.3 [a]	3.3 [a]	4.5	4.3	
$30,000–$39,999	7.4	5.5	7.0	6.3	
$40,000–$49,999	7.6	8.8	8.8	8.6	
$50,000–$74,999	19.0	19.5	19.9	19.5	
$75,000–$99,999	15.4	14.3	13.7	14.4	
$100,000–$149,999	7.8	9.2	10.8	9.4	
$150,000–$199,999	2.3	2.5	3.1	2.6	
$200,000 or more	1.1	2.0	1.8	1.7	
Do not wish to comment	30.2	32.4	28.2	30.7	
Distance from origin to destination (%)					21.00 **
Lives within the state	28.7 [a]	23.1 [a,c]	27.8 [c]	25.6	
Lives in the next state	48.5	45.1	47.0	46.4	
Lives far but within the U.S.	19.4 [a]	27.2 [a,c]	20.8 [c]	23.7	
Lives outside of the U.S.	3.4	4.6	4.3	4.3	

Note: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$. Bonferroni's method was used to compare column proportions: [a] comparison between Jan.-May group and Jun.–Aug. group; [b] comparison between Jan.–May group and Sep.–Dec. group; [c] comparison between Jun.–Aug. group and Sep.–Dec. group.

This study also examines the differences in trip characteristics and trip outcomes between three seasonal groups. While only 38.8% of travelers have no prior visit experience, another one-third (34.3%) of respondents had visited a destination more than four times in the past three years. The most common trip purpose is weekend getaway (2–3 days, 32.7%), followed by day trip (25.7%) and vacation (4 days or more, 22.3%). The most common time to start planning a trip was between one and four weeks before traveling (31.0%), followed by more than two months before (27.8%). Slightly

less than half of the respondents (43.3%) considered their trip as the same compared to similar trips, whereas approximately 40% of the sample have gained better tourism experiences.

As can be seen in Table 3, there are significant differences in the number of total visits in the past three years ($\chi^2 = 72.75,\ p < 0.001$), trip purpose ($\chi^2 = 118.25,\ p < 0.001$), the timing of trip planning ($\chi^2 = 49.30,\ p < 0.001$), and revisit intention ($\chi^2 = 124.69,\ p < 0.001$) between three seasons. More specifically, during June and August, there are fewer highly experienced visitors (more than four times, 26.7%) but more first-time visitors (45.5%), as compared to other two seasons. More travelers in the group visiting between January and May traveled to a destination with the purpose of a day trip and business meeting/convention than other two seasons. On the other hand, vacation (4 days or more) and attending festival were the more popular trip purposes but visiting family and friends was less common for those who visited a destination between June and August. This finding contrasts with those who visited during June and August started their trip planning earlier than the other two groups (more than two months before the trip, 32.5%). At the same time, a smaller number of travelers visiting between June and August started their trip planning the day of the trip and between one and six days before traveling. In terms of revisit intention, more travelers who visited between January and May had the intention to revisit a destination (41.9%), followed by those who visited between September and December (31.0%). On the other hand, over one-third (36.5%) of the sample in the group visiting between June and August did not have any plan to revisit while less than one-fourth of respondents in other two groups had no intention to revisit in the near future. Interestingly, there is no difference in the overall satisfaction compared to similar trips ($\chi^2 = 8.76,\ p > 0.05$).

Table 3. Differences in trip characteristics between seasons.

	Season			Total	χ^2 Value
	Jan.–May	Jun.–Aug.	Sep.–Dec.		
	(21.0%)	(49.3%)	(29.7%)		
Total Visits in the Past 3 Years (%)					72.75 ***
Once	31.9 [a]	45.0 [a,c]	33.3 [c]	38.8	
2 times	13.6	16.4	13.5	14.9	
3 times	11.6	11.9	12.4	12.0	
4 times or more	42.9 [a]	26.7 [a,c]	40.8 [c]	34.3	
Trip Purpose (%)					118.25 ***
Just passing through	8.3	10.6	12.2	10.6	
Daytrip	30.3 [a]	21.6 [a,c]	29.2 [c]	25.7	
Weekend getaway: 2–3 days	34.2	31.6	33.2	32.7	
Vacation: 4 days or more	17.3 [a]	28.1 [a,c]	16.2 [c]	22.3	
Visit family/friends	20.6 [a]	15.1 [a,c]	22.1 [c]	18.3	
Business meeting/convention	6.1 [a]	2.8 [a]	3.8	3.8	
Sports tournament	2.2	1.9	2.2	2.0	
Group tour	2.4	2.8	2.1	2.5	
Reunion	2.4	2.4	2.0	2.3	
Attend festival	4.1 [a]	8.9 [a, c]	5.3 [c]	6.8	
Time of Planning (%)					49.30 ***
Never planned	4.5	3.0	3.6	3.5	
Day of trip	7.0 [a,b]	3.0 [a]	3.1 [b]	3.9	
1–6 days before trip	16.0 [a]	9.4 [a,c]	16.5 [c]	12.7	
1–4 weeks before trip	29.4	29.5	35.1	31.0	
5–8 weeks before trip	19.0	22.6	19.7	21.0	
More than two months before trip	24.1 [a]	32.5 [a,c]	22.0 [c]	27.8	

Table 3. *Cont.*

	Season			Total	χ^2 Value
	Jan.–May	Jun.–Aug.	Sep.–Dec.		
	(21.0%)	(49.3%)	(29.7%)		
Overall Satisfaction compared to similar trips (%)					8.76
Significantly worse	-	0.7	0.3	0.4	
Worse	2.0	2.4	2.2	2.2	
About the same	44.1	43.0	43.2	43.3	
Better	28.3	26.3	27.8	27.2	
Significantly better	15.0	15.0	16.3	15.4	
This was my only trip	10.5	12.7	10.3	11.5	
Revisit Intention (%)					124.69 ***
Yes, within the next 3 months	41.9 [a,b]	23.4 [a,c]	31.0 [b,c]	29.5	
Yes, 3–6 months from now	17.5 [a]	9.3 [a,c]	17.8 [c]	13.5	
Yes, more than 6 months from now	19.2 [a,b]	30.8 [a]	27.0 [b]	27.3	
No	21.4 [a]	36.5 [a,c]	24.1 [c]	29.7	

Note: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$. Bonferroni's method was used to compare column proportions: [a] comparison between Jan.–May group and Jun.–Aug. group; [b] comparison between Jan.–May group and Sep.–Dec. group; [c] comparison between Jun.–Aug. group and Sep.–Dec. group.

This study also examines the differences in advertising responses, the length of stay, and overall trip expenditure between seasons (see Table 4). Analyses indicate that there were significant differences in the length of stay (F-value $= 4.50$, $p < 0.05$), overall trip expenditure (F-value $= 3.20$, $p < 0.05$), and travelers' decision in response to attraction (F-value $= 4.07$, $p < 0.05$), restaurant (F-value $= 4.17, p < 0.05$), and accommodation (F-value $= 5.42$, $p < 0.01$) between seasons. However, traveler decisions responding to destination (F-value $= 1.57$, $p > 0.05$), event (F-value $= 0.77$, $p > 0.05$), and shopping (F-value $= 2.62, p > 0.05$) did not differ significantly across three seasonal groups in our study; specifically, travelers between June and August had statistically higher means of both the length of stay and overall trip expenditure than travelers between September and December, whereas a season between September and December had the lowest values of the length of stay and overall trip expenditure. In terms of advertising response, travelers visiting during summer appeared to be influenced more by attraction and accommodation-related advertising as compared to those who visited the winter season. However, restaurant related advertising was more influential on traveler decisions between January and May than the rest of the year.

Table 4. Differences in advertising responses, length of stay, and expenditures.

	Season			Total	*F*-Value
	Jan.–May	Jun.–Aug.	Sep.–Dec.		
Length of Stay (days)	2.78	3.09 [c]	2.76 [c]	2.94	4.50 *
Trip Expenditure ($)	715.25	780.62 [c]	660.73 [c]	734.26	3.20 *
Advertising responses					
Destination	0.30	0.29	0.33	0.31	1.57
Visit an attraction	0.53	0.56 [c]	0.49 [c]	0.53	4.07 *
Visit a restaurant	0.53 [a,b]	0.46 [a]	0.45 [b]	0.47	4.17 *
Attend an event	0.23	0.22	0.20	0.22	0.77
Visit a store/shop	0.50	0.51	0.46	0.49	2.62
Stay in a listed hotel	0.19	0.22 [c]	0.16 [c]	0.20	5.42 **

Note: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$. Scheffe's posthoc analysis was used: [a] comparison between Jan.–May group and Jun.–Aug. group; [b] comparison between Jan.–May group and Sep.–Dec. group; [c] comparison between Jun.–Aug. group and Sep.–Dec. group.

The final analysis in this study examined the influence of DMOs' advertising efforts on individual travelers' behaviors (i.e., expenditure, the length of stay) using seemingly unrelated regression (SUR) to assess the marginal impact of facet-level advertisements response on both overall trip expenditures and the length of stay where the dependent variables were log-transformed and where the moderating variables (i.e., traveler and trip characteristics) were included in the model to exclude the confounding effects. In this study, overall trip expenditure and the length of stay are assumed to be influenced by a set of travelers and trip characteristics and advertising responses simultaneously [57,58]. As such, two separate ordinary least squares (OLS) regression analyses—i.e., for both overall trip expenditure and the length of stay—would provide invalid parameter estimates due to the endogeneity problems and a potential correlation between the error terms in two separate equations. Therefore, SUR potentially solves this problem by estimating the parameters of multiple equations simultaneously [53].

Table 5 shows the SUR estimates and summary statistics for determinants of the overall trip expenditure and the length of stay for three seasons described earlier. All three SUR models show that the Breusch–Pagan test of independence of the residuals rejected the null hypotheses, indicating that the error terms in the two equations (i.e., expenditure, the length of stay) are correlated for all three seasons. The significance of this test indicates that the SUR results are a more efficient and appropriate estimation than two separate OLS estimations. The explanatory level for the individual equations' powers is relatively high with adjusted R^2 values between 0.50 and 0.60. Since both dependent variables were log-transformed, the exponentiated form of regression coefficients indicate the changes in the odds ratio of the overall trip expenditure and the length of stay for a one-unit change in the explanatory variable, holding all other variables constant.

The results of the SURS analysis indicate that travelers and trip characteristics and advertising responses had a significant effect on total trip expenditures and the length of the trip across all three seasons but to varying degrees. Only trip purpose (or motivation) had a positive and consistent relationship with both dependent variables for all three seasons. For example, weekend getaway (2–3 days) and vacation (4 days or more) positively associated with both trip spending and the length of stay throughout the year. Of course, day trip purpose shortened the length of the trip. This result is consistent with the earlier tourism demand research, suggesting that the purpose of the trip is one of the most critical determinants of traveler behaviors depending on the seasonality [25,36].

However, the results also reveal several vital differences among the three groups. Firstly, although two types of trip purpose have consistent impacts, the purpose of the trip, in general, had differential impacts on trip spending and the length of stay across the three respective seasons. For example, the coefficients of weekend and vacation on trip spending for the seasons between June and August were relatively lower than other seasons. At the same time, business meeting/conversion purpose significantly related to both spending and the length of stay for those who visited during September and December but not for the group visiting between January and May. Also, group tour and reunion were associated with either trip spending or trip length for a particular season. Secondly, past visit experience only had an impact on those who visited between June and August, but not other seasons. It is important to note that past experiences influenced trip spending but not the length of stay until they visited a destination three times; but once travelers had more than four times, prior visit experience influenced the length of stay as well. Thirdly, the travel party size also correlated with trip spending but not on the length of the trip, suggesting that, on average, larger travel parties spent more money during their trip. However, there was no correlation with trip spending and the length of stay for those who visited between September and December. Fourthly, short trip planning period (i.e., less than one month before traveling) was not correlated with any of the dependent variables; but, longer trip planning had a significant positive impact only on the length of stay for the group visiting between January and May, and on the trip spending for those travelers between June and August. Fifth, the distance from the origin to a destination did influence the length of stay for summer season vacationers (between June and August) and on the trip spending and the length of stay at some extent for those visiting between September and December. Interestingly, physical distance did not correlate with both

dependent variables for the season between January and May and overall trip spending for the season between June and August.

Table 5. Seemingly unrelated regression (SUR) estimation results.

	Jan.–May		Jun.–Aug.		Sep.–Dec.	
	Spending	**Length of Stay**	**Spending**	**Length of Stay**	**Spending**	**Length of Stay**
	Beta	**Beta**	**Beta**	**Beta**	**Beta**	**Beta**
female	0.15	−0.02	0.02	0.01	−0.33 *	−0.15 *
$20,000–$29,999	0.19	0.01	−0.07	0.03	−0.20	−0.18
$30,000–$39,999	0.23	−0.09	0.01	0.09	−0.22	−0.10
$40,000–$49,999	0.62	0.08	−0.06	−0.09	−0.28	−0.05
$50,000–$74,999	0.08	−0.05	0.05	0.00	−0.24	0.05
$75,000–$99,999	0.44	−0.08	0.28	0.12	−0.22	−0.08
$100,000–$149,999	0.21	0.14	0.08	0.08	0.01	−0.11
$150,000–$199,999	0.03	−0.13	−0.02	−0.10	0.45	0.14
$200,000 or more	0.81	0.40	0.50	0.09	0.22	−0.11
Daytrip	0.13	−0.25 *	−0.22 **	−0.54 ***	0.06	−0.28 **
Weekend getaway—2–3 days	0.71 ***	0.39 ***	0.48 ***	0.22 ***	0.81 ***	0.35 ***
Vacation—4 days or more	1.22 ***	0.65 ***	0.86 ***	0.66 ***	1.21 ***	0.79 ***
Visit family/friends	0.01	0.26 *	−0.27 *	0.07	0.22	0.31 ***
Business meeting/convention	0.62	−0.06	−0.03	0.31 *	0.78 *	0.40 *
Sports tournament	0.29	−0.04	0.43	0.11	0.63	0.21
Group tour	0.48	−0.33	−0.19	−0.31	−1.25 *	−0.23
Reunion	0.37	0.51 *	0.78 **	0.27	0.49	0.15
Past Experience—2 times	−0.14	−0.02	0.26 *	0.11	−0.09	−0.05
Past Experience—3 times	0.07	−0.11	0.35 *	0.06	−0.01	−0.05
Past Experience—4 times or more	−0.12	−0.14	0.23 *	0.15 *	0.10	0.01
Travel Party Size: 2	−0.05	−0.01	0.09	−0.05	0.18	0.06
Travel Party Size: 3–5	0.33	−0.05	0.36 *	−0.06	0.44	0.08
Travel Party Size: Over 6	1.23 ***	0.25	0.79 ***	0.01	0.57	0.04
Day of trip	0.30	0.52	−0.34	−0.30	0.08	0.18
1–6 days before trip	0.18	0.49	−0.34	−0.10	0.38	0.03
1–4 weeks before trip	0.36	0.47	0.25	−0.03	0.64	0.26
5–8 weeks before trip	0.74	0.64 *	0.36	0.07	0.87 *	0.39 *
More than 2 months before trip	0.71	0.60 *	0.55 *	0.07	0.78 *	0.30
Lives in next state	0.18	0.00	0.11	0.02	0.16	−0.03
Lives far from state (within US)	0.42	0.14	00.21	0.14 *	0.29	0.28 **
Lives outside of Unites States	0.05	−0.26	0.32	0.42 **	0.78 *	−0.14
Visit a destination	0.13	−0.09	−0.04	−0.09	−0.13	0.03
Visit an attraction	0.12	0.18	0.14	0.10 *	−0.01	0.13
Visit a restaurant	0.19	0.10	0.14	0.14 **	0.22	0.07
Attend an event	−0.15	−0.07	0.19	0.03	−0.04	−0.06
Visit a store/shop	0.07	0.07	0.37 ***	0.13 **	0.43 **	0.05
Stay in a listed hotel	0.20	−0.09	0.03	−0.05	0.46 **	0.21 *
_cons	4.04 ***	0.03	4.52 ***	0.51 **	4.34 ***	0.25
Adjust R^2	0.52	0.51	0.50	0.60	0.50	0.59
Correlation between the errors of the two equations	0.38		0.32		0.38	
Breusch-Pagan test of independence	$\chi^2 = 28.07$ $p < 0.001$		$\chi^2 = 44.48$ $p < 0.001$		$\chi^2 = 35.48$ $p < 0.001$	

Note: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$. DVs are log-transformed to perform analyses.

Table 5 also shows the regression coefficients for the advertisement response for trip-related decision facets and indicates that the relationships between advertising response and dependent variables (i.e., both total trip expenditures and the length of stay) were substantially different among the three groups. In particular, for the travelers who visited during June and August, advertising

related to shopping decision influenced to a greater extent overall trip expenditure while advertising related to attraction, restaurant, and shopping decisions influenced the length of stay. On the other hand, the overall trip expenditure for those visiting between September and December were influenced by advertisement response related to shopping and accommodation decisions, whereas only accommodation decision influenced on the decision related to the length of stay. Interestingly, there were no statistically significant impacts for the season between January and May.

5. Discussion

Destination marketing organizations often focus much of their efforts on trying to mitigate the effect of seasonality on tourism demand by developing a range of strategies to attract visitors. This study, therefore, aims to understand the differences in tourism demand at the destination level and individual characteristics and tourists' behaviors at the individual level across the seasons. By combining two different levels, the results of this study provide useful information to understand the essential construction of tourism seasonality, which helps to develop a long-term marketing strategy and make a destination economically sustainable.

There are several theoretical and managerial implications. For the theoretical implications, this study empirically confirms the heterogeneity of tourists' behaviors depending on seasons by using analyses at two different levels—i.e., individual and destination. The results from both aggregated and disaggregated analyses are consistent with earlier studies. In particular, a market-level analysis using a gravity model indicates, as previous studies have found [6,23], that tourism demand (and therefore the factors predicting demand) is quite systematic in its response to seasonality in terms of timing and magnitude. Furthermore, physical distance to a destination is the only factor differentiating seasonal demand, which, again, is consistent with the previous research [25,34]. Individual-level analyses also indicate that traveler characteristics and their behaviors differ significantly between seasons. This study includes two separate analyses to understand the individual travelers' behaviors in more detail: (1) identifying the differences in individual and trip characteristics between the seasons; and, (2) comparing the impact of those characteristics on trip spending and the length of stay between the seasons. The findings, consistent with the previous studies [25,35,36], show that distance to a destination, trip purpose, and the number of prior visit experiences in the past three years were essential factors explaining differences in travelers' characteristics between seasons.

From the DMOs' perspective, the results of this study would provide many possible solutions to combat the negative impact of tourism seasonality. In general, this study found that the length of stay and the overall trip expenditures as an outcome of tourism activities at the destination differ significantly between the seasons; besides, advertising responses for trip-related facet decisions vary significantly. These differences might be caused not only by the fact that a destination provides different tourism products/services but also because travelers visiting during a specific season differ significantly in terms of purpose and, therefore, they differ in terms of basic demographic characteristics. These results suggest that DMOs should successfully develop an effective marketing strategy that promotes different aspects of tourist destinations. Second, more importantly, these traveler behaviors (i.e., overall trip spending, the length of stay) respond differently in terms of trip characteristics, and advertising response. In particular, trip purpose, i.e., weekend getaway and vacation, consistently correlates with trip spending and the length of stay across the year, although the magnitude of impacts differs. As such, DMOs may focus on attracting these groups of tourists as they spend more trip-related expenditure and stay longer within the destination, as compared to other groups throughout the year. Third, this study showed differential effects of destination advertising across the seasons. Among advertising responses regarding trip-related decision facets, shopping and accommodation have positive associations with trip spending and the length of stay for those who visited between June and December. Attraction and restaurant-related decisions are related to changes in the length of stay during the summer season (June–August). On the other hand, destination and event-related advertising does not influence traveler behaviors (e.g., expenditure, trip length) throughout the year. However, the results presented

in this study indicate that the impact of advertising regarding destination and event is consistent across seasons. As such, it is clear from the disaggregated analyses that destination marketers need to be quite sensitive to the seasonal changes in traveler characteristics when designing their marketing programs.

This study has several limitations. First, this study covered only one single destination located in the Midwestern United States. Different tourism destinations will have different demand functions and seasonality. Second, although a gravity model showed relatively higher explanatory powers, this study may neglect some important explanatory variables like destination attractiveness; therefore, further research should consider other variables determining tourism flows and tourism demand. Third, this study considered information inquirers as a proxy for tourism demand at the destination-level analysis. However, it may not fully cover tourism demand accurately. Therefore, a future study should consider other variables to accurately predict future tourism demand. Lastly, this study adjusted for non-response bias potentially existed in the data. However, the collected data might have suffered from selection bias as well. Therefore, future research should put more effort into the data collection procedure. Big data analytics could solve the potential issue related to the selection bias.

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Determinants and Mechanisms of Tourists' Environmentally Responsible Behavior: Applying and Extending the Value-Identity-Personal Norm Model in China

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Abstract: It is well recognized that tourists' environmentally responsible behavior is a prominent contributor to the sustainable development of tourist destinations. Based on the original Value-Identity-Personal norm (VIP) model and self-efficacy theory, this study proposes an extended VIP model for exploring the generalized determinants of tourists' environmentally responsible behavior and investigating the impact mechanism of this behavior in China. A total number of 435 self-reported questionnaires were collected on a professional online survey platform. Our research results indicated that the extended VIP model could significantly and validly explain tourists' environmentally responsible behavior. Specifically, biospheric values have an indirect but rooted effect on tourists' environmentally responsible behavior. Furthermore, two indirect paths play the same mediational role between biospheric values and tourists' environmentally responsible behavior. The findings expand the application field of the VIP model, contribute to a better understanding for academic researchers of tourists' environmentally responsible behavior and shed light on managerial implications for practitioners in the sustainable development of tourist destinations.

Keywords: biospheric values; environmental self-identity; environmental self-efficacy; personal norm; tourists' environmentally responsible behavior; China

1. Introduction

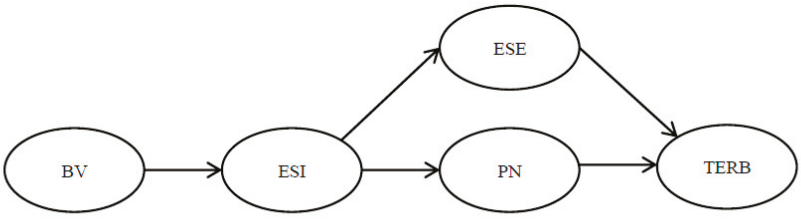
With the sustained and steady development of the economy in recent years, tourism has experienced rapid growth in China. In 2018, the Chinese tourism industry contributed a total of 9.94 trillion Renminbi to GDP, directly and indirectly promoted 79.91 million in employment, and notably, Chinese tourists made 5.539 billion domestic trips [1]. Although a large number of tourists have promoted the economic development and population employment of tourist destinations, they have also brought about negative impacts on the environment of tourist destinations (e.g., discarding litter at will, collecting flora and fauna specimens, and arbitrarily inscribing and carving). The environment (including natural, cultural, and historical resources) is an important factor to promote the development of tourism, and is an indispensable contribution to the attractiveness and desirability of tourist destinations [2]. Therefore, how to achieve the sustainable development of tourist destinations has become an urgent problem for China.

Facing the dilemma of the conservation of environmental resources between economic development and sustainable tourism, government authorities and tourist destination managers have often adopted regulatory measures such as restricting the scale of tourists, controlling tourists' behaviors, and funding the protection of environmental resources through tourism income. However, the appropriateness and effectiveness of these initiatives have been questioned by academic researchers [3]. For instance, some scholars suggest that regulatory measures come at the expense of tourism income and tourist experiences to realize sustainable tourism, and it is also extremely difficult to correct the inappropriate behavior of tourist [4,5]. Traditional management and regulation strategies essentially presuppose that tourists have negative impacts on the environmental resources of tourist destinations [6]. Nevertheless, many findings indicate that tourists have proactive environmental friendly behaviors during their trips, such as picking up their own litter [7], protecting rare flora and fauna, conserving historic and cultural buildings and statues [8], and volunteering and donating for the sustainable development of tourism destinations [9,10]. These behaviors of tourists are also referred to as Tourists' Environmentally Responsible Behaviors (TERB), which have been described as minimizing environmentally unfriendly activities and displaying a willingness to protect the environment in the context of a tour by Lee, Jan, and Yang [11]. The researchers deemed that TERB are critical for the sustainable development of tourist destinations [8,11,12], and that cultivating and guiding TERB can greatly reduce the costs of protecting the environmental resources of tourist destinations [4], thereby coping with the dilemma of the environment in sustainable tourism. Hence, exploring the reasons and mechanisms of TERB has become an important concern for academic researchers.

Previous studies on the reasons for TERB were mainly divided into three aspects: the tourists' demographic characteristics (including gender, age, education, and income) [13–16], the tourists' psychological cognitive and emotional factors (e.g., environmental knowledge, environmental commitment, environmental sensitivity, place attachment, and travel experience) [8,16–20], and situational factors (e.g., social and subjective norms) [7,21,22]. Besides, several theoretical frameworks, such as the theory of reasoned action (TRA) [23,24], the theory of planned behavior (TPB) [7,21,25], the norm activation model (NAM) [22,26], and the value-belief-norm (VBN) theory [27,28], have been used to understand the mechanisms of TERB. Although these studies contribute to the understanding of the causes and mechanisms of the formation of TERB, little research has been conducted in the Chinese context. Furthermore, the results of these studies also have some limitations. For instance, the TPB only explained 25%-30% variance of a specific behavior [29], and the predictive validity of the VBN theory was weaker when the environmentally responsible behavior was more costly [30]. Therefore, the Value-Identity-Personal norm (VIP) model was proposed based on the VBN theory [31] and was used to significantly examine employees in the organizational context [32]. However, the VIP model has not been empirically tested on TERB, especially in the Chinese context.

To fill these research gaps, the extended VIP model (see Figure 1) is proposed to assess the effects of antecedents and mechanisms on TERB. The three main aims of this study are the following: (1) verifying the validity of the VIP model on TERB in the Chinese context; (2) adding Environmental Self-Efficacy (ESE) to the VIP model and testing the predictive ability of the extended VIP model; and (3) analyzing the formation mechanism of TERB and comparing the mediation effects of two indirect paths. The findings could expand the application field of the VIP model, increase the understanding of TERB, and provide effective and efficient management suggestions to practitioners in the sustainable development of tourist destinations.

The framework of the study was organized as follows: firstly, the researchers conducted a review of the original and extended VIP model and proposed the theoretical hypotheses; secondly, the methodology was presented, including measurement instruments, data collection processes, and statistical analysis methods; thirdly, we performed the data analysis; next, we discussed the results of the analysis; and finally, we provided the conclusions, academic contributions, managerial implications, and future research suggestions.



Notes: BV = Biospheric Values, ESI = Environmental Self-Identity, PN = Personal Norm, ESE = Environmental Self-Efficacy, TERB = Tourists' Environmentally Responsible Behavior.

Figure 1. The extended VIP model.

2. Literature Review and Hypotheses

2.1. The Value-Identity-Personal Norm (VIP) Model

The Value-Identity-Personal norm (VIP) model was originally proposed by van der Werff and Steg based on the VBN theory [31]. Compared with the VBN theory (integrating the value theory, the New Environmental Paradigm, and the norm activation theory into a causal chain) [30], the VIP model has two main differences: on the one hand, the causal chain of the VIP model is more general and simple than that of the VBN model; on the other hand, the VIP model pays close attention to general considerations of eco-friendly behavior [31]. The VIP model comprised three constructs in explicating the formed mechanism of TERB, namely biospheric values (BV), environmental self-identity (ESI), and personal norm (PN). This model assumes that individuals' general environmental considerations (including BV and ESI) have a rooted but indirect effect on their environmentally responsible behaviors [31]. Specifically, the BV, reflecting tourists' determination to perform TERB based on the welfare of the biosphere [33], could increase tourists' ESI. Next, the ESI, describing the extent to which a tourist considers himself/herself to be an environmentally responsible person [34], could strengthen tourists' PN. Finally, the PN, representing tourists' feelings of moral obligation to engage in environmentally friendly behavior [35], could motivate tourists to carry out TERB.

Before the VIP model was proposed as a whole, several researchers had already found that portions of the VIP model were significant and valid in explaining environmentally friendly behavior. For example, some findings found that one's ESI could mediate the relationship between BV and eco-friendly consumer behaviors (e.g., green energy behaviors, the preferences for sustainable products, and recycling) [34,36], while others found that one's PN could mediate the relationship between ESI and the intent to take green energy as well as the sustainable product preferences [37,38]. Besides, the results of recent research have shown that the VIP model could not only significantly predict the pro-environmental behaviors of employees in the organizational context [32], but also validly explain individuals' interests and adoption of green energy system [31]. Based on these researchers' findings, we proposed the VIP model could significantly explain TERB in China's context. Hence, this study proposed the following hypotheses:

Hypothesis 1 (H_1). *Biospheric Values positively affect Environmental Self-Identity.*

Hypothesis 2 (H_2). *Environmental Self-Identity positively affects Personal Norm.*

Hypothesis 3 (H_3). *Personal Norm positively affects Tourists' Environmentally Responsible Behavior.*

2.2. The Extended Role of Environmental Self-efficacy in the VIP Model

Self-efficacy was described by Bandura in 1977 as the self-belief of an individual's ability to perform a specific task [39], which could contribute to the adoption and performance of an individual's

behavior [40]. Bandura pointed out that there is no general self-efficacy because one's self-efficacy is closely related to specific situations and widely varied in different areas [41]. Therefore, from the viewpoint of Bandura, this study defines the person's self-efficacy in the pro-environmental context as Environmental Self-Efficacy (ESE), which refers specifically to the belief that individuals have the ability to perform environmentally friendly behaviors to alleviate environmental problems [42].

Social cognitive theory holds that individual self-efficacy is mainly influenced by four kinds of information: (1) personal experience, such as the past experience of success or failure; (2) indirect experience (e.g., stemming from the experiences of others); (3) verbal persuasion (e.g., others' evaluation and persuasion, social media); and (4) emotional (physiological) arousal [43]. However, the impact of this information on self-efficacy is not automatic but requires a range of cognitive processes, such as selective attention, assessment, and judgment by individuals [44]. Compared with the information itself, the individual's cognitive processing about this information plays a more crucial role in the formation of self-efficacy [41]. Hence, when one shapes some kind of identity with himself/herself, he or she has a higher self-efficacy in this field. For example, corporate employees' creative self-identity can enhance their creative self-efficacy in ongoing work contexts [45]; a regular exerciser's self-identity can strengthen their self-regulatory efficacy in the exercise context [46]; and, a postgraduate's drinking self-identity can decrease their drink-refusal self-efficacy in the college [47]. Therefore, this study proposed that individuals' Environmental Self-Identity (ESI) would positively influence his or her ESE in a trip. Specifically, when someone regards himself/herself as an environmentally friendly person, he/she will pay more attention to the information related to ESE in the tourist destination, and thus he or she is more likely to form a higher ESE.

In addition, previous studies have shown that one's ESE can significantly and positively affect pro-environmental behaviors in different contexts, such as recycling [48], using public transport or cycling [49], and conserving water [50]. Furthermore, several empirical results indicated that ESE can validly contribute to different TERBs including engaging in recycling [51], going on environmental volunteer trips [9], and participating in campaigns and disseminating information for the sustainability of tourist destinations [10]. Hence, this study proposes the following hypotheses:

Hypothesis 4 (H_4). *Environmental Self-Identity positively affects Environmental Self-Efficacy.*

Hypothesis 5 (H_5). *Environmental Self-Efficacy positively affects Tourists' Environmentally Responsible Behavior.*

Based on the above literature review and the development of theoretical hypotheses, this study tested the proposed model, as seen in Figure 1.

3. Methodology

3.1. Measurement Instruments

In this study, the survey questionnaire was divided into two main parts. The first part included five latent variables: biospheric values, environmental self-identity, personal norm, environmental self-efficacy, and tourists' environmentally responsible behavior. All the measurement items (see Appendix A for details) were mainly adapted from previous environmentally responsible behavior studies as follows.

The 4-item biospheric values scale was developed by de Groot and Steg [33], which were validated in previous studies [27,31,32]. The 3-item environmental self-identity scale was revised and derived from previous studies [52–54]. The 4-item personal norm scale was adapted from Steg and De Groot [55], which was used to examine environmentally friendly behavior of employees in the organizational context [32]. The 4-item environmental self-efficacy scale was adapted from Strzelecka, Woosnam, and Nisbett [9]. The 4-item tourists' environmentally responsible behavior scale was selected and modified based on Chiu, Lee, and Chen [12] and Pan and Liu [8]. All items of these scales were

originally written in English and translated into Chinese by the researchers. In order to minimize translation bias and ensure conceptual equivalence of these items, one native English-speaker familiar with Chinese was asked to translate these Chinese items into English, and two academics specializing in tourism management were invited to evaluate the content validity of these items. All variables were measured on a 7-point Likert scale; BV ranged from "not very important" (1) to "very important" (7), while the other variables ranged from "strongly disagree" (1) to "strongly agree" (7).

The second part was the respondents' demographic variables, including gender, age, educational level, occupation, and monthly income.

3.2. Data Collection

Data were collected via the professional online survey platform: Questionnaire Star (https://www.wjx.cn/), which is one of the largest online survey platforms in China. The platform has more than 2.6 million members and no less than 1 million active respondents every day that are willing to fill out questionnaires. The respondents were randomly selected through paid services in the platform's sample pool. Moreover, participants who visited natural destinations in the past month were eligible to participate in the survey. Additionally, we also randomly arranged 19 items of all latent variables to reduce mutual interference between different items of latent variables. Finally, a total of 435 sample data were collected within 2 weeks. The respondents had a relatively balanced male-to-female ratio (50.8% vs. 49.2%) and 72.2% of respondents were between the ages of 21 and 40. More details are shown in Table 1.

Table 1. The demographic results of the respondents.

Variable & Category	Frequency	Percentage (%)
Gender		
Male	221	50.8
Female	214	49.2
Age (Years old)		
≤20	84	19.3
21–30	167	38.4
31–40	147	33.8
41–50	26	6
≥51	11	2.5
Monthly Income (RMB)		
≤ 2000	40	9.2
2001–4000	67	15.4
4001–6000	94	21.6
6001–8000	93	21.4
8001–10,000	92	21.1
≥10,001	49	11.3
Education Level		
High school or below	13	3
College	73	16.8
Bachelor	317	72.9
Postgraduate	32	7.4
Occupation		
Government public official	51	11.7
Corporate employee	196	45.1
Teacher or Doctor	81	18.6
Private owner	47	10.8
Others	60	13.8

3.3. Data Analysis

First, the descriptive statistics (e.g., Skewness, Kurtosis, and Demographic profile of the sample) were analyzed using IBM SPSS Statistics 24.0 statistical software. Second, the reliability and validity of all variables were analyzed using the method of Covariance-Based Structural Equation Modeling (CB-SEM) [56], and IBM SPSS Amos 24.0 statistical software. Third, the Ordinary Least Squares (OLS) method was used by IBM SPSS Statistics 24.0 software in the linear regression analysis. Lastly, the mediation effect was analyzed by the bootstrap test method [57], using the Hayes PROCESS (version 3.3) macro in the IBM SPSS Statistics 24.0 software package.

4. Results

4.1. Descriptive Statistical Analysis

As shown in Table 1, among the 435 respondents, there were slightly more male (50.8%) than female (49.2%) participants. They were mainly distributed in two age groups: 21 to 30 (38.4%) and 31 to 40 (33.8%). Their monthly income followed an approximately normal distribution. Most of them (80.3%) had bachelor or postgraduate educational experience. Nearly half (45.1%) were employees of corporations. These demographic results were basically consistent with the sample pool of the specialized online survey platform, Questionnaire Star.

Table 2 shows that the values of skewness of Tourists' Environmentally Responsible Behavior, Personal Norm, Environmental Self-Efficacy, Environmental Self-Identity, and Biospheric Values were less than one, and the values of kurtosis for these variables were less than three. The coefficients of skewness and kurtosis indicated that the sample data were approximately in accordance with a normal distribution. Moreover, according to the suggestion of Curran, West, and Finch [58], the results of skewness and kurtosis also showed a normal distribution for all the items of these variables.

Table 2. The descriptive analysis of variables.

Variable & Item	Mean	SD	Skewness	Kurtosis
Biospheric Values (BV)	5.83	0.78	−0.77	0.73
BV1	5.72	0.92	−0.69	0.88
BV2	5.89	0.88	−0.71	0.74
BV3	5.91	0.88	−0.46	−0.20
BV4	5.80	1.01	−1.07	2.12
Environmental Self-Identity (ESI)	5.63	0.94	−0.85	0.95
ESI1	5.70	0.96	−1.01	1.90
ESI2	5.62	1.05	−0.58	0.19
ESI3	5.57	1.04	−0.65	0.39
Personal Norm (PN)	5.73	0.75	−0.53	0.85
PN1	5.59	0.92	−0.63	1.00
PN2	5.76	0.87	−0.31	−0.15
PN3	5.81	0.85	−0.17	−0.60
PN4	5.76	0.98	−0.52	−0.19
Environmental Self-Efficacy (ESE)	5.71	0.81	−0.76	2.24
ESE1	5.75	0.98	−0.85	1.94
ESE2	5.84	0.95	−1.00	2.69
ESE3	5.43	1.12	−0.56	0.33
ESE4	5.82	0.91	−0.65	1.20
Tourists' Environmentally Responsible Behavior (TERB)	5.07	1.12	−0.90	0.89
TERB1	5.08	1.15	−0.80	0.90
TERB2	5.10	1.21	−0.73	0.56
TERB3	5.08	1.24	−0.79	0.52
TERB4	5.01	1.22	−0.77	0.69

4.2. Confirmatory Factor Analysis

Confirmatory factor analysis (CFA) consisted of five latent variables and nineteen observed items. The results of the CFA (maximum likelihood method) were presented as follows: Chi-squares = 352.978, DF = 142, Chi-squares/DF = 2.486, RMR = 0.042, RMSEA = 0.059, GFI = 0.918, CFI = 0.965, NFI = 0.944, IFI = 0.965, and TLI = 0.958. According to Hu and Bentley [59], the valid fit indices of the CFA were that Chi-squares/DF was less than 3, RMR was less than 0.05, RMSEA was less than 0.08, and GFI, CFI, NFI, IFI, and TLI were each more than 0.90. All fit indexes indicated that the measurement model had an acceptable model fit.

As shown in Table 3, the Composite Reliability (CR) values ranged from 0.843 to 0.946 and had a larger than threshold (0.7) of reliability [60], which indicated that the reliability of all variables was good. Moreover, the convergent validity was assessed through the standardized factor loadings and the Average Variance Extracted (AVE). All standardized factor loadings of these items ranged from 0.661 to 0.923 and no less than the threshold (0.6) of acceptance [61], and the AVE values ranged from 0.573 to 0.815 and had greater than the least value (0.5) of limitation [62]. These two indexes showed that the convergent validity of all constructs was qualified.

Table 3. The analysis results of reliability and convergent validity.

Variable & Item	Std. Factor	SMC	CR	AVE
Biospheric Values (BV)			0.868	0.623
BV1	0.784	0.615		
BV2	0.818	0.670		
BV3	0.814	0.663		
BV4	0.739	0.546		
Environmental Self-Identity (ESI)			0.915	0.781
ESI1	0.849	0.722		
ESI2	0.902	0.813		
ESI3	0.900	0.811		
Personal Norm (PN)			0.849	0.586
PN1	0.760	0.578		
PN2	0.821	0.674		
PN3	0.810	0.656		
PN4	0.661	0.437		
Environmental Self-Efficacy (ESE)			0.843	0.573
ESE1	0.796	0.634		
ESE2	0.783	0.613		
ESE3	0.670	0.448		
ESE4	0.773	0.598		
Tourists' Environmentally Responsible Behavior (TERB)			0.946	0.815
TERB1	0.899	0.809		
TERB2	0.905	0.819		
TERB3	0.923	0.853		
TERB4	0.883	0.780		

Based on these results, the reliability and validity of all variables were acceptable, which meant that the sample data could be applied in the next analysis.

According to the suggestion of Fornell and Larcker [62], discriminant validity can be evaluated by comparing the square root of the AVE of all variables and the Pearson correlation coefficients between paired variables. If the square root of AVE is bigger than all the Pearson correlation coefficients, the discriminant validity is adequate. As shown in Table 4, the results showed that all the values of the Pearson correlation matrix were smaller than the square roots of AVE for each latent variable.

Table 4. The results of discriminant validity analysis.

	BV	ESI	PN	ESE	TERB
BV	0.789				
ESI	0.472	0.884			
PN	0.680	0.594	0.766		
ESE	0.682	0.563	0.732	0.757	
TERB	0.482	0.398	0.542	0.572	0.903

Notes: BV = Biospheric Values, ESI = Environmental Self-Identity, PN = Personal Norm, ESE = Environmental Self-Efficacy, TERB = Tourists' Environmentally Responsible Behavior. Diagonal values represent the square root of AVE for each variable; underneath the diagonal is the Pearson correlation matrix of all variables.

4.3. Linear Regression Analysis

This study used linear regression to assess the validity of H_1, H_2, H_3, H_4, and H_5. The results are shown in Table 5. In Model 1, BV could significantly influence the 22.3% variance of ESI ($\beta = 0.569$, $p < 0.001$), which suggested that H_1 was supported by the data. In Model 2, ESI could significantly and positively affect PN ($\beta = 0.471$, $p < 0.001$), which meant H_2 was supported. In Model 3, TERB was significantly influenced by PN ($\beta = 0.813$, $p < 0.001$), which suggested H_3 was supported. In Model 4, ESI could significantly explain the 31.6% variance of ESE ($\beta = 0.485$, $p < 0.001$), which showed H_4 was supported. In Model 5, the 36.0% variance of TERB ($F = 121.347$, $p < 0.001$) was significantly influenced by ESE and PN. Specifically, the 6.6% variance of TERB was separately and significantly increased by ESE ($\Delta F = 44.589$, $p < 0.001$), which indicated H_5 was supported. Moreover, compared with the effect of PN on TERB (b = 0.266), the effect of ESE on TERB was more important (b = 0.377).

Table 5. The results of linear regression analysis.

	Dependent Variables											
	ESI (Model 1)				PN (Model 2)				TERB (Model 3)			
	β	b	t	*p*	β	b	t	*p*	β	b	t	*p*
Predictors												
BV	0.569	0.472	11.153	***								
ESI					0.471	0.594	15.375	***				
PN									0.813	0.542	13.416	***
Model												
F		124.389		***		236.385		***		179.986		***
R^2	0.223				0.353				0.294			
	ESE (Model 4)				TERB (Model 5)							
	β	b	t	*p*	β	b	t	*p*				
Predictors												
ESI	0.485	0.563	14.158	***								
PN					0.399	0.266	4.407	***				
ESE					0.519	0.377	6.678	***				
Model												
F		200.455		***		121.347		***				
R^2	0.316				0.360							
ΔF						44.589		***				
ΔR^2					0.066							

Notes: BV = Biospheric Values, ESI = Environmental Self-Identity, ESE = Environmental Self-Efficacy, PN = Personal Norm, TERB = Tourists' Environmentally Responsible Behavior, β = Unstandardized Regression Coefficients, b = Standardized Regression Coefficients, "**" represents $p < 0.01$, "***" represents $p < 0.001$.

4.4. Mediation Effect Analysis

In order to further analyze the formed mechanism of TERB, the mediation effects of ESI, ESE, and PN in the relationship between BV and TERB were examined, and the method of percentile bootstrap confidence interval was applied [63]. Specifically, 5000 bootstrap samples and 95% confidence interval were set in PROCESS 3.3, and Model 6 and Model 81 tested the original and extended VIP

models, respectively. The results are detailed in Table 6. In Model 6, the indirect effect of BV on TERB was significant (LLCI = 0.048, ULCI = 0.129), which indicated the original VIP model was valid in the Chinese context. In Model 81, two indirect effects of BV on TERB were significant. The mediation effect of Ind1 was 0.051 (LLCI = 0.015, ULCI = 0.094) and that of Ind2 was 0.069 (LLCI = 0.034, ULCI = 0.107), which indicated the extended VIP model was supported by the data. Moreover, the direct effect of BV on TERB was not significant (LLCI = −0.027, ULCI = 0.291), which suggested the two indirect paths played a full mediational role in the relationship between BV and TERB. Furthermore, although the effect of Ind1 was less than the effect of Ind2, the effect of "Ind1 minus Ind2" was not significant (LLCI = −0.079, ULCI = 0.046), which indicated that Ind1 and Ind2 played the same mediated role in the relationship between BV and TERB.

Table 6. Total, direct, and indirect effect analysis results.

Model	Path	Effect	Std. Error	t-Value	LLCI	ULCI
6	The total effect of BV on TERB					
	BV → TERB	0.690	0.060	11.437	0.571	0.808
	The direct effect of BV on TERB					
	BV → TERB	0.284	0.078	3.647	0.131	0.437
	The indirect effect of BV on TERB					
	BV → ESI → PN → TERB	0.083	0.021	3.952	0.048	0.129
81	The total effect of BV on TERB					
	BV → TERB	0.690	0.060	11.437	0.571	0.808
	The direct effect of BV on TERB					
	BV → TERB	0.132	0.081	1.635	-0.027	0.291
	The indirect effects of BV on TERB					
	Ind1: BV → ESI → PN → TERB	0.051	0.020	2.548	0.015	0.094
	Ind2: BV → ESI → ESE → TERB	0.069	0.019	3.714	0.034	0.107
	Ind1 minus Ind2	−0.018	0.031	−0.595	−0.079	0.046

Notes: BV = Biospheric Values, ESI = Environmental Self-Identity, ESE = Environmental Self-Efficacy, PN = Personal Norm, TERB = Tourists' Environmentally Responsible Behavior.

5. Discussion and Conclusions

This study proposed an extended VIP model based on the original VIP model and self-efficacy theory, and systematically explored the relationship between BV, ESI, ESE, PN, and TERB. Through empirical testing, all the hypotheses of the proposed model were supported by the sample data. Firstly, H_1 indicated that BV had a positive relationship with ESI, which meant that the higher tourists' BV, the stronger their ESI in the tourist destinations. This is consistent with the findings of van der Werff, Steg, and Keizer [34,54], who confirmed that one's BV would significantly strengthen his/her ESI. Secondly, H_2 showed that tourists' ESI was positively related to PN, which indicated that the stronger one's ESI in a trip, the more strongly a visitor had PN. This is in line with the findings of Barbarossa, De Pelsmacker and Moons [38], who stated that one's ESI can enhance the feeling of moral obligation to act in an environmentally friendly manner. Thirdly, H_3 revealed that tourists who have the feeling of moral obligation to perform environmentally responsible behavior are more willing to fulfill TERB, which is consistent with the research of Han [27] and Han and Hyun [21]. Fourthly, H_4 illustrated that one's ESI can strengthen his/her ESE in the tourism context, which empirically validates a number of previous studies in different contexts, such as Foster, Yeung, and Neighbors [47] and Tierney and Farmer [45]. Finally, H_5 demonstrated that tourists who are confident in their abilities to protect the environment would be more likely to carry out TERB. This is consistent with the findings of Strzelecka, Woosnam, and Nisbett [9] and Shahzalal and Font [10].

In summary, we come to the following three conclusions. First, the VIP model can effectively predict TERB in China. Second, ESE can significantly increase the predictability of the VIP model. Third, the indirect path of "BV → ESI → ESE → TERB" can deepen the understanding of the formation of TERB for the researchers.

6. Contributions, Implications, and Future Research Directions

The theoretical contributions of this study can be divided into two parts. For one thing, the validity of the original VIP model was empirically tested in China. Specifically, we examined the extent of generally environmental considerations (including biospheric values and environmental self-identity) and how to predict tourists' environmentally responsible behavior in a trip. Previous studies of the VIP model on pro-environmental behavior were conducted mainly in the home and organizational contexts [31,32]. The findings of this study are consistent with those studies, and further enriches the applicable situation of the VIP model. For another, the predictive power of VIP on TERB was enhanced by the extension of Environmental Self-Efficacy (ESE). In the extended VIP model, ESE can significantly and positively affect TERB, which once again confirms the findings of previous researchers in the sustainable tourism field [9,10,25]. Compared with PN, ESE has a greater impact on TERB. Moreover, the mediating effect of "BV → ESI → ESE → TERB" is verified for the first time, which has the same important mediating role as the existing indirect path (i.e., BV → ESI → PN → TERB). The finding is a prominent contribution to this study.

The managerial implications for the practitioners, including government authorities and tourist destination managers, are as follows: First of all, we have proved that ESE positively affects TERB. Therefore, if practitioners would like to prompt TERB in tourist destinations, they need to strengthen tourists' ESE. According to social cognitive theory [43], the managers can shape tourists' sense of efficacy for eco-friendly behavior through the persuasion of media information. Secondly, this study found TERB was significantly influenced by tourists' PN. As a result, managers should effectively activate tourists' PN by the diverse channels based on norm activation theory [26]. Finally, if government authorities would like to motivate TERB, they should enhance tourists' BV and ESI, since the results showed that BV and ESI had an indirect effect on TERB through ESE or PN. Moreover, BV and ESI, as individuals' general environmental considerations [31,32], can also promote the spillover effects of environmentally responsible behavior.

In addition, there are some research limitations in this study, and future research needs to be improved. First, the cross-sectional design was adopted in this study, which may make the causal inference between variables less reliable than that of a longitudinal design. Future studies should adopt a longitudinal or experimental design to verify the causal relationship of the original and extended VIP model. Second, although the data collection was completed by a professional online survey platform, it was still a convenient sampling. Future research should optimize sampling design to collect data from multiple regions to further enhance the external validity of the conclusions. Finally, this study only validated and extended the mechanisms of the VIP model on specific TERB, but where the theoretical boundaries of these mechanisms are, and which variables will increase the explanatory power of these mechanisms, remain to be determined. Thus, future research should introduce moderated variables, such as behavioral cost [64], to explore the theoretical boundaries of the original and extended VIP model.

Author Contributions: Y.X. mainly wrote the literature review and hypotheses, proposed the theoretical framework, developed the measurement instruments, and performed the statistical analysis. X.W. contributed to the introduction, research design, and data collection. S.-C.C. discussed the results and concluded the contributions and implications. All authors supported and were responsible for this paper.

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Conflicts of Interest: The authors declare no conflict of interest.

Appendix A

Variable & Item
Biospheric Values
Preventing pollution: protecting natural resources
Respecting the earth: harmony with other species
Unity with nature: fitting into nature
Protecting the environment: preserving nature
Environmental Self-Identity
Acting in an environmentally friendly manner is an important part of who I am
I am the type of person who acts in an environmentally friendly manner
I see myself as an environmentally friendly person
Personal Norm
I feel guilty if I do not act pro-environmentally in travel
I feel morally obliged to act pro-environmentally in travel
I feel proud when I act pro-environmentally in travel
I would violate my principles if I would not act pro-environmentally in travel
Environmental Self-Efficacy
I am capable of making a positive impact on the environment
I am able to help take care of nature
I believe I can contribute to solutions to environmental problems by my actions
Compared to other people, I think I can make a positive impact on the environment
Tourists' Environmentally Responsible Behavior
I will not walk on the grass, or wreck and climb trees
I will not throw my trash on the ground or into a pool or river
I will not paint or scratch historic and cultural buildings and statues
I will comply with the rules and regulations of destinations, and if I see my companions doing bad things to the destination, I will persuade them to stop

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Alternative Product Development as Strategy Towards Sustainability in Tourism: The Case of Lanzarote

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Abstract: Currently, tourist destinations are, more than ever, confronted with specific challenges and also negative impacts arising from overarching developments. In order to address such challenges and to reduce negative impacts resulting from tourism, sustainable development has emerged as a widely accepted approach. Under special consideration of seemingly successful destinations, this article aims to identify complementary strategies towards sustainability in tourism, instead of developing completely new strategies which replace the existing ones. This will be done in the course of endogenous values and structures within a destination. To discuss this issue, the Canary island of Lanzarote is used as case in point, via a qualitative interview series consisting of eleven interviews with different direct and indirect tourism stakeholders from the island, which have been evaluated according to the GABEK®-method (German abbreviation for "GAnzheitliche BEwältigung von Komplexität": holistic coping of complexity). The results show that aspects of mass tourism have a negative impact on the island and therefore a seemingly successful destination, at least in quantitative terms, is confronted with issues of sustainability and a need for action. In this field, diversification regarding both new offers and target groups is helpful to enable tourism and regional development to be more sustainable. In consequence and from a conceptual point of view, alternative product development as a new approach towards sustainability in tourism within established destinations will be presented.

Keywords: tourism development; Lanzarote; sustainability; alternative product development; strategy

1. Introduction

Tourism development currently takes place in an extremely dynamic and competitive environment [1]. In the course of expanding transformative environments and framework conditions regarding both supply and demand, tourist actors are confronted with the question about how to act appropriately. Such current developments can, for example, take place in emerging discussions about overcrowding and over-tourism, changes in tourists' values, increased demand for sharing economy offers, and new opportunities in the field of mobility [1–9]. Therefore, challenges in tourism generally require specific strategies and plans for action [10,11] in order to efficiently use available potentials for development [1]. Since the developments mentioned above affect urban and rural destinations equally, which in both cases represent the living space for the local population [12], one crucial element for success can be identified in sustainable tourism development [13].

Under special consideration of seemingly successful destinations, this paper aims to discuss how complementary strategies towards a more sustainable tourism development can be formulated on the basis of local values and structures within a destination, instead of developing completely new strategies which replace the existing ones. Since especially island destinations are confronted with

specific challenges regarding tourism development [14,15], this will be achieved via an examination of the island of Lanzarote, which is located in the Canary Islands-archipelago. The island of Lanzarote is highly relevant as place of research, due to steady discussions about tourism development and growth [16] and the islands character as an experimental zone for sustainable tourism in the context of an overflowing capacity of tourism growth [17]. Against this background, it is important to note that the island has received a strong increase in tourism numbers in the last years: between 2010–2018, tourist arrivals on Lanzarote have grown from 1,889,322 (2010) to 2,880,051 (2018), which means an increase of 52% within a period of eight years [18]. With regard to added value resulting from tourism, in 2017 tourists had an average expenditure of 134.14 € each day, of which an average of 97.97 € respectively 73% was paid in the place of residence, and 36.17 € respectively 27% remains in the Canary Islands [19].

Against the background of the described problem statement in general and on Lanzarote in particular, the strategy of alternative product development will be introduced as a complementary strategy towards a more sustainable destination development, which is based on endogenous potentials within a destination. With regard to the structure of the article, subsequently to a literature review on sustainability within tourism development, the concept of strategic product development as a strategy for destination development will be presented. After a description of the methodological approach, the results will be presented. These serve as the groundwork for the subsequent discussion on alternative product development as a new strategy, which is derived from the concept of strategic product development.

2. Literature Review

2.1. Sustainability within Tourism Development

It is widely accepted that tourism has the capability to make a positive contribution to urban and regional development and, in consequence, to improve local economies and/or the living conditions within a certain area [20,21]. However, tourism can also result in negative impacts [22–28], which then have to be addressed actively by the involved actors due to the circumstance that tourism tends not to self-regulate [29,30]. Negative effects resulting from tourism can be observed on four different levels in a destination, namely: (1) economic well-being, (2) social well-being, (3) cultural well-being and (4) environmental well-being [26]. To address negative impacts on these four levels, the concept of sustainability has gained a strong interest in tourism development during the last two decades [31–34] and hence became "a cornerstone of quality and competitiveness in tourism" [35]. In other words, sustainable tourism is today "almost universally accepted as a desirable and politically appropriate approach to tourism development" [29].

Quite generally, it can be stated that sustainable development assumes the view that development should occur in line with the needs of current generations while maintaining the present conditions and opportunities also for future generations [36–38]. Considering this in relation to tourism, it can be stated that a solid basis for the discussion of sustainability and tourism is marked by the distinction between (1) sustainable development in the context of tourism and (2) sustainable tourism [39,40]. On the one hand, sustainable development in a tourism context can be seen as tourism, which allows sustainability in a certain destination for an indefinite period. On the other hand, the term sustainable tourism can be defined as "tourism which is in a form which can maintain its viability in an area for an indefinite period of time" [39]. Moreover, sustainable tourism ideally reflects a holistic approach for development, which is based on sound economic, ecological and socio-cultural principles [41–44]. In consequence, sustainable tourism is able to provide economic benefits from tourism, while both the ecological and socio-cultural integrity of a destination is preserved [45].

With the aim to "support the continuous improvement of sustainability and resilience in the tourism sector through systematic, timely and regular monitoring of tourism performance and impact and to connect dedicated destinations in order to better understand destination-wide resource use and

foster the responsible management of tourism" on an international scale, the United Nations World Tourism Organization established the International Network of Sustainable Tourism Observatories (INSTO) in 2004 [46]. Within this framework, six central fields of action are examined with the aim of reaching sustainable development, as can be seen in Figure 1 below.

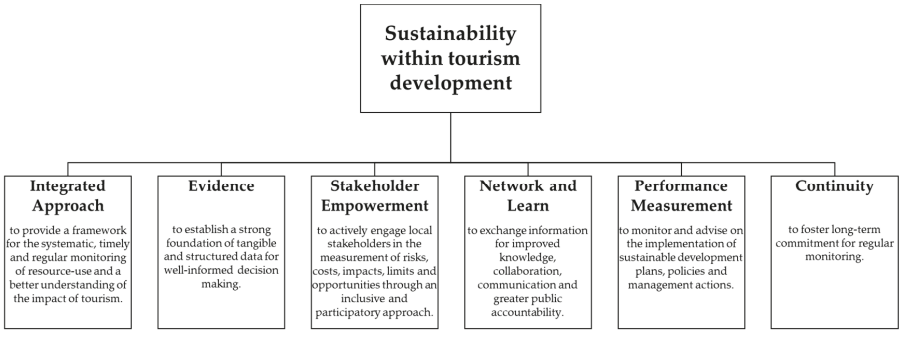

Figure 1. Objectives of sustainability within tourism development (Source: own illustration, based on Reference [46]).

As becomes apparent from Figure 1, one important factor in sustainable tourism development is marked by the empowerment and involvement of a broad range of heterogeneous stakeholders [39,47–50]. Related to this, various studies have named relevant actors and discussed their role within the process of sustainable tourism development [39,47,48,51–54]. Within this field, five central stakeholder groups can be named: (1) members of the local community, (2) tourism industry representatives (e.g., from local entrepreneurs to international tour operators), (3) policy makers (e.g., local government within a destination), (4) administrators (e.g., destination management organization) and (5) external experts (e.g., consultants) [55–58]. While the first four can especially make contributions due to their expertise in local circumstances, the last group can be helpful in the area of more independent and objective advice based on experiences from other destinations [55]. One prevalent strategy within this sphere of tourism development can be identified in the process of strategic product development, which will be presented below.

2.2. Strategic Product Development

In the context of tourism development, the resource-based view marks a widely accepted approach based on the endogenous potentials of a destination [59–65]. Within this sphere, one specific strategy is marked by the process of strategic product development, which focuses on location-specific core competencies, values and themes, from which appropriate products and offers can be derived, as is also illustrated in Figure 2 [66,67].

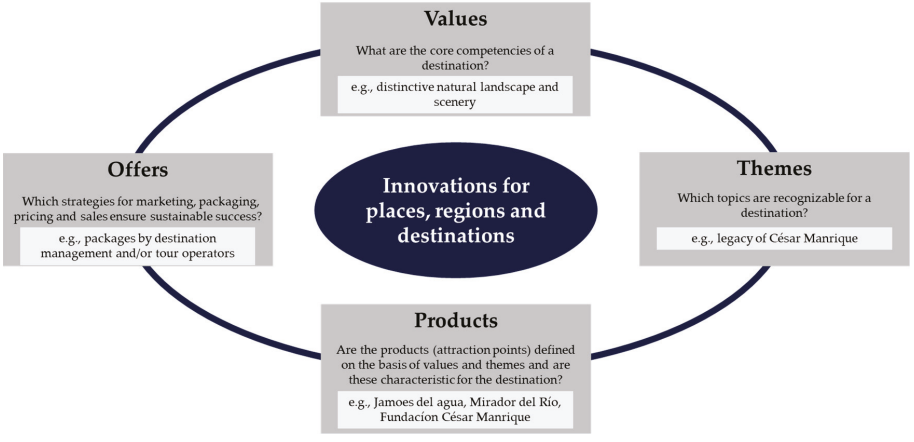

Figure 2. The process of strategic product development (Source: own illustration, based on References [66,67]).

The starting point of this process is marked by the identification of an endogenous value basis, which is distinctive for the considered destination. This means that, according to the resource-based view, destination-specific values and core competencies have to be figured out. This elaboration, which should be supported by a broad range of relevant stakeholders within the destination, builds the foundation for both destination-specific and innovative product development. Based on these identified values, suitable and characteristic themes (by means of which a destination can be recognized) have to be derived in a second step. Once destination-specific values and themes have been assessed, products based on the first two steps can be developed. Such relevant products should be embedded in both a sustainable and an overall concept, which links single destination-specific products to each other, in order to provide an appealing overall experience to the customer. The final step is marked by the implementation of the products within the market via suitable offers. Here, the focus lies with the question of target group-oriented distribution strategies, whereby it is important to emphasize that target groups may not only consist of foreign visitors, but also of the local population [1,66,67].

In order to make the process of strategic product development even more comprehensive, it will be demonstrated exemplarily in the context of the island of Lanzarote, whereby the examples for each step are already integrated in Figure 2: due to the exposed location of the Canary Islands-archipelago in the Atlantic Ocean, a distinctive feature of Lanzarote is a relatively high number of hours of sunshine, which is accompanied by mainly constant temperatures throughout the whole year and special climatic conditions. The combination of these factors can be seen as a baseline for a distinctive natural scenery and landscape, both of which provide a special value for the island. This setting was used by Canary Island-native artist César Manrique as a kind of playground, as he integrated his art directly into the landscape of the island. In addition, he was strongly committed to the preservation of these conditions by establishing a so-called "intelligent tourism". Despite his death, these efforts still give him a strong presence on the island, as well as in the collective consciousness of the local population. Therefore, César Manrique can be seen as one of the island's themes, which can be applied to the destination's product development. At the product level, this theme can be presented via the integration of the artworks of César Manrique into the landscape, such as his works Jameos del agua or Mirador del Río. Moreover, the César Manrique Foundation's information center can be seen as a touristic product, which communicates the artist's ideas and convictions to visitors. In a fourth and final step, such products can be implemented in the tourism market through special *offers*, for example via the island's destination management organization, but also through private tour operators.

3. Methodology

In the context of the study, a qualitative research design was developed in order to identify and analyze opportunities towards a more sustainable tourism on Lanzarote. To reach this aim, relevant actors in both direct and adjacent areas of the island's tourism have been identified in a desktop research prior to the stay on site, which took place in the first half of the year 2018. In this course, 21 potential interviewees had been requested, and a total number of eleven on-site interviews with a deliberately open character was conducted. The interviewees themselves were located in the fields of politics and tourism administration, heritage development, as well as cultural and natural attraction points. Moreover, interviewees had their background in the areas of gastronomy and real estate, and also infrastructure development. In general, a tendency towards a rather low willingness to participate in the study had to be observed in this context, with most requests being made several times. This can be attributed, among other things, to the fact that the topic is a quite sensitive one and was discussed at a time when discussions about over-tourism and critical effects of steady tourism growth were gradually expanding to a broader level.

The interviews themselves usually had a duration of about 45–60 minutes. In addition to an introducing discussion of the recent development of Lanzarote in general and the role of tourism in particular, the further content of the interviews revolved around the local attitude towards tourism development. In this regard, it was also discussed how the local population is affected by the tourism industry and to what extent it benefits from the created added value. The role of César Manrique and his erstwhile demands for the so-called "intelligent tourism" was another topic of conversation. Facing the current structures on Lanzarote, the extent to which César Manrique's considerations are currently rather a hindrance or a suitable approach towards tourism development in general and sustainable tourism development in particular was another topic discussed. With a view towards the future of tourism development, it was also discussed which possible paths exist for the further development of Lanzarote as both attractive living space for locals and tourist destination, and how such paths can be shaped in a sustainable way.

The open design of the interviews, which has already been mentioned above, was based on the fact that the study was conducted according to the principles of the GABEK®-method (the German abbreviation of "Ganzheitliche Bewältigung von Komplexität": the holistic mastery of complexity) and then evaluated using the accompanying software WinRelan®. This procedure makes it possible to reduce normal language verbal data in terms of complexity and to visualize it in form of linguistic conceptual networks [68]. Therefore, it was necessary to take an audio-record of the interviews and to transcribe them afterwards. Based on the then prevailing text documents of the interviews, a lexical coding of each interview can be performed using WinRelan®. In consequence, the software is able to identify semantic relationships in the sum of all interview statements. These relationships can in a next step be reduced in terms of complexity and afterwards visualized in the form of network-graphs [68]. In a compressed way, these network-graphs present the central topics and associations of all interviews and show the interlinkages between them. In this context, GABEK® is able to demonstrate cooperation relationships in the course of regional and destination development based on joint-solving approaches [69], which underlines the suitability of this method for the prevailing research. In a compressed way, the following Figure 3 illustrates the most central steps within the working process in the course of GABEK®, respectively in relation to WinRelan®.

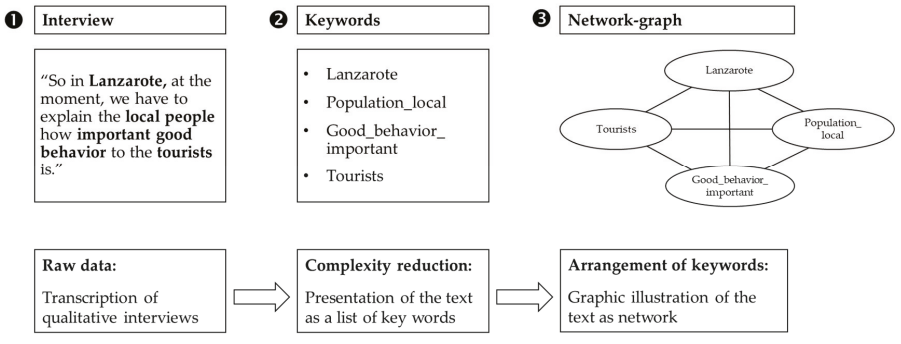

Figure 3. Process within the method of GABEK® by using the software WinRelan® (Source: own illustration).

4. Results

This section aims to present the results of the empirical survey. After a general presentation of the central associations concerning Lanzarote, the island's tourism development will be revealed. This is followed by a third network-graph focusing on low cost tourism and subsequently future development paths for Lanzarote.

4.1. Lanzarote: Central Associations

Regarding the most central associations of the interviewees with the island of Lanzarote, the results suggested two superordinate thematic clusters, as well as some additional singular topics, as Figure 4 below shows: the two clusters contained, on the one hand, specific and interrelated keywords describing the characteristics of Lanzarote in general, and on the other hand, aspects related to tourism in Lanzarote in particular. A complementary characteristic (which can be transformed into a sort of keyword) was, in addition to aspects related to sports, also the volcanic origin of Lanzarote within the broader context of the neighboring islands of the Canary Islands-archipelago, which is located in the Atlantic Ocean.

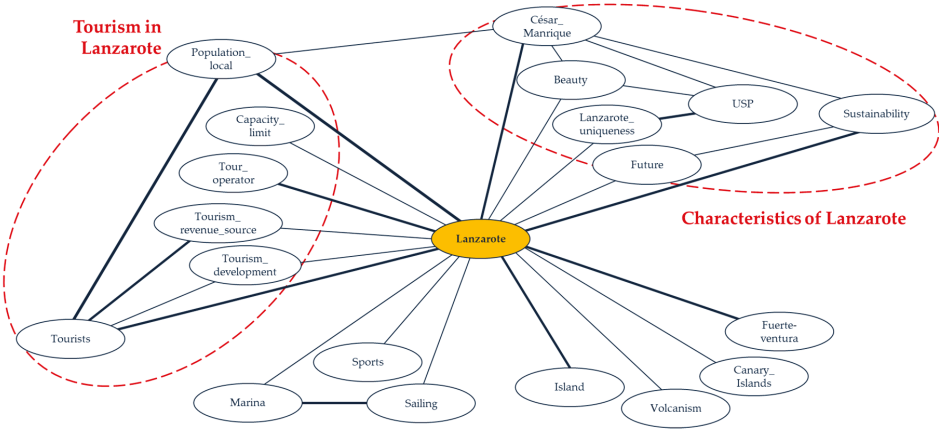

Figure 4. Network-graph "Lanzarote" (Source: own illustration, based on WinRelan®).

In the context of the first thematic cluster, which described rather general characteristics of Lanzarote, certain keywords located between the island itself, sustainability and César Manrique seemed to play an important role for the interviewees. In this field, César Manrique, who attributed a

distinctive character and certain beauty to the island and tried to develop this into a unique selling proposition, can be regarded as an important actor within the development of Lanzarote. This seems to encourage efforts to educate and sensitize the local population to the place they inhabit, since the island is seen as a unique place by the interviewees. In a wider context, these erstwhile efforts by César Manrique and his claim for an intelligent tourism can therefore be seen as the origin for a holistic, sustainable and future-oriented development, which also paved the way for calls for a sustainable tourism model, as the following interview quotations point out:

> "[César Manrique] told the people: Listen, what you are doing here is incredible special, you grow wine on a climate where there is no rain. What you are doing is special, and it is particular to here. And this island has a great capacity for tourism. And [César Manrique] helped the people to understand that this space was special. That we are very lucky to live here, but we need to protect it." (Interviewee 1)

> "In the end César [Manrique] achieved the acceptance of a sustainable tourism model on the island, which lasted for many years. And he developed different places on the island, which define this uniqueness until today. However, for him it was always important to see Lanzarote as a whole, and not tolerate only on single places. This was his legacy." (Interviewee 4)

Regarding the more tourism-specific cluster, the results showed an overarching relationship between tourists on the one hand and the local population on the other. It became apparent that there was no direct linkage between the two keywords "tourism development" and "tourism revenue source" to the local population. This means that, according to the interviewees, tourism development, and thus the tourism industry, though providing a source of income, does not provide a well-developed relationship to the local population, which will be described in more detail in the upcoming network-graph focusing on tourism development. It rather appears that international tour operators seem to dominate tourism and its structures on Lanzarote, since they attract a large number of tourists, e.g., through all-inclusive packages. Although the term "over-tourism" does not seem appropriate in the context of Lanzarote, there are discussions about a slowly but surely already-reached capacity limit, as the following quotations demonstrate:

> "The island has more tourism now than ever! The tourists are falling out of the sky, this never ever happened like that. Lots and lots of different systems and dynamics have converged to make this the most profitable time ever for the island." (Interviewee 1)

> "We see, if we put the focus on growing, having more tourists, at the end of the day this is the catastrophe for the destination." (Interviewee 2)

These first results and central associations in the context of Lanzarote, the island's tourism and César Manrique provide a broader framework in which tourism development occurs, which will be presented more detailed in the following section.

4.2. Tourism Development on Lanzarote

With regard to tourism development on Lanzarote, the empirical results showed three major thematic clusters, which evolved around local structures, potentials for further development and fields of tension, which can be either already existing or simply possess potential (see Figure 5).

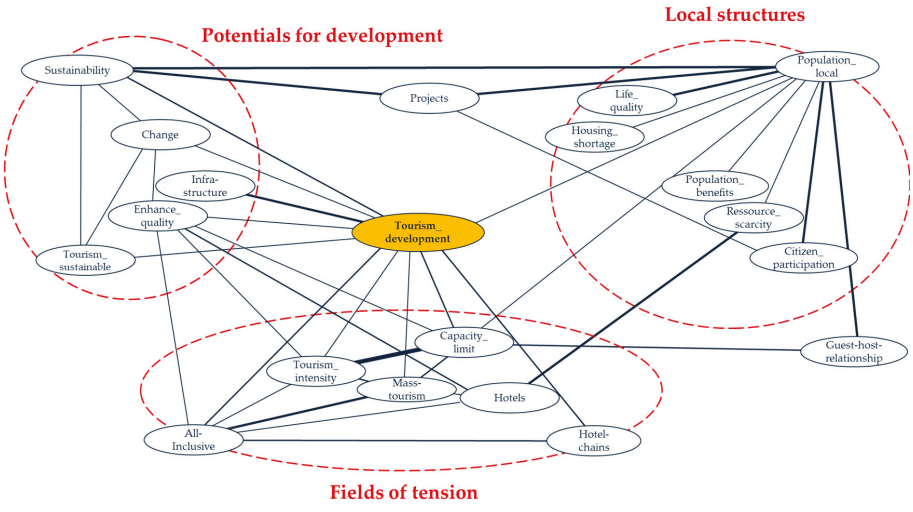

Figure 5. Network-graph "tourism development" (Source: own illustration, based on WinRelan®).

Considering tourism development and local structures, the results showed a direct superordinate relation between tourism development and the structures on Lanzarote. However, in this field the subordinate local structures were interestingly rather connected to the local population in particular than to tourism development in general, since such direct linkages are missing in Figure 5. For example, there seemed to be neither a direct relation between the island's tourism development and the quality of life, nor between the benefits for the local population and tourism development in Lanzarote. Moreover, it appeared that issues like a certain lack in the availability of resources were rather directly an issue for the local population on Lanzarote and not for tourism development as such.

> "[…] because this is a tiny island, resources are limited. And we have no water for everybody, unfortunately. Sometimes, I don't have water in my house, but tourists always have water in their hotel. I think that's not fair!" (Interviewee 5)

This quotation connects the bridge to certain fields of tension with regard to tourism development on Lanzarote, which evolve around an apparent dominance of hotel chains and all-inclusive packages. With regard to the scarcity of resources that has been mentioned by the interviewees, hotels in general and hotels connected to international tour operators in detail seem to play a crucial role. For the interviewees, developments like these can be seen as a cause for problems related to the phenomenon of mass tourism. This results in high tourism intensity and a slowly-reached capacity limit for tourism on Lanzarote. The issue of capacity limit especially seemed to have an influence on the local attitude towards tourism and, in consequence, the both the current and future quality of the relationship between guest and host:

> "Tourists come with all-inclusive in the hotel and they go from the airport to the hotel and they don't visit anything [on the island]. Just sitting at the swimming pool all day, because it is all-inclusive. And afterwards, they go to the airport, they go back home." (Interviewee 10)

> "We are [currently] for example at over 90% occupancy, which is almost at the limit of the island." (Interviewee 3)

> "There was a time when the contact between tourists and locals was very good, but now that's not the case anymore. It is not a conflict yet, but they are moving towards it." (Interviewee 4)

Despite some fields of tension, the results also showed that the interviewees identify potentials for future development, which were embedded into a broader framework of sustainability in general and sustainable tourism in particular. These potentials can be seen, among others, in an enhancement of the provided service quality, for example in the fields of accommodation, mobility or even safety. In sum, all these factors contribute to the overall tourist experience. While the results also show that a certain need for action is recognized, it must be emphasized that this quality enhancement does not seem practicable in the context of single and short-term measures, but rather within specific projects during a long-term process.

> "[In the past,] they just wanted the numbers: more airplanes, more hotels, more and more numbers [. . .]. And that's where the worry starts: we are going to try to get better quality! You have to do it by renovating accommodation, improving the infrastructure, the security, the experience, educating all the workers, bringing the hygiene up to a certain level, and bit-by-bit the prices start to increase. But it doesn't happen overnight." (Interviewee 3)

Since Figure 5 has already demonstrated a superordinate field of tension in the range of hotel chains and all-inclusive hotels, the following section focuses on a deeper examination of a so-called "low-cost tourism," which seems to a have a certain dominance within the tourism structures on Lanzarote.

4.3. Low-Cost Tourism on the Island of Lanzarote

Analogous to the previous remarks, a thematic clustering within the next network-graph was also possible with regard to interviewees associations concerning low-cost tourism. In particular, these are abetting factors for the emergence of low-cost tourism, changes on the demand-side, resulting tensions and also some general consequences, as can be seen in Figure 6.

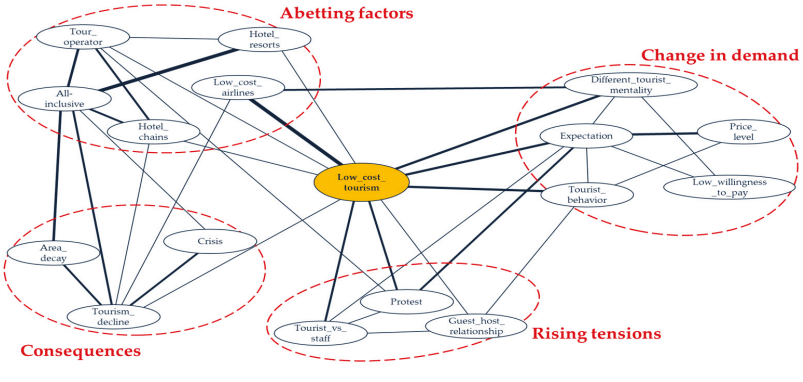

Figure 6. Network-graph "low-cost tourism" (Source: own illustration, based on WinRelan®).

With regard to abetting factors for the emergence of low-cost tourism, the aforementioned aspects of hotel chains and resorts seemed to have a certain impact, as well as an apparent dominance on all-inclusive offers from tour operators, which was supplemented by the presence of low-cost airlines. A particularly strong connection exists here between hotel resorts and all-inclusive offers, which means, according to the interviews, that a substantial part of the added value does not remain directly on the island. Instead, this revenue mostly is transferred to international tour operators located outside the island, mainly in continental Europe. In consequence, this means that international tour operators seem to put a high pressure on the island of Lanzarote due to their position within the market situation.

> "The all-inclusive model, the big hotel model, does not leave a lot of money on the island. What it does, though, is creating employment, and legal employment where people have contracts. They employ a lot of people, these hotels. So, from that point they do help the

economy. But from the local business person, who has a shop on the street, from that point, they do not create a lot." (Interviewee 3)

"The problem here lies on these people who spend their money not in the destination, but in the home country. Because these all-inclusive hotels are normally managed by tour operators which are not located on the island. So business is not here, it is outside." (Interviewee 5)

However, such structures are, of course, only possible if the customers have a sufficiently critical demand for all-inclusive offers and packages built by international tour operators. In this regard, the results show that there has been a change in customers' mentality in the past, which seems to come along with a high price sensitivity on the demand side. Paradoxically, the guests' high expectations regarding the overall tourist experience interestingly seem not to be affected by this high price sensitivity. Instead, tourists seek for high quality experiences sold for best affordable prices.

"This can be seen especially if you go to the three tourist centers. [Tourists] come here and leave no penny. That means most of them barely get out of their [hotel], they paid three meals a day, and then all the snacks are added. And if they ever come out then they will do a bus tour [. . .]. But let's say individual tourists leave more money here than these mass tourists." (Interviewee 9)

"The mentality of the people [has changed]: it cannot cost anything more, they want everything, but it should not cost anything. But on the other side they feel like a guest, they want to be treated like a king. All the tourism here, all the people who come here are not the same people than before." (Interviewee 8)

According to the interviews, perceptions like these result in rising tensions between tourists and the local population and are partly enforced by the partly negative behavior of some tourists. In consequence, this might lead to a reduced tolerance at the local side and thus a decline in the quality of the guest–host relationship and hospitality. In order to avoid such a decline and maintain the island's hospitality, a certain control of both quality and quantity in tourism seems to be necessary.

"The locals are very hospitable. But sure, there comes a moment where you feel uncomfortable and restricted. We can remain hospitable, but with limited capacity, that's the key. Tourism is good and important, but in a limited and fragile area like this, it just has to be controlled. And this is not only for Lanzarote, but for every tourist destination. We can currently see that in some major European cities which conflicts mass tourism brings with it." (Interviewee 4)

Since a functioning relationship between guest and host is a crucial criterion for the attractiveness of a destination, a decrease in hospitality resulting from low-cost tourism can also have further negative consequences, if, for example, tourists shift to other destinations with a similar offer. This may initially lead to a decline in tourism intensity, which—due to the island's dependency on tourism—in consequence can lead to a certain overall crisis for the island.

"There's very little else on the island to provide an income for the local people. So yes, in the downturns when you see the—not revolts—but the real problems, people's attitudes towards tourism in the downturn. In the upturn, I think, most people are benefitting, so most people are happy. But, it's very dynamic, very, very complicated to keep an island like this. Constantly developing, constantly growing, creating more wealth, but at the same time sustaining it aesthetically, sustaining the infrastructure and keeping the quality of the tourism: this is very hard to balance." (Interviewee 3)

These observations and an obvious certain need for action in order to design more sustainable tourism on Lanzarote lead to some possible paths for further development, which will be demonstrated in the following.

4.4. Future Development Paths

Even though there seem to exist some crucial challenges, the results also provided perspectives for future development paths on Lanzarote. Next to both tourism and regional development, these paths affect also issues in the field of resources and mobility and have to be embedded into political considerations and structures, as Figure 7 illustrates. It is important to emphasize that such developments and efforts towards a more sustainable regional and destination development should occur with the active involvement of the local population by the island's government (Cabildo), for example in the form of long-term education and specific projects.

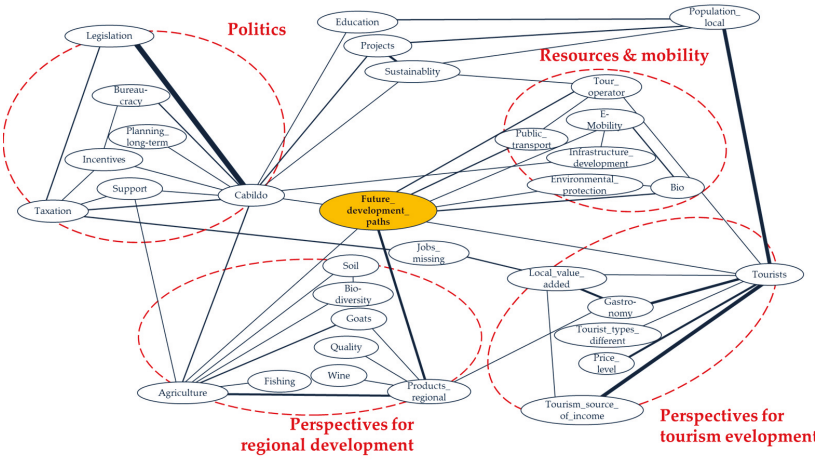

Figure 7. Network-graph "future development paths" (Source: own illustration, based on WinRelan®).

Since the previous results showed critical discussions about the handling of the islands resources, strategic opportunities in this field are especially within the sphere of renewable energies, namely wind and solar energy, which are mostly available throughout the whole year. In a second step, these renewable resources seem helpful to develop offers in the area of e-mobility, both in private and public transport. Examples to be named here are e-bikes and electric car rentals on the private side, and an efficient public transport system based on renewable energies on the public side. Regarding such efforts, a crucial role lies with tour operators, who, according to the interviewees, should increase their commitment towards issues of resources and hence sustainable destination development.

> "So if they want to use another energy, we have plenty of sun and light. We wouldn't really need the geothermic energy, because we have a lot of alternatives, but they keep depending on petrol." (Interviewee 7)

> "If I were a politician, I would say: no gasoline cars any longer, only electric cars and public transport! There are no distances. You could organize the traffic network in a different way." (Interviewee 8)

Such efforts towards the use of more renewable energies can, in consequence, also have an influence on Lanzarote's tourism development. In this context, new target groups with a certain awareness for sustainability and who want to experience the island and its distinctive character consciously and outside of the aforementioned typical hotel resorts, can be attracted. This can take place, for example, via experiencing the local gastronomy in restaurants, which in the end can help to increase added value remaining directly on the island and, according to the interviewees, also generate new jobs.

> "I think the main thing is to improve the quality of tourism and to make sure that the tourists that come here are not just for one reason, but for many reasons. To sample the food, sample the culture, to do sports, go diving, take part in ironman, to do excursions. I think you want the tourist to be interested in all this. […] You need to diversify, you need to offer extra things." (Interviewee 3)

> "It´s a way to increase the expenditure, every day from each tourist. […] We consider we have margin to have a higher expenditure every day if the tourists want to taste everything, you know, go to La Geria, La Vegueta, to taste our gastronomy. Automatically, the expenditure every day is going to grow." (Interviewee 2)

With regard to regional development in the context of gastronomy and agricultural products, various prospects for future development paths can be identified, which can contribute to increased diversification with regard to both touristic offers and target groups. Due to the volcanic origin of Lanzarote, these paths arise, for example, from the special geological features and the resulting biodiversity, which form special conditions for farming fruits and vegetables, and from the field of stockbreeding.

Within this overall framework, policy plays a central role, as the primary task seems to be the creation of general conditions for sustainable destination and regional development through appropriate legislative design and observance. This goes along with a more long-term orientation of aspirations and the creation of concrete incentives for both companies and private actors. Among others, such incentives can be found in the establishment of cooperatives, but also in an attractive and, above all, transparent tax structure in order to increase the motivation for active participation in sustainable change.

> "Big hotels mostly do not want these new activities because it is against their interests. The monopolies are directed against this type of privately-mediated tourism. The political instability, the constant change, is responsible for this and cannot develop a continuous model. Of all the positive upswing, only the rich ones profit. There is a lot of talk here about the legal discrepancies, but that's not true. We have laws that exist, but they are not applied in the right form. The law must run parallel to the political decisions." (Interviewee 4)

> "Cooperative farmers bring their onions to the cooperative, but the Cabildo is hesitant about paying. That can be improved. If you pay the farmers punctually and quickly then they will start to cultivate again next year, but if you do not pay them, they will stop and you will not grow anymore. They say: What is that supposed to be? Why should I do that?" (Interviewee 6)

These challenges and future development paths in the context of the conducted research build the groundwork for the concept of alternative product development as an adjusted strategy, which can contribute to achieving sustainable tourism and improving destination development.

5. Alternative Product Development: An Adjusted Strategy for Sustainable Tourism Development

The empirical results underline that competitive and, at least in quantitative terms, successful destinations are not immune to current developments and challenges in tourism, as further studies recently also have described [11,70,71]. This can especially be stated for destinations focusing on the conventional tourist model, based on sun, sea and sand (the 3S), since a heavy focus on such a model fails to promote sustainability due to a lack in economic benefits for host communities as well as growing environmental pressures [72]. The result is a specific need for action, which has to be managed within the sphere of sustainable, holistic and intersectoral destination and regional development. However from a strategic point of view, this need for action does not mean giving up existing and

successful considerations and business models in order to create completely new structures instead. Rather, additional strategies for diversification and thus sustainable destination development have to be formulated, from which appropriate measures can be derived. Based on, and supplementary to, the process of strategic product development, so-called alternative product development is identified as an additional strategy for diversification. The aim of the strategy of alternative product development lies therefore in the generation of a co-existence of both traditional and alternative products and offers., In this context, the latter have to go beyond established tourist models like the 3S and need to be based on alternative values and themes that are characteristic for a destination, while of course maintaining the existing core products and offers, which contribute to the success and competitiveness of the destination, as the following Figure 8 underlines.

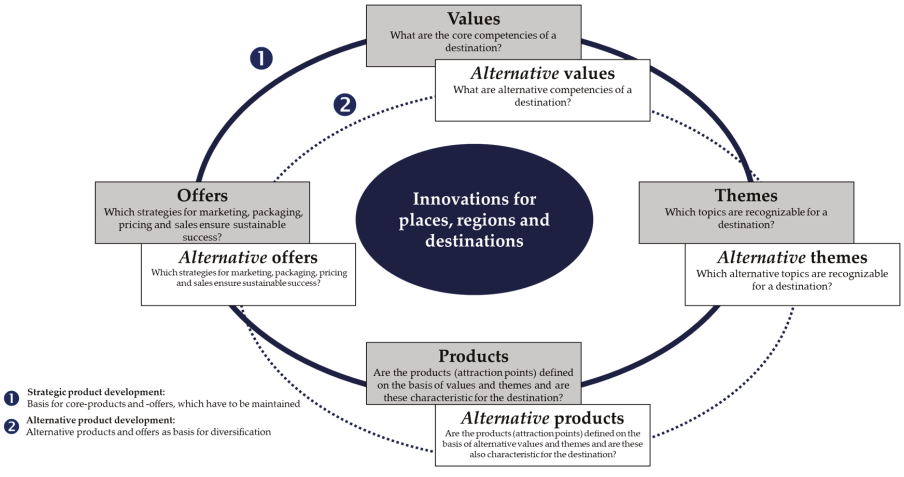

Figure 8. Alternative product development as a strategy towards sustainable tourism development (Source: Own illustration).

Considering alternative product development within the island of Lanzarote, a potential value can be found in the island's distinctive volcanic origin, from which island-specific themes related to geology and nature can be derived. In combination with the aspect of renewable energies, e-bike excursions within the Timanfaya National Park can be seen as a potential new product. Through appropriate marketing, this can either contribute to decreasing the concentration of tourists in hotel resorts along the coastline, or (in combination with other alternative products) even attract new, sustainability-oriented and potentially less price-sensitive target groups. This is especially important due to the fact that not only Lanzarote, but also many other, mostly European island destinations have for a long time been characterized by a large volume of aggressively sold package holidays [72]. In this context, literature suggests that within a destination, a growth of alternative tourism is likely to stimulate a decrease in package holidays [73].

This process of alternative product development as a supplement to already existing products and services represents an approach to overcome present challenges, especially in established destinations. With regard to the tourist area life cycle model [74,75], this strategy can be helpful for diversification not only, but above all, in mature destinations, which are facing an uncertain future and are therefore confronted with a need for action.

Within this process of alternative product development, it is important to mention that efforts in the context of sustainable development are considered to be most successful when they are driven endogenously by the local system [76], for example by regional entrepreneurs, but also by the local population and government. The government especially plays a crucial role in sustainable tourism

development, since it has to implement long-term tourism policies and provide an overall direction and coordination [15]. This is especially true for tourism on islands like Lanzarote, since on islands the formulation of sustainable tourism policies and their implementation is often hindered by key players in the field of the government, political parties, local governments and communities [77]. Even though politics plays a central role here, alternative product development can only succeed in the context of a holistic and collaborative process, which includes all stakeholders involved in a destination's touristic system. Therefore, in addition to policy and the responsible destination management organization, the local population and involved companies on a regional (e.g., small and medium-sized enterprises like restaurants or family businesses) and international (such as hotel chains, tour operators or mobility service providers) scale also need to be mentioned as relevant stakeholders.

Even though they are usually not directly involved in the development of touristic offers, the tourists visiting a destination play an important role in the course of tourism development as well. This makes them relevant stakeholders within the tourism system, as is demonstrated via their contribution to a local tourism system prior to a journey (e.g., through demand behavior) and throughout the stay in the destination (e.g., through socio-spatial behavior). Therefore, both demand for different products or services and a changed socio-spatial behavior can influence the impacts of tourism and, in consequence, its perception within the destination. Subsequently and in addition to the stakeholder groups presented in Section two, tourists can be added as a sixth stakeholder group in the field of sustainable development.

With regard to the central question raised in the beginning of the article, the study has been able to identify alternative product development as a new strategy, which can be pursued on a destination level in addition to existing strategies and tourist models. It is important to emphasize that this strategy has no universal character that can applied to any destination. Rather it is important to view this strategy from the lens of specific and endogenous values and structure that shape a certain destination. If destinations succeed in combining existing strategies and tourist models with alternative approaches, the presented strategy can be helpful on the way to a more sustainable tourism development, which is currently more than ever before at stake.

6. Conclusions

The prevailing research demonstrated that established destinations like Lanzarote are not immune to the current changes and challenges in tourism and are therefore confronted with a certain need for action. In this context, the current success of a destination threatens to become a challenge in the long run, if negative consequences resulting from tourism development are not managed in an equally active and sustainability-oriented way. Within this, it is important to emphasize that successful and established strategies and business models within a destination do not have to be completely replaced by others; indeed, it is the former that laid the foundation for long-term success and positive destination and regional development. At the same time and against the background of current developments and challenges, it is important to consciously deal with complementary strategies that are able to shape destination development sustainably and in the best case even resiliently. This results in a need for action, which should be addressed in the context of stronger diversification regarding both target groups and products in order to initiate a more sustainable destination and regional development. In this field, the study was able to identify the process of alternative product development, which was derived from, and acts as a supplement to, the process of strategic product development. By using the special case of Lanzarote, it can be stated that this process can be seen as a new strategy for not only, but above all, more sustainable development established destinations.

Limitations of the study can on the one hand be seen in the size of the sample, which seems to be a result of the fact that the topic per se is a sensitive one, and which might be supplemented by increasingly intensified discussions about negative effects of tourism at the time of the survey. In addition, the researchers' lack of direct access to the study area in the run-up to the empirical research has to be mentioned; one way of enhancing the reliability of the results would be to integrate a second

survey period, which is based on the first one and conducted according to the principles of the snowball system. On the other hand, there is a limitation in the spatially clearly delimitable research area within a singular destination, which is further reinforced by the status of Lanzarote as an island.

Against this background, future research could conduct a similar study in a destination located in the continental mainland, since island destinations like Lanzarote are subject to special framework conditions. From a structural perspective, further research may analyze the process of alternative product development in island destinations with different business models that are not so much based on the existence and presence of international tour operators and hotel chains.

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Auditing Marketing and the Use of Social Media at Ski Resorts

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Abstract: Mountain and snow tourism are sectors of immense social and economic importance that are developed in an especially sensitive environmental context. A large part of this tourism is channeled through ski resorts. The literature on comparative studies of ski-resort management and, in particular, on marketing management, is limited. This study contributes knowledge on the application of marketing practiced at ski resorts. For the first time, an audit of marketing at ski resorts is performed through a quantitative survey at resorts in two countries (Spain and Italy). The importance–performance analysis (IPA) is used, which identifies both the strong and the weak points and the great deficits of marketing management at ski resorts from the perspective of their directors, to whom the questionnaire was addressed. The social media usage of the ski-stations is also analyzed, identifying different typologies of resorts in accordance with their performance against 11 indicators from Twitter and 15 from Facebook. Knowing the opinion of the visitors, the online and competitive strategy, and adapting to the legislative changes are the aspects to which the directors attach greater importance. The greatest deficits were linked to employee motivation and communication (internal and non-integrated). There are minor differences in Twitter and Facebook indicators between Spanish and Italian ski resorts. The turnover results of the ski resorts present more correlation with Facebook indicators than with Twitter ones. This analysis provides recommendations and implications for the management of ski resorts in the six dimensions of marketing under consideration. It, likewise, offers knowledge of the social-media-related behavior of resorts that are leaders on both Twitter and Facebook, for benchmarking purposes.

Keywords: ski-resort management; ski-resort marketing; ski resorts; audit; mountain tourism

1. Introduction

Tourism is a sector of great dynamism that has displayed vigorous growth over many years [1]. Some studies have examined the potential for integration between sport and tourism, which depends on a decisive orientation, the regional context, government policies, and cultural and organizational structures [2]. The strong connection between tourism and sport means that sports tourism is one of the most highly developed segments of tourism. The national and international popularity of sporting events have contributed to that level of development, the benefits associated with active participation in sports, as have the variety of sporting events and their organization with periodic and frequent events in different parts of the world [3].

Ski resorts as tourism destinations are a magnificent example of a symbiosis between tourism and sport [1,4,5]. Together, they form an entity with shared interests in which different types of organizations interact (hotels, restaurants, travel agencies, sports firms, and environmental protection agencies, among others) that provide a variety of services to respond to the main driving force: Conducting activities and practicing sports related to snow-and-mountain tourism. Their relevant

social and economic impacts on the environment dynamize and favor the development of areas of influence, either as the principal activity, or as one that is complementary to others [6,7].

The winter sports industry contributes to the development of tourism and, in a considerable way, to economic growth and territorial organization [8–10]. Over 80 countries from all over the world offer winter sports activities, in all, at approximately 2000 ski resorts. Some have a long tradition in winter sports (for example, France, Switzerland, Austria, and Italy), while others, such as China and Eastern European countries, are emergent destinations [11].

The variety and breadth of the offer in relation to winter sports requires analysis and planning of destination marketing activities. All the more so, if the point of view of the visitor is considered, greater use of marketing tools is necessary in the management of those destinations [12]. Ski-resort managers need to study the potential of their destinations and current markets and prepare proposals that will differentiate them from the competition [13], through strategic analysis [14]. The importance of those destinations makes it advisable to gain an understanding of the behavior and, for example, the attitudes that are determined by the emotions that they awaken [15] and user preferences, and the surrounding environment. The development of innovative communication strategies and the application of positioning and segmentation strategies for visitors, and both amateur and professional skiers, may also be included [1,5,11,16–19].

In short, destination management cannot be understood without a major role for marketing. The question that is now raised is whether that is so and how it is done. Although there are studies on specific aspects of marketing, the academic literature on the application of marketing or the auditing of marketing at ski resorts [20] is practically non-existent. Within it, an aspect of special relevance in the strategy of all organizations, following the expansion of the Internet, is the virtual performance on social media [21] of ski resorts, also with an almost inexistent literature. No studies have been identified that set out to analyze the indicators provided by social media in reference to ski resorts, although their utility in the present-day context is recognized [22].

The main objective of this work is to know the perception that the managers of ski resorts have about the application of marketing management at ski resorts and the analysis of their performance in social networks, in particular:

- To conduct a marketing audit that will identify the main strengths and weaknesses in the application of marketing from the perspective of managers;
- To discover the main deficits in the application of marketing at ski stations and whether they present differences between countries, applying the importance–performance analysis (IPA) with a new methodological validation variant;
- To describe the patterns of behavior on social media (Twitter and Facebook) and to establish whether there are differences in accordance with the country in which the ski resort is found;
- To identify typologies of ski resorts by their patterns of behavior on social media.

In response to those questions, which are raised here for the first time, a survey was administered to directors and representatives of Italian and Spanish ski resorts on their evaluation of the current situation of the ski resort and the importance that they attached to it with respect to the different dimensions of marketing. Moreover, the social media behavior on Facebook and Twitter of the ski resorts from those two countries was analyzed (through 15 and 11 indicators, respectively) and their behavioral patterns were profiled.

2. Skiing Sports Tourism

Together with the increase in economic activity related to sports, there is greater interest in the study of sports management [23] as a service provider that must concern itself with customer satisfaction, by implementing a specific results-oriented business style and culture [24].

Falk [25] affirmed that the demand for winter tourism depends on national and international income, prices, transport, costs, the location of the destination, and climate change. Climate change is

fast becoming a significant factor [26] above all for low-altitude ski resorts in southern countries [27–29]. On the one hand, demand is considerably weaker when the depth and the quality of the snow is poor [25]; hence the business investments in, above all, high-altitude ski resorts [30]. On the other hand, new competitors from Eastern Europe and Asia offering new infrastructure and competitive pricing affect ski resorts in western-European countries. In addition, the tendency of mountainous regions is observed to evolve from mass tourism to multi-niche tourism [19].

Both internal aspects (i.e., characteristics of the individual and personal motives) and external aspects (characteristics of the destination) intervene in the choice of a ski resort, according to Pearce and Schänzel (2013). The motives of the traveler and the perceived capacity of a resort to satisfy previous expectations are variable strategies in the marketing of destinations [17]. Consequently, destination marketing and the promotion given to the activities which take place at the ski resorts become a key attractor for tourists when choosing destinations.

Winter sports tourism takes place in a natural environment that, because of its characteristics, requires high levels of investment in infrastructure and maintenance [6]. Resorts should also have a strategy that considers sustainable forms of development that are both competitive and profitable [31]. These destinations have to listen to what the visitor says and be concerned with the long-term sustainability of their surrounding environments [21,32].

The problem of seasonality and variability may also be added, given that the duration of the season depends on climatic conditions. One way of mitigating the effects of seasonality is by offering complementary alternative activities, whether sports-related (walking and mountain biking), cultural, or gastronomic. Complementary offers may also be developed for the non-skier market (relaxation, restaurants, *après ski* activities, etc.) [7], as well as even for amateur photographers, and areas for playing in the snow [33].

Ski resorts in both Spain and Italy have been selected for this study. In Spain, there are 30 ski and mountain resorts affiliated to *Asociación Turística de Estaciones de Esquí y Montaña*, (ATUDEM) [34], a business association created in 1974. The ski resort sector moves over 5 million visitors, the great majority of whom are sports men and women, and has a turnover in excess of 115 million Euros [35]. In Italy, there are 293 ski resorts where the importance of skiing makes it a good reference for Spanish resorts. According to the Study Centre of the *Confederazione Nazionale dell'Artigianato e della Piccola e Media Impresa* (CNA) [36], the 2017 season yielded an income of some 10.6 thousand million Euros. If we count hotels, direct services to tourism activities, and other hotel and catering-related services, the number of visitors with respect to the previous season increased by 6.2%, reaching almost 11 million tourists.

2.1. Ski Resorts: Management Policies and Marketing

Studies predominate in the academic literature on the investigation of marketing at ski resorts that take the perspective of skier into consideration, particularly the interest of the skier in the principal attributes that a high-quality ski resort should have and their evaluation. A quantitative type of methodology has been adopted in the majority of investigations, when analyzing the satisfaction and quality of ski resorts from a marketing perspective (see Table 1).

The satisfaction of skiers depends on the fun factor, the transport, the employees, and the lodgings [1]; ski-lifts, slopes quality, restaurants, equipment, and employees [5]; installations and equipment, features of the mountains, resort services, restaurants, lodging and social activities, and access [11].

Kyle et al. [37] demonstrated the positive effect of satisfaction on the loyalty of skiers. Kaplanidou et al. [38] affirmed that the organization of sporting events is a variable that influences future loyalty and attachment towards a destination, while "word of mouth" over social media positively influenced the destination image, the attitudes, and the intentions of tourists to make and to repeat a visit [39].

Table 1. Studies on the analysis of ski tourism and motives for the choice of ski resorts.

Authors/Year	Country	Data Analysis	Conclusions
Richards (1996) [44]	United Kingdom	Descriptive statistics and bivariable analysis	The advanced/expert skiers are more critical of the quality of ski-resort installations but pass more time at the destination and use the resources with greater frequency. The most important factor is snow quality.
Hudson and Shephard (1998) [42]	Switzerland	Focus group, in-depth interviews, and IPA.	IPA provides a useful technique with which to evaluate the attributes of the service in relation with ski resort destinations. The authors identified 12 factors for the evaluation of the services of tourism resort: Information services, lodging; restaurants and bars at resorts; ski shops and medical services; shops and supermarkets; other resort services; ski slopes; on-slope services; characteristics of other skiers; mountain restaurants outside tourism centers, and tourism operator services.
Matzler and Siller (2003) [17]	Germany	Descriptive analysis and regression. Importance–perception matrix.	Winter tourists expressed greater satisfaction with the resorts than summer tourists did. In addition, the motivations of both are different, as the skiers take sport and fun into account more than any other variables.
Godfrey (1999) [16]	United Kingdom/Canada	Descriptive analysis	The conditions of the quality of the snow and the variety of slopes were the main factors in the choice of a ski resort by each skier.
Ismert and Petrick (2004) [41]	United States	Logistic regression	Socialization (relations with companions and performance and treatment from directors) were the main indicators of quality for employees.
Clark and Maher (2007) [18]	United States	Logistic regression	Trust, commitment, satisfaction, previous experience, and perceived value predicted the loyalty of the skier.
Dickson and Faulks (2007) [16]	Australia	Content analysis	The people that indicated their intention of travelling abroad to practice snow sports were, in their majority, men with experience of snow sports, under 35 years old, with a high educational level and income.
Matzler et al. (2008) [5]	Austria, Germany, Italy, and Switzerland	Structural equations	The components of satisfaction were ski lifts, slopes quality, offer of restaurants, equipment, and employees. Age, sex, slopes difficulty at the resort, and (new or repeating) visits were all moderators of satisfaction.
Hwa-Ryong and Sung-Kyeom (2010) [43]	South Korea	IPA	The most important elements according to the matrix were proximity of resort, skiing courses, availability of skiing courses and type of ski lifts, tourism offer, lodging, skiing and snowboard programs, and snow conditions.
Kyle, Theodorakis, Karageorgiou, and Lafazani (2010) [37]	Greece	Structural equations	The quality of the resort services consisted of three dimensions: Interaction, installations, and results. Each dimension had a positive effect on skier loyalty and satisfaction.
Konu, Laukkanen and Komppula (2011) [40]	Finland	Segmentation of grouping	Six segments of different client-types were identified: Passive tourists, cross-country skiers, beginners, Alpine skiers, professional skiers, and people looking for relaxation and mountain scenery.
Vassiliadis, Priporas and Andronikidis (2013) [45]	Greece	Time-Blocking Activity Matrix (TBAM)	The TBAM is proposed as a strategic tool to structure decision-making in the management of tourism. Expenditure patterns in relation to specific blocks of time related to preferential products and services and their consumption.
Tjørve, Lien, and Flognfeldt (2015) [3]	Norway	Regressions	Ski resorts have no clear and defined marketing strategy. Foreign skiing tourists are not very interested in other snow-based activities or cultural attractions.
Komppula and Laukkanen (2016) [46]	Finland	Content analysis and analysis of variance (ANOVA)	Four differentiating factors were found for resort image: Alpine skiing services, cross-country skiing services, restaurants and social life, and spa services.
Miragaia, Conde and Soares (2016) [11]	Portugal	Cluster and factor analysis and ANOVA	Five factors affect satisfaction: Installations and equipment; features of the mountains; resort services; restaurants, lodging and social activities; and access. No gender differences were observed, but differences were noted between the experience and motivation of the skier.
Hall, O'Mahony and Gayler (2017) [1]	Australia	Cluster analysis and structural equations	Fun factor, transport, employees, and lodging were the most important factors.

The choice of ski resorts is subject to the conditions of the snow and the variety of slopes [16], or in the case of ski and snowboard tourists, safety and snow quality, the variety of slopes, and the off-piste areas [31]. Different studies have centered on defining both the demographic and the psychographic profiles of the skiers [31,40].

However, few studies have analyzed the opinions of other agents within the resorts, such as directors, employees, and marketing professionals. Ismert and Petrick [41] analyzed the organizational culture of the resorts, concluding that the employees valued socialization (relations with companions, and performance and treatment of the directors) as the most important aspects for the proper functioning of the firm. Tjørve, Lien and Flognfeldt [3] found that the marketing policies had little impact among skiers.

Hudson and Shephard [42] and Hwa-Ryong and Sung-Kyeom [43] analyzed ski resorts through the importance–performance analysis (IPA). The skiers attached greater importance to information services, lodging, ski shops, medical services, shops and supermarkets, ski slopes, ski-slope services, tourism services operators, proximity of the resort, and types of ski-lifts. Matzler and Siller [17] applied a variation known as the importance–perception matrix through which the principal motivations of the skiers are established.

2.2. Skiing Stations and Use of Social Networks

The use of the Internet and virtual social media for the development of relations with clients and users of firms has intensified over recent years [47], assuming a high profile, because they generate real-time communication, cooperation, and geographical proximity [48]. Two social media networks with the highest number of users, among both firms and individuals, are Facebook and Twitter [49].

Chen [50] demonstrated that the use of Twitter permits users to feel continually connected and informed, while Zhang et al. [51] affirmed that the use of Facebook offers emotional support, collective self-esteem, and amusement. Facebook is a platform that offers different tools to firms, so that they are able to publicize their activities with actual and potential audiences, for which reason it plays a very important role in marketing policies [52,53].

The literature highlights the role of the 'brand' community of a firm as a powerful influence on the strength of the relations between the participants of the community and the firm [54]. The interaction between members can help the followers of a brand to feel that they are active participants rather than mere spectators or visitors to their installations [55].

The benefits of the use of social media have been demonstrated within the area of sports marketing. Baena [56] showed that the traditional websites of football teams are no longer sufficient, because the interactive medium of a social media site favors choice and commitment towards the brand or the firm. Ioakimidis [57], in an analysis of the accounts of professional sportspersons, showed improvements in the relations with their followers. A website is an effective means for the marketing of organizations that, if well-constructed (home page, content, use of advertisements, etc.), will help to form ties of loyalty with the visitors [58–60].

There are few studies that have analyzed the role and the results of the use of social media among skiing resorts. Massa and Avesani [61] analyzed the Internet sites of skiing stations, to predict user preferences in terms of the trust-related metrics that the users expressed. Gretzel et al. [62] discussed the possibilities that the Internet can provide for the promotion of the various skiing destinations.

Other investigations detected weak exploitation of this instrument, revealing the need to reinforce resources and not to overlook the opportunities provided by the ICTs [6]. It has been confirmed that almost all ski resorts have their own websites, but a mere presence in the world of the Internet is not a factor that is, in itself, sufficient. It is necessary to create links with both consumers and users [21]. Social media networks contribute significant support to achieve such links [63]. Despite all of the above, no analysis has yet been completed on the use of social media and skiing resorts, nor are there studies of their impact on commitment towards clients and winning over new ones.

3. IPA (Importance–Performance Analysis)

The importance–performance analysis is a management tool that assumes a focus of expectations and performance to measure the perceptions of quality that has been widely used in the literature [4,5,64,65]. It is used to provide guidelines for strategic decision-making in marketing. In the case of the skiing stations, Hudson and Shephard [42] considered it a very useful tool and a decisive one for the planning of marketing. Hwa-Ryong and Sung-Kyeom [43] used it to analyze the attributes of the seasons from the viewpoints of the visitors.

This matrix is used to evaluate the different characteristics of an organization (perceptions of performance and the importance of results), so as to establish the strong points and the areas for the improvement of an organization (perceptions of performance and importance of the results),

when comparing the importance that is given to each attribute with the assessment or performance that is attributed to it. It has been used in different areas such as universities [66,67] and strategic city planning [68].

In this investigation, it is the directors and representatives of the ski stations who have to assess the importance and the performance of their resorts against the different aspects of the dimensions of applied marketing, on the basis of the proposal of Kotler and Dubois [20]. The authors identified six dimensions relating to the surrounding environment, strategy, organization, system, productivity, and functions.

4. Methodology

4.1. Survey for the Application of the IPA

The IPA matrix is a basic diagnostic decision tool [4] that facilitates the identification of the prioritization of improvements, the mobilization and deployment of scarce resources where they are most needed [69], and the harmonization of strategic planning efforts to improve competitiveness [70]. In the tourism sector, IPA is considered a useful tool to examine customer satisfaction and management strategies. This technique can help tourist companies to diagnose the underlying deficiencies and establish priorities in the development of their activity [71].

There are many studies about theoretical and practical aspects of IPA that inform about how to solve the key decisions: Use data-centered, scale-centered, and diagonal methods; how to interpret the quadrants or choose the thresholds or the cross-hair points; how to measure importance (direct or indirect); how to validate [70–73].

In the application of the IPA matrix, the recommendations of the literature have been taken into account [70–74]. These recommendations have been considered in both the process and conceptual issues: Definition of importance, distinguished in the same quadrant, determination of a reference criterion [71]. In summary, the process consists of the following steps:

- Define the problem or challenge: Perform an internal marketing audit in the ski resort sector;
- Specify the objective: From the practical and management point of view, know the strengths, weaknesses, and deficits in the application of marketing in the ski sector, following the analysis of the IPA quadrants. From the methodological point of view, the purpose is to try a new form of validation: The application of the ROC curve (receiver operating characteristic);
- Selection of items: The appropriate items had to be selected that covered the best possible application of marketing to skiing resorts. Based on the proposal of Kotler and Dubois [20], 83 items were prepared and grouped into the six aforementioned dimensions. The items were assessed by four marketing experts in the framework of the Delphi model. After the first assessment, each expert had access to the average score of each item (on a scale from 1, of little importance, to 10, very important), before moving on to the second vote. The items with the highest average scores for importance and the lowest standard deviation were selected. Finally, the questionnaire was formed of 32 items of the six aforementioned dimensions, which are listed in Appendix A. Unlike previous literature focused on the evaluation of tourists (skiers) [45,73] where consumer satisfaction was assessed through the IPA matrix, we analyze the adequacy of marketing management from the point of view of managers. Therefore, it is expected that all the items result to be very important and the difference is the self-perceived deficit in the marketing application;
- Measure: It was carried out obtaining direct data. All items were measured on a Likert scale from 0 to 10 points. In order to do this, the indications of Alpert [75] and Bacon [72] were followed. In according to these authors, direct measurements better reflect the attribute than indirect methods. Direct gradings are more stable and valid, and better reflect the importance of the attribute compared to indirect measures [70,76];
- Validation: Through the application of the ROC curve, according to Server [71], it could provide the criteria for an optimal categorization of the elements in the framework of IPA.

The objective population (universe) were all Spanish and Italian ski resorts. All the Spanish Alpine ski resorts, of which there are 30, were contacted via email; Although 293 Italian resorts were identified, in many cases, they formed part of the same district, so altogether, a total of 122 surveys were sent out.

The Qualtrics platform was used for the (self-administered) application and management of the questionnaire, sending out a hyperlink to the directors and technicians for the questionnaire to be completed online. Various surveys were sent out during the months of November and December 2017, and January 2018. In total, 29 responses were obtained, of which 8 were from Italian resorts.

The analysis of the items of the IPA matrix was done by applying non-parametric tests (Wilcoxon's test, Mann–Whitney test) for the separate items; thereby confirming whether there were significant differences between the importance and the performance attributed to each one.

Table 2 shows the main descriptive data about ski resorts in Spain and Italy. Italians are bigger, receive more visitors, and have more kilometers of skiing on average.

Table 2. Descriptive data of ski resorts.

	Spain		**Italy**	
	Mean	**Stand.Desv.**	**Mean**	**Stand.Desv.**
Opening days	83.97	55.06	131.85	20.803
Total visitors	193,861	282,090	n.d.	n.d.
Turnover	5,019,110	7,682,282	22,355,240	20,983,441
Kilometers of ski slopes	40.26	39.24	103.7	87.29

4.2. Study of Social Networks

It was decided to consider all the Spanish ski resorts and to choose the 20 most important Italian resorts by numbers of visitors, touristic importance, and prestige of the destination where the ski resort was found.

Two pages were used in the analysis of the social media that offered free data relating to position, activity, relevance, etc. that the ski resorts obtained on their respective Facebook and Twitter pages. The indicators are shown in Tables 5 and 6. The pages were LikeAlyzer for Facebook and Foller for Twitter, both consulted during the month of November 2017.

Non-parametric tests and cluster analysis were used in the analysis of the social media data. All analyses were done with the Statistical Package for the Social Sciences (SPSS) 20 software package.

5. Results

5.1. Marketing Audit

Appendix A contains the scores given by the directors of the ski resorts to both importance and performance, and the differences (or deficit) between importance and performance of each of the 32 items used to conduct the audit, which are shown in Figure 1. In the last column, the significance level is shown of the difference between importance and performance.

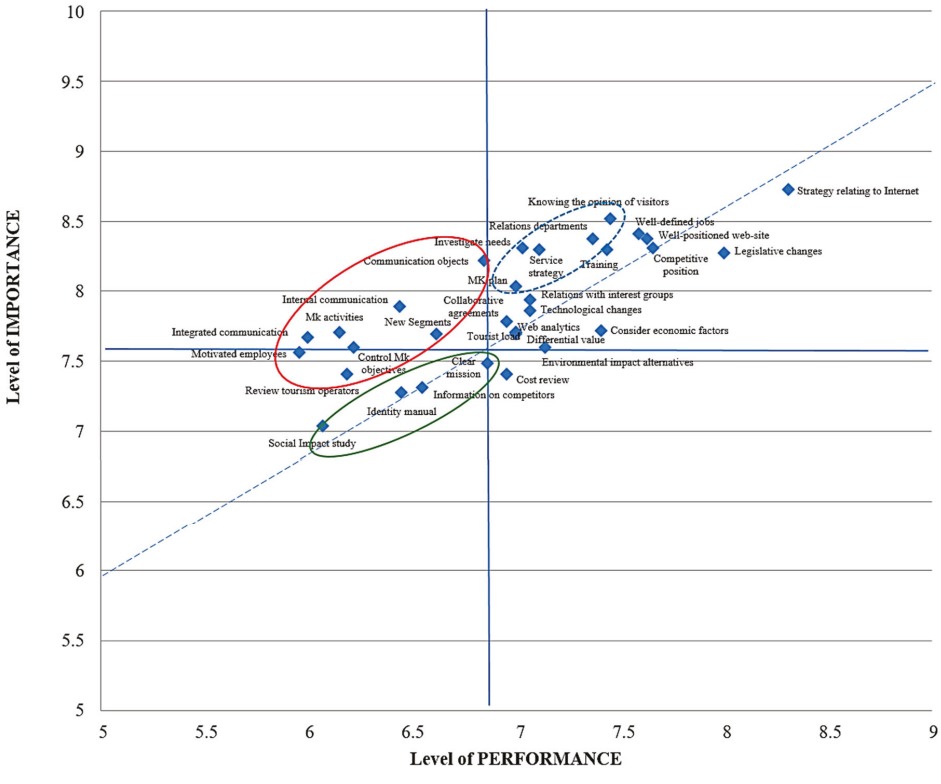

Figure 1. Importance–performance matrix.

First of all, according to the importance given by managers, a third of the characteristics considered most important—with scores of 8.22 to 8.72 over 10 and an average score of 8.87 (Appendix A)—are related to the analysis of the environment (to know the opinion of their visitors, to investigate the needs of the target public, and to respond to legislative change), the marketing strategy (the Internet forms part of the strategy, and the competitive stance of the resort is known, as are its threats and opportunities on which basis it defines its objectives and goals), the organization of the marketing (defining the jobs with objectives, responsibilities and sufficient authority; existence of good relations and communications between the marketing department and the others; and the training of those involved in marketing) and the functions (availability of a well-positioned website in the search engines; clear definitions of its service quality and its communications strategy both online and offline).

With regard to the items that were given less importance, the lowest scores were for productivity, strategy, functions, and marketing environment: Periodically studying the social impact that its services provoked between the communities based around the ski resort; follow-up of actions; availability of a manual of corporate identity; availability of information on objectives, strategies, strengths, and weaknesses of other resorts; looking for sustainable alternatives; controlling objectives; motivating employees, and periodic reviews of the cost of activities so that suitable measures may be taken.

Secondly, with respect to adequacy and according to the directors, one third of the items that presented better performance, in other words, what was done best (scores between 8.81 to 7.11 out of 10, where the highest average score of the top third was 7.56) was related to:

- Environment: Considering the main economic events, looking for sustainable alternatives, knowing the opinions of visitors, and knowing and responding rapidly to legislative changes;
- Strategy: The Internet forms part of the marketing strategy of the station; knowing the competitive position, threats, and opportunities;
- Organization: Defining the jobs well, with objectives, responsibilities, and sufficient authority, existence of good relations between the marketing department and the others; and ensuring that those participating in the marketing activities are properly trained in their roles:
- Functions: Availability of a website that is well positioned among the search engines; and having clearly defined their service quality strategy.

On the contrary, the following items in the one third of characteristics with the worst performance or main weaknesses, with scores below 6.5 out of 10 and with an average score for the lower third of 6.32, may be highlighted as follows:

- Marketing functions: Communication adapted to the concept of integrated marketing; controlling the achievement of marketing objectives (offline and online); availability of an internal communications system; performing direct marketing activities, online, and in databases; periodic reviews of the efficiency of tourism operators;
- Organization: Employees who are motivated to achieve marketing objectives;
- Strategy: Availability of a corporate identity manual;
- Productivity: Periodically studying the social impact occasioned by resort services.

The scores for importance were always higher than for performance, with statistically significant (or quasi-significant) differences, with some exceptions (see Appendix A). Those exceptions were the situations in which it may be considered that no deficits existed; in other words, the consideration of performance was practically at the same level as that of importance. This balance is the case of six items relating to strategy, environment, functions, and productivity (Appendix A): Taking into account the principal economic events in their environment to take action; looking for sustainable alternatives relating to environmental impact; knowing and responding rapidly to legislative changes; the mission is clearly expressed, is feasible, and known by all members of the organization; periodic reviews of marketing activities; the services present some added value that differentiates them from other resorts.

The difference between importance and performance yielded a measure of the deficits existing in the management of marketing. The items of the dimensions of the environment and of marketing organizations predominate both importance and performance in the one-third with the highest scores. The contrary happens for the other dimensions, in particular for the systems and productivity. Table 3 shows the number of the items for the six dimensions (environment, strategy, system, productivity, functions) that are among the upper third of scores of importance (+), in the central third (=), and in the lower third (-); and the same was done for performance and for the difference between importance and performance. When distinguishing between importance and performance, slight differences were found in the items of the dimensions for both environment and strategy. The greatest deficits, however, were found in the dimensions of the functions. In concrete, those deficits were:

- Functions: Adopt the concept of integrated marketing communication; conduct direct marketing activities, online, and with databases; availability of a system of internal communication; defining the communication objectives (on and offline); review the efficiency of the tourism operators and the internal communications system; clearly defining the quality strategy of its services;
- Environment: Annually investigate the needs of their objective public, gather the opinions of their (real and potential) visitors;
- Strategy: Look for new segments still unsatisfied or niche markets;
- Organization: Motivate employees to achieve (the weakest) marketing objectives;

- Systems: Control the achievement of marketing objectives (offline and online).

Table 3. Distribution of the items of each dimension that are in the one-third with the highest (+), the intermediate (=), and the lowest (−) blocks.

Blocks	Num. Items	Importance			Performance			Differences		
		+	=	−	+	=	−	+	=	−
Environment	7	3	2	2	4	2	1	2	2	3
Strategy	8	2	3	3	2	4	2	1	3	4
Organization	4	3		1	3		1	1	3	
System	2		1	1		1	1	1		1
Productivity	3		1	2		2	1		2	1
Functions	8	3	3	2	2	1	5	6		2
Total	32	11	10	11	11	10	11	11	10	11

After describing the results referring to importance, adequacy, and deficits, the IPA matrix has been carried out. The process is the one detailed below, following the criteria recommended in the previous literature on the application of IPA in the tourism sector [71,73,74]:

- The average values of performance, importance, and their difference are calculated. The difference is a measure of the self-perceived deficit in the application of marketing management to the ski resorts;
- When it comes to applying the IPA to consumer satisfaction, according to the theory of disconfirmation, if the performance–importance difference is zero or positive there is satisfaction, while there will be dissatisfaction if it is negative. In the current case, a zero or a positive difference is considered a sufficient application of marketing management, while if it is negative, it will be a poor application;
- The performance–importance thresholds (or crossing point) are identified to delimit the quadrants and to identify which items are in each one. To do this, we calculate the probability (sensitivity) that a great difference between performance–importance (a great deficit) is considered as a weakness or insufficient application of that characteristic. The probability (specificity) that a small difference is not considered a weakness is also obtained; in other words, a sufficient application is considered. The ROC curve offers information for all combinations of sensitivity and specificity. The closer you are to the diagonal, the less suitable the combination is; the farther you go, the more appropriate;
- Validation by measuring the power of discrimination of the ROC curve and the Youden test [77]. The power of discrimination of the ROC curve is the area under the ROC curve (AUC); in other words, the probability that the value of the diagnosis is greater than that randomly selected with a positive result rather than with a negative result. The value of 0.5 means that accuracy is equal to a random chance, while the value of 1 means higher accuracy. In our case, the performance has an AUC value of 0.79 (0.00), which is fair. According to importance, the discriminatory power is poor (0.51): Managers do not discriminate a lot in terms of the importance of the selected items. Youden's test provides a measurement of importance considering sensitivity and specificity for every point of the ROC curve. Youden's test is equal to sensitivity plus specificity minus 1. The point to choose is the higher one. Table 4 shows how to obtain the values of Youden's test for performance. The highest value for performance of the Youden's test is 6.85. Doing the same for importance, it obtains the highest value for importance in this test at 7.69. These values do not differ much from the average values for performance (6.96) and importance (7.88).
- Representation (Figure 1). The discriminating thresholds are the highest values of performance and importance for the test of Youden. These values are used to identify the cut-off. In the analysis of the resulting quadrants of the IPA matrix, it is possible to check those aspects that are carried out properly in the sector of the ski resorts, as well as those with notable deficiencies.

Table 4. Youden's test for performance.

Positive if Less than or Equal to	Sensitivity	1—Specificity	Youden's Test
4.96	0.00	0.00	0.00
5.98	0.07	0.00	0.07
6.03	0.14	0.00	0.14
6.11	0.21	0.00	0.21
6.17	0.29	0.00	0.29
6.205	0.36	0.00	0.36
6.33	0.43	0.00	0.43
6.44	0.50	0.00	0.50
6.5	0.50	0.06	0.44
6.58	0.50	0.11	0.39
6.73	0.57	0.11	0.46
6.85	0.64	0.11	0.53
6.91	0.64	0.17	0.48
6.98	0.64	0.28	0.37
7.01	0.71	0.44	0.27
7.05	0.79	0.44	0.34
7.09	0.79	0.56	0.23
7.12	0.86	0.56	0.30
7.25	0.86	0.61	0.25
7.39	0.93	0.61	0.32
7.42	0.93	0.67	0.26
7.44	0.93	0.72	0.21
7.52	1.00	0.72	0.28
7.61	1.00	0.78	0.22
7.64	1.00	0.83	0.17
7.83	1.00	0.89	0.11
8.15	1.00	0.94	0.06
9.31	1.00	1.00	0.00

Five aspects are performed especially well in the sector (those items belonging to the blue circle): availability of a coherent and feasible marketing plan; clearly defined service quality strategy; annual investigation of the public target's needs of the ski resort; existence of good relations and communications between the marketing department and the other departments; and the ski resort knows the opinion of its (real and potential) visitors. What the ski resorts do best is related to the environment, although aspects related to sustainability do not stand out. It highlights the fact that no aspects related to the dimensions of marketing systems and productivity are among the best.

By contrast, the aspects of marketing with the most deficient application in the ski resorts are: Employees are motivated to achieve the marketing objectives; communications are adapted to the concept of integrated marketing communication; ski resort has a system of internal communication; ski resort performs direct marketing, online marketing, and database marketing activities; ski resort defines and is clear with regards to its online and offline communications objectives (publicity and promotion); and the ski resort looks for new unsatisfied segments and market niches. Therefore, the biggest deficiencies are related to the dimension of marketing functions.

The matrix also helps to detect those aspects to which the sector grants a lower priority (green circle). They are the following: Ski resort periodically studies the social impact of its services; availability of a manual on corporate identity; the mission is clearly expressed, is feasible, and known to all members of the organization; and the ski resort knows its competitive position and its threats and opportunities, in order to define objectives. In this case, they are the elements (three of them) related to the strategy dimension.

Therefore, it can be concluded that those that perform best relate to the environment, while the greatest deficiencies are found in the functions. That which is not paid special attention or priority is related to the marketing strategy.

Finally, analyzing the differences between Italy and Spain, there is a high coincidence when evaluating the items of both performance and importance among the managers of the ski resorts from the two countries. Only the Mann–Whitney test uncovered differences with regards to performance in availability of corporate identity manual and use of web analytics tools, with higher scores in Spain in

both cases. The Italians related better performance with a marketing strategy that took into account the proper tourist load for the ski resort.

With regards to the scores for importance, the strategy of promoting good relations with stakeholder groups was scored more highly in Spain.

5.2. Social Network Analysis

The first point that was confirmed in the analysis of behavioral patterns on social media was in regard to Twitter, with which all the resorts that were selected have an account. There were no significative differences between both countries in the majority of indicators on Twitter (Table 5). It was notable that the ski resorts in Spain surpassed those of Italy in terms of tweets, followers, following, followers per following, replies, listed, and tweets with links. The opposite was true for tweets with mentions, tweets with hashtags, retweets, and tweets with media. However, significant differences only occurred with tweets and followers and listed, which were always greater in Spain.

Table 5. Average values of indicators on Twitter for the Spanish and the Italian ski resorts.

Indicator	Description	Spain	Italy	Significance Level
Tweets	Number of tweets	3865.85	3363.53	0.022
Followers	Number of followers	6929.32	4464.80	0.050
Following	Number of followed	275.21	265.27	Insig.
Followers per following	Followers per following	28.37	4.88	Insig.
Listed	Number of searches via lists	109.50	67.07	0.050
Replies	Number of responses over 100	5.29	4.93	Insig.
Tweets with @mentions	Tweets with mentions over 100	32.71	51.00	Insig.
Tweets with #hashtags	Tweets with hashtags over 100	37.26	57.00	Insig.
Retweets	Number of retweets over 100	18.94	32.67	Insig.
Tweets with links	Tweets with links over 100	64.62	56.60	Insig.
Tweets with media	Tweets with multimedia over 100	19.00	26.80	Insig.

Source: Foller. Significance level for the Mann–Whitney U test of differences.

With regarda to Facebook, the Italian ski resorts were much more dynamic in relation to practically all the indicators, with two exceptions: Notes and average post length (Table 6). There were statistically significative differences (in the Mann–Whitney test) for *about*, *response*, *total Page likes*, and *native Facebook videos*, with greater activity at the Italian ski resorts in all cases.

Table 6. Average values of indicators on Facebook for the Spanish and the Italian ski resorts.

Indicator	Description	Spain	Italy	Significance Level
Frontpage	Visits to Frontpage	0.917	0.981	Insig.
About	Additional information	0.770	0.831	0.07
Activity	Percentage activity of the page	0.538	0.697	Insig.
Response	Number of responses	0.384	0.475	0.08
Photos	Percentage of photographs	0.546	0.728	Insig.
Videos	Percentage of notes	0.218	0.122	Insig.
Notes	Percentage of videos	0.114	0.160	Insig.
People talking about this	People posting comments on the page	782.50	3100.35	Insig.
Total Page likes	Total "likes" received	22,434.72	40,797.90	0.048
Engagement rate	Implication	0.026	0.502	Insig.
Posts per day	Daily posts	0.361	1.485	Insig.
Average post length	Average length of post	226.97	206.2	Insig.
Events	Events created	1.39	5.95	Insig.
Pages liked	Number of likes received	33.92	52.45	Insig.
Facebook native videos	Videos posted on the page	5.25	9.4	0.07

Source: LikeAlyzer. Significance level for the Mann–Whitney U test of differences.

In Tables 7 and 8, the results of the Pearson's correlation analysis between the indicators of social networks and the main descriptive indicators of the ski resorts (opening days, total visitors, kilometers of ski slopes, and turnover) are shown. With regard to Twitter, there is a positive correlation in several cases. Open days correlate with number of tweets, listed, tweets with mentions, and tweets with hashtags. Open days denote more activity but links, multimedia, or more followers do not.

The total number of visitors to the ski resorts is correlated with tweets, followers, following (incorporates social mass), listed, and tweets with hashtags. Kilometers of slopes do not provide new information to the previous results. It is correlated with tweets and tweets with hashtags. Finally, the turnover only correlates with the number of following.

Table 7. Correlation between Twitter indicators and descriptive data of ski resorts.

	Opening Days	Total Visitors	Kilometers of Ski Slopes	Turnover
Number of tweets	0.41 **	0.64 **	0.41 *	0.18
Followers	0.24	0.83 **	0.18	0.21
Following	0.25	0.39 *	0.23	0.49 **
Followers per following	−0.12	0.02	−0.17	−0.17
Listed	0.31 *	0.87 **	0.21	0.22
Number of responses over 100	0.22	0.38	0.20	−0.01
Tweets with mentions over 100	0.37 *	0.08	0.27	0.23
Tweets with hashtags over 100	0.577 **	0.56 **	0.53 **	0.27
Number of retweets over 100	0.24	−0.04	0.13	0.27
Tweets with links over 100	0.13	0.08	−0.11	−0.08
Tweets with multimedia over 100	−0.11	0.11	0.15	0.18

** Significance level of 0.01. * Significance level of 0.05.

Table 8. Correlation between Facebook indicators and descriptive data of ski resorts.

	Opening Days	Total Visitors	Kilometers of Ski Slopes	Turnover
Frontpage	0.18	0.19	0.25	0.23
Additional information	0.15	0.13	0.16	0.27
Percentage activity of the page	0.38 **	0.45 *	0.32 *	0.34 *
Number of responses	0.18	−0.09	0.21	−0.02
Percentage of photographs	0.02	−0.02	0.11	0.31 *
Percentage of notes	−0.07	0.02	−0.09	−0.24
Percentage of videos	0.29 *	0.24	0.17	−0.04
People posting comments on the page	0.38 **	0.73 **	0.54 **	0.41 **
Total "likes" received	0.27	0.87 **	0.69 **	0.48 **
Implication–engagement rate	0.15	0.32	−0.06	−0.02
Daily posts	0.29 *	0.17	0.40 **	0.24
Average length of post	−0.05	0.10	0.05	0.01
Events created	0.26	0.80 **	0.50 **	0.61 **
Number of likes received	0.24	0.61 **	0.42 **	0.30 *
Videos posted on the page	0.25	0.468 *	0.44 **	0.14

** Significance level of 0.01. * Significance level of 0.05.

With regards to Facebook, it is interesting that three indicators (activity, people posting comments on the page, and total page likes) are correlated with the four indicators of ski resorts. Turnover has also a great number of correlations. Apart from the three mentioned, it has correlations with percentage of photographs and events created. Strong correlations occur with the descriptive indicator of open days. The activity on Facebook has more to do with the volume and business characteristics of the ski resorts than the Twitter indicators, in particular regarding turnover.

5.3. Ski Resort Clusters by Twitter and Facebook Indicators

The values related to the behavioral patterns of the ski resorts on the two social media networks were normalized, to identify clusters of ski resorts. After applying different procedures of hierarchical grouping, such as the Ward and the complete linkage method, with different distance factors, it was concluded that the most appropriate grouping was the one formed by four groups. Having decided on the number of groups, the k-means cluster analysis option was performed, yielding the results that are commented on below (Table 9).

Table 9. Clusters identified by indicators on Twitter and Facebook. Normalized values.

Cluster	Average Profile	Inactive	Leader	Aversion to Twitter
Tweets	1.285	−0.772	**2.457**	*−1.008*
Followers	0.178	−0.498	**6.188**	*−0.449*
Following	2.289	−0.775	−0.846	−0.360
Followers per following	*−0.197*	**1.207**	0.542	−0.139
Listed	0.543	−0.931	**4.048**	*−0.942*
Replies	−0.982	−0.982	0.908	−0.415
Tweets with mentions	−0.672	*−1.371*	−0.148	−0.148
Tweets with hashtags	0.506	*−1.275*	**0.902**	−0.167
Retweets	−0.355	−0.964	−0.395	−0.395
Tweets with links	0.894	−0.366	0.440	−0.114
Tweets with media	−0.281	*−1.207*	0.210	1.245
Frontpage	0.380	*−4.481*	0.380	0.380
About	**0.931**	*−4.216*	−0.437	−0.437
Activity	**0.972**	*−2.324*	**0.972**	−0.139
Response	0.202	−1.593	−1.593	0.202
Photos	0.381	*−2.198*	0.344	0.492
Notes	−0.543	−0.869	−0.590	−0.683
Videos	0.134	*−1.186*	**1.014**	0.486
People talking about this	0.155	*−0.528*	**3.658**	3.806
Total page likes	1.456	*−0.804*	**2.990**	0.325
Engagement rates	−0.161	−0.188	−0.106	0.111
Posts per day	0.080	*−0.564*	−0.207	5.879
Average post length	0.821	−1.540	−0.081	−0.298
Events	**3.363**	*−0.492*	**3.363**	−0.492
Pages liked	**1.418**	*−1.069*	**1.418**	−0.770
Facebook native videos	1.469	*−0.883*	**1.841**	0.850

Bold: Highest values between the different clusters. *Italic*: Lowest values between the different clusters. Shaded : No significant differences.

Cluster 1: Average profile on social media

This cluster was formed of ski resorts that are neither prominent, because of their activity either on Twitter or on Facebook, nor stand out, nor have the lowest level of activity on social media. They only stand out because of frontpage and about in Facebook. It comprises the great majority (34) of the ski resorts and represents an intermediary profile in the use of social networks.

Cluster 2: Inactive on social networks

This cluster has the fewest indicators on both social media networks. The ski resorts in it had the lowest values in 19 of the 26 indicators, only standing out because of the high number of followers per following on Twitter and notes on Facebook. The least active resorts on both Twitter and Facebook topped the list. This group was formed of eight ski resorts, of which the seven Spanish ones were the least active. Among those resorts, we may mention the following: Port Ainé, Valdezcaray, San Isidro, Astún, Navacerrada, La Pinilla, and Vigo di Fassa.

Cluster 3: Most active on social media networks

This cluster has the highest activity both on Twitter and on Facebook. It presented the highest indicators for both networks: On Twitter, it had the highest score for 6 of the 11 indicators. The single resort in this cluster had the most tweets, the most followers, the most searches via lists (referred to as listed), replies, and tweets with links, while its own accounts followed others less than any other to the Twitter accounts. It is the leading Twitter account in the universe under analysis and corresponds to the ski resort of Sierra Nevada. Something similar was found on Facebook, where it especially stands out on videos, people talking about this, total page likes, events, pages liked, and Facebook native videos.

Cluster 4: Aversion to Twitter

These resorts show very little activity on Twitter but are moderately active on Facebook. They are the resorts with the fewest tweets, the fewest followers, and the fewest followers per following. Nevertheless, they head the list of tweets with mentions and retweets. The high number of responses, photos, posts per day, and average post length may note their greatest activity on Facebook. The other indicators of the cluster usually left it in second position. The Italian ski resorts that stood out in this cluster were as follows: Madonna di Campiglio and Monterosa Gressoney marked by their preference to use Facebook and their non-use of Twitter.

The most similar clusters were 1 and 4, while the most different clusters were 2 and 3.

We have analyzed the possible differences between the clusters in relation to the four descriptive indicators of the ski stations. The non-parametric Kruskal–Wallis test shows that there are only differences between the clusters for the variable "open days" ($p = 0.02$). Sierra Nevada is the ski station with the greatest number of opening days, and it stands out in the cluster "active in social media" (3). Opening days is the variable that makes the difference in the social networks' activity of the ski stations.

6. Discussion

Tourism is a very dynamic sector with strong growth. Sport represents an activity that is practiced in an increasingly significant manner. The segment of sports tourism is of great social and economic impact. Tourism linked to the practice of skiing involves some 80 countries with approximately 400 million annual visiting skiers [78].

The management of ski resorts has its peculiarities and, in particular, the marketing of ski resorts. The existing literature has centered on studies of motivations for the choice of resort and satisfaction with the experience of the visit. There are no studies on the assessments of ski-resort directors with regards to the performance and the importance of the marketing dimensions of their resorts.

A methodology based on the IPA with a list of items to conduct this type of marketing audit of ski stations has been used to analyze the responses of ski-resort directors, in both Spain and Italy, to the survey. From the results, the following may be deduced.

IPA is a widely used tool in the tourism sector, useful for evaluating the service of tourism companies [71,79] and, specifically, ski resorts [42,43].

Among the results, the importance of online management has been proven. The use of the Internet as a source of information and interaction with visitors was confirmed as a fundamental aspect to highlight among the tasks of ski-resorts [62]. The information that users can accumulate and/or consult on their mobile phones is larger and larger. In addition, technological development makes it possible to personalize the services that are on offer in accordance with the characteristics of the consumers and the collection of valuable information in the form of big data [80].

The above is connected with the need to be consumer oriented and to know your consumer, in order to differentiate the offer of the resort [14]. Well-defined positions of employment are important for successful marketing and, in agreement with [41], good relations with other departments. The attributes that stand out among the most important ones have to do with the surrounding environment, organization, and functions.

The lack of importance given to relations with members of its microenvironment (mainly, the operators) stands out. However, according to Zehrer and Hallmann [81], collaboration between the different stakeholders (community, suppliers, tourism operators, visitors, etc.) is decisive.

The literature on studies of social media at ski resorts is very limited. No references were found that identified typologies of behavior at the ski resorts with the detail that has been presented in this paper, through 11 indicators from Twitter and 15 from Facebook.

The recommendations at which we arrive from this study is the need to implement marketing planning from preparatory research (incorporating web analytics) up to implementation (in marketing activities, and specifically digital marketing actions, and the integration of communication actions) and, of course, follow up and control of objectives and costs. This planning should be sensitive and

coordinated with impact studies on the ski resorts, reviewing and analyzing the tourist load, and the needs of their visitors. Communications with stakeholders should be meticulous with integrated and coordinated (online and offline) actions. Finally, another recommendation is to establish training and motivation plans for personnel that develop marketing activities, always from the perspective of ethical marketing and macro-marketing. In short, this study can serve to establish priorities and a working method for the improvement of the implementation of marketing at ski resorts.

In short, from the analysis, the direct implication for management is the need to improve the orientation toward a marketing application in a responsible manner in all its dimensions, from how a marketing strategy is formulated taking into account the environment, to how to involve the employees. It is necessary to implement actions aimed at finding the expectations of the stakeholders, including sustainable development and management to maintain the attractiveness of the stations.

The typologies of behavior on Twitter and Facebook provide the possibility of benchmarking for comparisons between the profiles or clusters and social media activity, especially to draw comparisons with the leading or most active ski resorts. One fundamental implication is to adopt an active behavior towards social media and with the followers, as there is a direct relation with the performance indicators of the resort.

As with all investigations, the present one also presents limitations. In the first place, the size of the sample for the marketing audit was reduced. Nevertheless, large sizes are not essential for this type of study consisting in positioning items, in order to arrive at an acceptable diagnosis. Moreover, only two social media networks and certain indicators have been considered in the analysis. Those two social media are the most widely used and the conclusions that we have advanced are conditioned by those limitations.

7. Conclusions

The main purpose of this work is to know the perception that the managers have about the application of marketing management at their ski resorts. To do this, an internal marketing audit is carried out, applying the importance–performance analysis, incorporating methodological innovations. In particular, the ROC (receiver operating characteristic) curve is used to find the optimal location of discriminating thresholds. This identifies what is done better and what is done worse. Respectively, the following have been achieved:

7.1. Conclusions about Marketing Audit

The Most and the Least Important Aspects of Ski-Resort Marketing

The directors considered that both the opinions and the needs of the visitors were of the greatest importance, as was responding to legislative changes. They also considered it important to use the Internet in their strategies and to know their competitive positions and possible threats and opportunities. With regard to the organization, they highlighted the importance of defining their jobs and their characteristics, the relations between the marketing department and the others, and the training of marketing personnel. Finally, with regard to functions, the importance given to a well-positioned web site was high on the list, as were service-quality orientation, and both online and offline communications. Tracking the activities of other ski resorts or the implementation of a resort's own marketing and communication activities were not among the priorities. This situation confirms why the questions of tracking the activities of other ski resorts, periodically studying the social impact of the resort, and the availability of a clear, well-defined, and well-known mission statement are all among the questions considered of least importance. Among those questions are the availability of a corporate identity manual, cost reviews, controlling the achievement of objectives, employer motivation, having integrated marketing communications, and relations with co-workers.

It should be mentioned that looking for sustainable alternatives is not among the priorities. There is no clear orientation towards sustainable management or interest in social impact. For this

reason, it is important to promote the awareness of sustainable development and management of ski resorts to maintain their attractiveness, as well as to be aware that overexploitation can downplay interest in the station.

The Best and the Worst Marketing Performance at the Ski-Resorts

At all times from the perspective of the directors of the ski-resorts, the factors that achieved a higher level of implementation were: The use of the Internet in the strategy and the availability of a well-positioned web; responding to legislative changes; monitoring economic changes in the local environment; knowing their position in relation to the other resorts, and the opinions of their visitors; well-defined marketing jobs and solid training; good relations between the marketing department and other departments; and a clear service orientation.

At the other extreme is the definition of objectives and their follow-up (referring to communication, the search for new segments, tracking other ski resorts, controlling the achievement of marketing objectives, social impact studies of their services); communications and marketing actions (availability of a manual on corporate identity, an internal communications system, carrying out direct marketing activities from databases or online, adopting integrated communications), and relations (review the efficiency of tour operators).

In general, the dimensions of the environment and the organization were considered to lead to higher performance levels than the functional dimensions, above all those connected with tracking and control.

The Weaknesses of Marketing at Ski-Resorts

The greatest differences between importance and performance are the key deficits, or, expressed otherwise, the weaknesses in the very important questions. The greatest deficits arise principally in relation to the functions and have to do with:

- Employees: Need for motivation to achieve objectives;
- Market research: Research the needs of the target public; look for unexplored market segments or new market niches; deeper knowledge of the opinions of (real and potential) visitors;
- Communications: No adaptation to integrated marketing communications, no availability of and internal communications system, improvement of online and offline communications objectives;
- Activities to implement and relations: Database marketing activities, online, and direct; reviewing the efficiency of the tourism operators with which the resort collaborates; definition of a service quality strategy;
- Controlling objectives: Both for online and for offline marketing.

The greatest deficits were linked to employee motivation and communication.

Finally, there were, in general, no differences between the scores of the directors by country. The differences between the 32 items were all exceptions.

7.2. Patterns of Behavior on Social Media of Ski Resorts

The social media profiles of the Spanish and the Italian ski resorts have presented differences. Those of Italy were more active, had a more proactive behavior on Facebook, which was adapted largely to their communications strategy. These differences were significant for the following indicators: About, response, total page likes, and native Facebook videos. The resorts from both countries showed a similar behavior on Twitter, although the Italians had more following, tweets with mentions, and hashtags. The Spanish resorts, in this case with statistically significant differences, had more tweets, followers, and listed.

Four behavioral typologies were identified in these social media networks, which were average profile, inactive social media, leader, and aversion to Twitter. The Spanish ski resort of Sierra Nevada

was the most active one, while the Italian resorts had a higher number in the group of aversion to Twitter. The Italians were more active on Facebook.

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Appendix A

Table A1. Importance–performance scores. Differences between importance and performance and significance level of the Wilkinson's test for differences between importance and performance.

List of items	Importance I		Performance P		I-P	Sig. Level Wilcoxon Test for Difference
	Avg.	Std. Dev.	Avg.	Std. Dev.		
Marketing Environment						
The ski resort takes into account and takes action on the main economic events in its environment	7.72	1.73	7.14	2.279	0.31	0.153
The ski resort looks for sustainable alternatives related to environmental impact	7.59	2.062	7.03	2.195	0.45	0.221
Annual investigation of the needs of the target public of the ski resort	8.31	2.316	7.45	1.682	1.28	0.002
The ski resort knows the opinion of its (real and potential) visitors	8.52	1.805	6.55	2.063	1.07	0.014
Availability of information on objectives, strategies, strengths and weaknesses of other ski resorts	7.31	1.984	8.00	1.464	0.76	0.059
The ski resort is aware of and rapidly responds to legislative changes that may affect it	8.28	1.533	7.07	1.534	0.28	0.297
The ski resort takes into account the main technological changes of its environment	7.86	1.62	6.86	1.959	0.79	0.029
Marketing Strategy						
The mission is clearly expressed, is feasible and known to all members of the organization	7.48	2.246	6.86	1.959	0.62	0.165
Availability of a coherent and feasible marketing plan	8.03	2.368	7.00	2.252	1.03	0.007
The marketing strategy takes into account a realistic tourism load for the ski resort	7.69	2.173	7.00	2.138	0.69	0.048
The ski resort looks for new unsatisfied segments and market niches	7.69	2.316	6.62	2.259	1.07	0.003
Availability of a manual on corporate identity	7.28	2.658	6.45	3.019	0.83	0.077
The strategy of the ski resort promotes good relations with its stakeholder groups	7.93	1.907	7.07	1.771	0.86	0.001
Internet forms part of the marketing strategy of the ski resort	8.72	1.334	8.31	1.65	0.41	0.068
The ski resort knows its competitive position and its threats and opportunities, in order to define objectives	8.31	1.391	7.66	1.587	0.65	0.008

Table A1. *Cont.*

List of items	Importance I		Performance P		I-P	Sig. Level Wilcoxon Test for Difference
	Avg.	Std. Dev.	Avg.	Std. Dev.		
Marketing Environment						
Marketing Organization						
Well-defined jobs with objectives, responsibilities, and authority for their development	8.41	1.575	7.59	1.693	0.82	0.007
Good relations and communications between the marketing department and the other departments	8.37	1.668	7.37	2.097	1	0.016
Participants in marketing activities are properly trained	8.30	1.436	7.44	1.672	0.86	0.022
The employees are motivated to achieve the marketing objectives	7.67	2.148	6.00	2.253	1.67	0.002
Marketing Systems						
The ski resort monitors the achievement of (off-line and on-line) marketing objectives and evaluates the deviations	7.59	2.341	6.22	2.455	1.37	0.001
The ski resort uses web analytics tools	7.70	2.145	7.00	2.075	0.70	0.046
Marketing Productivity						
The ski resort periodically studies the social impact of its services	7.04	2.394	6.07	2.745	0.97	0.007
The ski resort shares programmes through collaborative agreements with other institutions	7.78	1.739	6.96	1.99	0.82	0.014
The cost of the marketing activities is periodically revised and suitable measures are taken	7.41	2.606	6.96	2.295	0.45	0.149
Marketing Functions						
Availability of a well-positioned web site in the search engines	8.37	1.668	7.63	1.597	0.74	0.017
Clearly defined service quality strategy	8.30	1.589	7.11	1.867	1.19	0.004
The ski resort has a system of internal communication	7.89	1.695	6.44	1.987	1.45	0.001
The ski resort defines and is clear with regard to its on-line and off-line communications objectives (publicity and promotion)	8.22	2.044	6.85	2.196	1.37	0.002
The services present some added value that differentiates it from other ski resorts	7.70	2.431	7.00	2.496	0.70	0.128
The ski resort periodically reviews the efficacy of the tourist operators and commercial companies with which it works	7.41	2.664	6.19	2.617	1.22	0.003
The ski resort performs direct marketing, online marketing, and database marketing activities	7.70	2.163	6.15	2.445	1.55	0.001
Communications are adapted to the concept of integrated marketing communication	7.56	2.694	5.96	2.519	1.60	0.000

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Is Gastronomy A Relevant Factor for Sustainable Tourism? An Empirical Analysis of Spain Country Brand

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Abstract: Tourism has become a fundamental industry for the economic growth of many countries. Due to this, there is growing competitiveness among the different destinations to attract as many tourists as possible. As a result, disciplines such as marketing have developed tools to differentiate some destinations from others and concepts such as place branding and country brand have emerged. One of the key factors forming the country brand is gastronomy, as food tourism is one way to reduce the growing problem of sustainability in tourism, as it impacts different aspects of the country's environment. However, there is a great lack of scientific works that relate both variables. In this paper, we propose to establish that, in the case of Spain, tourists' perception of Spanish gastronomy is a key element of its country brand. To do that, this study relies on the use of Partial Least Squares Structural Equations Modeling (PLS-SEM) using a 496 cases data set.

Keywords: country brand; gastronomy; tourism; Spain

1. Introduction

Tourism has become one of the main economic activities in the world. In the case of Spain, tourism has become an important source of income and country development. According to data from the World Tourism Organization, 81.8 million tourists visited Spain in 2017, thus becoming the country receiving the second-most international tourists [1]. In addition, the tourism sector accounted for 11.7% of the Gross Domestic Product (GDP) in 2017, which in terms of value was 62 billion euros, accounting for 12.8% of total economic activities [2].

Due to the capital importance of the tourism sector in the world economy, the governments in charge of tourism promotion began to apply marketing strategies in the early 1980s. Thus Burgess [3], Ashworth, and Voogd [4] carried out the first investigations focusing on the image that a place had to project and from a strategic perspective. Kotler et al. [5] continued and expanded this area of knowledge in the following decade. However, it was not until 2002 that the term "place branding" was coined [6] producing a sudden increase in the academic literature. For example, Kotler et al. [5] indicate that one of the objectives of the territory brand is the attraction of tourists to the destination and Van Gelder [7] reaffirms this idea.

However, one of the problems that arise for the proper management of the country brand is its polyhedral nature, since these can be associated with a huge number of dimensions. Analyzing the previous studies of the image of Spain made by the Real Instituto Elcano [8], this country is strongly associated with soft factors such as sports or gastronomy. Specifically, Symons [9] claimed that gastronomy is a key element in the management of tourism, finding in the scientific literature a growing number of studies on food tourism. Despite this, there are only a few articles that relate gastronomy

and place branding [10–12]. These authors have demonstrated how gastronomy is indicated as one of the main attributes of place branding of the territory and, therefore, is part of the attributes of a territory brand. Among other reasons, this is due to the fact that gastronomy is involved in different areas [13] such as agriculture, food industry, the retail sector, and hospitality. Despite this, many scholars agree that place branding and food tourism studies still lack a proven scientific methodology [14–16].

However, Swarbrooke [17], in his book "Sustainable Tourism Management", pointed out that marketers must be mindful to develop a sustainable tourism model to reduce the possible negative impact over local communities. In this line, World Tourism Organization (UNWTO) has focused part of its research on sustainable tourism-boosting the International Network of Sustainable Tourism Observatories (INSTO) which is monitoring the economic, environmental, and social impact of tourism at the destination level [18]. Among others, food tourism has been identified as a main way to empower local communities thanks to the value-added activities involved [19,20]. Nevertheless, there must be a linkage between what it is sustainable and what tourists desire when visiting a destination. Because of this, we wonder if gastronomy is a key factor forming the Spain brand, and so could be an attribute to lead a successful and sustainable marketing strategy for the Spanish government.

Having said that, the main objective of this research is to prove in an empirical way the relationship between gastronomy and the Spain brand. In the case of obtaining positive and conclusive results, this model would be used to know if this relationship can occur in other countries with a good gastronomic positioning such as France, Italy, Peru, Thailand, or Japan, based on the world travel awards 2018 that every year choose the world's leading culinary destinations [21].

2. Theoretical Framework and Hypothesis Development

Firstly, it should be emphasized that the success of a region in the reception of tourists may depend on macro-environmental factors such as politics, terrorism, diseases, natural disasters, or weather conditions [22]. However, some attributes have a more important role than others in the final choice of a touristic destination [23]. Moreover, Morgan et al. [24] ensured that the battle for customers in the tourism industry would not be won thanks to price competition, but by focusing on the hearts and minds of tourists, that is, in the emotional links and in the experience, as studied more recently by Bukharov and Berezka [25]. According to Sheth et al. [26] consumers, through their choice of a product or service—including tourism—make a clear statement of their lifestyle, which also brings an emotional link. Therefore, the country brand is an important element when choosing a destination as demonstrated by different academics [27–29].

Among the first research on marketing applied to the management of regions, we can highlight those of Burgess [3] and Ashworth and Voogd [4], that focused on the image that a place had to project and the sale of that image. Later, Kotler et al. [5] made a series of proposals on managing an effective image of the territories. This gave rise to the concept of place branding [30], which has aroused great interest among researchers and professionals. Some authors consider that it is a field that goes beyond generalist brand management [31]. For the correct development of the country brand, a systematic and long-term marketing strategy must be developed [32]. This strategy must aim to nurture and develop the natural and potential attributes of an area or region. Finally, Moilanen and Rainisto [33] listed clear and direct benefits derived from place branding.

The perceived image of a tourist destination by potential travelers is a significant factor in terms of choice, satisfaction, and purchase intention [34]. The same has been widely studied by authors such as Fakeye and Crompton [35] and more recently by Lee et al. [36] and Chen and Tsai [37]. The latter proved empirically, through a study carried out in Taiwan, that the image of an destination exerts a great influence on the behavior of tourists when choosing that tourist destination. This means that branding managers for a tourist destination have to take care of the image projected of their territory, trying to meet the needs of potential travelers. For the development of a strong image of a territory through destination branding, it is necessary to identify those attributes that generate positive experiences for tourists. Once identified, these have to be key elements of communication and the

positioning of the image of the place in order to attract new visitors and provide the destination with differentiating elements from the competition [38]. Experience shows that, in most cases, the absolute control of the image is beyond the reach of those responsible [39]. The bibliography studied shows how the management of the country brand is complex since it affects a large number of elements that define that country [5,40,41].

Related to the above, several authors have highlighted the importance of the perception that gastronomy has about the attributes of a country brand. Among them, we can highlight research on the attitude of tourists to local cuisine such as those carried out by Ricolfe et al. [42], Hjalager and Corigliano [43], Quan and Wang [44], or Nummedal and Hall [45]. Regarding gastronomy branding, as a part of destination branding, few articles address the subject. Some authors who have addressed this issue have empirically demonstrated that gastronomy is indicated as one of the main attributes of the place branding [10–12]. Others have pointed out that gastronomy has become one of the key elements for the improvement, sustainability, and consolidation of tourist destinations [46]. Therefore, it has become clear that gastronomy is inherent in tourism and essential both in its production and consumption [9].

In the case of Spain, it has some of the world's leading gastronomy, highlighting other tourist attributes and providing significant value to the country brand. In a recent study conducted by Pérez-Priego et al. [47], they have revealed that culture and local gastronomic heritage are currently a differentiating factor of tourist destinations due to the growing culinary interest for people visiting Spain. This may be due to the high perception of the quality of products and services related to Spanish cuisine that give it an image of exclusivity [48]. In line with the above, since 2011 TurEspaña (State Agency dedicated to the promotion of Spain as a tourist destination abroad) has implemented gastronomy as one of the main values of the tourism brand in Spain within its foreign promotion plan [49]. In its marketing plan one of its main objectives is to increase the power of the tourism brand in Spain thanks to gastronomy, as well as the promotion of gastronomic tourism for which the Royal Academy of Gastronomy has been added to the project [50].

This is because, although tourism is an important activity for Spain, this industry is related to sustainability problems having a direct impact on the physical environment, economic viability, and social justice and equity [17]. In this line, Moscardó and Pearce [51] showed how tourism development could affect to the disempowerment of destination communities. Both perspectives are linked with the UNWTO's sustainable tourism definition: "Tourism that takes full account of its current and future economic, social, and environmental impacts, addressing the needs of visitors, the industry, the environment, and host communities" [18]. This may be why many places in Spain such as Madrid, Cataluña, or Islas Baleares have started to regulate and tax the entrance of new tourists to make this model more sustainable. Looking for solutions to this problem some studies have found the gastronomy, as an inherent part of the tourism, is a good solution to this sustainability problem. If the place has a strong linkage between tourism and food production, this can build added value to the place, stimulate the entrepreneurial activities among the locals, and boost food exports [19]. Also, when sustainable gastronomic tourism is well planned and executed it can preserve the quality of life of the locals [20].

Therefore, our main objective is to explore if the perception of attributes of Spanish gastronomy (ASG) by tourists becomes a key element for the development of Spain Brand (SB). We also aim to find out if gastronomy it is designated as one of the main attributes of the place branding of the territory as pointed out by other authors [10–12,52], in the case of Spain, which has some of the world's leading gastronomy, which contributes a remarkable value [48]. All this is specified in the following hypotheses that can be observed in Figure 1.

Hyphothsis (H1). *There is a positive relationship between the perception of the attributes of Spanish gastronomy (ASG) and the perception of the Spain brand (SB).*

Hyphothsis (H2). *There is a positive relationship between the perception of the attributes of Spanish gastronomy (ASG) and the evaluation of Spanish gastronomy (ESG).*

Hyphothsis (H3). *There is a positive relationship between the evaluation of Spanish gastronomy (ESG) and the perception of the Spain brand (SB).*

Hyphothsis (H4). *The evaluation of Spanish gastronomy (ESG) mediates the link between the perception of the attributes of Spanish gastronomy (ASG) and the perception of the Spain brand (SB) (indirect effect).*

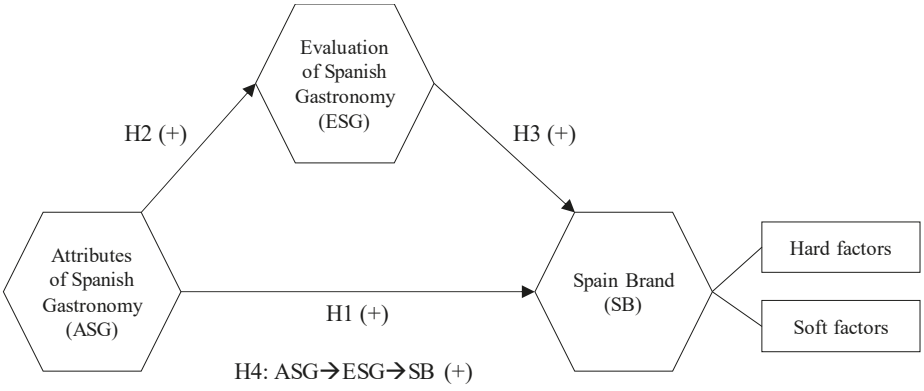

Figure 1. Research model and hypotheses. ASG: attributes of Spanish gastronomy; SB: Spain Brand; ESG: evaluation of Spanish gastronomy.

3. Methodology

3.1. Sample, Data Collection, and Measures

The methodology for this investigation was based on the realization of an online survey with the purpose of knowing the opinion of foreign citizens in relation to its gastronomy and its image as a tourist destination. In the first place, the profile of the respondent was configured. These must be non-Spaniards, over twenty years of age, and who had visited Spain. The age limitation was determined based on the reflection that people under twenty years could distort the results because they are not usually decision makers, that is to say, it is their parents who decide where to spend their vacations and where they eat. Due to the objectives of this research work, Spanish citizens were not considered as an objective public who know the vision that foreign tourists have about Spanish gastronomy. Once elected, a profile proceeded to the preparation of the questionnaire. To reach the final questionnaire six previous drafts were drawn up. By pre-test, we were detecting possible errors of interpretation, including measure response being mandatory or filtering, which could cause deviations understood and errors in the final analysis.

The sample was 496 individuals that would be considered as a large sample according to Kline [53]. However, to confirm the adequacy of the sample size, we relied on the G*power test, computed through the use of the G*power 3.1 tool [54]. Concretely, we conducted an a priori analysis, by virtue of which the necessary sample size is calculated as a function of researcher-specified values for the required significance level (α), the desired statistical power (1-β), and the to-be detected population effect size [54]. This test reveals that a minimum sample size of 74 is needed to obtain a power of 0.95 being alpha 0.05 and 2 the number of predictors (see Figure 2). Consequently, the final sample (n = 496) meets the initial sample size requirements [55].

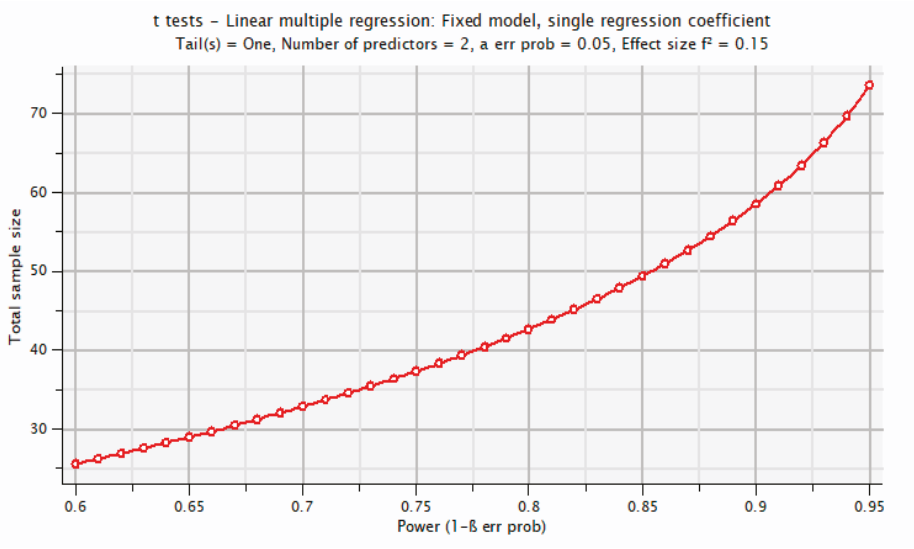

Figure 2. A priori power analysis plot.

The variables Attributes of the Spanish Gastronomy and Spain Brand have been modelled as composite constructs on behalf of the theoretical background shown in Table 1, and all the items of the survey were measured through a seven-point Likert scale. Such variables can be regarded as design constructs or artifacts that are made up of more elementary components, (i.e., dimensions or indicators). Thereby, composites are modelled as linear combinations of their own indicators or dimensions [56]. As can be observed in Table 2, ASG was measured by asking the interviewees to evaluate the following attributes of Spanish gastronomy: tasty, varied, traditional, original, sophisticated, healthy, international, exclusive, and quality. This construct provides a measure of the positive or negative perception that might have those interviewed in relation to the Spanish cuisine. However, the construct ESG was added to get a direct measurement of this perception, which was measured by the question: "After your visit, how would you assess Spanish gastronomy? "(1 = extremely poor, 7 = excellent). Finally, SB construct is a second order construct meaning that it is shaped by two first order constructs. These are hard (technology, innovation, and business) and soft (culture, partying, leisure, good weather, and Food/drink) factors that make up the image of Spain in the minds of tourists.

Table 1. Modeling of constructs.

Constructs	Authors
Attributes of Spanish Gastronomy (ASG): First order construct (Mode A).	Muñoz and Rodríguez [48]; Ricolfe et al. [42]; Kivela et al. [57]; Hjalager and Corigliano [43]; Cohen and Avieli [58]; Nummedal and Hall [45]; Mak et al. [16]; Hall and Mitchell [59].
Evaluation of Spanish Gastronomy (ESG): Single-item variable.	Hall and Mitchell [59]; Nuñez-Florencio [60]; Tarrés [61]; Schlüter [62]; Ehrmann et al. [63]; Surlemont and Johnson [64].
Spain Brand (SB): second order construct (Mode B) shaped by two dimensions (Hard and Soft factors).	Boyne and Hall [52]; Kastenholz et al. [10]; Gyimothy et al. [11]; Joppe et al. [12]; Muñoz and Rodríguez [48]; Chon [65]; Assael [66]; Papadopoulos and Heslop [40]; Goodall [41]; Fakeye and Crompton [35]; Kotler et al. [5]; Beerli and Martín [67]; Echtner and Ritchie [68]; Chen and Tsai [37]; Baloglu and McClear [69]; Bigné et al. [70].

Table 2. Individual item reliability, construct reliability and convergent validity.

Construct/Indicators	Outer Loadings	Weights	VIF	rho_A	CR	AVE
Attributes of the Spanish gastronomy				0.888	0.902	0.509
P1_1: Tasty	0.737	0.179	2.030			
P1_2: Varied	0.770	0.176	1.968			
P1_3: Traditional	0.590	0.116	1.496			
P1_4: Original	0.765	0.155	2.059			
P1_5: Sophisticated	0.779	0.169	2.248			
P1_6: Healthy	0.665	0.148	1.595			
P1_7: International	0.657	0.127	1.687			
P1_8: Exclusive	0.647	0.133	1.603			
P1_9: Quality	0.781	0.187	2.031			
Evaluation of the Spanish gastronomy				N.A.	N.A.	N.A.
P2: Evaluation	1.000	1.000	1.000			
Soft factors				N.A.	N.A.	N.A.
P3_1: Culture	0.734	0.393	1.264			
P3_2: Partying	0.421	0.139	1.157			
P3_3: Leisure	0.567	0.229	1.287			
P3_6: Good weather	0.374	0.113	1.120			
P3_7: Food/drink	0.855	0.562	1.329			
Hard factors				N.A.	N.A.	N.A.
P3_4: Technology	0.918	0.387	3.496			
P3_5: Innovation	0.908	0.402	3.320			
P3_8: Business	0.775	0.361	1.439			

Note: VIF: Variance Inflation Factor; rho_A: Jöreskog's rho; CR: Composite Reliability; AVE: Average Variance Extracted; N.A.: Non-Applicable.

3.2. Data Analysis

Empirical data analysis in the fields of management, marketing, psychology, information systems, and other related social sciences disciplines have been lately aiming to provide wiser and more accurate interpretations and understandings of the intricate interrelationships inherent to the so-called 'black box' of a broad range of organizational and behavioral features [71]. Partial Least Squares Structural Equations Modelling (PLS-SEM) is a tool of utmost interest and applicability when attempting to analyze complex interrelationships involving a wide diversity of latent variables—constructs—and manifest variables—indicators—, be such relationships either direct, indirect, or mediated and moderated in nature [71,72].

To empirically test the research model and hypotheses posited, this study relies on the use of Partial Least Squares Structural Equations Modelling (PLS-SEM), a variance-based structural equation modelling technique [55]. This decision is due to the fact that two of the constructs shaping our research model are composites [73]. Both theoretical and empirical studies have endorsed the use of PLS when a composite measurement model is supported [74]. Another reason for using PLS-SEM is that this research is primarily focused on identifying key constructs in order to predict the dependent construct—Spain Brand—and it uses latent variable scores in the subsequent development of Spain Brand as a second order construct applying the two-stage approach [75–77].

The two dimensions—Hard factors and Soft factors—shaping the multidimensional construct Spain Brand have been modelled as composites and estimated in Mode B (regression weights, the standard in OLS regression analysis, which comprise not only the correlation between each item and the latent variable but also the correlations between items), while Mode A (correlation weights resulting from bivariate correlations between each item and the latent variable) was chosen for measuring the Attributes of the Spanish Gastronomy construct. Moreover, SmartPLS 3.2.7 software was used [78].

4. Results

4.1. Measurement Model: Individual Item Reliability, Construct Reliability, Convergent Validity and Discriminant Validity, Potential Multicollinearity, and Weights Assessment

The evaluation of the measurement model shows satisfactory results. First, with regard to the Attributes of the Spanish gastronomy construct, it has been modeled as a composite construct in Mode A. In this case, the evaluation of the measurement model entails the assessment of individual item reliability, construct reliability, convergent validity, and discriminant validity. The indicators meet the requirement of individual item reliability because the outer loadings are, generally, greater than 0.707 [79] (Table 2) and only a few of the outer loadings are slightly under this threshold. Nevertheless, the decision is to retain them to support the content validity of the scale. Only the item P1_10 was removed, following the advice for item trimming provided by Hair et al. [77], since its outer loading (0.432) was too low. Second, this construct satisfies the requisite of construct reliability, given that its Jöreskog's rho and composite reliability are greater than 0.7 [80] (Table 2). Third, this construct reaches convergent validity since its average variance extracted (AVE) is over the 0.5 critical level [81] (Table 2). Finally, Table 3 discloses that all the constructs attain discriminant validity following the heterotrait-monotrait ratio (HTMT) criterion [82], which indicates that values should be under the threshold of 0.85 [53]. As for the soft factors and hard factors constructs, they have been modeled as composite constructs in Mode B. Therefore, these composites must be assessed in terms of potential multicollinearity between items and weights assessment [55]. According to Petter et al. [83] a variance inflation factor (VIF) statistic over 3.3 indicates the existence of high multicollinearity between items. However, Ringle et al. [78] indicate that multicollinearity should be a concern if VIF levels surpass the critical level of 5. In our case (Table 2), the maximum VIF value for indicators came to 3.496, slightly over the 3.3 threshold and well below the threshold proposed by Ringle et al. [78]. Hence, we may conclude that multicollinearity is not a concern. Subsequently, the magnitude and significance of the weights should be examined (Table 2). Weights provide information concerning how each item contributes to the respective composite [84], allowing hence ranking the indicators according to their contribution.

Table 3. Discriminant validity.

Heterotrait-Monotrait Ratio (HTMT)				
Construct	**Attributes of the Spanish Gastronomy**	**Hard**	**Soft**	**Evaluation of the Spanish Gastronomy**
Attributes of the Spanish gastronomy				
Hard	0.414			
Soft	0.726	0.461		
Evaluation of the Spanish gastronomy	0.760	0.282	0.577	

4.2. Structural Model

In line with Hair et al. [85] endorsement, this paper applies a bootstrapping (5000 resamples) technique to generate the standard errors, t-statistics, p-values and 95% bias corrected confidence intervals (BCCI) that enable the evaluation of the statistical significance for the considered relationships (both direct and indirect) hypothesized within the research model. Table 4 contains the main parameters that are obtained for the structural model under assessment in this study. The coefficient of determination (R^2) is assumed as the main criterion for measuring explained variance, which is shown in the endogenous constructs. The results comprised in Table 4 reveal that the structural model entails acceptable predictive relevance for the endogenous constructs, given that the R^2 coefficients are $R^2 = 0.451$ for the construct Spain brand and $R^2 = 0.529$ for the construct Evaluation of the Spanish gastronomy (Table 4). In addition, all the direct and indirect relationships that underlie the four

research hypotheses under assessment are shown to be positive and significant. Thus, we find empirical evidence to sustain the four hypotheses posited in this research. This implies that the Attributes of the Spanish gastronomy are positively linked to Spain Brand and to the Evaluation of the Spanish gastronomy (H1 and H2). Besides there is a positive and significant relationship Evaluation of the Spanish gastronomy and Spain Brand (H3). Finally, this study also finds support for the mediation hypothesis that links the Attributes of the Spanish gastronomy with Spain Brand via the Evaluation of the Spanish gastronomy (H4).

Table 4. Structural model results and predictive performance summary.

Hypotheses	**Path Coefficient**	***t*-Statistic**	***p*-Value**	**95% BCCI**
H1: Attributes of the Spanish gastronomy → Spain Brand	0.481(Sig.)	7.863	0.000	[0.354; 0.596]
H2: Attributes of the Spanish gastronomy → Evaluation of the Spanish gastronomy	0.727(Sig.)	28.508	0.000	[0.672; 0.773]
H3: Evaluation of the Spanish gastronomy → Spain Brand	0.235(Sig.)	3.495	0.000	[0.105; 0.369]
H4: [Indirect effect] Attributes of the Spanish gastronomy → Spain Brand	0.171(Sig.)	3.375	0.001	[0.075; 0.275]
Coefficient of determination: R^2 Spain Brand = 0.451; R^2 Evaluation of the Spanish gastronomy = 0.529				
Construct prediction summary				
	Q^2			
Spain Brand	0.336			
Dimension prediction summary				
	Q^2			
Soft	0.409			
Hard	0.156			

Note: 95% BCCI: 95% bias corrected confidence intervals.

4.3. Predictive Ability of the Model

The second purpose of our research is prediction. Shmueli and Koppius [86] define a model's predictive performance as its ability to generate precise predictions of new observations, being them either temporal or cross-sectional in nature. In this line, Shmueli [87] argues that explanation and prediction shape two distinct purposes that could be joined in a research study. Such position is also shared by Dolce et al. [88], who conclude that "The predictions of path models should be sensitive to the theory. In particular, the theoretical model represented by the structural equations and prediction should not be separated". Thus, this paper examines the predictive ability (out-of-sample prediction) of the proposed research model through the use of cross-validation with holdout samples [89] focusing on the key endogenous construct (Spain brand). Concretely, this paper relies on the use of the PLS predict algorithm [90] available in the SmartPLS software version 3.2.7. [78].

To assess whether the research model entails predictive ability it is necessary to check the Q^2 value. Positive Q^2 values imply that the prediction error of PLS results are smaller than the prediction error of merely using the mean values. For this purpose, the following prediction error statistics are considered: root mean squared error (RMSE), mean absolute error (MAE), and mean absolute percentage error (MAPE). Thus, attaining positive Q^2 values involves that the proposed research model offers a proper predictive ability. The research model posited in this study satisfies this criterion both at the construct (i.e., Spain brand), and at the dimension (soft and hard factors) levels (Table 4).

5. Discussions and Conclusions

As has been said before, gastronomy seems to be one of the main assets of the Spanish tourism brand due to its direct contribution to the economy and to the enormous potential it entails. However, few studies address the relationship between gastronomy and country brand. Thus, this paper sheds light upon this research gap, since it presents a research model that (i) hypothesizes a positive link

between the attributes of Spanish gastronomy (ASG) and Spain brand (SB), and (ii) subsequently analyses the existence of an indirect (mediated) effect of ASG on SB via the evaluation of Spanish Gastronomy (ESG) in the context of a sustainable way to promote the Spain brand. To test the research model and hypotheses, this paper relies on the use of partial least squares (PLS) path-modelling, a variance-based structural equation modelling technique of broad recognition, application, and robustness in the field of social sciences.

As the PLS analysis reveals, this paper shows in an empirical, scientific, and academic manner that these relationships are positive and statistically significant. That is why both scholars and practitioners (i.e., policy-makers) must begin to pay attention to the real importance that gastronomy has on the image of the country. As it might be observed, in light of the empirical basis presented in this paper, Spain currently enjoys a great global reputation in the field of gastronomy, which has been built throughout the last twenty years. Having been capable of reaching this relevant milestone—being recognized internationally for gastronomy—and having empirically verified the positive and significant impact exerted by Spanish gastronomy upon the Spanish country brand, it must serve to focus and emphasize part of our tourist communication policies on the gastronomic field. We presume that, in the case of Spain, the promotion of its gastronomy will not lead to anything but the development and improvement of the Spanish brand in a sustainable way.

This paper entails remarkable implications both for theory and practice. The theoretical implications are clear. This study is pioneering both from a conceptual and empirical point of view, since it posits an original conceptual model that assesses scarcely explored relationships between constructs, and subsequently analyses them empirically through the use of PLS. It also confirms what other studies pointed out—that gastronomy is a key factor forming a country's brand—in the case of Spain [47], as in other cases [42–45]. Considering the high capability of country brand to attract tourists [32] and following the advice of UNTWO to develop sustainable tourism marketing strategies, the main practical implication that derives from this study is that Spain must reinforce its positioning as a gastronomic brand in order to attract more food tourism is one of the best options to solve the sustainability problem [46] related to tourism [19,20]. Moreover, there are several countries like Peru, Thailand, or Japan that can follow the same way thanks to the strength of the image of culinary destinations [21]. Therefore, we urge Spanish policy-makers to publicize Spanish cuisine globally to maintain and improve the image of food tourism destination.

Regarding limitations, it is important to note that our results are valid for the case of Spain only. This makes us doubt what is the relative importance of gastronomy in the formation of the country brand over other tourist destinations. Therefore, as a future line of research, we intend to test this model for the cases of the aforementioned countries, as well as others whose gastronomy is not so well known to set the relative position of each destination. If gastronomy could be broadly established as a key factor in the formation of the country brand, this could be an affective global strategy to promote sustainable tourism.

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Exploring the Determinants of Hot Spring Tourism Customer Satisfaction: Causal Relationships Analysis Using ISM

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Abstract: To stand out in the hot spring tourism industry, customer satisfaction has become the crucial issue for competitiveness. A company cannot implement several customer satisfaction improvement practices altogether with limited resources. Researchers advocate that companies should evaluate the relationships among success factors and explore determinants for their improvement implementation. However, such a relationship evaluation has not yet been adequately performed. This paper intends to explore the determinants for improving hot spring customer satisfaction. Adopting grounded theory (GT) and using data collected from websites, Ctrip and Qunar, the first 12 key factors for customer satisfaction were identified. Then, their interrelationships were assessed by 15 experts, and interpretive structural modeling (ISM) was employed to analyze the interrelationships and the driving and dependence power among key factors. The results show that "Environment Quality", "Special Resource", "Convenience", "Food", Service Quality", and "Facilities" were the decisive factors affecting customer satisfaction. The findings offer important implications for hot spring management and practice. The contribution of this study is using a novel approach to establish a hierarchical structural model for comprehensive understanding of factor relationships that influence hot spring tourists' satisfaction and to explore decisive factors which can help hot spring practitioners to better plan and design effective improvement strategies to attract potential new consumers and retain their current consumers, especially with limited resources.

Keywords: hot spring; customer satisfaction; interpretive structural modeling; decisive factors; grounded theory

1. Introduction

Hot spring tourism is one of the most popular types of tourism [1], which often attracts thousands of domestic and international travelers to visit annually [2,3]. With the rapid growth of economic and wellness tourism in China, the hot spring tour has become a popular holiday activity. Chinese consumers tend to enjoy holidays in hot spring resorts. With continuing steady investment in new hot springs resorts and ongoing strong growth in hot spring-based tourism, according to the 2017 Global Wellness Institute report, China accounted for 31.2% of global revenues in thermal/mineral springs tourism in 2017 because of the ongoing massive investments in hot spring resorts [4]. Furthermore, in order to raise standards and industry quality to attract foreign visitors, the Chinese government has established a national hot spring committee and regulations related to water quality, safety

management, and the rating of "hot springs towns" [4]. However, the market of hot spring resorts is gradually becoming more saturated with more intense competition. Consequently, it becomes difficult for the management to distinguish their operations from other market participants in order to increase or maintain their market share if they do not strategically change or improve.

Applicable to both tourism and leisure activities, hot spring resources are not only viewed as a large steaming pool and a "health spa"; instead, they have become cultural carriers for fitness, relaxation, and leisure tourism [5]. Compared with those of sightseeing tours, consumers of hot spring tourism demand higher satisfaction. Delivering superior customer value and satisfaction is crucial to a destination's competitive edge [6]. In the largest contemporary service industry, one of the greatest challenges encountered by management is to deliver and maintain customer satisfaction [7,8]. Contemporary tourists want to have a unique experience and are no longer interested in purchasing a standardized product/service; therefore, to meet the new demands, tourist destinations must assign top priority to achieving tourist satisfaction [9]. On the other hand, with the development of the Internet and social networks, it is easier to transfer customers, and it is more difficult to maintain customer loyalty. Keeping high customer satisfaction today is more difficult but also very important in order to maintain hot spring tourists' loyalty.

Currently, studies on hot spring resources from the perspective of customers are focused on the utilization and exploitation of hot spring tourist resources [10,11], the competitiveness of hot spring tourism [12], the problems in exploitation [11,13], and the service quality of hot spring tourism [3,14–16]. Although many researchers are concerned with the relationships among service quality [17,18], emotion [19,20], revisit intention or loyalty [21–23], destination image [24,25], satisfaction [23,26], and the sustainable hot spring business [10,15,27,28], few studies have been conducted on identifying decisive factors that could influence the generation of customer satisfaction with hot spring tourism. Moreover, even though some scholars have found the antecedents to satisfaction, they have yet to consider the potential influencing relationships between such factors. In fact, the independence among antecedents is not a realistic assumption in many real-world problems [29]. Different forms of interactions among antecedents might occur in real life situations [29–32]. Exploring contextual relationships and building a hierarchical structural model among key factors can help hot spring tourism service providers to understand which key factors are essential, and those that are very important, thereby utilizing that knowledge to effectively develop operation improvement strategies focusing on decisive factors [3]. Such a hierarchical model can help hot spring service providers to understand exactly what products and services they must offer, and how they should or could offer them to meet consumers' needs in order to attract them, thereby achieving high customer satisfaction with limited resources.

Based on the above discussion, the aim of this research is to provide a comprehensive understanding of the hierarchical model of different success factors in the hot spring tourism context and identify the decisive factors to improve hot spring industry customer satisfaction. In this study, the grounded theory (GT) approach and interpretive structural modeling (ISM) were employed to identify key success factors, examine their interrelationships, driving and dependence power, and develop a hierarchical structural model. The results show that "Environment Quality", "Special Resource", "Convenience", "Food", "Service Quality", and "Facilities" are the decisive factors affecting customer satisfaction; "Consumption Emotion" and "Perceived Value" directly impact customers' satisfaction; and the factor "Targeted Consumers" is the core factor in the whole system, since it provides the only path to transform influences from lower levels to higher levels. The primary contribution to the current literature on hot spring tourism industry management is to provide a comprehensive understanding of contextual relationships and a hierarchical structural model among key factors, and help hot spring tourism service providers to understand which key factors are essential, and those that are very important, thereby helping them to effectively develop strategies focusing on decisive factors. Furthermore, we also aimed to initiate a new theoretical perspective for research in the field of hot spring tourism

industry management. Apart from that, this study is the first using a novel integrated approach to explore the decisive factors affecting customer satisfaction in the hot spring tourism industry.

The remainder of this article is organized as follows. The next section discusses the relevant literature review. The methodology section demonstrates, step by step, the research procedures. The following section describes the ISM approach for modeling the factors. The next section presents the discussions and empirical implications for the managers. The last section presents the conclusion, limitations and future research work.

2. Literature Review

To conduct the research, this section reviews the related literature consisting of hot spring tourism research, customer satisfaction, and grounded theory.

2.1. Hot Springs Tourism Studies

Hot spring refers to spring with water at a temperature substantially higher than the air temperature of the surrounding region [33]. Hot spring tourism is literally the combination of a hot spring and tourism. As an emerging tourism theme that is dominated by participation and experience, hot spring tourism is an important component of leisure tourism that integrates health preservation, leisure, culture, and other functions [10]. Currently, there lacks a unified definition for hot spring tourism [34]. For example, from the phenomenon of social development viewpoint, believed that hot spring tourism is a tourism activity conducted at hot spring locations away from one's permanent residence during leisure periods. Wu et al. [22] consider hot spring tourism as a special type of tourism. Tourists expect to achieve the goal of spa health preservation and a leisure vacation through a special experience and the cultural atmosphere of hot springs. In this study, hot spring tourism is defined as a generic term for entertainment, health preservation, commercial conferences, and other leisure activities conducted at hot spring locations, which is supported by a natural environment, cultural customs, and quality services for the purposes of a hot spring experience, culture appreciation, health preservation, relaxation, and holiday tourism.

Regarding hot spring tourism, consumers visit hot spring resorts with different purposes depending on their different regions [35]. A study showed that the consumers in Asia often pursue their personal inner peace (or peace of mind), so they pay more attention to seeking escape [36], a soothing experience [21,37], and tranquility [38], while in Western countries, visitors always focus on social factors in spas [21]. To reflect the strong customer demand, there is also a wide range of different types of service features or characteristics among establishments. According to Lee and King's [39] study, in Asia, recreation in natural hot springs is usually used for vacation and leisure, connecting with nature, experiencing cultural traditions, and pursuing alternative modalities for healing, rehabilitation, and prevention. Meanwhile, Asians set up different types of hot spring establishments based on their own history and culture to infuse more wellness-focused services. In China, for example, hot spring resorts usually offer spa-related services, such as massage, traditional Chinese medicine/treatment, hydrotherapy, and other treatments [21,40]; in Japan, most of the Japanese-style hot springs offer thermal/mineral water for bathing or recreation. Affected by the traditional Chinese culture and philosophy, in East, South, and Southeast Asia, customers usually emphasize the harmony between man and nature [21]. They are not only concerned with the natural hot spring itself but also the surrounding environment of the hot spring.

As a great combination of natural resources and leisure experiences, hot spring-based tourism has garnered notable academic interest. Early researchers focused on the physical therapy of hot spring resources. Medical scholars analyzed the medical function and value of hot spring resources [41]. Hot spring developers often relied on medical authorities to advertise the medical function and value to achieve the goal of attracting customers [34]. Under mass exploitation, researchers gradually became concerned with the comprehensive evaluation of exploiting hot spring resources. With the increasing awareness of the value of spa treatments, people began to attach importance to the commercial and

economic value of hot springs, particularly the tourism industry, mainly for the behavior and demand characteristics of tourists [18], travel motivations [36,38,42,43], the geographical characteristics of customer marketing [15], as well as visitors' evaluation of spa experiences [44]. In addition to focusing on the value of hot spring resources, researchers later began to discuss the influencing factors of hot spring tourism development, such as hot spring hot brand [45], the coordinated development of the entire region's economy, and ecology at the external macro level [12,15,46,47], while other scholars studied the advantages and disadvantages of hot spring resorts with case analyses [12], focused on services and activities at hot spring destinations [48–50], and service quality and consumer preferences [15,22,35,48].

2.2. Customer Satisfaction

Customer satisfaction has always been considered an essential objective in all market sectors because it is assumed that satisfied customers would repurchase the product/service and are more likely to develop product loyalty [51]. Moreover, a wide range of literature [52–54] has shown that service quality and customers satisfaction are conceptually distinct but closely related constructs. In addition, both tourism and marketing literature have shown that satisfaction was found to influence behavioral intentions [55,56]. Tourists who were satisfied with a destination might come back, be willing to pay a price premium [57], recommend it, or favorably speak to other tourists [58]. The existing literature indicates that customer satisfaction is dependent on a series of elements that belong to the subjective area of the customer and to the objective quality of the product/service experienced [23,59]. In the tourism context, the concept of tourist satisfaction is particularly difficult to address as the tourist product is "complex" by definition. The complexity of the theme of tourist satisfaction depends on its richness in terms of contents [60].

The literature concerning tourist satisfaction can be divided into two types: (1) Concentrating the attention on the individual components influencing the satisfaction (customer perspective); and (2) focusing on the intrinsic features of the product/service and on the means through which it is delivered. In hot spring tourism, the predominant literature has examined the relationships among service quality, emotion, destination image, revisit intentions, and customer satisfaction. Most scholars have synthesized the effects of service quality and emotion on customer satisfaction, which transfers the influence to revisit intentions and destination image, as perceived by hot spring customers. Although many tourism researchers have questioned what customer satisfaction depends on, few studies are concerned with customer satisfaction in hot spring tourism. In contrast to other contents of tourism, hot spring tourism integrates the functions of tourism, leisure, and fitness into a more complex experiential tourism [61]. Hence, it is necessary and significant to completely find those elements that could influence tourist satisfaction.

In recent years, as online tourism has begun to develop, online comments data mining is also well applied [62]. Researchers have begun to explore customers' authentic experience and satisfaction using tourists' practical comment data from the consumer's perspective [63]. Zheng [64] extracted the frequently used words for describing the features of tourist destinations from the text data on tourism review websites and constructed contents and themes based on different factors to explore the tourists' view of the tourism image. Recently, Zhao et al. [65] used the technical attributes of online textual reviews and customers' involvement in the review community to predict hotel overall customer satisfaction.

Summarizing the literature review of hot springs tourism studies and customer satisfaction, there are at least three research gaps. First, few existing studies systematically analyze the internal conditions of hot spring tourism development with customer satisfaction at the microlevel. Second, although researchers increasingly realize the importance of online data's contribution to understanding consumer satisfaction, few studies discuss hot spring tourism. Third, factors influencing consumer satisfaction that were identified in previous studies were treated as isolated from each other, without explaining what and how these factors influence each other. According to research studies, the independence of

the factors is not a realistic assumption in many real-world problems. Different forms of interactions among factors might occur in real-life situations [29–32], which need a more intelligent technique such as ISM to deal with the particular need of the problem under consideration. In summary, systematic comprehensive qualitative and quantitative analysis still needs to be conducted in the hot spring tourism field, where researchers have rarely examined the influence relationships and routes among hot spring consumer satisfaction factors.

2.3. Grounded Theory

Grounded theory (GT) is a systematic research methodology in social sciences involving the construction of theory from data. It usually applies to qualitative research and solving micro problems in social sciences [66]. The original desire of GT was to bridge the gap between theoretically uninformed empirical research and empirically uninformed theory [67]. Generally, a study using GT is likely to begin with a question on practical problems rather than with theoretical hypotheses and concludes concepts and categories through analysis on the collected original data. This mean that GT is best used when an existing model or theory does not apply to the population of interest or does not address all variables of interest.

Even though Glaser and Strauss were the co-founders of GT, Glaser [68] later accused Strauss and Corbin [69] of distorting the principles of the original GT. Since then, GT has developed its distinct guidelines for data analysis and split into three approaches: (1) The Straussian approach [69], (2) Glaserian approach [68], and (3) constructive approach [17]. Thus, the approach of GT selection is congruent with the research cognitive style. Shojaei and Haeri [70] further emphasized that different approaches of GT should not be mixed together. In this study, the Straussian approach was selected since it best served the purposes of the current research, it is more prescriptive, and provides more guidelines compared to others [70]. The Straussian approach was a systematic research design of GT which highlights the use of data analyzing stages through open coding, axial coding, and selective coding. According to Strauss and Corbin [69], open coding is the initial step, which involves scanning and analyzing the gathered data to discover and identify broad concepts, properties, and dimensions; axial coding is the act of relating categories to their subcategories along the lines of their properties and dimensions, in order to form a more precise and complete explanation of the phenomenon. Finally, selective coding is to refine and integrate the theory.

In tourism science studies, the qualitative analysis method in the GT is widely applied, especially in analyzing causes and extracting theoretical dimensions and the main category. A number of examples of tourism and hospitality studies that employed GT in recent years have been shown in literature [67,71–73]. The GT is adopted in this paper, for it caters for the exploratory research herein and breaks the limitations of optimistic research where the collected data and conclusion of theoretical scope are subject to experiential perspectives or pre-assumed theoretical models. Against such a background, the combination of first-hand data of online comments with the GT is very helpful for extracting the influence concepts/categories (i.e., variables) of customer satisfaction really concerned with hot spring tourism consumers.

3. Methodology

Interpretive structural modeling (ISM) is an interactive learning process in which a set of varied but directly related variables are structured into a comprehensive, systemic model [74]. The objective of ISM is "to expedite the process of creating a digraph, which can be converted to a structural model, and then inspected and revised to capture the user's best perceptions of the situation" [75]. ISM has been applied by a number of researchers in various fields to develop a better understanding of complex systems, such as analyzing vendor selection criteria [76], exploring the factors affecting flexibility in a flexible manufacturing system [77], determining the mutual relationships between the enablers of tourism value [78], and identifying the barriers to the implementation of total productive maintenance [79]. The objective of this study is to utilize ISM to explore the relationships between

various factors of customer satisfaction with hot spring tourism. The establishment of an ISM involves a number of steps as below, and the process is outlined in Figure 1, which draws from other ISM-based journal papers [80–82]. The details of the development of the structural models for each of the clusters are provided in the case study section.

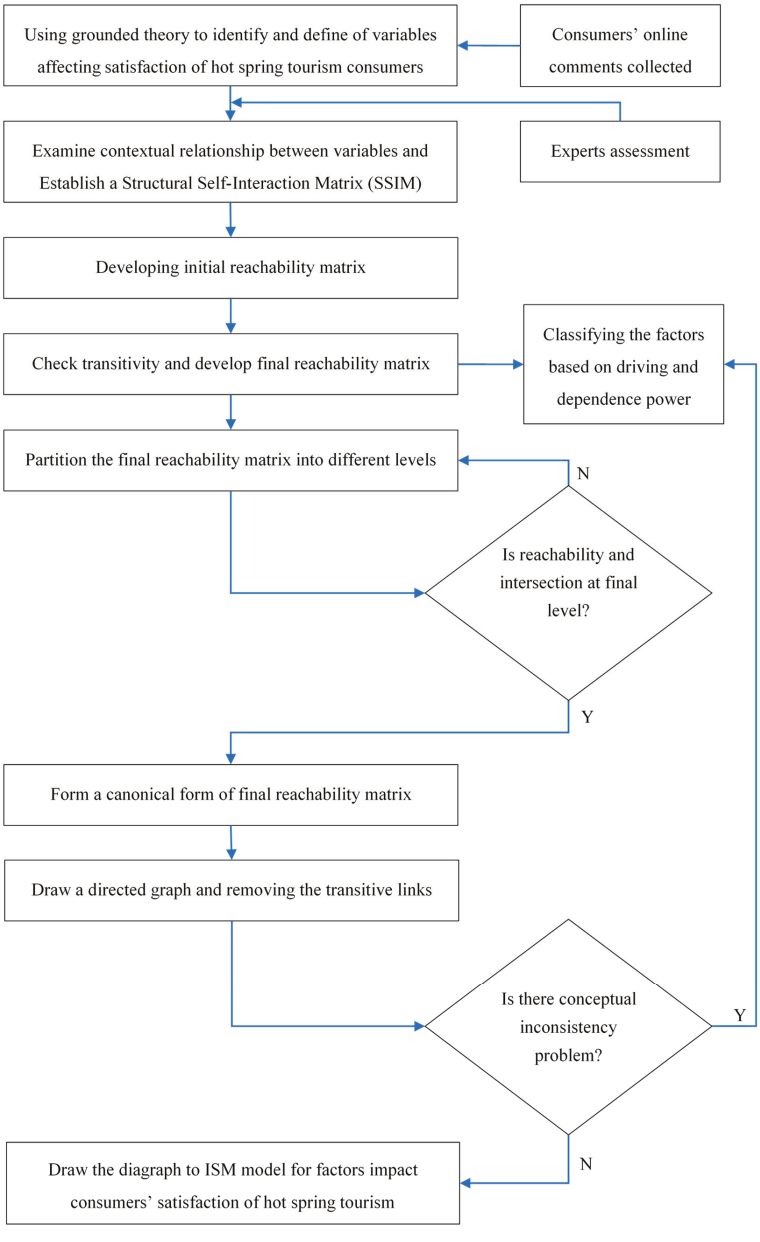

Figure 1. Study flow.

Step 1: Identify the factors affecting the customer satisfaction of hot spring tourism: Traditionally, the variables can be identified through careful analysis of literature and expert reviews. To extract the concepts that really concerned hot spring tourism consumers, the factors were directly extracted from consumers' online comments based on the GT method.

Step 2: Examine and interpret a contextual relationship: The contextual relationships among the factors were examined, such as, if the factor "Facilities" influences "Convenience", the relation must be recorded. Additionally, an interpretation of the relation should also be made representing how "Facilities" influences "Convenience".

Step 3: Establish a structural self-interaction matrix (SSIM): SSIM clearly indicates pairwise relationships among factors affecting the customer satisfaction of hot spring tourism into consideration. There are four symbols (V, A, X, O) used to indicate the contextual relationships between factors.

Step 4: Develop an initial reachability matrix and final reachability matrix: The SSIM is transformed into binary digits (0 or 1), and then the transitive relations are checked and are represented in the reachability matrix to construct the final reachability matrix.

Step 5: Partition the final reachability matrix into different levels: Final reachability matrix leveling is done for the factors to place the elements level-wise.

Step 6: Form a canonical matrix: The canonical matrix is developed through grouping factors contained in the same level, across columns and rows of the final reachability matrix.

Step 7: Draw a directed graph and remove the transitive links: Based on the relationships obtained in the reachability matrix, a directed graph is drawn, and the transitive links are removed.

Step 8: Convert the resultant digraph into an ISM by replacing factors nodes with statements.

Step 9: The ISM framework developed in Step 8 is examined to ensure conceptual inconsistency and the necessary modifications are made.

Step 9: Classify the variables affecting the customer satisfaction of hot spring tourism: Variables impacting the customer satisfaction of hot spring tourism are categorized into four groups, based on driving power and dependence power.

4. Case Study: ISM Approach for Modeling the Factors of Hot Spring Customer Satisfaction

4.1. Research Context and Data Collection

In general, the identification of factors that influence hot spring customer satisfaction was conducted through careful analysis of literature and expert reviews. In this study, the factors were directly extracted from consumers' online comments based on the GT method since it was a first-hand record from the population of interest, and using the data collected to generate factors can really reflect and explain the comprehensive emotion and behavior [83].

The Nanjing Tangshan Hot Spring Resort in China was selected as the research object of this study for the following reasons: (1) It takes the lead in the four great hot spring sanatoriums of China and is a world-renowned hot spring resort, containing more than 30 kinds of mineral substances and microelements. (2) It is built for spa services, fitness and entertainment, holidays and more; in 2014, it was rated the "Best Leisure and Holiday Destination of China". In October 2015, Nanjing Tangshan Hot Spring Resort became one of the first groups of National Tourist Resorts.

In order to collect online reviews for the Tangshan hot spring, this study selected two of China's third-party online tourism giants as samples. Ctrip is a leading provider of online ticketing services with over 90 million members. Ctrip's services include accommodation reservations, corporate travel management, transportation ticketing, packaged tours, vacation reservations, and tourist information. Qunar is a Chinese language tourist search engine. As Chinese leading third-party e-commerce platforms, Ctrip and Qunar conform to the requirements of this study in terms of both user scale and influence.

In GT analysis, the systematic analytic procedures of Strauss and Corbin [69] were employed. The systematic procedures focus on hot spring consumers' consumption experience and their online

comments. In the context of this study, the aim was to extract from the individual's perspective what service attributers or features make her/him feel satisfied. The study employed a two-fold strategy, using open coding first and then axial coding to find concepts or variables among online comments.

During the GT analysis phase, software NVivo 11.0 was used to code the data. After a literature discussion and data collection which included the period between January 1, 2006 and June 1, 2018, 625 comments of tourists were encoded via NVivo11.0 with no pre-assumption and bias, 259 comments encoded from Ctrip and 366 comments encoded from Qunar. Then, each online review was checked, and we assigned codes to the review data. In the open coding phase, 62 significant and/or frequent comments' initial conceptualizations were generated from the original comment data. Subsequently, the initial conceptualization with the same underlying idea was combined into one conceptual category, and we finally obtained 15 categories. For instance, "Accommodation Environment" and "Air Quality" were categorized into one category named "Environment Quality". All these activities laid the foundation for axial coding. Thus, the concepts and categories were named subject to the document literature, the comment records and the discussion of the authors.

Regarding the abovementioned 15 conceptual categories defined during the axial coding phase, 12 main categories were further concluded in accordance with their internal relationships in the selective coding process. Based on the comprehensive and systematic analysis of open coding, axial coding and selective coding work, rigorous comparisons and refinements, and reference to the relevant literature, twelve factors finally emerged: "Consumption Emotion", "Convenience", "Environmental Quality", "Facilities", "Food', "Hot Spring Quality", "Target Consumers", "Perceived Value", "Price Satisfaction", "Service Quality", and "Special Resources" (as shown in Table 1).

Table 1. Key success factors of hot spring identified based on grounded theory.

Factors	Description
Consumption Emotion	This refers to the set of emotional responses elicited during product use or consumption experiences.
Convenience	This refers to the convenience of buying or enjoying a service at a spa resort.
Environmental Quality	It refers to the overall environment assessment of a hot spring resort including location, air condition, and noise.
Facilities	This refers to the interior decorations, hardware facilities and additional facilities such as restaurants, exercise gyms, swimming pools, etc. [15].
Food	It refers to something to eat or drink provided in a hot spring.
Hot Spring Quality	It refers to the quality of hot springs such as the water quality, and water temperature [47].
Target Consumers	It refers to different types of travelers who are more likely to visit the hot spring.
Perceived Value	This refers to consumers' overall assessment of the utility of a product or service based on their perceptions of what was received versus what was provided.
Price	This refers to the total monetary cost to the consumer of purchasing products or service [48,49].
Satisfaction	This refers to the customer's fulfillment response: A judgment that a product or service provides a pleasurable level of consumption-related fulfillment [14].
Service Quality	This refers to an abstract and elusive construct that has three features that make the services unique: Intangibility, heterogeneity, and inseparability of production and consumption [48].
Special Resources	This refers to the specific natural resources in the region [48].

4.2. Data Analysis: Applying ISM

4.2.1. Structural Self-Interaction Matrix (SSIM)

After identifying and establishing the definition of each factor, the correlation between any two factors (i and j) as well as the associated routing of relation was further examined. ISM recommends making use of views of experts in examining the relationships among the factors that influence hot spring consumer satisfaction. Therefore, in this study, to recognize the appropriate relationships among the factors, 15 industry experts (the profile of 15 experts listed in Table 2), including top managers and managers of hot spring firms, were invited to examine the influence relationships between these factors.

Table 2. Profiles of 15 experts.

Gender	Male	8	Education	Below high school	0
	Female	7		High school	0
Age	<35	3		College	6
	35–45	7		Graduate study	9
	>45	5	Working experience	5–10	4
Respondent title	Top Manager (CEO, General Manager, Vice General Manager)	4		11–15	6
	Senior Manager	5		More than 15	5
	Manager	6			

To evaluate the relationship between the various factors affecting hot spring customer satisfaction, a contextual link of leads to type was selected. This means one factor assists in improving the effects of another. Four symbols (V, A, X, O) were used for the category of the relationship that exists between the identified factors.

V = If factor i influences factor j;
A = If factor i is influenced by factor j;
X = If factor i and j influence each other; and
O = if factor i and j do not influence each other.

To accurately assess factors reflecting the entire set of attributes of hot spring, based on their experience and considering the contextual relationship for every factor, the experts used an appropriate relationship symbol to directly assess the extent of relation between any two factors (i and j). Furthermore, it is important to aggregate different experts' opinions in group decision-making. Many methods can be used to measure the central tendency of the experts' assessments, such as mean, median, and mode. Since the mode operation is the only method which fit nominal scale measurement, this method was chosen to pool the experts' assessments of any two factors. Table 3 (SSIM) is the aggregated relationship assessment between 12 factors for improving customer satisfaction of the hot spring tourism industry. From Table 3, it is seen that the factor "Consumption Emotion (S_1)" can be enhanced by the factor "Special Resources (S_{12})". Therefore, the connection between these factors is represented by 'A' for the entry (1, 12) in the SSIM, while the factor "Consumption Emotion (S_1)" will assist to enhance the factor "Satisfaction (S_{10})"; thus, the association of 'V' is represented for the entry (1,10) in the SSIM.

Table 3. Structural self-interaction matrix (SSIM).

	S_{12}	**S_{11}**	**S_{10}**	**S_9**	**S_8**	**S_7**	**S_6**	**S_5**	**S_4**	**S_3**	**S_2**	**S_1**
S_1	A	A	V	O	O	A	A	A	A	A	A	
S_2	O	O	V	O	V	O	O	O	O	O		
S_3	O	O	V	O	V	V	V	O	O			
S_4	O	O	V	O	V	O	O	O				
S_5	O	O	V	O	V	O	O					
S_6	A	O	V	O	V	V						
S_7	O	O	V	O	O							
S_8	A	A	V	A								
S_9	O	O	V									
S_{10}	A	A										
S_{11}	O											
S_{12}												

4.2.2. Development of the Initial and Final Reachability Matrix

When the SSIM was obtained, the symbols (V, A, X, O) in SSIM were converted into a binary digit (i.e., 1s or 0s) matrix which was called the initial reachability matrix. The rules for transferring symbols into binary digits were as follows:

- If the (i, j) entry in the SSIM is V, the (i, j) entry in the reachability matrix will be 1 and (j, i) entry will be 0.
- If the (i, j) entry in the SSIM is A, the (i, j) entry in the reachability matrix will be 0 and (j, i) entry will be 1.
- If the (i, j) entry in the SSIM is X, the (i, j) entry in the reachability matrix will be 1 and (j, i) entry will be 1.
- If the (i, j) entry in the SSIM is O, the (i, j) entry in the reachability matrix will be 0 and (j, i) entry will be 0.

Based on the above rules, the relationship symbols for all factors in SSIM were completely changed binary numbers of 0s and 1s as shown in Table 4.

Table 4. Initial reachability matrix.

	S_1	**S_2**	**S_3**	**S_4**	**S_5**	**S_6**	**S_7**	**S_8**	**S_9**	**S_{10}**	**S_{11}**	**S_{12}**
S_1	1	0	0	0	0	0	0	0	0	1	0	0
S_2	1	1	0	0	0	0	0	1	0	1	0	0
S_3	1	0	1	0	0	1	1	1	0	1	0	0
S_4	1	0	0	1	0	0	0	1	0	1	0	0
S_5	1	0	0	0	1	0	0	1	0	1	0	0
S_6	1	0	0	0	0	1	1	1	0	1	0	0
S_7	1	0	0	0	0	0	1	0	0	1	0	0
S_8	0	0	0	0	0	0	0	1	0	1	0	0
S_9	0	0	0	0	0	0	0	1	1	1	0	0
S_{10}	0	0	0	0	0	0	0	0	0	1	0	0
S_{11}	1	0	0	0	0	0	0	1	0	1	1	0
S_{12}	1	0	0	0	0	1	0	1	0	1	0	1

4.2.3. Final Reachability Matrix

The final reachability matrix (see Table 5) was computed by incorporating the transitivity in Table 4. Transitivity means the contextual relation in which if variable A is related to B and B is related to C, then A will be necessarily related to C. The transitivity measurement was computed by conducting a power iteration analysis. Since there was no transitivity effect in the context of this research, transitivity entry does not exist in matrix 5.

Table 5. Final reachability matrix.

	S_1	**S_2**	**S_3**	**S_4**	**S_5**	**S_6**	**S_7**	**S_8**	**S_9**	**S_{10}**	**S_{11}**	**S_{12}**	**Drive Power**
S_1	1	0	0	0	0	0	0	0	0	1	0	0	2
S_2	1	1	0	0	0	0	0	1	0	1	0	0	4
S_3	1	0	1	0	0	1	1	1	0	1	0	0	6
S_4	1	0	0	1	0	0	0	1	0	1	0	0	4
S_5	1	0	0	0	1	0	0	1	0	1	0	0	4
S_6	1	0	0	0	0	1	1	1	0	1	0	0	5
S_7	1	0	0	0	0	0	1	0	0	1	0	0	3
S_8	0	0	0	0	0	0	0	1	0	1	0	0	2
S_9	0	0	0	0	0	0	0	1	1	1	0	0	3
S_{10}	0	0	0	0	0	0	0	0	0	1	0	0	1
S_{11}	1	0	0	0	0	0	0	1	0	1	1	0	4
S_{12}	1	0	0	0	0	1	1	1	0	1	0	1	6
Dependence	9	1	1	1	1	3	4	9	1	12	1	1	44

[Legend: 1* shows transitivity].

4.2.4. Partition of Reachability Matrix

In the reachability matrix, every factor has a reachability set and an antecedent set [84]; the partition is done to find the level of factors and then the conical matrix is generated. The intersection set of factors was determined by antecedents set and a reachability set. If the membership of intersection set and reachability set was the same, then the top-level factor was identified and removed from the next subsequent iteration. Similar iterations were repeated until all factors' levels were determined. The partition on the reachability matrix of iterations is presented in Table 6.

Table 6. Partition on the reachability matrix: Iterations.

S_i	$R(S_i)$	$A(S_i)$	$C(S_i)$	Level(L_i)
S_1	1,10	1,2,3,4,5,6,7,11,12	1	L_2
S_2	1,2,8,10	2	2	L_3
S_3	1,3,6,7,8,10	3	3	L_5
S_4	1,4,8,10	4	4	L_3
S_5	1,5,8,10	5	5	L_3
S_6	1,6,7,8,10	3,6,12	6	L_4
S_7	1,7,10	3,6,7,12	7	L_3
S_8	8,10	2,3,4,5,6,8,9,11,12	8	L_2
S_9	8,9,10	9	9	L_3
S_{10}	10	1,2,3,4,5,6,7,8,9,10,11,12	10	L_1
S_{11}	1,8,10,11	11	11	L_3
S_{12}	1,6,7,8,10,12	12	12	L_5

4.2.5. Developing the Conical Matrix

The conical matrix (see Table 7) was used to develop the final digraph and structural model. It was created through grouping all factors contained in the same level, across columns and rows of the final reachability matrix. For example, factors (1) and (8) are found in level II, while (3) and (12) are found in level V. All factors are ordered by their level partition.

Table 7. Canonical matrix.

	S_{10}	S_1	S_8	S_2	S_4	S_7	S_9	S_{11}	S_5	S_6	S_3	S_{12}
S_{10}	1	0	0	0	0	0	0	0	0	0	0	0
S_1	1	1	0	0	0	0	0	0	0	0	0	0
S_8	1	0	1	0	0	0	0	0	0	0	0	0
S_2	1	1	1	1	0	0	0	0	0	0	0	0
S_4	1	1	1	0	1	0	0	0	0	0	0	0
S_7	1	1	0	0	0	1	0	0	0	0	0	0
S_9	1	0	1	0	0	0	1	0	0	0	0	0
S_{11}	1	1	1	0	0	0	0	1	0	0	0	0
S_5	1	1	1	0	0	0	0	0	1	0	0	0
S_6	1	1	1	0	0	1	0	0	0	1	0	0
S_3	1	1	1	0	0	1	0	0	0	1	1	0
S_{12}	1	1	1	0	0	1	0	0	0	1	0	1

4.2.6. Development of a Structural Model

The final ISM-based model of factors affecting consumers' satisfaction of hot spring was constructed from both the canonical matrix shown in Table 7 and the final reachability matrix shown in Table 5. Based on the canonical matrix, a directed digraph including nodes and transitivity links was generated. Arrows between nodes show the direction of the influence. If factor i influences j, an arrow will point from i to j. For example, the factor "Service Quality (S_3)" impacts the factor "'Hot Spring Quality (S_6)", so there is an arrow from S_3 points to S_6. The top-level factors are placed at the top of the diagraph, and lower levels are placed at lower positions. Finally, the diagraph was developed by removing the indirect links as shown in Figure 2.

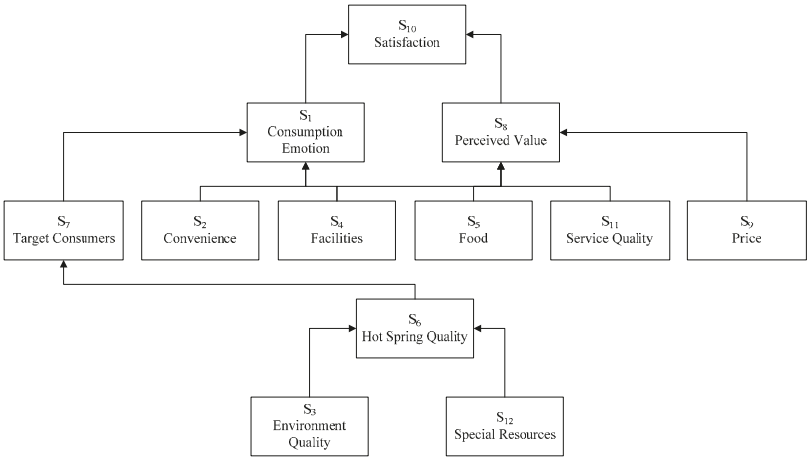

Figure 2. Interpretive structural modeling (ISM) model for factors of customers' satisfaction of hot springs tourism.

The digraph illustrates the direct relations among all factors, with arrows indicating the direction of each impact. Figure 2 shows that these factors are divided into five levels in the hierarchy model. "Satisfaction" is located at the top level, which directly depends on "Consumption Emotion" and "Perceived Value". The next level variables include "Convenience", "Facilities", "Target Consumers", "Price", "Food", And "Service Quality". "Hot Spring Quality" is located at the fourth level, while the bottom-level variables are "Environment Quality" and "Special Resources", which are considered strong enablers of the above factors. This means both factors "Environment Quality" and "Special Resources" are the decisive factors affecting customer satisfaction.

4.2.7. Classification of Factors Impacting Hot Spring Tourism Customer Satisfaction

The classification of factors impacting hot spring tourism customer satisfaction was conducted using MICMAC (Matrice d'Impacts Croisés Multiplication Appliquée á un Classement) analysis which was developed by Duperrin and Godet [84]. MICMAC is a systematic analysis tool for categorizing factors based on hidden and indirect relationships, as well as for assessing the extent to which they influence each other [85]. Deshmukh and Mandal [76] claim that the primary goal of MICMAC analysis is to analyze the driving power and dependence of each factor. "Driving power" refers to the degree of influence that one factor exceeds another, and "Dependence" is defined as the extent to which one factor is influenced by others. Based on driving power and dependence, a 2D driver-dependence diagram can be created, with the horizontal axis representing the extent of dependence and the vertical axis representing the extent of the driver [5]. Using MICMAC, the factors can be classified into four clusters, namely: (1) The autonomous cluster, which consists of the factors that have a weak driving power and weak dependence; (2) the dependent cluster, whose driving power is low but dependence power is high; (3) the driver cluster, consisting of the factors that have strong driving power and weak dependence; and (4) the linkage cluster, which includes factors that have strong driving power and dependence. It was observed whether a factor with a strong driving power is a key factor.

Applying MICMAC analysis, the 12 factors can be classified into four clusters according to their driving power and dependence (see Figure 3). The driver-dependence diagram shows that there is one factor "Price" in autonomous clusters, meaning that "Price" is totally disconnected from this system since it has both a weak driver power and dependence. The second cluster of dependent factors includes "Satisfaction", "Consumption Emotion", "Target Consumer", and "Perceived Value". These factors have strong dependence power and weak driving power and are at the top levels of

the ISM hierarchy. Because of their strong dependence, all the other factors are required to advance the dependent factors in achieving the goal of the system. Although there is no factor present in the linkage cluster, it is worth noting that the factor "Target Consumer" is close to the border of the linkage cluster. The independent cluster includes factors "Convenience", "Environmental Quality", "Facilities", "Food", "Quality of Hot Spring", "Service Quality", and "Special Resources", which are located at the bottom levels of the ISM model. These factors have a strong driving power and weak dependence power, indicating that they have a strong influence on the other factors in the dependent cluster. Generally, these factors can be regarded as the focus of the management strategy by decision-makers.

Finally, integrated results of the ISM model and MICMAC analysis can help to conclude that the factors "Special Resources", "Environmental Quality", "Facilities", "Food", "Service Quality", and "Convenience" are decisive factors for managers to improve their consumers' satisfaction of hot spring tourism.

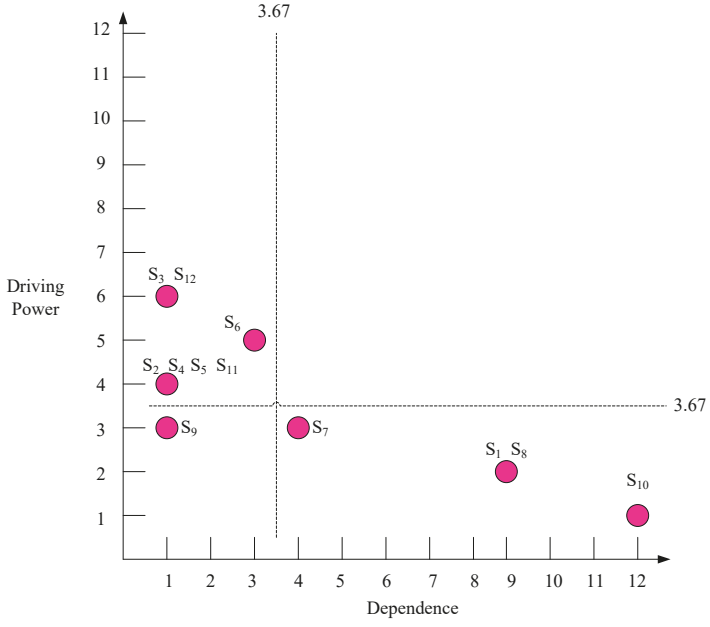

Figure 3. Result of MICMAC analysis.

5. Discussions and Implication

5.1. Discussion

To stand out in the hot spring tourism industry, customer satisfaction has become the crucial issue for competitiveness. A company cannot implement several customer satisfaction improvement practices simultaneously with limited resources. Different from the previous research, which adopted GT, based on user-generated reviews, this study discovered twelve factors related to customer satisfaction with hot spring tourism. These factors were further evaluated, their relationship divided into a five-level cluster, and finally, a hierarchical relationship model was established using ISM, and MICMAC analysis was used to analyze the driving power and dependence of each factor. Comparing the findings with the previous studies, we have a few interesting findings.

First, in accordance with previous studies on hot spring tourism, fundamental factors such as "Environmental Quality", "Hot Spring Quality", "Food", "Facilities", "Convenience", and "Service Quality" are consistent [10,15,16]. These factors can be considered as basic means to influence consumer

satisfaction of hot spring tourism. This result further supported the calls for considering "Perceived Value" and "Satisfaction" in the hot spring tourism customer research [14,22,26]. The results showed that "Satisfaction" is influenced by all factors and located at the top level as the target of the system. Satisfaction can directly measure whether the customer perception is positive or negative. Furthermore, consumers' emotional experience directly determines the level of satisfaction, which is consistent with a study conducted by Veasna et al. [25]. Thus, hot spring providers should find ways to develop strong emotional hot spring establishments attachments for their tourists, which can lead to stronger hot spring establishments loyalty and satisfaction [22,86].

Next, certain factors performed inconsistently with previous studies. Factors such as "Special Resource", "Target Consumers", and "Consumption Emotion" were not found in many other studies on hot spring tourism. "Special Resource" and "Environmental Quality" directly influence the hot spring quality, which indicates that consumers are currently not satisfied with the function of hot spring tourism. "Target Consumers" was noted by many customers in online reviews. People attach great importance to a suitable hot spring crowd, such as couples, children, and the elderly. This phenomenon can be explained by the fact that consumers usually prefer to enjoy their hot spring time with others rather than alone. Furthermore, price has a disconnection with this system, which indicates consumers are not sensitive to price fluctuation, while in Taiwan, visitors hope to have an excellent quality with a reasonable price [15].

Moreover, the results of MICMAC analysis show that price has relatively few connections with the system, and it seems like it can be excluded from the system. It is also apparent that hot springs are high-grade goods, and its customers are able to afford the bill. Comparing "Consumption Emotion" and "Perceived Value" with other factors, certain factors have played an indirect role in influencing "Satisfaction". "Environment Quality" and "Special Resources" are the decisive factors for achieving consumers' satisfaction, as they have high driving power and are located at the bottom of the model, passing from "Hot Spring Quality" to "Target Consumer" and finally to "Satisfaction". It can be concluded that target consumers are the core factor, since this provides the only path to transforming influences from lower levels to higher levels. Thus, these factors should be continuously and consciously improved, as they have an overall effect on all other factors.

5.2. Managerial Implications

The major findings of this study also have significant managerial implications for hot spring practitioners to make better use of hot spring resources and enhance performance. Based on findings, several ideas relevant to improving consumption experience are offered, as follows:

First, improve environment quality and focus on delineating the experience's own characteristics. The ISM hierarchical model showed that "Environment Quality" and "Special Resources" are the decisive factors for achieving consumers' satisfaction, as they have high driving power and are located at the bottom of the model. The problem of a hot spring development pattern is similar, with a lack of cultural characteristics and brand effect [87]. Previous studies [3,88,89] have shown that tourists may choose to visit hot springs to pursue leisure and the factors in personal internal peace, so they pay more attention to seeking escape [36], a soothing experience [21,37], and tranquility [38]. Thus, "Environment Quality" such as silence, cleanliness, ecology, cultural features, and recreational activities can be a staple attraction for many consumers, and managers should improve and focus on creating hot spring environment specialties to distinguish themselves from competitors. Furthermore, "Special Resources" such as chemical composition, microelements, and mineral concentration and water temperature: Hot spring managers have to consider what will be best to allocate the resources to in order sustain attraction to both new and existing customers. Managers and designers also need to create and maintain source credibility, which could indeed affect tourist perceptions of hot spring establishments satisfaction with regard to health benefits that hot springs may offer. That characteristic not only attracts domestic tourists but also international tourists, especially Japanese [3]. Moreover,

special ingredients are a crucial substance to guarantee hot spring quality. Investor need to strengthen environmental protection and properly handle geothermal water [87].

Next, managers should consider psychological factors such as consumption emotion and perceived value to provide better experiences for customers. The results show that consumption emotion and perceived value directly impact customers' satisfaction, and those two factors are influenced by "Facilities", "Food", "Customers Service", and "Convenience". Previous studies also have shown that consumers' "Consumption Emotions" and "Perceived Value" are directly related to consumer satisfaction [90,91], complaint behavior [92], and word-of-mouth intentions [55]. Thus, understanding consumers' consumption emotions and perceived value is crucial for hot spring service evaluation. In the age of social media, understanding consumers' consumption emotions and perceived value, open face-to-face discussion with customers, and providing customer comment cards are good ways to obtain indirect and open perceptions of customers [65]. Managers can translate a face-to-face conversation to text data and use the GT method in this study to generate different psychological factors of the text. They can also predict overall customer satisfaction from those conversations and comment cards. Customers will have negative consumption emotions and perceived value when they feel uncomfortable evaluating the hot spring establishments' product and service, such as facilities, food, customers service, water quality, surroundings and convenience [93]. Thus, indirect measurements of their perception from conversation and comments avoid eliciting their perception directly and can help managers to obtain their customers' actual perception and predict their overall satisfaction [65]. Furthermore, the results also show that customers are not sensitive to price, which means operators can save more time and effort for other factors such as improving the service quality and facilities and creating a more convenience-oriented environment.

Thirdly, accurately locate targeted customers and provide differentiated services. This study shows that targeted consumers are the core factor in the whole system. Different types of customers represent diverse interests; therefore, managers should implement different measures and services. Moreover, as Internet technology and the popularity of virtual communities have grown, more consumers are commenting on products and services on the Internet, enabling firms to process them to objectively understand consumers' preferences and demands to implement effective marketing strategies, such as mass marketing and one-to-one marketing done simultaneously with little cost and high speed [94]. In this regard, developing a mechanism for identifying desirable product specifications from targeted customers to provide enterprises with reference specifications in product planning, and thereby reducing the time to market and improving targeted customers' satisfaction [95], becomes significantly important for the hot spring tourism industry.

6. Conclusions and Future Research Work

To grow and stand out in the intense competition of the hot spring tourism industry, customer satisfaction has become the crucial issue for competitiveness. Companies cannot implement several customer satisfaction improvement practices at the same time with limited resources. Researchers advocate that companies should evaluate the relationships of success factors and explore determinants for their improvement implementation. However, such a relationship evaluation is yet to be adequately performed. With the popularity of internet technology and the growth of virtual communities, more consumers are commenting on products and services on the Internet. In order to provide firms with concentrated resources to plan intervention strategies to improve the determinants of customers' satisfaction in hot springs, adopting the GT and using data collected from online comments, the first 12 key factors for customer satisfaction were identified. Then, the interrelationships of the key factors were assessed by 15 experts, and ISM was employed to analyze the interrelationships and their driving and dependence power.

From the ISM hierarchical model, it can be summarized that: (1) "Environment Quality" and "Special Resources" are the decisive factors, as they have high driving power and are located at the bottom of the model, both factors surpassing hot spring quality, target customers, and consumption

emotion, finally influencing consumers' satisfaction; (2) "Consumption Emotion" and "Perceived Value" directly impact customers satisfaction, and those two factors are influenced by the factors "Facilities", "Food", "Customer Service", and "Convenience", which are also the decisive factors of consumer satisfaction as they are not influenced by any other factors; (3) "Targeted Consumers" is the core factor in the whole system, since it provides the only path to transforming influences from lower levels to higher levels; (4) the factor "Price" has a disconnection with this system, which indicates that consumers are not sensitive to price fluctuation.

Furthermore, from a theoretical perspective, this study makes a number of significant contributions. They are:

(1) This study is among the first to systematically explore how to fully utilize hot spring resources from an online customer satisfaction perspective. We conducted a qualitative study based on online review data generated by hot spring consumers. This study offers a list of factors of customer satisfaction with minimal researcher bias and can thus be used for the development of questionnaires for customer satisfaction studies, since the items were generated based on user-generated review content.

(2) This study is among the first to uncover the influencing process or the paths of various factors influencing customer satisfaction. The complex contextual relationships among the 12 factors were identified using ISM and MICMAC methodology. The hierarchical structural model identified in this study clearly depicted how factors influenced each other and how customers can be satisfied in a step-by-step manner. Thus, the findings provided significant insights and were notable for hot spring hoteliers or marketers to take resource-based marketing strategy into account when they attempt to create a customer satisfaction relationship with the guests. For example, hot spring providers must concentrate their resources on improving "Environment Quality" and maintaining "Special Resources". Furthermore, this hierarchical model can also lay the foundation for future research that strives to test the research model related to customer satisfaction.

(3) From a methodological perspective, the results of this study provide more solid evidence to support the integration of the GT method, ISM, and MICMAC with the content analysis, which shows an effective application in future research. The combination of the GT method, ISM, and MICMAC helps researchers not only to reveal customer consumption experiences but also to highlight product and service variables customers care about, to provide customers' perceptions in a detailed way, and also to identify the direct and indirect relationships between variables. It also helps to ascertain the influence process and the most fundamental factors that drive the target variable. The approach this study adopted further demonstrates that it can be effectively applied in factor exploration research in the hot spring tourism industry.

(4) Due to limited business resources, hot spring tourism service providers must plan appropriate strategies to control costs while improving products and service quality, so as to ensure a viable competitive edge [59]. The factors and their relationships identified in this study contribute to measuring the consumer satisfaction of hot spring tourism, and that is beneficial to companies and governments in order to become more efficient and successful.

However, several new possibilities have been revealed for future exploration. Future research may utilize a larger survey sample size or other case to test the conclusion. Moreover, this article uses ISM and MICMAC to explore the interrelationships between factors, but the interrelationships between factors can be obscure and imprecise; thus, conventional "crisp" evaluation approaches can be inadequate to suitably or effectively inform such an evaluation, and a future study can take the ambiguity into account and incorporate fuzzy logic. Other approaches, such as AHP and DEMATEL (Decision Making Trial and Evaluation Laboratory), can be used to compare the final results.

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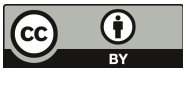

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Social Network Analysis as a Valuable Tool for Understanding Tourists' Multi-Attraction Travel Behavioral Intention to Revisit and Recommend †

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Abstract: In order to better understand tourists' multi-attraction travel behavior, the present study developed a research model by combining the social network analysis technique with the structural equation model. The object of this study was to examine the structural relationships among destination image, tourists' multi-attraction travel behavior patterns, tourists' satisfaction, and their behavioral intentions. The data were gathered via an online survey using the China panel system. A total of 468 respondents who visited multiple attractions while in Seoul, Korea, were used for actual analysis. The results showed that all hypotheses are supported. Specifically, destination image was an important antecedent to multi-attraction travel behavior indicated by density and degree indices. In addition, the present study confirmed that density and degree centrality, the indicators of tourists' multi-attraction travel behavior, were positively related to tourist satisfaction. The current study represented theoretical and practical implications and suggested avenues for future research.

Keywords: multi-attraction travel; social network analysis; degree centrality; density; tourist behaviors; tourism destination image; behavioral intention; Chinese tourist

1. Introduction

Tourism destination image is a pivot from tourism destination branding, and every successful tourism destination has a uniquely appealing image that distinguishes it from others [1]. According to tourist behavior literature, tourism destination image consists of the image features of a destination, which subsequently affect tourists' destination choice, trip planning, and post-trip evaluation of visited destinations [2]. Therefore, developing and managing a positive tourism destination image is a critical step before planning, policy-making, and marketing communication for tourism destinations.

Pleasure travel is based on a whole experience at a very personal level involving many elements, such as spatial/temporal durations, breadth and depth of experiential deeds, intensity (e.g., relaxation and engagement), social/individual interactions, senses, meaning, symbol, and the functionality of the consumptive target [3,4]. Travelers undergo a series of complex spatial/temporal experiential stages, which involve a relatively high level of psychological involvement compared to buying consumption goods. According to Lee, Petrick, and Crompton [5], satisfaction is a consumer's experience occurring as the end condition of a psychological procedure. Most tourism research supports the significance of satisfaction as an evaluation of an experience or service [6]. The evaluation

of tourists' satisfaction has been adopted by destination marketing organizations (DMOs) not only to monitor its comprehensive performance but also to explore opportunities for and to amend problems with tourism organizations [7]. Therefore, it is of prime interest for destination management companies, travel agencies, the government, and private enterprises to continuously monitor visitors' satisfaction score [8].

In general, tourists tend to travel to multiple attractions, destinations, or cities when they travel to a foreign country [9,10]. Despite these common practices of multi-attraction travel behavior, quite a few empirical studies of tourist behavior heavily relying on traditional statistical procedures, often linear modeling techniques, are based on the unrealistic premise that tourists visit a single destination. A number of scholars have argued that although one-destination selection models have contributed consistently to the understanding of the behaviors of tourists, the single-destination framework is too simple to fully capture tourists' travel behavior of visiting multiple travel routes [9,10]. Thus, relying on a single-destination framework does not allow researchers to have a more complete understanding of tourists' complex travel pattern of visiting multiple attractions. To overcome the obstacle of the traditional statistical technique, some scholars have tried mapping spatial movements by means of the geographic information system (GIS) technique [4,11]. The drawbacks of such GIS-based analysis arise from its constraint in identifying only the spatial movement patterns of visitors. In order to solve the problems of both traditional analytical analysis and the GIS technique, scholars have adopted social network analysis (SNA) techniques to discover the multiple attraction travel behavior patterns of tourists [12–16]. However, even though studies adopting SNA techniques have provided in-depth knowledge and snapshot pictures about tourists' multi-attraction travel behavior pattern, these SNA-based studies are very limited in explaining the holistic relationship between the antecedents (e.g., attraction image) and consequences (e.g., tourist satisfaction and future behavior intention) of tourists' multi-attraction travel behavior. Furthermore, to the knowledge of the authors, studies incorporating SNA with traditional statistical analysis to understand tourists' multi-attraction travel behavior do not exist in tourist behavior research.

Thus, to address the literature gap and better understand tourists' multi-attraction travel behavior, the present study developed a research model by combining the SNA technique with the structural equation model (SEM). The primary purpose of this study is to examine the structural relationships among tourism destination image, tourists' multi-attraction travel behavior patterns, tourists' satisfaction, and their behavioral intentions.

2. Theoretical Background, Research Hypotheses, and Model

2.1. Tourism Destination Image

Tourism destination image has been an important topic of study since the 1970s because tourism has become more and more dependent on destination image [17]. Due to the reciprocal relation between destination image and destination choice behavior, interest has arisen in destination image studies because the aforementioned are predictor variables in the destination choice model [1]. In addition, since tourism destination as a product possesses a unique image, the importance of destination image is commonly acknowledged in tourism studies as it affects tourists' perception and destination decision making [2].

Baloglu and McCleary [2] used a two-dimensional model of destination image, which included affective and cognitive image components. The cognitive image was defined by Gartner [18] as an assessment of known attributes of the goods. From a cognitive image viewpoint, destination image is evaluated based on a set of attributes that correspond to physical attributes, such as attractions and resources, that the destination offers [19]. Affective image relates to motivation in feeling and/or emotion, which is how a subjective entity values the object under consideration. From an affective image viewpoint, destination image represents overall feelings about a destination [20]. This study

used an overall destination image consisting of cognitive and affective images to investigate the relationship between destination image and tourists' multi-attraction travel behavior patterns.

2.2. Tourists' Multi-Attraction Travel Behavior Patterns

In general, tourists tend to visit various attractions located within the one destination during their travel. This type of travel is called as multi-attraction travel [14,21]. Multi-attraction travel is defined as a tourist visit of two or more attractions within the same tourism destination that are on the same travel route [14]. Understanding tourists' multi-attraction travel behavior is essential for destination management strategies concerning attraction planning, designing and developing accommodations and tourism products, transportation, and infrastructure and superstructure to support tourism [4]. Thus, the concept of visiting multiple attractions within one destination has attracted researchers in various fields, such as tourism, hospitality, marketing, geography, and transportation [9,21]. Considering the importance of multi-attraction travel of tourists, previous researchers have tried to apply various techniques to understand the multi-attraction travel behavior of tourists.

Some research endeavors are based on more traditional methods, such as interview and survey questionnaires, as in Smallwood, Beckley, and Moore [22]. Similarly, Yang, Fik, and Zhang [23] analyzed data using multivariate statistical procedures, including logistic regression, a logit model, and a Markov model in understanding tourist movement patterns. On the other hand, in mapping tourist movement patterns, a plethora of researchers has used various new approaches. For instance, some researchers have applied GIS [4,11,24]. Recently, SNA, for its part, has slowly but steadily gained approval from tourism researchers for its usefulness in explaining tourism destination network. Researchers examined and visually presented tourism destination networks using SNA methodology to extend our understanding of tourist movement patterns and the structural characteristics of tourism destination [12–16,25]. The results of those studies provide tourism industry practitioners with implications for marketing strategies and researchers with directions for future research.

2.3. Hypothesis Development

2.3.1. Tourism Destination Image and Tourists' Multi-Attraction Travel Behavior Patterns

Previous image studies demonstrated that destination image has a strong association with tourists' length of stay [26–28]. More specifically, Gokovali et al. [27] confirmed that the overall image of Turkey stimulates travelers' length of stay. De Menezes et al. [26] categorized the 25-item scale of destination image into six dimensions—cultural heritage; nature and landscape; availability of packages and flights; safety and hospitality; quality and price; weather and ultra-periphery. They found that out of the six dimensions, the primary reasons for tourists' longer length of stay in a leisure destination originate from their favorable perceptions of two dimensions: Weather and remoteness; and nature and landscape. Machado [28] reported that tourists who had a favorable destination image of Madeira Island tended to stay for longer periods.

On the other hand, previous researchers attempted to identify the relation between the length of stay and tourists' travel pattern. Oppermann [29] indicated that when tourists stay for longer periods of time in a destination, they are more likely to visit more places and attractions. Asero et al. [12] indicated that network density is used as a way to connect tourist routes among attractions. Suppose a multi-attraction network has a high density score within its overall network structure. This implies that tourists tend to travel to multiple attractions within one trip. Based on the aforementioned literature, this study proposes that long-term tourists' travel pattern displays a more extensive pattern than short-term tourists' travel pattern.

In sum, the better the destination image, the longer tourists tend to stay, which in turn allows them to visit more complex routes and diverse attractions, leading to high network density. Based on this literature background, the authors propose the following hypothesis:

Hypothesis 1 (H1). *Destination image has a positive influence on network density.*

Tourism destination image is commonly defined as tourists' overall perception of a tourism destination [30]. Destination image, one of the most important factors influencing destination preference and consequent behaviors, is diverse feelings about, overall evaluation of, and attitudes toward a destination [2]. Most image studies suggest that destination image is one of the most influential predictors of tourists' destination choice behavior and a pivot of destination branding [31,32]. More specifically, according to Sirakaya et al. [32], cognitive evaluation of destination attractiveness and tourist services of attractions are predictors for increasing the probability of a tourist's choice to visit the destination. Mussalam and Tajeddini [31] confirmed that the perception of a destination's infrastructure (e.g., accessibility, accommodation facilities, and transportation facilities) and the perception of a destination's popularity have a significant effect on the frequency of visits to the destination.

From an SNA perspective, according to Wasserman and Faust [33], Asero et al. [12], and Chung, Chung, and Nam [13], destinations with a high degree centrality are connected with many other destinations and places. Consequently, they tend to be influential attractions, often serving as an anchor-point within a larger city system. For that reason, they serve as a core attraction, which attracts a large number of visitors for its popularity and distributes visitors to a few connected destinations. Therefore, a typical destination with a high degree centrality is a famous hub of tourism infrastructures, superstructures, and public transportation. In our study, those destinations with highdegree centrality, including Myeongdong, Dongdaemun Market, Namsan/N Seoul Tower, and Lotte World, have all these qualities. Asero et al. [12] suggested that if many tourists visit a specific destination, the specific destination can be influential and become popular within the network. Most of the popular destinations have a well-established infrastructure: Accommodation, convenient transportation facilities, easy accessibility, and unique attractiveness (e.g., heritage, mountain, and activities) [34].

To sum up, a favorable image of destination regarding its infrastructure, attractiveness, and reputation is more likely to contribute high tourists' traffic flow of a tourism destination, which in turn is accompanied by high degree centrality. Based on this literature background, the following hypothesis is proposed:

Hypothesis 2 (H2). *Destination image has a positive influence on degree centrality.*

2.3.2. Tourists' Multi-Attraction Travel Behavior Patterns and Tourist Satisfaction

Generally speaking, tourist satisfaction is an important parameter in assessing the quality of tourism services. According to Lue et al. [10], potential tourists tend to travel to various destinations due to their rational behavior that could decrease their time and expenditure related to their travel itineraries and maximize their benefits. On the other hand, Tussyadiah, Kono, and Morisugi [35] attempted to explain tourists' multi-attraction travel behavior patterns from another perspective. They argued that the primary motivation of travelers' behavior is to satisfy various needs of tourists that cannot be accomplished by visiting a single destination.

According to Kang et al.'s [14] studies on tourist attraction, if a multi-attraction network has a high density score, it indicates that tourists cohesively visited the multi-attraction. On the other hand, if a multi-attraction network has a low density score, it shows that the attraction visit patterns of tourists tended to be hierarchical. In other words, the network's high density score can be derived from the centralized pattern in which tourists visit a multi-attraction to enhance their satisfaction with the experience of various travels in a single trip. Based on this literature background, the authors propose the following hypothesis:

Hypothesis 3 (H3). *Network density is positively related to tourist satisfaction.*

In tourism literature, satisfaction refers to the emotional condition reflected in tourists' post-experience evaluation of a tourism destination [36]. Previous studies have empirically confirmed that the experience of destination has a positive association with satisfaction from tourists [37].

From an SNA perspective, an attraction with high degree centrality is interpreted as a famous and popular tourist place located at a geographic center within an overall destination network structure [14,16]. In addition, these studies confirmed that attractions with high degree centrality are fully equipped with positive reputation, convenient transportation, easy accessibility, and well-established shopping centers.

On the other hand, several empirical studies have identified the relationship between tourism facilities and tourist satisfaction. Araslı and Baradarani [38] categorized the 23-item scale of destination facilities into five factors—shopping and tourist attraction; food; lodging and restaurants; environment and safety; and transportation. They demonstrated that out of five factors, three dimensions—shopping and tourist attraction, environment and safety, and food—have a positive effect on tourist satisfaction. Thompson and Schofield [39] argued that positive relationships were revealed between transport facilities and tourist satisfaction.

In sum, the attraction with high degree centrality, which is assumed to have abundant tourism-related facilities, such as transportation, accessibility, and well-established shopping/dining centers, is likely to tempt tourists, which can in turn induce tourists' satisfaction. Accordingly, the authors propose the following hypothesis:

Hypothesis 4 (H4). *Degree centrality is positively related to tourist satisfaction.*

2.3.3. Tourist Satisfaction and Behavioral Intentions

Tourist satisfaction is defined as a function of pre-tour expectation and post-tour experience [37]. Without any doubt, tourism researchers and most practitioners in the tourism industry would agree that tourism success depends on the level of tourist satisfaction [40].

The present study uses three behavioral intention variables, revisit intention, word-of-mouth (WOM) intention, and intention to recommend, to examine the outcomes of tourists' satisfaction. In tourism literature, revisit intention, serving as a strong indicator of future behavior, is defined as a tourist's willingness or eagerness to revisit the same destination [30]. Intention to recommend is closely associated with tourists' satisfaction levels [30]. WOM is defined as informal communication between sender and receiver about a product or service [41].

Numerous tourism studies suggest an important relationship between tourist satisfaction and behavioral intentions [6,42]. Moreover, satisfied tourists are more inclined to recommend the attraction they visit to others and to revisit those places [30,43]. Previous studies demonstrated the significant positive effect of tourist satisfaction on WOM [41,43]. Thus, the authors derive the following hypothesis from the literature:

Hypothesis 5 (H5). *Tourist satisfaction has a positive influence on behavioral intentions.*

Figure 1 displays the hypothesized research model that is composed of the interrelationships among research variables.

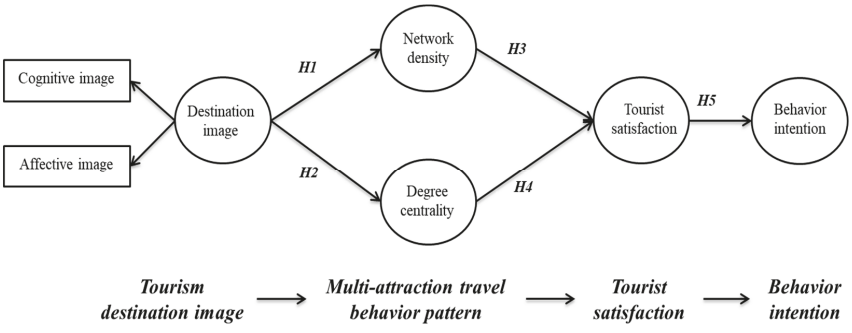

Figure 1. A research model for the structural relationships of tourism destination image, multi-attraction travel behavior pattern, tourist satisfaction, and behavior intention. Notes: Destination image construct (i.e., second-order factor structure) is manifested by cognitive image and affective image.

3. Methodology

3.1. Sample and Data Collection

The rapid increase in the number of Chinese tourists visiting Korea shows that Chinese tourists are highly interested in South Korea tourism [44]. Considering the importance of China as the number one originating country to the Korean inbound market, the present study selected Chinese free independent travelers (FITs) for its subject.

The researchers conducted an online survey for over ten days from 1 May 2015 to 12 May 2015 through "Wen Juan Xing" (www.sojump.com), an online survey company in China. This company is the number one online research and development agency with the largest panel members in China. Target panel members were Chinese tourists who were eighteen years or older and stayed at least one night in Seoul mainly for leisure purposes. When the panel members consented to participate in the online survey, they received an e-mail that contained an online survey site link.

The survey used two screening questions: Whether the respondents were 18 or older and if they had visited Seoul for an overnight stay mainly for leisure purposes (e.g., "Have you visited to Seoul for an overnight within the last 12 months for leisure purpose?"). If respondents answered "no", the survey immediately stopped. Next, the questionnaire randomly evaluated the study's scale items. Further, in order to minimize common method bias, the questionnaire administered separate cover stories for each scale. The final part of the questionnaire was composed of respondents' demographics.

The authors collected a total of 484 questionnaires through the online survey. Prior to analyzing the data, the researchers eliminated data that were not appropriate for the purpose of the study. More specifically, the purpose of this study was to measure tourists' multi-attraction travel behavior by constructing a multi-attraction network based on the relationship between attractions and then analyzing a multi-attraction network. Thus, the authors deleted the sample that visited single attractions because it was not suitable for constructing a multi-attraction network. After eliminating the abovementioned 16 samples, the researchers used a total of 468 responses for this study.

3.2. Measurement

3.2.1. Scale Items

The researchers used scale items from diverse sources in the literature to operationalize the key constructs of destination image (cognitive image and affective image), tourist satisfaction, and behavioral intentions. These variables produced the attribute data as shown in Table 1, and a total of 18 measurement items were used based on previous studies. The current study measured all scale

items of the attribute data on a five-point Likert scale, with answer options ranging from 1 (strongly disagree) to 5 (strongly agree). The theoretical basis of the variables is displayed in Table 1.

Table 1. Constructs in the research model.

Construct	Measurement Items	References
Destination image		
Cognitive image (CI)	I feel Seoul has good shopping facilities I feel Seoul has a beautiful nature I feel Seoul has a diversity of foods I feel Seoul has a good accommodation system I feel Seoul has a clean environment	Beerli and Martin [19]
Affective image (AI)	I feel Seoul is a safe I feel Seoul is exciting I feel Seoul is peaceful I feel Seoul is exotic I feel Seoul is vital	
Tourist satisfaction (TS)	I am satisfied with my decision to visit Seoul (TS1) I feel good about my choice to visit Seoul (TS2) Overall, I am satisfied with my decision to visit Seoul (TS3) I am satisfied with the cost for the tour experience (TS4)	Eid and Gohary [45]
Behavioral intention (BI)	I will recommend Seoul to my friends (BI1) I intend to revisit Seoul (BI2) I will say positive things about Seoul to my friends and relatives (BI3) I will visit Seoul again (BI4)	Zabkar, Brencic, and Dmitrovic [46]

3.2.2. Measurement of Network Variable

Social Network Analysis

SNA describes the structure of relations between given entities, such as people, place, and information, and then applies quantitative measurements to find relevant indicators for the features of the network structure and the role of its components [16]. Two main mathematical functions are available in SNA: Network density and centrality measures for explaining the structural characteristics of a network [14]. Network density is defined by de Nooy, Mrvar, and Batagelj [47] as a proportion of the maximum possible linkage in a network. It measures the relative number of connections in the network [47]. The more nodes linked to another node, the denser the network will be [14]. Meanwhile, centrality is defined with reference to the whole network that an individual structure has [48]. It refers to the positioning of a specific network node linked to other network nodes; a given node is more or less central than other nodes, a primary concern in SNA [48]. Wasserman and Faust [33] defined degree centrality as the number of nodes directly connected to a particular node. According to Wasserman and Faust [33], the number of links indicates 'connectedness' of one node to other nodes, and it is a function of influence and power it has within the network.

Network Variables Derived from SNA

The network variables utilized in this study, such as network density and degree centrality, explain the multi-attraction travel behavior of tourists. In order to measure the network variable, the authors used the questionnaire items about "Which attractions did you visit while traveling in Seoul? Please select the appropriate place from the suggested attraction list" (as shown in Appendix A).

However, according to Liu, Huang, and Fu [49], social network data gained via a survey are attribute data and should be transformed to relational data for SNA. Thus, in order to convert attribute data to relational data, we created a matrix showing the relationships between tourists and tourist attractions using a sociometric choice matrix that shows whether a relationship between entities existed or not. The details of how this study created the matrix are outlined in Appendix B (See Table A1 in Appendix B). More specifically, in order to measure density, we converted the aforementioned

tourist–tourist attraction matrix to a tourist attraction–tourist attraction matrix to calculate the density scores (See Table A2 in Appendix B). As a result, the 468 tourists by 23 attractions matrix was transformed to a matrix of 23 attractions by 23 attractions for the density score. The details of how this study calculated the density indices are outlined in Appendix C. In terms of network structure, the nodes mean each tourist attraction, and the link indicates tourist attractions sharing the relationship.

In addition, to calculate degree centrality, the tourist–tourist attraction matrix was converted to a tourist–tourist matrix (See Table A3 in Appendix B). As a result, the 468 tourists by 23 attractions matrix was transformed to a matrix of 468 tourists by 468 tourists for the calculation of degree centrality score. The details on the calculation of the degree centrality score are represented in Appendix C. In network structure, the node represents each tourist, and the link indicates tourists sharing the relationship.

3.3. Data Analysis Process and Analytical Tools

Two categories of data are used in this study: Multiple-item scales, including tourism destination image, tourist satisfaction, and behavioral intentions, and relational data concerning network density and degree centrality. To estimate the structural model and test the research hypotheses, we followed the data analysis process of previous studies [50,51]. First, we carried out network density and degree centrality analysis as explained above (see also Appendix B). Second, to meet the normal distribution assumption for the multivariable analysis technique, the network variables induced from SNA (i.e., NC, and DC) were normalized. Third, indices for network density and degree centrality were encoded as individual tourist-level variables. To examine the scale validity of tourism destination image, satisfaction, and behavioral intention, confirmatory factor analysis (CFA) and discriminant analysis were carried out, followed by tests of the structural relationships among all variables using SEM [52].

For data analyses, SPSS 20.0 and UCINET 6 were used to convert and compute the network density and the degree centrality scores. AMOS 20.0 packages were used for CFA, discriminant analysis, and SEM.

4. Results

4.1. Characteristics of Respondents

Table 2 summarizes respondents' profile information. Of the total respondents, 52.1% were male, whereas 47.9% were female. The respondents in their 30s were 53.4% of the total respondents, followed by those in their 20s (36.5%). Married respondents (80.3%) out-numbered single respondents (19.7%). As for educational level, a vast majority of the respondents (76.7%) completed university, followed by a completion of graduate school (12.6%). With regard to occupation, half of the respondents were white-collar workers (45.9%), followed by engineers (19.2%), and professionals (8.5%). In terms of monthly household income, 13.2% of the respondents earned between $1051 and $1120, followed by 11.8% of the respondents between $1501 and $1650, and 10.9% earned more than $2101.

Table 2. Profiles of the respondents (n = 468).

Characteristics	N	(%)	Characteristics	N	(%)
Gender			*Age (years)*		
Male	224	47.9	20–29	171	36.5
Female	244	52.1	30–39	250	53.4
Marital status			40–49	43	9.2
Single	92	19.7	50 or older	4	0.9
Married	376	80.3	*Monthly household income (US$)*		
Education			Less than 600	9	1.9
High school	4	0.9	601–750	49	10.5
2 years college	46	9.8	751–900	45	9.6
University	359	76.7	901–1050	40	8.5
Graduate school	59	12.6	1051–1120	62	13.2
Occupation			1121–1350	46	9.8
Clerical worker	215	45.9	1351–1500	30	6.4
Business executives	65	13.9	1501–1650	55	11.8
Government/military	22	4.7	1651–1800	31	6.6
Agriculture/fisheries	2	0.4	1801–1950	28	6.0
Student	7	1.5	1951–2100	22	4.7
Engineer	90	19.2	More than 2100	51	10.9
Professional related (doctor, attorney, etc.)	40	8.5			
Sales & related	3	0.6			
Service worker	19	4.1			
Other	5	1.1			

4.2. Measurement Validation

We analyzed the reliability and validity of the latent construct variables, including destination image, tourist satisfaction, and behavior intention. The Cronbach's alpha coefficients of the three structures are presented in Table 3. The Cronbach's alpha coefficients of the three structures ranged from 0.570 (tourist satisfaction) to 0.672 (destination image), which can be regarded as reliable because the three constructs are all above the acceptable threshold of 0.50 [53].

Table 3. The results of convergent validity and reliability testing.

Construct	Indicators	AVE	CR	Alpha	Std. Factor Loadings	T-Values
Destination image	AI	0.866	0.927	0.672	0.612	–
	CI				0.838	12.974
Tourist satisfaction	TS1	0.525	0.766	0.570	0.644	–
	TS3				0.481	8.938
	TS4				0.559	10.193
Behavior intention	BI1	0.532	0.771	0.618	0.681	9.845
	BI2				0.586	9.043
	BI4				0.534	–

Model fit: χ^2 [17] = 35.504, Q = 2.062; goodness of fit index (GFI) = 0.981; normed fit index (NFI) = 0.965; Tucker–Lewis index (TLI) = 0.969; comparative fit index (CFI) = 0.981; root mean square error of approximation (RMSEA) = 0.048.

The authors employed CFA to estimate the convergent validity. Following the suggestion of Hall, Snell, and Foust [54], this study adopted an item parceling procedure, aggregated individual items, and used combined items as the indicators for the higher order latent dimension to accomplish a more parsimonious model. The authors formed two parcels for the destination image: Affective image and cognitive image. The initial result of the CFA showed that the factor loadings of one item (T2) of the

tourist satisfaction and one item (B3) of the behavior intention were less than 0.40. By deleting these two items, the reliability of indicators was secured.

Table 3 shows the final result of CFA, which was composed of the three constructs. The three-factor measurement model represented an acceptable goodness of fit with $\chi^2 = 35.504$, df = 17, $\chi^2/df = 2.062$, $p = 0.000$, goodness of fit index (GFI) = 0.981, normed fit index (NFI) = 0.965, Tucker–Lewis index (TLI) = 0.969, comparative fit index (CFI) = 0.981, and root mean square error of approximation (RMSEA) = 0.048. Overall, the CFA results meet the suggested level of goodness of fit [52,55], indicating that the measurement model is generally suitable for the sample data. In addition, the standardized factor loadings score ranged from 0.481 to 0.838, and all standardized factor loadings were significant at $p < 0.001$. The average variance extracted (AVE) values (0.525: Tourist satisfaction to 0.866: Destination image) exceeded the recommended threshold of 0.50 [56]. In addition, the composite reliability (CR) values (0.771: Behavior intentions to 0.927: Destination image) were higher than the suggested threshold of 0.70 [56].

The AVE test (average variance extracted), a measure of the amount of variance captured by a construct in relation to the amount of variance due to measurement error, confirmed the discriminant validity of measurement scales. The AVE value for each construct ought to be higher than the squared correlation among the constructs [56]. Table 4 shows that the square value of all correlation coefficients does not exceed the AVE value. Thus, this result demonstrates that the measurement model meets the acceptable discriminant validity [56]. In sum, the results of convergent and discriminant validity provided strong evidence of the validity of the constructs.

Table 4. Results of the correlations and discriminant validity assessment.

Variables	1	2	3	4	5
1. Destination image	-				
2. Network density	0.104 *	-			
3. Degree centrality	0.118 *	0.905 *	-		
4. Tourist satisfaction	0.648 ** (0.420)	0.139 **	0.159 **	-	
5. Behavior intention	0.600 ** (0.360)	0.069	0.099 *	0.641 ** (0.410)	-
AVE score	0.866	-	-	0.525	0.532

Notes: Correlations among all research variables are represented in the lower off the diagonal; calculated scores of the squared correlations among constructs (i.e., destination image, tourist satisfaction, and behavior intention) are displayed in parentheses; network variables (i.e., network density and degree centrality) are excluded from the discriminant validity test, because they do not have an AVE value. Thus, network variables (network density anddegree centrality) were used only for correlation test. * $p < 0.05$, ** $p < 0.01$.

4.3. Structural Model

The authors utilized a set of fit indices to test the structural model and hypotheses using SEM as shown in Figure 2. The research model fits the statistics well with $\chi^2/df = 1.923$, $p = 0.000$, GFI = 0.972, NFI = 0.961, TLI = 0.936, CFI = 0.969, and RMSEA = 0.073. Hypotheses 1 and 2 examined the relation between tourism destination image and multi-attraction travel behavior patterns. Destination image ($\gamma = 0.157$, $p < 0.05$) has a statistically significant effect on network density, and destination image ($\gamma = 0.172$, $p < 0.05$) is positively related to degree centrality. Thus, Hypotheses 1 and 2 are supported. Hypotheses 3 and 4 investigated the relation between multi-attraction travel behavior patterns and tourist satisfaction. Network density ($\gamma = 0.176$, $p < 0.001$) and degree centrality ($\gamma = 0.185$, $p < 0.001$) have significant effects on tourist satisfaction. Therefore, Hypotheses 3 and 4 are accepted. As expected, tourist satisfaction has a significant positive effect on behavioral intentions ($\gamma = 0.913$, $p < 0.001$), lending support for Hypothesis 5.

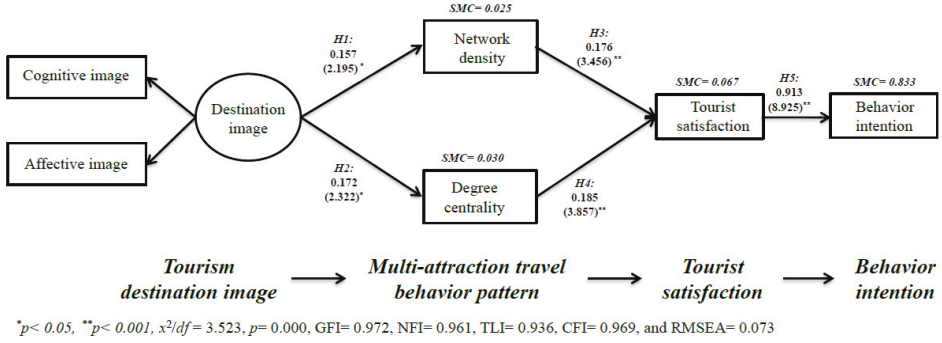

Figure 2. Structural model and hypotheses test results.

5. Discussion and Implications

5.1. Discussion

For a deeper understanding of tourist behavior, this study attempted to develop a research model fully reflecting tourists' multi-destination travel behavior by way of combining SNA techniques with multivariate linear modeling techniques.

The first major finding of this study is that the image of Seoul had a positive effect on density, which is defined as the connectivity of tourist attractions. Therefore, this finding can be interpreted as: If the Chinese tourists perceived the image of Seoul more positively, they tended to visit more of the tourist attractions within Seoul, which increased the connectivity of tourist attractions. This result confirms Kang et al.'s [14] previous studies. Second, destination image had a positive influence on degree centrality. If a destination has an overall positive image, tourists presume that it is equipped with favorable publicity and reputation, locational advantages, and convenient transportation facilities that are drawing factors to the attraction selection. Third, network density was positively related to tourist satisfaction. Travel to multiple attractions affects tourist satisfaction. According to a study by Xiang [57], Chinese FITs tend to spend a lot of time in a large geographic area by searching for information on multiple attractions and selecting multiple attractions based on obtained information. Based on these FITs' travel behavioral characteristics, one can interpret the result of the study that Chinese FITs improve satisfaction by meeting their needs based on gained experience through multi-attraction travel. Fourth, degree centrality, one of the indicators of tourists' multi-attraction travel behavior, exerted a positive influence on tourist satisfaction. In other words, well-known places and/or geographically advantageous tourist attractions, which are positioned to have a high pulling effect, lead to greater tourist satisfaction. Finally, tourist satisfaction had a positive impact on behavioral intentions. This result is consistent with previous findings [42,46] showing that tourist satisfaction is an important antecedent of behavioral intention to revisit. In other words, the higher the tourists' satisfaction, the higher their revisit intention, favorable WOM, and destination recommendations.

5.2. Academic Implications

The uniqueness of this study is in its approach to tourist behavior model. This study makes a methodological contribution to the literature on the topics of tourism destination management and marketing by amalgamating overall network structure, which reflects visitors' movement patterns and the composition of places/attractions within a destination system, with SEM dealing with the behavioral intention and its key precursors. Findings of the present study suggest a few methodological implications for sustainable tourism marketing and development. Most of all, this study overcomes the limitations of existing research, which were mainly concerned with spatial movement patterns of tourism

phenomena [4,11,24], or tourists' individual behavioral characteristics in a single destination [9,10]. This study will serve as a catalyst for extending the realms of researchers tackling this topic.

Unlike the diverse empirical findings of the GIS and traditional statistical technique-based studies, this study collected survey data from actual tourists visiting multiple attractions and applied SNA techniques to incorporate their actual visit patterns. Adopting this approach, we found an important association between destination image perceived by visitors and their movement patterns within the destination, as indicated by the network density and degree centrality of SNA. Another interesting point to note is that both indices of network density and degree centrality exerted positive influences on tourist satisfaction. As far as the authors' knowledge goes, the present study is the first that investigated actual multi-attraction travel behavior using SNA and then transformed it as attribute level variables to examine the structural relationship between SNA indices and tourist satisfactions. Thus, we rendered a strong empirical support to Hwang et al. [9] and Lue et al.'s [10] theoretical proposal about the relationship between tourists' multi-attraction travel behaviors and tourist satisfaction. Apart from the fact that the research methodology is only at its initial stage, this study has made significant advances in this topical area; as the first empirical example, it demonstrates an innovative methodological approach by amalgamating two different techniques from different disciplines. Therefore, the current study contributed to developing the destination choice behavior model for sustainable tourism. This study will trigger new attempts for furthering the applications and expansion in tourism research. In addition, there are several practical implications of the study as discussed below.

5.3. Practical Implications

First, this study verified that the destination image is a significant variable that affects tourists' multi-attraction travel behavior. Thus, in order to induce the multi-attraction travel of tourists, DMOs may utilize the following methods to implant a positive destination image in them. For example, DMOs may utilize various sources of social media, such as YouTube comments, blogs, Twitter, and online discussions, to identify which types of attractions (e.g., restaurants with good food, tourist attractions, nearby attractions, attractions that are easily accessible using local means of transportation) tourists are interested in. This knowledge can be helpful in developing a composed attractive image related to the accommodation, food, landmarks, and transportation. Further, advertising these appealing qualities via television ads, print ads, and social media can lure tourists to visit multiple attractions, which in turn could promote economic vitalization by inducing those tourists to spend money at those attractions.

Lastly, the current study confirmed that the multi-attraction travel of tourists has a positive influence on the level of tourist satisfaction. Thus, in order for DMOs to provide a higher level of satisfaction for tourists through diverse attractions and memorable experiences, the following multilateral efforts are needed: (1) DMOs need to establish a smart tourism plan. For example, from an information-providing perspective, DMOs have to provide information regarding the destination to satisfy the needs of tourists using social media. Using that method, tourists can receive up-to-date information on the destination, attraction diversity, traffic, and lodging; (2) DMOs need to make an effort to provide guidance to multi-attraction tourists regarding the facilities and services that are available for traveling between destinations. For instance, tourism product developers can create a city tour bus program so that tourists who are planning to visit multiple attractions within a destination can comfortably travel between sites, which can increase tourist satisfaction.

5.4. Limitations and Avenues for Future Research

This study, by using survey data for tourists' multi-attraction travel behavior and applying it to SNA, elucidates an in-depth analysis of tourist behavior and suggests constructive ways for local governments, related companies, or tourism destination marketers who organize tourism destinations. However, this study has some limitations. First, there are shortcomings in unveiling the causal relationships among variables by incorporating SNA, which has been utilized by researchers on tourist

behavior patterns, with measurement factors, such as destination images or tourist satisfaction into the structural model. Furthermore, the failure to convey meaning for a small number of specific items resulted in data loss. More specific measurement metrics need to be used in future studies.

Second, due to the nature of the data (i.e., undirected data), tourists' multi-attraction travel behavior patterns are only measured by network density and degree centrality in this paper. Future studies will employ additional metrics that can describe the structural characteristics of the network, such as closeness centrality and concentration, to understand multi-attraction travel in a more detailed manner.

Lastly, we used a total of 468 responses for this study. This seems to be sufficient for this type of modeling and a reasonable level of model fit. However, other than the SEM analysis purpose, for a more conclusive confirmation of the findings of our study, a larger data set would surely be beneficial. Thus, researchers should utilize a large volume of additional data for a more conclusive confirmation of the findings in the future study.

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Appendix A. Explanation of 23 Attractions in Seoul, South Korea

Attractions	Name	Characteristics
Attraction 1	Palaces	Heritage site
Attraction 2	Museums (Memorial Halls)	Heritage site
Attraction 3	Insa-dong	Cultural & shopping place
Attraction 4	Namsan/N Seoul Tower	Landmark of Seoul
Attraction 5	Myeong-dong	Shopping place
Attraction 6	Namdaemun Market	Shopping place
Attraction 7	COEX	Convention & exhibition place
Attraction 8	Dongdaemun Market	Shopping
Attraction 9	Itaewon	Multicultural & shopping place
Attraction 10	Lotte World	Theme park
Attraction 11	Yeouido/63 Building	Entertainment building
Attraction 12	Hangang River/Ferry	Natural scenery place
Attraction 13	Cheonggyecheon	Natural scenery place
Attraction 14	Sinchon/Hongik University	Shopping place
Attraction 15	DMC/World Cup Stadium	Sports & entertainment place
Attraction 16	Hanok village(Namsan)	Cultural place
Attraction 17	Bukchon/Samcheong-dong	Cultural place
Attraction 18	Cheongdam-dong	Shopping
Attraction 19	Garosu-gil street	Shopping place
Attraction 20	Seoul National University	University
Attraction 21	Ewha Womans University	University
Attraction 22	Naksan park	Natural scenery place
Attraction 23	Gangnam station	Shopping place

Appendix B. Conversion to Relational Data from Attribute Data

Table A1, the Attraction by Tourist 2 mode matrix indicates all possible pairs of one-to-one connectedness between an attraction and a tourist.

Table A1. Attraction by Tourist, 2 mode matrix (Incidence matrix).

	Tourist 1	Tourist 2	Tourist 3	Tourist 4	Tourist 5
Attraction 1	1	1	1	1	0
Attraction 2	1	1	1	0	1
Attraction 3	0	1	1	1	0
Attraction 4	0	0	1	0	1

Table A2 (Attraction by Attraction) indicates the number of tourists who visited any pair of common attractions. For instance, Attraction 1 and Attraction 4 share one tourist who visited both places.

Table A2. Attraction by Attraction, 1 mode matrix (Adjacency matrix).

	Attraction 1	Attraction 2	Attraction 3	Attraction 4
Attraction 1	-	3	3	1
Attraction 2	3	-	2	2
Attraction 3	3	2	-	1
Attraction 4	1	2	1	-

Table A3 (Tourist by Tourist) indicates an overall connectedness between two tourists who visited the same attractions derived from the first two matrices, Tables A1 and A2. In other words, Table A3 shows the number of attractions commonly visited by any two particular tourists. For instance, Tourist 2 and Tourist 3 commonly visited Attraction 1, Attraction 2, and Attraction 3. These two tourists commonly selected three different attractions while they traveled.

Table A3. Tourist by Tourist, 1 mode matrix (Adjacency matrix).

	Tourist 1	Tourist 2	Tourist 3	Tourist 4	Tourist 5
Tourist 1	-	2	2	1	1
Tourist 2	2	-	3	2	1
Tourist 3	2	3	-	2	2
Tourist 4	1	2	2	-	0
Tourist 5	1	1	2	0	-

Therefore, a two-mode matrix is a primary input matrix showing connectedness between the same kind of nodes (either attractions or tourists). On the other hand, the two-mode matrix shows how two different categories of nodes (attraction by tourist) are connected. Converting matrices from 2-mode to 1-mode does not result in any information loss, as shown when Tables A1 and A2 is incorporated into Table A3.

Appendix C. Calculation Process of Density and Centrality Value

Density is calculated using an SNA conducted based on data from the attractions that tourists have actually visited. For instance, if an SNA conducted on 'Tourist A', who visited six of the 23 attractions in Seoul, produces a density value of 0.05, and the same analysis is conducted on 'Tourist B', who visited two out of the 23 attractions, and that produced a density value of 0.01, the density value for 'Tourist A' means that 'Tourist A' shows a wider multi-attraction visit pattern than 'Tourist B'. The authors applied this procedure in order to derive the density values to use them as a variable in the SEM. First, they constructed a 23-attractions-by-1-tourist matrix based on the responses of each respondent in order to calculate the density value, which was then converted to a 23×23 attraction matrix. Lastly, the authors created 468 attraction networks using the 1-mode matrix (attraction by attraction) and then conducted an SNA to calculate the density value for each of the 468 individuals.

In addition, a quasi-network, which is created when tourists visit an attraction at the same time, was used to calculate the degree centrality. More specifically, the authors created a 468 tourists by 23 attractions matrix to calculate the degree centrality value and then converted the matrix to a 468 tourists by 468 tourists matrix. Secondly, they conducted the SNA to calculate the degree centrality of the 468 respondents, which indicates the number of tourists directly connected to a particular tourist. Lastly, they used the degree centrality value as a variable that an attraction visited by a tourist with a high degree centrality tended to be visited simultaneously by many other tourists, which means that the particular attraction has a high degree centrality.

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A Business Creation in Post-Industrial Tourism Objects: Case of the Industrial Monuments Route

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Abstract: The aim of this article is to discuss the basic types of business transformations identified in post-industrial heritage sites in the context of changes in business models. The basis for this analysis is the research carried out in 2017 in 42 post-industrial tourism objects, in the *Industrial Monuments Route* (IMR) largest in Poland, that is a part of *European Route of Industrial Heritage*. The analysis of historical changes and the documentation of objects, within the Industrial Monuments Route, made it possible to identify three transformation types in business models of these objects. The post-production organization model can be considered the most popular scheme on the analyzed route. It concerns an enterprise or cultural institution, that previously was a production or extraction plant and currently services tourists only. Although these objects were not designed with tourists in mind, they perfectly fulfill this function due to the presented transformations.

Keywords: post-industrial tourism; The Industrial Monuments Route; business models

1. Introduction

The concept of post-industrial society, introduced half a century ago by A. Touraine [1], and later popularized by D. Bell [2], is characteristic of the global economy development stage present from the second half of 20th century, where the service sector generates more wealth than the production sector, services employ more employees than production sites, and mass production is replaced by individual production. Knowledge becomes a resource. Therefore, the source of income for societies is the process of production and processing of information, not material goods production. The factor for economy development is the creation of new ideas.

Currently, traces of the post-industrial era can be observed in many economy sectors around the world. The dynamic technological progress at the turn of the millennia accelerated the post-industrialization process. It is particularly evident in the development of IT services that act as the source of almost unlimited customized and global collective communication. The development of new technologies, defined in the post-industrial era as third technological wave [3] (after agricultural and industrial ones), is evident not only in retrospect, as previously, but almost immediately. Without much effort, one can observe the changes referred to above in the global economy. There are, however, also negative consequences of the third wave visible—for example—in the post-industrial landscape, full of abandoned factories with outdated production lines, full of exploited drifts (carbon, silver, gold), that quite often lower the security level of community living in their vicinity and deform the city landscape.

The characteristic feature of the post-industrial era is also the change of technological processes that no longer manufacture material goods but deal in services (non-material goods). It is worth noting that in this case, post-industrial tourism more often becomes an additional activity carried out by industrial plants (for example, multi-generational breweries that, apart from production offer

sightseeing tours, concern both the modern production lines and old beer production technology lines from past centuries). One can take Żywiec brewery as an example, it's one the largest enterprises of this type in Poland. It can also be observed that, sometimes these additional service activities, carried out by industrial enterprises, end in the domination of these tourist services over production. In such cases, the industrial plant becomes a post-industrial tourism object, making regional post-industrial heritage available, similarly to, for example, closed silver or hard coal mines, where the extraction was discontinued, due to economic reasons or due to the lack of deposits. In this aspect, tourist activities become an attempt to make use of non-material (history, ideas) and material values (abandoned machinery and facilities) for tourist purposes, thus contributing to the sustainable development of society. Researchers like, Jonsen-Verbeke, M. [4] have shown industrial heritage as an idea of new tourist product (new value of old things). N. Yashalova et al. [5] has indicated that industrial tourism encourages regional economy growth by stimulating the activities of related sectors.

The article discusses three basic types of business transformations, identified in post-industrial heritage sites, in the context of changes in business models. The basis for this analysis is the research carried out in 2017, in 42 post-industrial tourism objects, associated in the larges part in Poland Industrial Monuments Route (IMR), that is a part of *European Route of Industrial Heritage*. We believe that this article will help understand how the value for customers and other elements of business could be created. Moreover, the article shows how the resources, on which the enterprise was built, affect to other aspects of the business.

2. Cultural Heritage and Post-Industrial Tourism

The literature indicates that heritage is what we inherit from the past, use today, and pass on to future generations [6]. Potential heritage resources are vast and widespread, and they include many objects, places, events, persons, and phenomena not heretofore considered to be traditional heritage tourism products [7]. D.J. Timothy indicates that "people are becoming more sophisticated in their travel tastes and desires; many are showing more interest in the deeper meanings of places, local identities, and their own connections to the places they visit".

Human heritage is strongly linked to the culture understood as humankind's spiritual and material heritage [8]. It can also be an element of national identity [9]. It is strongly related to tourist activities. Traveling to visit cultural sites is called cultural tourism, and is one of the fastest developing tourism forms [10].

A. Mikos von Rohrschedit [6] describes cultural tourism as travel during which its participants encounter objects or values, being the manifestation of high or popular culture or expansion of their knowledge about the world surrounding them. Similar concepts on cultural tourism are shared by other researchers. W. Pannich et al. [11] indicate the particular will to learn, discover life styles, art, architecture, and other aspects linked to human existence. Cultural tourism is characterized by intense engagement of human perception. The concept of experience tourism was identified, among others, by C. Hall and H. Zeppel [12]. Others [13] define it as a movement of people to cultural attractions, located outside their place of residence, to gather new information and experiences to satisfy their cultural needs.

Whereas heritage, being an integral part of culture [9], is defined as a mission that is about taking care of historical heritage and maintaining its authenticity as much as possible [14]. H. Park [9] considers it an important element of national history that reminds their citizens about their roots on which the sense of belonging is based.

Undoubtedly, this is a phenomenon characterized by a high sensitivity. J. J. Zhang [15] claims that conflicts may include ethnic clashes, religious differences, or political rivalry, and these difficult pasts are inevitably encountered by tourists from both sides. If such heritage increases the complexities associated with tourism politics, post-conflict tourism becomes even more sensitive when it is associated with historical sites of bloodshed.

According to G. Ismagilov et al. [16], historical and cultural heritage plays a major role when it comes to developing tourism in a given country. When describing the Russian market, they indicated that heritage is a real opportunity to improve the economic, social, and cultural status, thus creating the places that demonstrate that heritage is a sign of creativity and cultural promotion of the local community. Therefore, heritage is more linked with social and economic development [17].

In the context of geography, heritage was discussed by M. Ursache [17], who described cultural heritage as a significant determinant of attractiveness and competitiveness of a given country as a tourist attraction. Due to economic reasons, enterprises focused on cultural heritage should strive to achieve financial independence. It is also emphasized by M. and C. Surugiu [18], in the context of providing support for the entrepreneurship related to it. One must notice, however, that heritage is an economic opportunity for the development of a given area, but on the other hand it maintains social identity. Some claim that it should be protected, not due to financial aspects, but due to its unique value [19].

Due to the above, traveling to sites associated with culture and history of the community can be considered heritage tourism. This view can be confirmed by the definition [14], that tourism is oriented to what we inherited, no matter whether these are historical buildings, craftsmanship or beautiful landscape. This interpretation of this term, however, was criticized by Y. Poria et al. [20], who claim that heritage tourism is about tourist motivation rather than attributes of a given place. No matter what the conclusion is in this discussion, many researchers support the definition proposed by P. Yale and treat heritage tourism as "nothing more" than tourism centered around what we inherited, which can mean anything, starting from historical buildings, through art to beautiful landscapes [21].

To sum up the discussion on heritage tourism and cultural tourism, one can conclude that they are closely linked. An example may be the use of heritage goods in shaping cultural tourism activities. Therefore, culture can be perceived as material and non-material goods, while heritage as this manifestation of culture, that should be maintained for future generations, as unchanged as possible.

A specific type of heritage are objects related to the industry being present in past centuries. Infrastructure now closed plants, production facilities, or extraction enterprises, are permanently inscribed in the infrastructure of numerous cities. In the past, these places aroused varied emotions. At first, they were associated with professional work and source of income for many families, a way to escape poverty. In turn, once unprofitable or unnecessary plants were closed, they were associated with negative emotions, due to work loss and growing unemployment. They are, however, a unique record in history, presenting technical and technological processes [22], and in this scope, they implement the cognitive need among tourists. Interest in the post-industrial heritage concerns both travelers (including tourists) as well as local communities the ancestors of which worked in the facilities being now tourist attractions. A crucial aspect of industrial heritage are customs and traditions shaped in the work environment of decades long gone, as well as approved behaviors and work ethics. In many cases they constitute vital elements of regional identity.

Tourism in industrial heritage areas is defined in many ways. In the global literature, one can find such terms as industrial tourism, post-industrial tourism, industrial heritage tourism, or industrial objects cultural tourism. Yet, the term industrial tourism [23] is the most popular. Although these terms are similar and often used interchangeably, researchers indicate slight differences between them. For example, M. Kronenberg [24] differentiates industrial and post-industrial tourism. According to him, the first one means tourism in active production plants that has educational and cognitive purposes, while the latter concerns traveling to places, where the industrial production was decommissioned. Yet, these terms are often treated as synonyms and mean tourist activity in areas where industrial heritage is the main theme of the travel. In addition, in this paper we understand industrial tourism similarly to A. Otgaar [25]—as visits to sites like museums, parks or other infrastructure, based on the active or abandoned industrial enterprises, which now fulfill a new function.

Apart from the mentioned theoretical references to industrial heritage tourism, in literature the empirical and theoretical context is discussed often. Y. Xu and Y. Cao [26] present experiences in the scope of economically justifiable use of industrial areas, as an example using, among others, German cases (in particular Ruhr region). F. Merciu et al. [27], in the publication on industrial heritage, indicated the necessity to maintain of local heritage and to maintain its economic sense. It is particularly important when it comes to city revitalization. S. Ćopić et al. [28] noticed that there are many industrial areas where tourism can be promoted as useful regional restructuring and economic development tools. As an example, Ruhr region (Germany) is where the major structural changes took place, due to the decline of extraction and the steel industry. The post-industrial areas were transformed into tourist attractions that can be found in the central part of Ruhr region in the area of Emscher park. They also noticed that it is a good example of sustainable growth, where tourism was used as a revitalization and industrial heritage protection tool. This positive approach and experience, as seen in Germany, can be applied to similar areas and regions in Europe. S. Vukosav et al. [29] first of all point to the fact that industrial heritage can have many functions and purposes, but its role in the general development of a community depends on the needs and priorities of its representatives. Moreover, they indicate that revitalization projects are based on inter-sectoral partnerships and their implementation requires engagement and cooperation of private sector and state support. According to the researchers, local authorities should play a key role in such processes, as these are the local authorities that assess which projects bring the best investors and what is of interest for the city.

From among the experiences of multiple post-industrial monument routes mentioned in the literature, it is evident that the protection of industrial heritage, and making it available by tourist enterprises is associated with increased tourist interest. The reasons for this are, originality, unique architecture, sentiment, or technical values. Making the heritage available for the public results in the emergence of tourist attraction. Yet, the process of transformation of a ruined factory, from the 19th century into a tourist attraction, is not easy and requires resources (especially capital) and the implementation of many managerial solutions based on well-thought business model.

3. Characteristics of Business Models

The business model concept, although widely described in literature [30,31], is understood intuitively or by way of using selected individual strategic tools among management practitioners. Similarly, in the tourism sector, formalized business models, based on clearly designed and well-thought elements, are rarely observed. However, as indicated by an analysis of many organizations, created by persons that have no educational background in terms of management, the lack of knowledge is not an obstacle when it comes to creating and implementing interesting business models. That is because almost every business starts with more or less a formal plan, drawn up on the basis of own ideas and experience of the venture initiator. However, what is being missed is the fact that the order in this scope constitutes added value, being the awareness of the significance of each step of business creation and the avoidance of mistakes and errors. It is, therefore, an important element for running a business that quite often makes it possible to survive on the market and to achieve a competitive advantage.

Modern business models take different forms when it comes to the links between components. They can be perceived as a synthetic description of the business [32] or as a tool [31], as a characteristic of relations between the components that lead to the development and capturing of value by the organization [33].

Informal business plans are being prepared by the humanity for thousands of years. Yet, only from the second half of 20th century, an attempt to name this process can be observed [34,35]. At first, the concept of a business model did not have a managerial meaning, but functioned in the context of business games. In the context of management, this concept appears in the literature as late as the mid-1970s [36], when E. Konczal [37] added a managerial value to business models, clearly suggesting that they should not be perceived only as scientific or natural science tools. Since 1970, business models

started being associated with business. This is confirmed by the fact that in the 1980s, the notion of dominant logic, the mental map of managers and a road map resulting from it, covering the logic of resources used to achieve business success had emerged [38].

In research literature on tourism, this concept rarely appears. In general, the particular components of business models of tourist enterprises are being indicated, that is innovation [39], relations with customers [40], creating value for the customer [41–44], or building cross-organizational networks [45].

An interesting discussion on business models in tourism sector concerns the accommodation and catering services. M. Diaconu and A. Dutu [46] paid attention to the evolution of hotel industry towards innovative business models, while N. Langviniene and I. DaunoraviÞinjtơ [47] in their publication listed a number of factors that need to be taken into account when creating a business model to be successful in the hotel industry.

A business model can be exemplified by the *smart tourism (ST)* concept. It is based on transforming huge amounts of data received via applications (most often mobile ones) into proposals of values for the customer [48]. The idea is about gathering knowledge on the preferences of consumers of tourism services, not only to transform it into new proposal of value, but also into a customized product, an efficient communication channel and a personally selected manner of relations buildings.

Currently, a business model is defined by D. Teece [31] as a tool describing the design or architecture of creation, supply, or value capturing mechanisms. The core of business model is defining the way in which the enterprise captures the value for the customers, entices them to pay for this value and converts payables into profits. S. Prendeville and N. Bocken [49] described it as a conceptual tool describing the activities that refer to business transactions between customers, partners, and suppliers, and the organization and their participation in the development and capturing of value. Slightly different approaches are presented by M. Geissdoerfer, P. Savaget and S. Evans [50]. According to them, business models are a simplified presentation of organizational elements (including interaction between them) defined to analyze, plan, and communicate in a complex organization structure.

An important reference to business models is the value triangle developed by R. Biloslavo, C. Bagnolii, D. Edgar [51], that covers the interactions between society, capital, and product, thereby creating three distinctive values—public value, partner value, and customer value. It is a proposal of value creation by sustainable business models, taking into account sustainable development to which more and more research on business models refers [52].

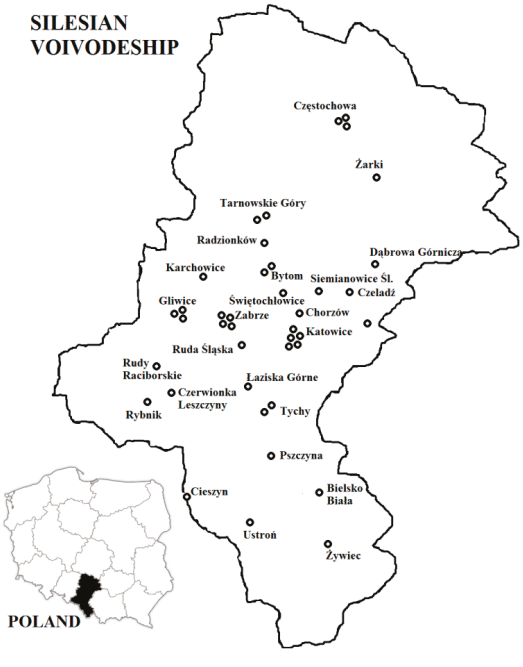
The most popular concept of a business model is CANVAS, created by A. Osterwalder and Y. Pigneur [30]. They indicate nine components describing a business model. These are market segments, proposed value for the customer, distribution channels, relationships with the customers, revenue streams, key resources, key activities, key partnership, and costs structure. Grouped components make it possible to visualize business model value and performance.

Yet, such static business models are criticized for their lack of experiments on, and modifications of, the components of business models, made by some entrepreneurs. Therefore, quite often dynamic business models are developed that are an alternative in the turbulent economic environment [53]. The proposal of dynamic business models is based on the combination of conventional schemes of business model [54] with modeling of system dynamics. By mapping key elements of value creation processes into the cause-and-effect relationships, with the use of simulation, it makes it possible for analysts of strategy, and entrepreneurs, to experiment and learn how the company reacts to strategic and organizational changes in terms of performance, innovation, and value creation.

4. Research Methodology

Based on the experience described in the literature and observed in industrial heritage tourist enterprises (IHTE), associated within Industrial Monuments Route (IMR), an identification of business creation models typology in post-industrial tourism, based on the criterion of the method of their creation was made. As a result, the subjective scope of the research covers post-industrial tourism

objects operating in Southern Poland, functioning within a formalized route administered by a regional government unity that plays the role of a coordinator. Currently, IMR is the biggest thematic route in Poland. It organizes 42 post-industrial tourist objects of highly diversified portfolio of the presented theme—starting from the Historic Coal Mine GUIDO, through the Museum of the Production of Matches, Radio Station and ending on breweries or adits. The listed sites are presented in Figure 1. At the same time, it is the only route in Central Europe that belongs to the European Route of Industrial Heritage (ERIH). In general, IMR was chosen because it is the most representative tourist route in Poland, which is based on industrial heritage with a well-organized structure.



No	Sites name	City / Town
1	Old Factory	Bielsko-Biała
2	Power Plant "Szombierki"	Bytom
3	Upper Silesian Narrow Gauge Railways	Bytom
4	"President" Shaft	Chorzów
5	Museum of Printing	Cieszyn
6	Castle Brewery	Cieszyn
7	"Elektrownia" Contemporary Art Gallery	Czeladź
8	Familoki	Czerwionka
9	Museum of Iron Ore Mining	Częstochowa
10	Museum of Railway History	Częstochowa
11	Museum of the Production of Matches	Częstochowa
12	Drill Mine of the "Sztygarka" Town Museum	Dąbrowa Górnicza
13	Museum of Sanitary Technology	Gliwice
14	Artistic Casting Department	Gliwice
15	Gliwice Radio Station	Gliwice
16	Historic Water Supply Station "Zawada"	Karchowice
17	Wilson Shaft Gallery	Katowice
18	Giszowiec Settlement	Katowice
19	Nikiszowiec Settlement	Katowice
20	Museum of Zinc Smelting	Katowice
21	Silesian Museum	Katowice
22	Porcelain Factory	Katowice
23	Museum of Power Industry	Łaziska
24	Central Museum of Firefighting	Mysłowice
25	Museum of the Silesian Press	Pszczyna
26	Museum of Bread, School and Curiosities	Radzionków
27	Ficinus Workers' Settlement	Ruda Śląska
28	History Narrow-Gauge Railway Station	Rudy
29	"Ignacy" Historic Mine	Rybnik
30	Tradition Park	Siemianowice Śląskie
31	The "KWK Polska" shafts	Świętochłowice
32	Black Trout Adit	Tarnowskie Góry
33	Historic Silver Mine	Tarnowskie Góry
34	The Museum of the Duke's Brewery	Tychy
35	Citizens Brewery	Tychy
36	Museum of Ustroń	Ustroń
37	"Queen Louise" Adit	Zabrze
38	Maciej Shaft	Zabrze
39	"Guido" Coal Mine	Zabrze
40	"Queen Louise" Adit - Wilhelmina	Zabrze
41	Old Mill	Żarki
42	The Historic Brewery in Żywiec	Żywiec

Figure 1. The IMR sites on the Silesian voivodeship map. (Source: The Industrial Monument Route information [55]).

The research was carried out by way of face-to-face interviews and multiple case study of a representative character. The selection of this method was dictated by the possibility of using varied source materials, such as reports, offers, online resources, feedback received during interviews, and own observations. The research process was about preparing the literature and document query for selected IMR objects. The entities selection criteria were varied in terms of implemented business models. Then, based on the business model concept of A. Osterwalder and Y. Pigneur [30], several elements of the changing business model in post-industrial tourism enterprises were identified.

In general, the research process included four stages. The first stage was the analysis of the place of business. Two types of enterprises were selected. Some of the companies were just tourist-oriented, and the others were industrial enterprises, with an additional touristic function. The second stage was the analysis of the enterprise's history. We checked reasons for the sites being built and what function (production or not) they had. The third stage was to develop a typology of industrial tourism companies. During this stage multiple case studies and in-depth interviews were conducted. In the

last stage, a description of the identified types of enterprises and exemplary elements of components for business models were prepared.

5. Typology of Approaches to Business Models in Post-Industrial Tourism

A distinctive element of post-industrial heritage tourism objects, that distinguish such objects from other tourist attractions, is their focus on technical and industrial heritage. Based on this criterion, it was possible to divide the analyzed organizations into three types:

- post-production tourist organizations,
- production and tourist enterprises,
- tourist thematic organizations (The terms used towards organization forms (enterprise, entity or organization) are not incidental. In the case of production and tourist organizations, the production is implemented within the economic activity of the production company, therefore, we can identify an enterprise in this case. Yet, in case of the other two types (post-production and thematic organizations) the legal form can vary, that is why they are referred to as entities (implicitly economic, social, cultural, non-governmental, administrative ones etc.) or in general as organizations.).

The adopted division is also based on the characteristics of the place where the tourist activity is carried out and the intensity of tourist traffic presented figuratively. It can be thus specified that post-production organizations function within former (non-operating) production sites, production and tourist enterprises (combined) carry out both industry and tourist services, while thematic entities make use of industrial and technical heritage in a place usually not associated with the presented heritage.

The above types of business activity, being at the same time as the introduced business model, can be described from the context of a widely discussed concept of organization life cycle [54,56,57]. For that purpose, the concept of the life cycle of an organization was completed with an additional transitional stage that takes place once the basic production activity was finished or when it is taking place, that is at the same time the moment when the new activity is being initiated. When analyzing the historical changes in the studied objects, it became evident that its concerns both the domination and development of tourist function. This concept was completed to identify key stages of tourist industrial enterprises emergence basing on industrial heritage.

5.1. Post-Production Tourist Organizations (PPTO)

Post-production enterprise functions on the basis of past enterprises that operated in the industry. It is characterized by two stages of activity. The first one concerns the period when the production function dominates. The second stage is characterized by the domination of tourist function that is preceded by the development of implementation of tourist function. The post-production enterprise model is presented in Figure 2.

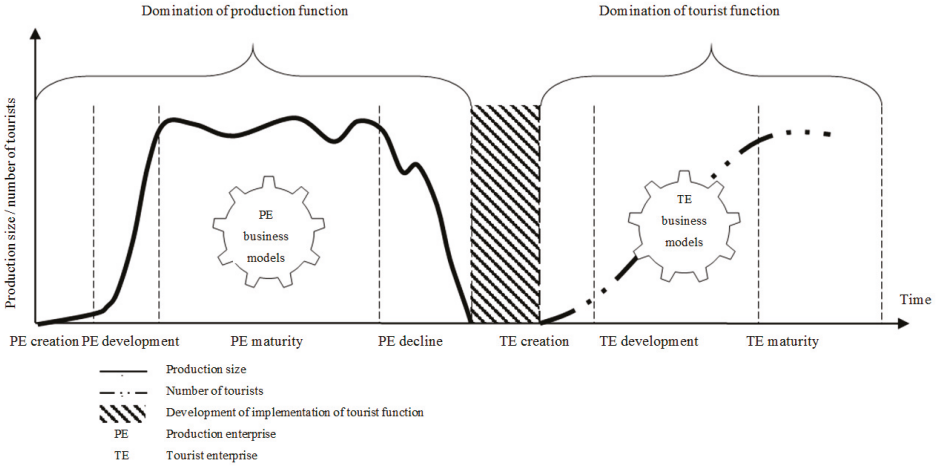


Figure 2. General model of post-production enterprise. (Source: Author's own work).

During the analyses of IMR it was noticed that during the first stage, the enterprise carries out a production or service function, generally understood as extraction, production of goods, and services. Decommissioning this activity results in the necessity to make a decision on the future of the enterprise being closed. Such an enterprise can be liquidated and its industrial infrastructure (or its part) can be removed or maintained. In case the infrastructure is to be maintained and made available for the tourists, the dominant function changes and a new business stage begins when the tourist activities become a crucial or strategic source of revenue.

An example of such an object is a very popular IMR tourist attraction that is a Historic Coal Mine, GUIDO, that finished extraction 89 years before the idea to transform it into a museum emerged in 2007. Mining levels at 170 and 320 m below the ground, leading to an authentic elevator, make it possible to discover how the work of miners looked like in 19th and 20th century [58]. Another example is the 19th century Black Trout Adit being a World Heritage Site and entered on the List of Historic Monuments.

One must pay attention, however, that in the presented stages two different business models are being used. The first one concerns production, the second one concerns tourist activities. Resources, key activities, as well as the server market segment are different just like the values proposed for the end customer. The stage before the second stage of enterprise functioning is defined as the *development of implementation of tourist function* is a time when a fundamental change of enterprise business model takes place. It is a time when the decisions on the scope of heritage are made available, the first concepts of object availability are presented, the funds to make the object available are sourced, the enterprise management is appointed (if the management ceased its activity), or the object is merged with an existing entity.

In post-production enterprises, the idea of implementing tourist function does not always take place once the production stopped. It can be postponed in time, when the production and tourist function can overlap (Figure 3).

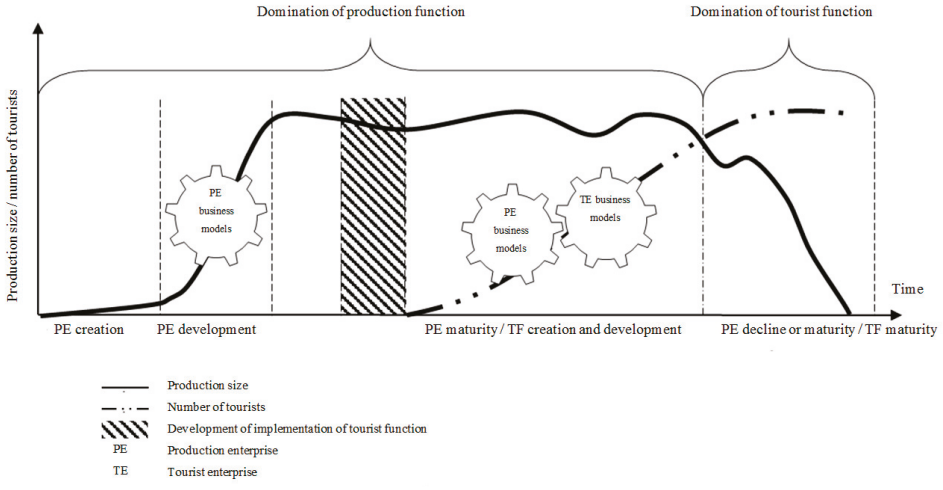


Figure 3. The postponement of tourist function in post-production enterprise model. (Source: Author's own work).

The postponement of the implementation of tourist function is characterized by the presence of two separate business models: Production and service (tourist), or a combination of these two activities in one integrated model. The aim of such enterprises is usually well-thought and well-maintained value proposal for the end recipient—customer and tourist.

Integrated business models, covering two types of activities, can be based on common components, for example, resources, customer segments, and treating the tourist activity as a product that completes the entity's offer.

However, post-industrial tourism enterprises do not only function on the basis of past industrial enterprises, where primary production was decommissioned or soon will be decommissioned. They can carry out tourist activity alongside the current industrial activity as a production and tourist enterprises.

5.2. Production and Tourist Enterprises (PTE)

Production and tourist enterprises carry out the tourist and production activity at the same time and both these activities are a source of revenue. Similarly, as in the case of post-production enterprises, the development of these economic entities is characterized by two stages of activity. In the first stage, the production function is the dominating one. Only later is it completed with tourist function. Yet, in general, there comes a moment when the two activities carried out at the same time are both strategic activities. The general model of a production and tourist enterprise is presented in Figure 4.

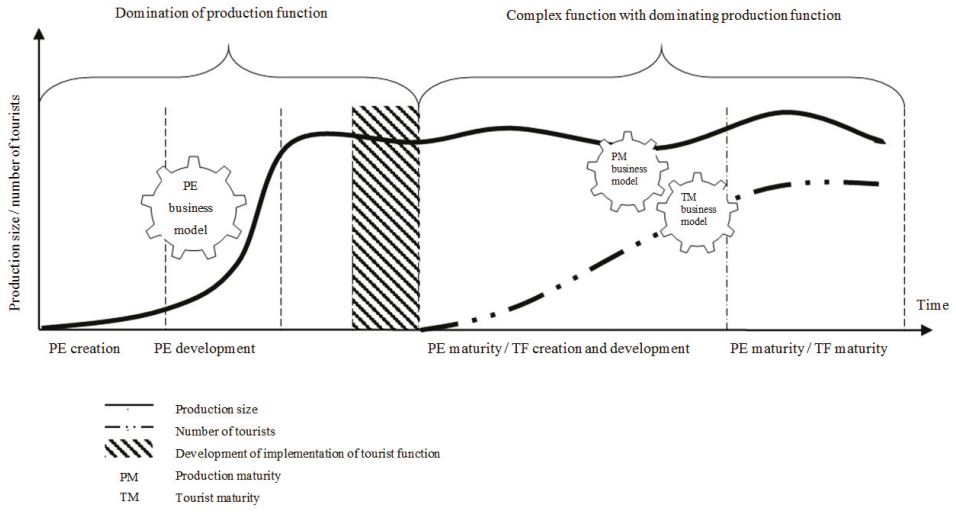


Figure 4. General model of a production and tourist enterprise. (Source: Author's own work).

The enterprises carrying out production and tourist activities at the same time are characterized by two business models interacting with one another: The Tourist activity model and production activity model or a complex business model that covers two separate areas of business activity. It will not, however, be an integrated model as particular components will be different for both activities. It is then possible to develop an autonomous model, for example, with shared resources or even a separate model that describes both activities separately. A sound solution for such a division may be also in implementing the concept of corporation separation, where the activity related to maintaining relations with customers, and the activities focused on product innovation development and infrastructure, are identified.

From the analysis of IMR objects, in the majority of cases of activity separation, the production model is dominant. The revenues on these activities are a strategic source of business financing. An example of such type of objects are breweries within IMR that carry out both beer production and offer sightseeing tours. For that purpose, The Museum of the Duke's Brewery in Tychy and Żywiec Brewery Museum were opened, where not only one can learn about the modern and historical process of beer brewing, but it is also possible to participate in workshops and presentations [59,60].

A particular example of such a model are enterprises where the transformation of the dominant activity is taking place. Then a slightly different second stage of activities can be observed. It can be observed by the decrease of production turnover and simultaneous growth of number of tourists (Figure 5). The decrease of production can result from various reasons, for example it can be due to plant restructuring or the change in the final product.

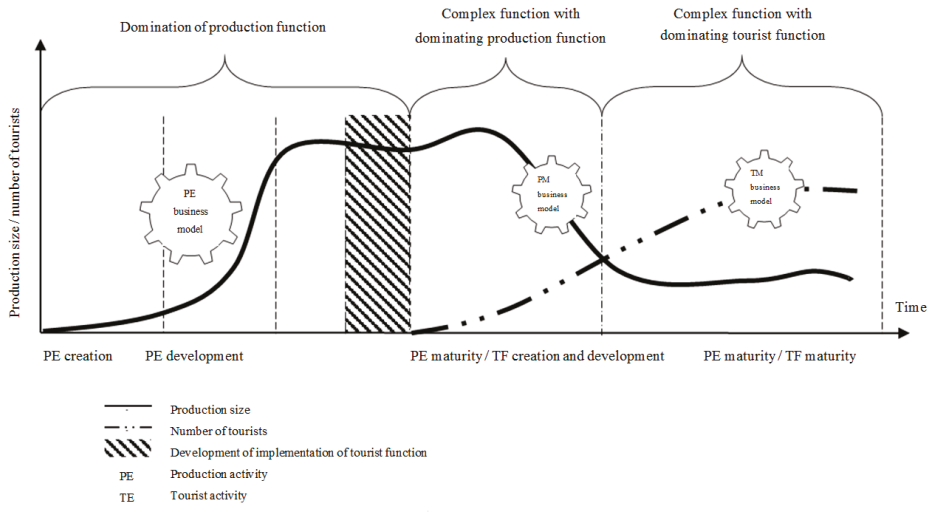


Figure 5. Production and tourist enterprise model with the dominant tourist function. (Source: Author's own work).

Another example of production and tourist enterprises are ones that, after a while since decommissioning the activity, re-started their original production activity. However, the restarted production is quite often limited in scope as it is not intended for production purposes, but has promotional or demonstrative character, and is about extending the value for the tourist (Gravari-Barbas, 2018). Unlike the previously described production and tourist enterprises, this activity is not characterized by two business models, only one (Figure 6).

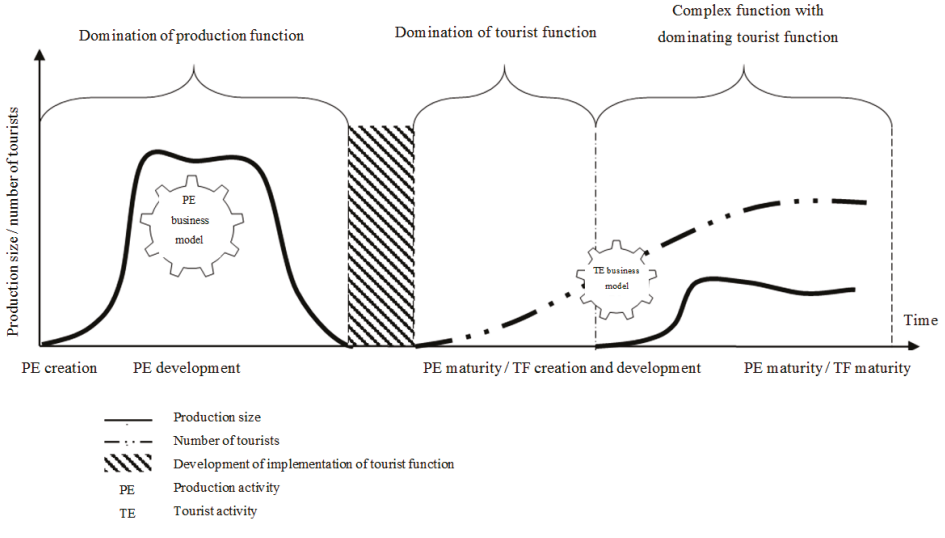


Figure 6. Production and tourist enterprise model where the production was re-started. (Source: Author's own work).

5.3. Tourist Thematic Organizations (TTO)

The last group of entities within IMR are enterprises, cultural, and art institutions providing services in the form of thematic exhibitions. First of all, they are characterized by activities devoted to industrial or technical heritage in places that in the past did not carry out any production (Figure 7).

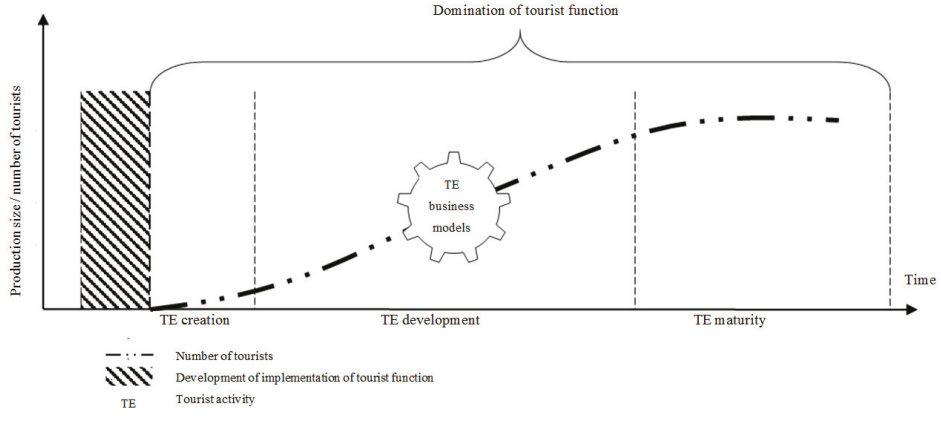


Figure 7. Thematic enterprise. (Source: Author's own work).

What is characteristic for this type of entity is only one dominant function—tourism. Such enterprises present the heritage on the basis of acquired resources, the subject of which is consistent with the assumed business profile. It can be assumed that these are objects that make the museum pieces available and exhibit tools, machinery, industrial, and craft devices from the past centuries.

There is no continuation or relation between the two functions of the activity being carried out. It is, therefore, a separate entity type of varied form of ownership and economic classification.

As an example, the Central Museum of Firefighting in Mysłowice [61], makes a historic collection on Polish firefighting available. Thus, visitors can learn more about the fire-fighters' work in the 19th and 20th century.

6. Discussion

The presented models of post-industrial heritage tourist organizations differ in many aspects, although several of them are characterized by significant similarities. It is worth analyzing the business model components and their relations in the context of the three mentioned schemes (Table 1).

In case of the infrastructure required in each of these models, one can list the historical devices, tools, and objects, including the tourist routes. Yet, almost in every model, the approach to these resources will be slightly different. In case of the production and tourist enterprises (PTE), the production model (PE) will complement the tourist model (TE), therefore the infrastructure of such enterprises will be larger and will require more engagement of activities and a wider circle of business partners. The situation is different in case of post-production tourist organizations (PPTO), as the role of resources is played not only by museum pieces, but also by the very post-production object, for example underground tourist routes in mining excavations. Preparation and maintenance of such a route requires many activities and engagement of significant group of partners (including local and regional administrative units). The smallest infrastructure will be present in thematic tourist organizations as the placement of exhibitions usually does not take place in historical buildings, but in specially prepared rooms, that make it possible to discover the thematic path.

Table 1. Exemplary elements of components for business models.

Components	**Post-Production Tourist Organization (PPTO)**	**Production and Tourist Enterprise (PTE)**		**Tourist Thematic Organizations (TTO)**
		Production (PE)	***Tourism (TE)***	
		Infrastructure		
Key Activities	Activities aiming to adjust the routes and exhibitions to the traffic route and maintain a high quality of service	Production activities	Separating tourist routes from production lines Securing mutual interaction of both activities	Acquiring museum pieces and creating thematic routes
Key Resources	Historic machinery and industrial devices, craft tools Routes in disused excavations Tradition and history of the plant	Production and transport base	Machinery, showpieces and routes Tradition and history of the industry	Showpieces, traditions, history
Partner Network	Guides and retired employees of the plant Hotel and catering industry Regional administrative unit	Suppliers Distributors Sellers Service	Guides Hotel and catering industry Regional administrative unit	Guides Hotel and catering industry Regional administrative unit
		Offering		
Value Propositions	Learning about the environment where the ancestors worked Learning about the work ethos of the region Learning about the industry history Cultural experiences	Value resulting from the usability of products	Learning about the current work environment Learning about the past and present production process	Familiarizing oneself with the subject of sightseeing Cultural experiences
		Customers		
Customer Segments	Tourists visiting this region Residents Educational institutions	Recipients (retail and wholesale) of production	Tourists and residents Educational institutions	Tourists and residents Educational institutions
Channels	Internet, local press	Internet, direct sale, advertising in media	Internet, direct sale, advertising in media	Internet, direct sale
Customer Relationships	Tourist—"guest" Making new attractions available gradually and periodically Creating new sightseeing programmes	Improving the quality of goods and their distribution Establishing the brand and image	Tourist—"guest and potential customer" Brand creation	Tourist—"guest" Telling the story of the exhibition
		Finances		
Cost Structure	Cost of post-production infrastructure and its adjustment Showpieces maintenance	Cost of production and sales chain	Cost of tourist route maintenance Cost of production safety Cost of promotion and servicing	Cost of thematic route maintenance Showpieces servicing
Revenue Streams	Revenues on tourist and cultural activity Subsidies	Sales revenues	Revenues on tourist and cultural activity Subsidies	Revenues on tourist and cultural activity Subsidies

Source: Author's own work.

Differences can also be seen in the value for the customer. Apart from the value of the product that is offered by tourist and production enterprises, repeatability of cognitive value of the tourist routes can be seen. The dominating value is the one related to the knowledge about history, personal past, and regional culture. Additionally, in some cases, cultural experiences in a wider scope are possible. It results from the fact that both post-production and thematic organizations include cultural events (concerts, meetings with popular people, various events etc.) in their offer.

The characteristics of the customer in all models associated with tourism will be directed towards the tourist as a guest whose cognitive needs become the key task for the team servicing the tourist traffic. Nevertheless, as in the case of production and tourist enterprises, the role of the sightseeing route will be more significant as it serves not only cognitive values but also promotional ones. The knowledge

about the entity offering a given product and about the production process of this good can attach the visitor not only to the product but also to the manufacturer. It can result in loyalty to products that are available every day. Extremely crucial is also the development of the relationship with the customer in other types of industrial heritage tourist organizations, for example, by developing routes with the theme of history.

What can also be noticed is the different financial structure in the discussed organizations. These differences stem not only from the levels of the already mentioned costs but also from revenues as in the case of entities not supporting themselves from the sale of their own products, they can obtain subsidies for cultural activities as the only source of revenue. State support is also necessary when restoring the usability of an object that has been closed for many years.

It is worth noting, that in the case of production and tourist enterprises, it is also necessary to take into account the costs of business and tourist safety. It results from the necessity to maintain production continuity despite the tourist traffic as well as from the need to protect the tourist in the vicinity of machinery and devices and in the excavations.

All discussed business models seem to have their strengths and weaknesses. For example, managers of PPTO enterprises indicated that they can show heritage only by exhibits, without real production. On the other hand, PTE managers indicated that showing production lines requires increased caution in order to ensure the safety of tourists. However, managers have limited influence on what type of enterprise their business will become. The transformation from one type of enterprise to another is impossible in the short-term period, in which business models are usually considered. Therefore, managers should focus on improving business models rather than changing them to another one.

7. Conclusions

The article discusses three basic types of business transformations identified in post-industrial heritage tourist entities. The post-production organization model can be considered the most popular scheme on the analyzed route. It concerns an enterprise or cultural institution that previously was a production or extraction plant and currently services tourists. Although these objects were not designed with tourists in mind, they perfectly fulfill this function thanks to the presented transformations.

Thanks to this, the care of post-industrial heritage becomes an interesting implementation of the principles of sustainable development. Activities aimed at creating tourist objects of cultural heritage, can save the legacy of previous generations from oblivion, and at the same time preserve them for future generations.

This research opens the way for further exploration of industrial heritage tourism in Poland. It can be useful for managers, especially when one compares our results with well-researched examples from Germany, France, or Belgium. We believe that the results of these comparisons will bring many conclusions to the discussion on creating customer value based on industrial tourism.

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The Relationships among Experiential Marketing, Service Innovation, and Customer Satisfaction—A Case Study of Tourism Factories in Taiwan

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Abstract: Tourism factories are tourist attractions with values of manufacturing, culture, history, tourism, and recreation, providing a series of activities for tourists to experience the products and the manufacturing process in the mode of experiential marketing so as to enhance their cognition for the products and the corporate image. With the establishment of numerous tourism factories in Taiwan, to be competitive it is essential for the factories to develop unique and innovative modes that are difficult to imitate. This study explores experiential marketing, service innovation, customer satisfaction, and other related issues through research on the tourists of a certain tourism factory. It notes that experiential marketing and service innovation have positive effects on customer satisfaction. Tourists' levels of consciousness of sensual and emotional experience in experiential marketing is very high. Therefore, to strengthen experiential marketing towards customers, applying electronic media to reinforce knowledge of the corporation and products will promote the corporation's image and product packaging. It will also familiarize customers with the operating philosophy of the corporation and the characteristics of the products so that their purchase intentions will increase, resulting in sustainable development of the business.

Keywords: customer satisfaction; experiential marketing; tourism factory; tourism marketing; service innovation

1. Introduction

In recent years, due to improvements in living standards, a five-day work week, a decrease of working hours, and convenient traffic and transportation, the leisure, recreation, and tourism industries in Taiwan have been emerging prosperously. The general public in Taiwan is demanding more intellectually and culturally stimulating tourism experiences. As a result, tourism within the leisure, agricultural, and fishing industries is rising. To cope with changing times and industrial structures, traditional manufacturing industries in Taiwan have gradually turned their focus to the development of tourism factories centered on services [1]. The same has been true in Europe, America, and Japan for many years. As early as the 20th century, there were manufacturing industries in cooperation with tourism, the pioneer of the contemporary tourism factory. Otgaar [2] also pointed out that the demand for industrial tourism, which is a type of special interest tourism, increased with the growing interest in unique and authentic experiences. Since the 1980s, various countries, regions, and cities have identified industrial tourism as a relevant segment of the tourism market. The development

of industrial tourism provides the regional economy with a multiplier effect, stimulating the activities of related sectors and promoting import substitution in tourism [3]. Industrial tourism can be used to improve the image of the industries and hence, the regions in which they are located [2]. In Taiwan, "industrial tourism" occurs in "tourism factories", which have usually been transformed from small, traditional manufacturing factories.

With changing times and industrial structures, many local factories in Taiwan have, with assistance from the Ministry of Economic Affairs, been transformed into protected manufacturing businesses and have converted their facilities into "tourism factories" [4]. Each tourism factory has a unique tourism theme and facility environment that has been improved with landscaping and other beautification efforts. The factories offer tours introducing production processes, exhibitions of cultural relics, and DIY facilities [1]. Through these and other services, tourism factories present a wealth of industrial knowledge and culture in an artistic ambiance, creating new tourist destinations for both learning and recreation [5].

Since 2003, the Ministry of Economic Affairs in Taiwan has been making plans regarding the assistance for the promotion of tourism factories in order to cope with changing times and the need for industrial transformation. Traditional factories with specific industrial cultures or values in tourism and education receive assistance [4]. For the past 10 years, 134 companies have received assistance to transform factories into tourism factories. Each year, the number of visitors to the factories increases by one million visitors. It is estimated that in 2019, the number of visitors to the tourism factories will grow by 15%, with a total of 11.5 million people and annual tourism revenues of NT$ 2.5 billion [5].

Tourism factories have three major functions: leisure quality, industrial knowledge, and industrial culture. Tourism factories meet a tourism need and create added value for traditional industries, along with improving the quality of the travel experience in terms of historical, cultural, and educational insights [6]. In comparison with ordinary tourism, for a tourism factory the key strategic resource in the process of an industry making the transition to tourism lies in the fact that it provides tourists with knowledge regarding the cultural history of the industry and corporation, a chance to perceive the manufacturing process, and a hands-on experience on-site through a guided tour [5].

Tourism factories have become an indispensable part of domestic tourism. They also energize traditional manufacturing industries because of the possibilities for sustainable development, as well as passed-down knowledge regarding the industrial cultures [1]. The greatest difference between tourism factories and ordinary tourist attractions is that tourists are able to experience personally the products and the manufacturing process so that they can know the products, the industry, and the corporate images better. Tourism is a service-intensive industry. The experience of the services determines whether the tourists feel satisfied or not. Corporations care about how to maintain their competitiveness in terms of the internal and subjective responses generated through customers' contact with the corporation [7,8]. Pine II and Gilmore [9] suggested that to generate greater consumption, it is important to bring to the customers a personalized, customized, and unforgettable experience.

Schmitt [10] proposed the idea of experiential marketing to impress customers by experiencing diverse activities. The key to boosting customer satisfaction and loyalty depends on customers' experience of the products or brands [11,12]. To sum up, experiential marketing is an important trend in the current age of the experiential economy. Tidd and Hull [13] indicated that manufacturers with a better product and service innovation have the potential to make double the profits than those without. Therefore, we should emphasize more the "hot issue" of service innovation [14]. It is an important issue for manufacturers seeking to meet the needs of a highly unpredictable market [15–17]. Accordingly, tourism factories would definitely make their mark in the market if they could focus on service innovation and meeting consumers' needs.

As the main objective of a business's sustainable development strategy, customer satisfaction is regarded as one of the factors influencing customer loyalty and corporate market share [18]. Satisfied customers are those considered to be insensitive to price, less affected by the competitors, willing to purchase more products and services, and staying loyal for a long time [19]. Good service

can enhance customer loyalty and increase the likelihood of customers buying again [20]. Kotler [21] suggested that when satisfied, customers will have the intention to make purchases again, be more willing to discuss the products of the company with others, and become loyal to the brand. Kristensen et al. [22] proposed that customer satisfaction is customers' evaluation of and response to their experience to purchase and consume the product. The response derives from the comparison between expectations and gains.

As we can see, customer satisfaction has a great influence on consumers, affecting their behavioral intentions. If tourism factories are able to control and predict tourists' future behavioral intentions, they will be able to establish long-term relationships with them. Therefore, it is a key element for sustainable development. Although tourism factories in Taiwan started late, they can take advantage of the excellent geographical location and distinguished local cultures to show their creativity and attract visitors. It is vital for tourism factories to market themselves, appeal to consumers, and create prosperity and business opportunities. This study aims to explore experiential marketing, service innovation, customer satisfaction, and other related issues in terms of the tourists of a certain tourism factory. Service innovation and customer satisfaction are important parts of a business sustainable development strategy for many enterprises. Tourism factories must also offer innovative services continually in order to achieve sustainable development.

2. Literature Review

2.1. Experiential Marketing

Pine II and Gilmore [9] suggested that experiential marketing emerges when a company builds a stage with services and uses products as props for consumers. Products are tangible, services are intangible, and experiences are unforgettable. Schmitt [10] indicated that experience is a response of the consumer to the occurrence of a certain stimulating event, usually induced by direct observation or involvement of the event rather than caused spontaneously. To reinforce customer experience is to strengthen the rights and values of the brand [23].

Schmitt [10] proposed four key characteristics of experiential marketing: (1) A focus on customer experiences; (2) a focus on consumption as a holistic experience; (3) an assumption that customers are rational and emotional beings; and (4) an understanding that methods and tools are eclectic. Experiential modules are a combination of implementation tools for creating experiential marketing used to convey experiences of sense, feel, think, act, and relate. These experiences are implemented through so-called experience providers (ExPros) such as communications, visual and verbal identity, product presence, electronic media, etc.

Targeting leisure farms, Wu and Liang [24] explored the relationships between experiential marketing, customer satisfaction, and willingness to revisit. The dimensions of measuring experiential marketing focused on Schmitt's idea of sense, feel, think, act, and relate [10]. The results showed that the experiential marketing of leisure farms had significant positive effects on customer satisfaction. Using the experiential modules suggested by Schmitt [10] as the dimensions of measurement, Chou et al. [25] scrutinized the role experiential marketing played in festive events for the Lantern Festival. The results confirmed that experiential marketing was an important antecedent affecting the images of the events and influencing the willingness of consumers to revisit during festive events.

To sum up, the five experiential modules suggested by Schmitt can measure consumers' experiential feelings. Based on Schmitt's definition of experiential marketing, this study will define experiential marketing as a process of an individual customer to sense a certain stimulation, induce his or her motivation to make a purchase, and generate identification with the thinking after he or she observes and participates in certain events.

2.2. Service Innovation

Service innovation is an important business sustainable development strategy for many enterprises [26]. Service innovation mainly refers to changes in the characteristics of the service itself [20]. Tidd et al. [27] indicated that the core procedure for a corporation's sustainable development is through innovative behaviors, that is, to create value from the corporation's assets by redesigning or improving the products, services, or methods in innovative ways. Therefore, an organization has to create and maintain its competitive advantages by integrating its resources and abilities. Service innovation drives the corporation to convert change into opportunities [28,29]. Service innovation refers to services that are different from those that consumers knew from previous occasions. In other words, the organization provides services different from consumers' previous consumption experiences [30,31]. Drejer [32] suggested that service innovation is not merely the development of new products or services, but also innovative activities that revise and improve current products, services, and delivery systems. To create new markets, firms must implement specific service innovation practices to provide managerial process innovations, develop scalar business models, and manage customer experiences [33].

Lin et al. [34] explored in a study how manufacturing industries were transformed into service-oriented corporations in the view of service sciences. By apply Hertog's [35] idea of service innovation to verify the relationships between the manufacturing industries' service innovation activities, it was noted that customer interfaces, delivery systems, and service concepts had positive and significant relationships with the corporation's transition, including the redesign of the corporation's procedures, redesign of the corporation's network, and redefinition of the corporation's scope.

Based on the idea of service innovation proposed by Hertog [35], this study suggests that service innovation requires new service ideas, new customer interfaces, new service delivery systems, and new choices of skills. In terms of new service ideas, this study suggests that service ideas need to be novel for the corporation's service providers, customers, or the market. These ideas should also include new logic or scientific knowledge. As for new customer interfaces, this study indicates that interfaces should concentrate on the interaction between service providers and customers so that the service providers can learn from the customers when they interact with the actual and potential customers. In terms of new service delivery systems, this study points out that innovative service procedures are required to serve customers, whereas with choices of skills, this study suggests that corporations take advantage of customer information and new technology to serve customers. Ostrom et al. [36] suggested that service innovation creates value for customers, employees, business owners, alliance partners, and communities through new and/or improved service offerings, service processes, and service business models.

2.3. Customer Satisfaction

In regard to customer satisfaction, Cardozo applied the concept of satisfaction to the field of marketing for the first time in 1965 [37]. Customer satisfaction was conducive to promoting customers' consumption behaviors [38]. Customer satisfaction refers to people's evaluation of their satisfaction with the products they purchase and the services they enjoy. The level of customer satisfaction depends on the relationship between their expectations of the products and their actual consumption experiences [39].

Engel et al. [40] illustrated that after using a product, customers assess the product and evaluate their expectations prior to the purchase, which influence customer satisfaction. When the opinions for both are consistent, the customers feel satisfied. Otherwise, they do not. Customer satisfaction is based on the user's comparison between the efficacy of the product or service and his or her expectations [41,42]. Kotler [43] indicated that if satisfied, the customer will usually be more willing to make the purchase again, pleasantly discuss the product of the company with others, ignore advertisement of other competitors' brands, and refuse to buy products of other companies.

Based on the definition of customer satisfaction made by Barker and Crompton [44], this study defines customer satisfaction as an individual's psychological and emotional conditions after experience, and an attitude affected by social and psychological factors or other external factors, such as the atmosphere, group interactions, etc. The measurement of customer satisfaction can be divided into the measurement of general attitude and the measurement of multiple dimensions. In the measurement of customer satisfaction, this study regards it as a holistic concept, as outlined by Henning-Thurau [45]. Accordingly, this study will measure customer satisfaction through holistic questions.

2.4. Research Hypothesis

According to Schmitt's [10] research results, customers' identification, thinking, or action for a purchase are induced through observation of or involvement in events. Better experiences bring higher customer satisfaction [46]. Using consumer experiences with clothes of famous brands as an example, Huang and Zhang [11] proposed empirical research notes that experiential marketing had positive effects on customer satisfaction. Focusing on customers making purchases at Starbucks, Wei and Hung [47] discovered that experiential marketing had positive effects on customer satisfaction. Yang [48] and Lee et al. [49] explored cases in service industries, proving that experiential marketing had positive effects on customer satisfaction. Based on previous research, Hypothesis 1 is proposed as follows:

Hypothesis 1 (H1). *The tourism factories' experiential marketing positively affects customer satisfaction.*

Yang [48] suggested that new services skills, professional knowledge, information, facilities, time, or space are provided by service providers, so that they can help customers deal with events, solve problems, or entertain them, making them happy and comfortable. Kolter [43] and Drejer [32] indicated that a corporation emphasizing service innovation can not only win outstanding competitive advantages but also further establish long-term selling relationships with customers by providing high quality products and services. Tsai et al. [50], focusing on car-rental carriers, noted that service innovation had significant effects on customer satisfaction. Focusing on bed-and-breakfast tourists in Kenting, Taiwan, Chuang and Hsu [51] noted that service innovation had significant effects on customer satisfaction and loyalty. Hossain and Kim [52] indicated that service innovation could improve service quality and customers' willingness to consume again. Based on previous research, Hypothesis 2 is proposed as follows:

Hypothesis 1 (H2). *The tourism factories' service innovation positively affects customer satisfaction.*

3. Methodology

3.1. Research Structure

Based on the goals of this research and other theoretical studies, this study proposed the following structure after inferring the relationship between experiential marketing, service innovation, customer satisfaction, and other variables, as presented in Figure 1.

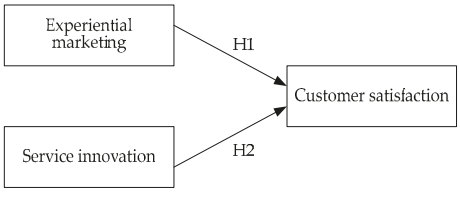

Figure 1. Research structure.

3.2. Questionnaire Design and Survey

The questionnaire was divided into four parts: Part one, experiential marketing; part two, service innovation; part three, customer satisfaction; and part four, the tourist's basic information. In experiential marketing, the study was based on the experiential modules proposed by Schmitt [10]: Sense, feel, think, act, and relate. The variables for the scales of service innovation were composed of the dimensions of service innovation developed by Hertog [35] and the scales made by Davenport and Short [53], Zeithaml et al. [54], Lawson and Samson [55], and other scholars. The dimensions included new service concepts, new customer interfaces, service delivery systems, and choices of skills. The level of customer satisfaction referred to the scale of customer satisfaction developed by Henning-Thurau [33], measuring holistic satisfaction. The measurement of the variables was based on a Likert scale: Strongly disagree, disagree, undecided, agree, or strongly agree, indicated by 1, 2, 3, 4, or 5, respectively. The higher the point, the better the level of agreement. The tourist's basic information included gender, marital status, age, occupation, and education.

Focusing on the Rice Museum, a tourism factory of rice in Changhua County in Taiwan, this study conducted a questionnaire survey through convenience sampling between July and October 2017. A total of 400 questionnaires were distributed. By deducting 46 invalid questionnaires, there were 354 valid questionnaires; the valid recovery rate was 88.5%.

4. Research Results

4.1. Analysis of Basic Information

Most of the subjects of the study were female and most were between 31 and 40 years old. Most of the subjects graduated from college and most of them were married. Their occupations were as follows: Industry (19.8%), commerce (23.7%), housekeeping (16.4%), and others (mostly students (22.6%)). All of the respondents were Taiwanese. Table 1 shows the analysis of basic information of the respondents.

Table 1. Analysis of basic information.

Items		Frequency	Percentage
Gender	Male	148	41.8%
	Female	206	58.2%
Age	16–20	56	15.8%
	21–30	40	11.3%
	31–40	145	41.0%
	41–50	61	17.2%
	51–60	37	10.5%
	Above 61	15	4.2%
Education background	Below high school	58	16.4%
	High school	78	22.0%
	University	184	52.0%
	Above master's	34	9.6%
Marital status	Married	107	30.2%
	Unmarried	247	69.8%
Occupation	Agriculture industry	5	1.4%
	Industry	70	19.8%
	Commerce	84	23.7%
	Office holder	39	11.0%
	Housekeeping	58	16.4%
	Retirement	18	5.1%
	Others	80	22.6%

4.2. Factor Analysis and Reliability Analysis

In terms of the factor analysis approach, this study extracted two factors in experiential marketing. Factor one, by integrating the original experiential modules including dimensions of sense, feel, and think was renamed "sensual and emotional experience." Factor two, combining the original experiential modules, action and relate, was renamed "action and relate Experience." Two factors were extracted from service innovation: "Interfaces of new customer service" and "new service concepts." The results are presented Table 2. All tests achieved significant levels.

Table 2. Factor analysis.

Variables	Index	Factor Loading	Cronbach α
Experiential marketing	Factor 1	0.579	0.863
	Factor 2	0.638	0.853
Service innovation	Factor 1	0.683	0.810
	Factor 2	0.746	0.810
Customer satisfaction	S1	0.926	0.882
	S2	0.898	
	S3	0.878	

4.3. Analysis of Correlation

Based on Pearson's analysis of correlation for the analysis of the relationship strength between two variables, this study showed that the r-value was between −1.00 and +1.00. The r-values −1.00 or +1.00 and −0.50 or +0.50 indicate perfectly correlated and moderately correlated, respectively. As presented in Table 3, this study discovered that there was a positive correlation between the five dimensions, with r-values higher than 0.6.

Table 3. Correlation matrix of the five dimensions.

Dimensions	Sensual and Emotional Experience	Action and Relate Experience	Interfaces of New Customer Service	New Service Concepts	Customers' Satisfaction
Sensual and Emotional Experience	1				
Action and Relate Experience	0.746 **	1			
Interfaces of New Customer Service	0.724 **	0.688 **	1		
New Service Concepts	0.666 **	0.632 **	0.650 **	1	
Customers' Satisfaction	0.624 **	0.619 **	0.648 **	0.588 **	1

Note: ** $p < 0.01$.

4.4. Hypothesis Testing

4.4.1. Correlation Analysis between Experiential Marketing and Customer Satisfaction

According to the factor analysis, this study noted that experiential marketing included two dimensions: Sensual and emotional experience, and action and relate experience. Accordingly, this study examined whether experiential marketing had positive effects on customer satisfaction through multiple regression analysis; the results are presented in Table 4. According to Table 4, $R^2 = 0.443$. This means the regression model established by the two dimensions could explain 44.3% of the variance of customer satisfaction. Meanwhile, in ANOVA, with a significant level of 0.05, $F = 139.223$, $p < 0.001$, meaning the regression model was significant. On the other hand, regarding the results of the estimation of the coefficients, the coefficients of the sensual and emotional experience and action and relate experience were estimated to be 0.514 and 0.430, respectively, with a positive value of $p < 0.001$, indicating that both of the two dimensions of experiential marketing had significant positive effects on customer satisfaction. It proves that the higher the tourists' levels of consciousness of

experiential marketing, the higher their customer satisfaction. The results support H1, that experiential marketing has a positive effect on customer satisfaction.

4.4.2. Correlation Analysis between Service Innovation and Customer Satisfaction

As shown in Table 4, R^2 = 0.468, meaning the regression model established by these two dimensions could explain 46.8% of the variance of customer satisfaction. In ANOVA, under a 0.05 significant level, F = 154.576, $p < 0.001$, indicating the regression model was significant. Furthermore, regarding the results of the estimation of the coefficients, the estimated values of the coefficients of interfaces of new customer service and new service concepts were 0.556 and 0.341, respectively, with a positive value of $p < 0.001$, meaning that both dimensions of service innovation had significant positive effects on customer satisfaction. Therefore, the higher the tourists' level of consciousness of service innovation, the higher their customer satisfaction. The results support H2, that service innovation has a positive effect on customer satisfaction.

Table 4. Regression analysis between experiential marketing and service innovation for customer satisfaction.

	Hypothesis 1		**Hypothesis 2**	
	β	**t**	**β**	**t**
Sensual and Emotional Experience	0.514	6.133 ***		
Action and Relate Experience	0.430	5.765 ***		
Interfaces of New Customer Service			0.556	9.013 ***
New Service Concepts			0.341	5.624 ***
Constant term	0.161	0.694	0.404	1.970 **
F		139.223 ***		154.576 ***
R^2		0.443		0.468

Note: ** $p < 0.01$; *** $p < 0.001$.

5. Discussion and Conclusions

5.1. Discussion

With changing times and industrial structures, many factories in Taiwan have been transformed into tourism factories retaining production and manufacturing functions, as well as opening for tourism in order to make breakthroughs in operations. Each tourism factory contains unique tourism themes, not only presenting beautified spaces but also providing services for guided tours, exhibitions, experiential facilities, etc. These tourism factories are emerging tourist attractions that combine knowledge and leisure, showing abundant industrial knowledge and culture and creating leisure and a beautiful atmosphere. With the development of local tourism, many local, traditional industries are eager to be transformed into tourism factories in the hope of combining industry, economy, and culture. In addition to creativity and tourism, these factories expect to introduce to tourists the local traditional industries through experience and guided tours and bring in new opportunities and livelihoods for themselves.

As noted in the study, experiential marketing and service innovation have positive effects on customer satisfaction. Both hypotheses are supported. This study also proves the findings of Westbrook [56] and Mano and Oliver [57], that tourists' positive emotional experiences during an activity will satisfy them. Therefore, in order to promote customer satisfaction and improve the service quality of tourism factories, tourism factory owners should provide various experiential marketing activities that combine sense, feeling, action, and so on, listen to the tourists' opinions and different points of view after they participate in the activities, and re-plan and redesign experiential marketing activities accordingly.

This study notes that promoting the level of consciousness of experiential marketing and service innovation will increase customer satisfaction, whereas the increase in customer satisfaction will reinforce customers' intentions and willingness to revisit, make recommendations, and purchase products. Customer satisfaction is the intervening variable correlating experiential marketing and service innovation with the intention of paying a visit again, the intention to make recommendations, and the intention to purchase. The study finds that, in general, customers feel satisfied. However, since the customers are diverse, the services they expect are changing. Therefore, the key development includes flexible guided tours, interactive experiences, the construction of innovative and friendly spaces, etc., so that consumers' intentions and willingness to revisit, make recommendations, and make purchases will be reinforced.

5.2. Conclusions

Tourists expect tourism factories to be more than just tourist spots. Instead, they hope to receive better services to spice up their experiences. This is why service quality is so vital. It is time for tourism factories to be upgraded and transformed. Since tourists' levels of consciousness of sensual and emotional experiences in experiential marketing are the highest, to reinforce customers' experiential marketing, applying electronic media to reinforce the introduction of the corporation and products will promote the corporation's image and packaging of the products and familiarize customers with the operative philosophy of the corporation and the characteristics of the products, so that their purchase intentions will increase. For example, videos and slides can be made to familiarize tourists with the industry. Also, interactive facilities that intrigue or appeal to the tourists can be added to reinforce their sense of identification. In terms of the level of consciousness of service innovation, tourists' levels of consciousness of new service concepts are more significant. Therefore, it is more effective for the operation and implementation of the marketing strategies of modern corporations to develop the image of their brands more eagerly, display new, lively images and new concepts of the corporation, and promote the sales performance of the products. Accordingly, tourism factories can take advantage of their trademark to publicize their brands. For example, tourism factories can give more exposure to the mascot of the corporation, design more products of culture and creativity based on the mascot, and familiarize tourists with the brand so that they will have a better sense of identification with the brand and accept the products better.

This study also notes that the tourists to tourism factories are mostly those taking a trip with their families and well-educated young adults. Therefore, this study suggests that tourism factories should design more family interactive activities for these tourists so as to increase their intention and willingness to revisit. In addition, tourism factories can also establish promotion mechanisms for marketing and create more opportunities for development through cooperation with local festive and cultural events, horizontal alliances, and resource integration.

Every study has its limitations; most of the respondents in this study were parts of tourist groups and thus had limited time. In the case of time pressure, it may have affected the quality of the questionnaire, so the authenticity of the answers may be limited. Furthermore, this study was limited by factors such as human and material resources. The research was limited to a single case of a tourism factory in Taiwan. In the future, the scope of the research can be increased, and a number of tourism factories of the same nature can be compared.

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Threshold Effect of Tourism Development on Economic Growth Following a Disaster Shock: Evidence from the Wenchuan Earthquake, P.R. China

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Abstract: To examine whether tourism can effectively stimulate economic growth following a disaster shock, we apply a panel threshold regression technique to test the threshold effect of tourism development on economic growth of the 36 Wenchuan earthquake-affected counties in 2008–2016. The empirical results using the panel fixed-effects model show that tourism significantly contributes to economic growth, supporting the validity of the tourism-led growth hypothesis (TLGH) for the disaster-affected destinations. The results of the panel threshold regression model also indicate a threshold effect of tourism development on economic growth, implying that counties with different conditions of tourism specialization and industrial structure experience different impacts on the tourism-growth nexus. Specifically, the estimated coefficients of tourism on economic growth decrease with the levels of tourism specialization and industrial structure exceeding the threshold value. Based on the Tourism Area Life Cycle theory (TALC), we further divide the 36 disaster-stricken counties into six types based on the evolution of tourism specialization: Exploration-stage type, involvement-stage type, transition-stage type, development-stage type, consolidation-stage type, and stagnation-stage type. The empirical findings and managerial implications discussed are generally applicable to policymakers seeking new ways to invigorate the economy in other disaster-affected destinations.

Keywords: tourism development; economic growth; panel threshold regression model; disaster-stricken counties; Wenchuan earthquake; Butler's Tourism Area Life Cycle

1. Introduction

Over the past years, a large number of disasters, ranging from natural disasters (e.g., floods, hurricane storms, volcanoes, tsunami and earthquakes) to man-made hazards (e.g., financial crises, wars, and terrorist attacks), have caused severe destruction to facilities, economies and ecological environments of the disaster-hit destinations [1–10]. The discussion on how to promote the local economic recovery following a disaster has attracted the attention of both policymakers and scholars worldwide [11,12]. Tourism is one of the world's fastest-growing industries and yields huge economic benefits through creating employment opportunities, multiplying personal wealth, increasing the investments in infrastructure, raising government tax revenue, and reducing the budget deficit [13–16]. Hence, for the disaster-hit destinations, an increasing number of policymakers consider tourism development to be a strategic engine for stimulating economic recovery [17–24]. However, does tourism effectively stimulate economic recovery? The lack of research is somewhat surprising, given the causal relationship between tourism development and economic growth following disaster shocks.

As tourism plays an increasingly prominent role in economic growth, the relationship between tourism development and economic growth has attracted wide attention from scholars. In tourism literature, the tourism-led growth hypothesis (TLGH) is mostly used to analyze the effect of tourism development on economic growth based on the country or region level. Scholars have recently extended the studies of TLGH to four main hypotheses: (1) Tourism-led growth hypothesis itself [21,25,26], (2) conservation hypothesis [21,25,26], (3) feedback hypothesis [21,27], and (4) neutrality hypothesis [21,25,28].

The tourism-led growth hypothesis, first proposed by Balaguer and Cantavella-Jorda [29], points out that there is a positive one-way causality from tourism development to economic growth. Namely, tourism development can unidirectionally promote economic growth. A large number of subsequent studies have provided evidence verifying this hypothesis [30–34].

The conservation hypothesis, or so-called economic-driven tourism growth (EDTG) hypothesis, suggests that there exists a unidirectional causal relationship between economic growth and tourism development. In other words, the growth in economic activities can increase tourism demand and income. Aslan, Oh, Payne and Mervar and Lin et al. support the conservation hypothesis [28,35–37].

The feedback hypothesis posits that a positive bidirectional causal relationship exists between tourism development and economic growth. Investments in the tourism industry can also stimulate the growth of economic activities and vice versa. The feedback hypothesis has been applied in the studies of Aslan, Lee and Chang, Al-mulali et al., Lorde et al., Ridderstaat et al. and Tugcu [28,38–42].

The neutrality hypothesis postulates that there is no causal relationship between tourism development and economic growth, implying that tourism development cannot significantly stimulate economic growth or vice versa. Such polices or incentives for tourism development have little or no effect on the growth of the overall economy, because tourism is one insignificant part of the whole economic system [21]. The results in Brau et al., Tang and Tan, Chiu and Yeh, and Katircioglu provide support for the neutrality hypothesis [43–46].

In addition, other scholars have found that tourism development negatively affects economic growth [26,47]. The symptoms of Dutch disease, first put forward by Corden and Neary [48], are often used to illustrate the unfavorable economic effects of tourism expansion: Drawing resources and labor from other industries to tourism-oriented sectors, increasing local land and house prices, and reducing social welfare [22,47,49–52], and thus hampering long-term economic growth.

For the tourism-dominated destination, the economic structure that is overdependent on tourism may generate adverse effects, because the tourism industry is exposed to an increasing number and range of external shocks [53]. Capó, Font and Nadal argue that an excessive tourism-oriented economy may result in less dynamic and low efficient growth [47]. Gursoy and Rutherford, and Sequeira and Campos provide evidence supporting the negative effect of tourism [54,55].

The TLGH is widely used in general destination in the tourism economic field. For the disaster-hit destination, the empirical research on the causal relationship between tourism development and economic growth following disaster shock is very limited. Jose et al. investigated the tourism-growth nexus for Spain after the global economic and financial crisis, showing that there was a bilateral Granger causality between tourism and economic growth; however, the results are not robust [56]. Julio explored the relationship between tourism and economic growth in Turkey after terrorism. The result illustrates a negative impact of terrorism on real GDP because of the decrease or loss of tourism [57]. Qazi and Rana examined the TLGH for Pakistan and found that tourism income led to economic growth, except in the years of 2006–2008, due to the increase in terrorist attacks [58]. Tang and Abosedra investigate the contribution of tourism to economic growth in Lebanon during 1995–2010, a period of political unrest and war [59].

The main contributions of our study to the existing literature are essentially two-fold. On the one hand, although the contribution of tourism to economic growth has been widely investigated in the tourism economic field, few scholars have empirically investigated the important issue of whether tourism could effectively stimulate economic recovery after the post-disaster recovery phase; likewise,

few studies have confirmed whether or not the TLGH is applicable to disaster-affected destinations. Therefore, based on the TLGH, this article applies the panel threshold regression model to explore the threshold effect of tourism development on economic growth for 36 disaster-hit counties during the Wenchuan earthquake recovery and development phase (2008–2016), in an attempt to fill this gap. On the other hand, jointly applying the Tourism Area Life Cycle (TALC) theory, this article further analyzes the dynamism of the nonlinear tourism–growth nexus in different stages of destinations through the evolution of tourism specialization. Based on the empirical results, our study provides comprehensive and reliable insights for policymakers seeking a new source for stimulating economic recovery, both theoretically and empirically. Hence, our research questions to be addressed are: Will tourism development effectively promote economic growth following the disaster shock? Is there a threshold effect of tourism development on economic growth? On the basis of TALC, will the effect of tourism on economic growth vary significantly in different stages of different destinations?

The rest of this paper is organized as follows. Section 2 presents the literature review of the TLGH and TALC model. The case study, method and data source are described in Section 3. Section 4 presents the empirical results of the threshold model. This is followed by conclusions and managerial implications in Section 5.

2. Literature Review

2.1. Tourism-led Growth Hypothesis

Two primary relationships between tourism development and economic growth have been well documented in tourism economic literature: Linear and non-linear relationships. Many studies have investigated the linear tourism-growth nexus by applying such simple techniques as Granger causality tests [38,60–62], exponential bivariate GARCH-in-mean model [63], Autoregressive Distributed Lag (ADL) model [59,64], Vector Error Correction Model (VECM) [13,65], and a generalized method of moments (GMM) [66].

Balaguer and Cantavella-Jorda are the first investigators to examine tourism-led growth, illustrating the evidence of one-way causality from tourism to economic growth [29]. Ozturk and Acaravci found no evidence of the tourism–growth nexus in Turkey, suggesting that Turkey's tourism development cannot significantly stimulate economic growth [67]. Tang and Tan attempted to further verify the validity of the TLGH in Malaysia using a multivariate model derived from the Solow growth theory [62]. They found that tourism had a positive impact on Malaysia's economic growth, both in the short and long term.

Alhowaish used panel data for the period of 1995–2012 to investigate the causal relationship between tourism development and economic growth in the Gulf Cooperation Council (GCC) countries [68]. The results show a unidirectional causality from economic growth to tourism development. Salifou and Haq employed the panel cointegration technique to confirm the positive effect of physical capital, tourism and the economic globalization index on economic growth in the 11 countries of the Economic Community of the West African States (ECOWAS) [69].

The linear model may oversimplify the tourism-growth nexus because of the complex, dynamic and non-linear link existing among the variables [70]. Hence, some scholars began to investigate the non-linear mechanism between tourism development and economic growth [71,72]. Po and Huang applied the panel threshold approach to test the non-linear tourism-growth nexus in 88 countries. They used q (international tourism receipt as a percentage of GDP) as the threshold variable [73]. The results show that, when q is below 4.05% or above 4.73%, tourism can significantly promote economic growth; when q is between 4.05% and 4.73%, the impact of tourism on economic growth is insignificant.

Chang et al. investigated the threshold effect of tourism on economic growth using r (tourism specialization) as a threshold variable [74]. They found a positive and significant relationship between tourism and economic growth in two regimes: When r is below 14.97% (Regime 1) and when r is

between 14.97% and 17.5% (Regime 2). When r is higher than 17.5%, there is no significant relationship between them.

Syed examined the validity of the non-linear tourism–growth nexus for the top ten world tourism destinations using a quantile-on-quantile approach [15]. He found that a positive relation between tourism development and economic growth for the ten countries showed substantial variation across countries. Zuo and Huang employed a system generalized method of moments (SYSGMM) to explore the non-linear relationship between tourism specializations and economic growth in the 31 provinces of mainland China [26]. The empirical results reveal that there is a meaningful N-shaped or inverted-U-shaped relationship between tourism specializations and economic growth.

2.2. Tourism Area Life Cycle model

Since the 1960s, early scholars have already put forward some ideas about the evolution of tourism destination [74–76]. Butler's (1980) TALC is one of the most influentially theoretical models in the tourism field [77]. Butler's model is the six-stage model of destination evolution, which suggests that the tourism area life cycle experiences six stages, including exploration, involvement, development, consolidation, stagnation, and decline or rejuvenation. Later, Butler (2000) further revised the model and put forward the factors influencing the TALC model: (1) Dynamism, (2) process, (3) capacity or limits to growth, (4) triggers, (5) management, (6) long-term viewpoints, (7) special components, and (8) universal applicability [78].

The TALC has drawn theoretical and practical attention, examination, and modification in relevant literature [79–83]. Kubickova and Li examined the role that the government plays in tourism competitiveness and understood the relationship based on the TALC model [84]. Tang et al. investigated the factors influencing the tourism industry's carbon emissions from the TALC model perspective [85]. Zhong et al. investigated the applicability of the TALC model to China's Zhangjiajie National Forest Park [86]. Some studies extend the stages of the TALC, including the post-stagnation stage [87], the rejuvenation stage [88] and the reinvention stage [89].

There have been many debates about how to select the indicators measuring the TALC model. Previous studies widely applied the indicators of tourism specialization to assess the evolution of TALC. These specialization indicators include tourist arrival (e.g., length of stay, characteristics of tourists), tourist receipt and tourist expenditure [87,90,91]. Other scholars selected tourist-related establishment and the authorities' involvement scope as the evaluating indicators [92–94].

The destination life cycle is a dynamic evolutionary process. It is closely related to the level of tourism specialization [26,72,73]. Tourist arrival is a key indicator measuring tourism specialization. Tourist arrival refers to the tourism demand necessary to attract tourists to visit, reflecting the "carrying capacity" of the destination. Development and growth in the TALC model are often expressed in terms of visitor numbers [81]. Tourist receipt is another indicator. Tourist receipt denotes the economic contribution of tourism development, reflecting the structural effect or quality of the tourism specialization.

The process of the effect of tourism specialization on economic growth is embedded in the TALC model [26]. The impact of tourism on economic growth varies with the different level of tourism specialization. This, in turn, reflects the changing effect of the tourism–growth nexus in the different stages of destination life cycle. Consequently, on the basis of the empirical results, this article further divides the 36 disaster-hit counties into six types according to the different stages of the TALC model and discusses the specific impact of tourism on economic growth in different types.

3. Case Study, Method and Data

3.1. Case Study

On 12 May 2008, the magnitude-8.0-Ms Wenchuan earthquake struck Wenchuan County in the Aba Tibetan and Qiang Autonomous Prefecture of the Sichuan Province in China (see Figure 1).

The earthquake struck most areas of the Sichuan province and caused huge loss of life and property. The earthquake resulted in 69,226 human deaths, 374,643 injures, and 17,923 people that went missing. It also left millions of people homeless.

The Wenchuan Earthquake also destroyed buildings, the ecological environment, critical infrastructure (e.g., highways, water supply, sewage, gas and power systems), and industrial developments. The tourism industry was one of the industries most affected by the earthquake. Direct losses to the tourism industry amounted to 46.6 billion Yuan in Sichuan province. The 36 counties, as shown in Figure 1, which were located in the active seismic belt, were extremely affected by the earthquake. This resulted in a large recession of tourism industry and the dramatic downturn of the entire economy.

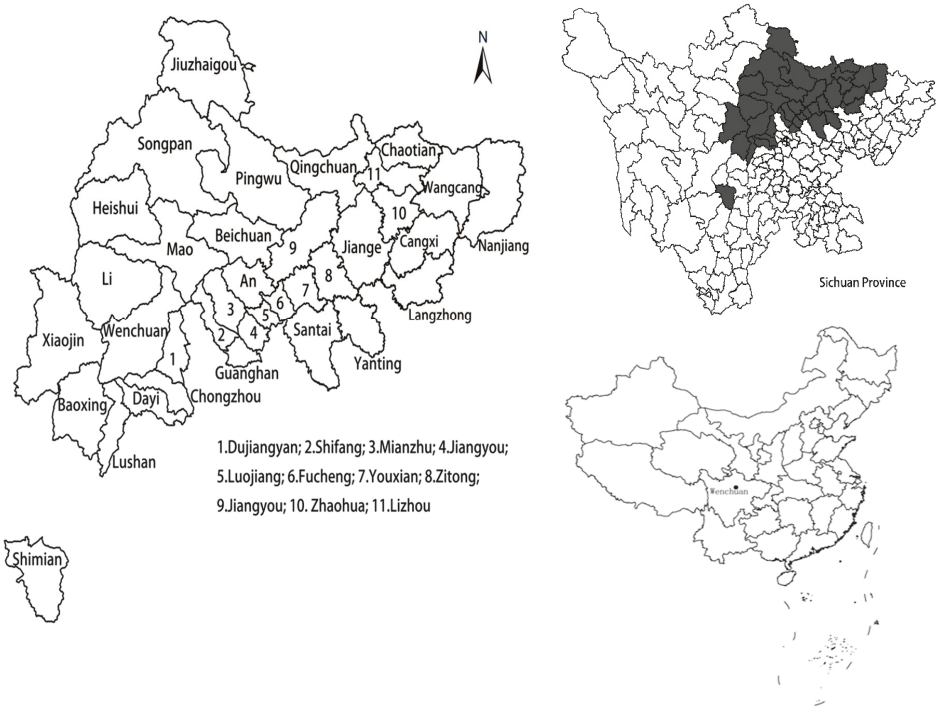

Figure 1. The location of the 36 Wenchuan earthquake-stricken counties.

After the Wenchuan earthquake, tourism was strategically used to stimulate the economic recovery of most of the 36 disaster-stricken counties. Table 1 illustrates the evolutionary levels of tourism specialization in the 36 counties during the period between 2008 and 2016. The levels of tourism specialization (e.g., tourist arrivals, tourist receipts) in most counties continued to increase after the Wenchuan earthquake. Until 2016, tourism receipt accounts for 40% of the GDP in 20 counties. Hence, tourism is used as a primary pathway of invigorating economic growth in most of the disaster-affected destinations and generates considerable economic returns. It can be seen from Table 1 that tourism receipt has currently become the main source of economic income in these counties.

Table 1. The change in tourist arrival as a percentage of local population (TA) and ratio of tourism receipt to GDP (TR) after the Wenchuan Earthquake (2008–2016).

County	TA								
	2008	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
An	1.83	2.51	4.07	5.08	5.59	8.23	9.51	12.92	16.90
Baoxing	8.56	7.56	14.24	17.20	21.30	7.64	16.68	20.69	26.64
Beichuan	0.84	1.03	2.20	7.27	9.13	16.93	16.67	18.87	22.66
Cangxi	1.29	2.32	1.63	5.20	3.26	5.75	6.72	6.44	8.52
Chaotian	2.09	3.07	3.93	9.86	8.88	11.78	14.97	14.74	17.69
Chongzhou	3.32	3.75	4.61	5.57	7.69	9.79	12.05	16.65	14.76
Dayi	8.05	9.41	9.73	10.85	19.02	23.26	28.33	30.80	33.77
Dujiangyan	7.45	15.72	18.71	23.97	28.20	28.28	30.01	31.55	32.74
Fucheng	1.52	2.08	2.53	3.02	3.36	3.46	4.18	5.04	5.99
Guanghan	2.32	1.33	1.49	4.36	7.92	9.25	10.07	10.98	13.29
Heishui	0.16	1.59	3.11	10.02	8.80	9.93	16.40	19.07	26.42
Jiange	0.29	0.76	1.73	3.67	3.94	7.46	6.32	11.21	13.72
Jiangyou	1.38	1.52	2.23	2.56	3.04	4.08	4.87	6.32	7.64
Jingyang	1.14	1.52	2.00	2.44	2.87	2.79	3.81	5.09	5.70
Jiuzhaigou	10.59	23.86	28.78	48.58	67.61	58.58	71.29	78.14	88.67
Langzhong	1.85	2.45	3.26	3.55	4.45	7.08	8.55	9.94	12.10
Li	1.85	3.59	8.14	18.49	32.61	40.15	69.58	77.19	97.34
Lizhou	3.43	4.94	5.77	10.40	14.10	16.04	17.17	18.82	23.32
Luojiang	3.08	3.71	3.87	4.46	5.24	8.30	9.59	12.64	14.41
Lushan	4.29	4.39	5.83	6.50	7.45	4.01	5.89	26.51	14.69
Mao	0.59	1.28	2.92	7.99	10.27	12.02	15.13	16.73	73.04
Mianzhu	1.31	1.43	1.34	1.98	2.56	3.67	5.83	7.05	8.80
Nanjiang	0.98	1.28	2.13	2.50	3.05	4.77	6.54	8.64	11.37
Pingwu	0.55	0.60	1.90	5.05	7.05	9.18	10.14	13.23	16.44
Qingchuan	1.37	4.13	2.43	4.86	8.84	12.33	14.66	19.37	23.68
Santai	1.48	1.38	1.51	4.23	5.27	7.95	8.98	9.53	4.42
Shifang	0.61	1.49	1.66	1.93	2.49	6.39	8.39	8.85	10.75
Shimian	3.09	3.92	3.70	5.77	6.85	8.73	15.83	29.76	35.96
Songpa	4.75	15.23	24.26	32.80	43.55	43.94	60.38	67.33	75.97
Wangcang	1.08	1.20	1.55	1.64	2.91	4.37	4.62	5.07	5.97
Wenchuan	1.07	8.34	14.02	36.25	56.84	59.59	65.58	75.10	80.84
Xiaojin	0.48	1.40	2.70	8.04	7.41	8.30	8.88	9.56	11.70
Yanting	0.58	0.77	0.83	1.40	1.71	2.28	2.22	2.84	3.45
Youxian	1.07	1.28	1.44	1.66	3.32	5.58	6.51	7.21	9.78
Yuanba	1.47	6.05	4.48	9.58	13.95	17.09	21.26	24.55	28.34
Zitong	1.42	3.45	4.71	5.21	6.43	11.70	11.65	12.95	16.06
County	**TR**								
	2008	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
An	0.07	0.09	0.12	0.06	0.08	0.12	0.16	0.19	0.41
Baoxing	0.22	0.18	0.28	0.30	0.34	0.15	0.25	0.30	0.45
Beichuan	0.14	0.05	0.09	0.25	0.39	0.66	0.56	0.81	0.93
Cangxi	0.09	0.10	0.08	0.18	0.14	0.17	0.18	0.17	0.23
Chaotian	0.22	0.23	0.22	0.33	0.29	0.39	0.49	0.58	0.75
Chongzhou	0.04	0.04	0.04	0.04	0.05	0.06	0.07	0.13	0.12
Dayi	0.09	0.11	0.10	0.10	0.14	0.16	0.17	0.18	0.18
Dujiangyan	0.23	0.36	0.35	0.36	0.37	0.36	0.36	0.41	0.48
Fucheng	0.06	0.06	0.06	0.06	0.07	0.09	0.10	0.11	0.12
Guanghan	0.05	0.00	0.01	0.07	0.09	0.12	0.12	0.13	0.13
Heishui	0.02	0.09	0.17	0.53	0.33	0.31	0.48	0.54	0.67
Jiange	0.04	0.04	0.12	0.16	0.23	0.29	0.47	0.58	0.73
Jiangyou	0.04	0.05	0.06	0.07	0.09	0.13	0.16	0.21	0.23
Jingyang	0.01	0.01	0.01	0.03	0.03	0.04	0.05	0.06	0.07
Jiuzhaigou	0.87	1.54	2.26	2.61	3.25	3.07	3.36	3.50	3.45
Langzhong	0.13	0.18	0.21	0.19	0.20	0.28	0.32	0.36	0.41
Li	0.17	0.15	0.29	0.52	0.82	0.77	1.05	1.20	1.40
Lizhou	0.11	0.11	0.15	0.13	0.13	0.15	0.19	0.24	0.28
Luojiang	0.06	0.06	0.07	0.08	0.08	0.10	0.13	0.17	0.19
Lushan	0.14	0.16	0.18	0.18	0.18	0.09	0.15	0.80	0.37
Mao	0.09	0.08	0.17	0.26	0.32	0.30	0.34	0.47	1.14
Mianzhu	0.03	0.03	0.05	0.05	0.07	0.08	0.10	0.12	0.14

Table 1. *Cont.*

County	TR								
	2008	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
Nanjiang	0.09	0.11	0.14	0.16	0.18	0.24	0.30	0.41	0.52
Pingwu	0.07	0.03	0.10	0.23	0.29	0.38	0.45	0.54	0.66
Qingchuan	0.14	0.23	0.15	0.23	0.32	0.43	0.50	0.62	0.69
Santai	0.05	0.06	0.07	0.16	0.20	0.30	0.38	0.42	0.20
Shifang	0.03	0.03	0.04	0.04	0.05	0.07	0.09	0.11	0.12
Shimian	0.06	0.07	0.05	0.09	0.10	0.13	0.21	0.32	0.42
Songpa	0.74	1.56	2.16	2.35	2.96	2.46	3.17	3.15	3.27
Wangcang	0.08	0.10	0.06	0.07	0.09	0.12	0.15	0.16	0.19
Wenchuan	0.04	0.09	0.18	0.43	0.54	0.54	0.53	0.64	0.66
Xiaojin	0.06	0.15	0.27	0.75	0.59	0.56	0.13	0.54	0.51
Yanting	0.01	0.01	0.02	0.02	0.03	0.04	0.02	0.05	0.08
Youxian	0.06	0.07	0.07	0.09	0.10	0.13	0.17	0.19	0.22
Yuanba	0.03	0.21	0.20	0.25	0.31	0.39	0.50	0.60	0.67
Zitong	0.11	0.13	0.16	0.17	0.22	0.31	0.39	0.45	0.53

Note: TA = tourist arrival as a percentage of local population; TR = Ratio of tourism receipt to GDP.

3.2. Method

Given that the impact of tourism development on economic growth may be non-linear, we employ the fixed-effects panel threshold regression approach of Hansen [95]. In this way, we can explore how tourism development has different influences on economic growth under different levels of threshold variable.

Hajamini and Mohammad suggest that the panel threshold regression method can be more reliable than the cross-sectional and time-series models [96]. The structural equation for the basic panel threshold is as follows:

$$y_{it} = \mu_{it} + \beta_1' x_{it} I(q_{it} \leq \gamma) + \beta_2' x_{it} I(q_{it} > r) + e_{it} \quad (1)$$

where the dependent variable, $y_{it,}$ is the economic growth in the 36 counties in the Sichuan province between 2008 and 2016. The independent variable, $x_{it,}$ denotes tourism development; q_{it} refers to the threshold variable; r is the value of the threshold; μ_{it} indicates the unobservable individual effects of the county; e_{it} is the random standard error; and I(.) refers to the indicator function.

Hansen suggests that the observations be divided into two regimes, depending on whether the threshold q is smaller or larger than the r parameter [96]. The regimes are distinguished by the slope coefficients: β_1' and β_2'. Therefore, an alternative method of the equation can be written as:

$$y_{it} = \begin{cases} u_{it} + \beta_1' x_{it} + e_{it} & \text{if } q \leq \gamma \\ u_{it} + \beta_2' x_{it} + e_{it} & \text{if } q > \gamma \end{cases} \quad (2)$$

To make sure that the empirical results are valid and significant, it is necessary to employ the F test. Hansen recommends that the F test be used to test for the threshold effect and the sup-Ward statistic be applied to test null hypothesis:

$$F = \sup F(r)$$
$$\text{and } F(r) = \frac{(SSE_0 - SSE_1(\hat{r}))/1}{SSE_1(\hat{r})/n(T-1)} = \frac{SSE_0 - SSE_1(\hat{r})}{\sigma^2} \quad (3)$$

Given that there may exist a non-standard distribution of an F test, Hansen proposes a bootstrap method to produce the first-order asymptotic distribution for testing. The P-value for the F-statistic yield from the bootstrap can be used to validly test the existence of a threshold. The null hypothesis of the threshold effect is rejected if the F statistical value is larger than the desired critical value [95], meaning that a nonlinear relationship exists between tourism development and economic growth.

As stated in the introduction, this study empirically focuses on the effect of tourism on economic growth based on the prevailing TLGH by considering three aspects. First, since tourism developed quickly during the post-Wenchuan earthquake recovery and development phase, and because tourism income contributes much to economic revenue, we focus our discussion on whether tourism may be a catalyst for stimulating economic growth following the Wenchuan earthquake. Secondly, during the processing work, we also followed previous literature to test a causal relationship from economic growth to tourism development using the panel Granger causality test. However, the results did not support such a relationship, rejecting the hypothesis of EDTG. Finally, in the process of conducting the study, we applied a panel threshold regression method to examine the threshold effect of economic growth on tourism development. The results revealed that the statistical F values for the three thresholds were all below their critical threshold values, indicating no threshold effect of economic growth on tourism development, rejecting the EDTG hypothesis. Therefore, for the above reasons, we did not examine the EDTG hypothesis in this paper.

3.3. Data

We explore the effect of tourism development on economic growth in 36 disaster-hit counties in Sichuan province following the Wenchuan earthquake. The data spans the period of 2008 through 2016, collecting from the *Sichuan Statistical Yearbook* (2008–2017), *Sichuan Yearbook* (2008–2017), *Chengdu Yearbook* (2008–2017), *Deyang Yearbook* (2009–2017), *Mianyang Yearbook* (2008–2017), *Yaan Yearbook* (2008–2017), *Aba Tibetan and Qiang Autonomous Prefecture Yearbook* (2009–2017), and the *Official Statistical Bulletins for National Economic and Social Development of 36 Counties* (2009–2017). Missing data are supplemented by the averaging method with the data from the adjacent two years.

The dependent variable economic growth is constructed by the logarithm of the real GDP per capita (LGDP) [15,26,37]. We empirically confirm the tourism-led growth relationship by establishing a fixed-effect panel data model and a panel threshold regression model. For the threshold variable, the level of tourism specialization is measured by TR (tourism revenue as a share of the real GDP) and TA (tourist arrival as a percentage of the local population). The level of industrial structure is reflected by the variable of IS (the proportion of employees in a tertiary industry to total employees). According to Zuo and Huang [26], TA reflects the size effect or level of tourism specialization, and TR measures the structure effect or quality of tourism specialization.

To control for the effect of the other variables on economic growth, we apply the following control variables according to the recommendations of previous literature [56,62,66,96]: The ratio of the total investment in fixed assets to GDP as capital investment (INV), the ratio of the length of the highway roads to the county area as transportation accessibility (HD), and the proportion of employees in a tertiary industry to total employees as industrial structure (IS). In addition, considering that the Wenchuan earthquake may affect the economic growth, we add the dummy variable for Y2008 to the model. Complete details of the data sources are given in Table 2.

Table 2. Data and sources.

Variable	Description	Explanation	Literature Source
LGDP	The logarithm of the real GDP per capita	Economic growth	Syed et al. [15], Zuo and Huang [26]
TA	Tourist arrival as a percentage of the local population	Reflecting the size effect or level of tourism specialization	Zuo and Huang [26], Jose et al. [56], Tang et al. [66], Liu et al. [97]
TR	Tourism revenue as a share of the real GDP	Reflecting the structure effect or quality of tourism specialization	
HD	The ratio of the length of the highway roads to the county area	Transportation accessibility	Tang et al. [66], Zhang et al. [98]; Chakrabarti [99],
INV	The ratio of the total investment in fixed assets to GDP	Capital investment	Zuo and Huang [26], Chang et al. [72]
IS	The proportion of employees in a tertiary industry to total employees	Industrial structure	Zuo and Huang [26], Hu et al. [100]

4. Empirical Results

The estimations of panel fixed-effects model and panel threshold regression model first require that all variables are stationary to avoid generating the 'spurious regression'. The first-generation panel unit root tests (e.g., ADF, LLC, IPS, and PP) are performed to test the stationarity of variables under the assumption that the individual time series in the panel are cross-sectionally independent [101]. If the individual time series in the panel are cross-sectionally, dependently distributed due to the common factors, the results using the first-generation panel unit root tests will cause distortion [102]. Therefore, to overcome this deficiency, we utilize the Pesaran's cross-sectional dependence (CD) test which examines the cross-sectional dependence in the panel-data models with small T and large N [102]. Then we need to apply the Pesaran's CADF test to examine the stationarity of all variables in panels with cross-sectional dependence [102]. In Table 3, the results of Pesaran's CD test reject the null hypothesis of the cross-sectional independence, indicating that the data in the cross-sections are interdependent. Hence, the Pesaran's CADF test is further used to examine the stationarity of all variables. Table 3 shows significant stationarity results for all variables (e.g., LGDP, TA, HD, INV, IS) at 1% and 5% significance level.

Table 3. Results of Pesaran's cross-sectional dependence (CD)_test and Pesaran's panel unit root test.

Pesaran's Cross Sectional Dependence Test			
CD statistics	28.576^{***} (0.000)		
Pesaran's CADF test			
LGDP	-2.272^{***} (0.004)	INV	-2.239^{***} (0.007)
TA	-2.079^{**} (0.040)	IS	-2.540^{***} (0.000)
HD	-2.710^{***} (0.000)		

Note: p values are reported in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Tables 4 and 5 display the linear and non-linear impacts of tourism development on economic growth estimated using a conventional panel regression model and panel threshold regression model, respectively. Model 1 in Table 6 presents the linear results based on the panel fixed-effects model. The Hausman test and F test are used to select the pooled OLS model, panel fixed-effects model or panel random-effects model. The Hausman test and F test are both significant at the 1% statistical level, which indicates that the empirical results of the panel fixed-effects model are regarded as reliable. The estimated coefficient of TA is 0.015, which is positive and significant at the 1% statistical level. This implies that a 1% increase in the ratio of tourist arrival to GDP may lead to a 0.015% increase in the logarithm of real GDP per capita (LGDP). The result confirms the validity of the TLGH for the disaster-stricken destinations, and concurs with Chiu and Yeh [45], Katircioglu [46], and Lee and Chang [38], who find evidence of supporting the TLGH that tourism development can be an effective engine for stimulating economic growth.

For the other explanatory variables, in line with Che [103], Foster [104], Pratt [105] and Shi et al. [106], the variables of HD, INV, and IS are estimated to be positive and significant at the 1% statistical level, indicating that transportation accessibility, capital investment and industrial structure can significantly stimulate economic growth. The dummy variable Y2008 for the Wenchuan earthquake has a significantly negative impact on economic growth at the 1% statistical level. This illustrates that the Wenchuan earthquake caused severe damage to the 36 counties and led to a 33% decline in the entire economy. The results are supported by Miao and Ding [107], who investigate the impact of the Wenchuan earthquake on the economy of the counties in the Upper River. They find that the disaster interrupts the counties' economy and has different effects on regional economic recovery.

In order to investigate the nonlinear relationship between tourism development and economic growth under the different levels of tourism specialization and industrial economy, the article uses a panel threshold regression model. Prior to conducting this analysis, it is necessary to test whether a non-linear relationship exists by determining the number of regimes using the F-test statistic and bootstrap P-value. According to Table 4, the results of F-test and P-value show that the null hypothesis of threshold effect test of all threshold variables (TA, TR and IS) are rejected at the 5% or 10% statistical level in the single threshold model and the double threshold model, but are accepted at the 10% statistical level in the triple threshold model, showing that the tourism–growth model is a two-regime model. Therefore, the following panel threshold regression analysis, which will be based on the double threshold model, is appropriate.

When TA is set as the threshold variable, the threshold values are 17.09 and 40.15. When TR is the threshold variable, the threshold values are 0.52 and 0.93. When IS is the threshold variable, the threshold values are 0.20 and 0.34.

Table 4. Threshold effect test.

Threshold Variable	Number	RSS	MSE	F	P	Threshold Critical		
						10%	5%	1%
TA	Single	10.162	0.033	107.07 ***	0.000	31.567	34.893	41.130
	Double	7.970	0.025	86.64 ***	0.000	27.697	31.770	39.003
	Triple	7.331	0.023	27.46	0.817	65.811	75.025	84.374
TR	Single	11.547	0.037	56.44 **	0.013	33.285	39.100	56.939
	Double	10.312	0.033	37.73 ***	0.007	23.181	27.129	35.381
	Triple	10.100	0.032	6.63	0.913	36.807	41.162	62.276
IS	Single	12.901	0.041	17.47 *	0.060	15.035	17.737	23.329
	Double	12.370	0.040	13.52 *	0.093	13.310	16.163	21.344
	Triple	12.167	0.039	5.250	0.657	30.534	36.753	51.716

Note: p values are reported in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

In Table 5, Models (2)–(4) report the non-linear results estimated using the panel threshold model. In Model (2), when TA is used as the threshold variable, we divide the 36 counties into three regimes: 30 counties in regime 1, three counties in regime 2 and three counties in regime 3. If TA is less than 17.09 (regime 1), a 1% increase in TA may significantly contribute to a 0.053% increase in LGDP. If TA is above 17.09 and below 40.15 in Regime 2, a 1% increase in TA may significantly lead to a 0.033% increase in LGDP at the 1% statistical level. If TA exceeds 40.15 in Regime 3, a 1% increase in TA can bring about a 0.017% increase in LGDP at the 1% statistical level. These results reveal that the estimated coefficients will become significantly smaller with a TA higher than the threshold value.

Similarly, when using TR as the threshold variable in Model 3, there are 33 counties in regime 1 (TR $\leq$ 0.52), 1 county in regime 2 (0.52 < TR $\leq$ 0.93) and 2 counties (Songpan and Jiuzhaigou) in regime 3 (TR > 0.93). The estimated coefficients of TA on LGDP are significantly positive at the 1% statistical level. These coefficients tend to be smaller with a TR exceeding the threshold value.

When the IS is set as the threshold variable in Model 4, 18 counties are in regime 1 and 18 counties are in regime 2. According to the results in regime 1 (IS $\leq$ 0.20) and regime 2 (0.20 < IS $\leq$ 0.34), tourism development has a positive impact on economic growth at the 1% significant level. When IS is larger than the highest threshold value (0.34) in regime 3, a significantly negative relationship exists between tourism development and economic growth at the 1% statistical level. This illustrates that a 1% increase in TA may cause a 0.139% decline in LGDP. In addition, the magnitudes and dimensions of the estimated results for the control variables (HD, INV, IS, and Y2008) are similar to those of Model 1.

For the two indicators of tourism specialization (i.e., TA and TR), when tourism specialization exceeds the first and the second threshold values, the estimated coefficient will become smaller, reflecting that the law of diminishing returns of tourism to economic growth exists. The findings in our study are similar to those of Chang et al. [72], Po and Huang [73], and Zuo and Huang [26]. When tourism specialization exceeds the first or second threshold value, the destination goes into a

lock-in situation because of the path-dependence [26]. According to Chang et al. [72], a destination at a high level of tourism specialization may lose the destination's comparative advantage in tourism with a low contribution of tourism and possibly generates unsustainable economic growth in the long term.

Table 5. The effect of tourism on economic growth in the linear model and in the threshold model.

Variables	Fixed Effects	Threshold Effects		
	Model (1)	Model (2)	Model (3)	Model (4)
TA	0.015 ***			
	(0.000)			
HD	0.907 ***	0.581 ***	0.712 ***	0.827 ***
	(0.000)	(0.000)	(0.000)	(0.000)
INV	0.019 **	0.018 ***	0.020 **	0.015 *
	(0.03)	(0.007)	(0.011)	(0.073)
IS	0.711 ***	0.556 ***	0.628 **	1.378 ***
	(0.000)	(0.001)	(0.001)	(0.000)
Y2008	−0.327 ***	−0.223 ***	-0.270 ***	-0.321 ***
	(0.000)	(0.000)	(0.000)	(0.000)
TA (TA ≤ 17.09)		0.053 ***		
		(0.000)		
TA (17.09 < TA≤40.15)		0.033 ***		
		(0.000)		
TA (TA > 40.15)		0.017 ***		
		(0.000)		
TA (TR ≤ 0.52)			0.035 ***	
			(0.000)	
TA (0.52 < TR ≤ 0.93)			0.022 ***	
			(0.000)	
TA (TR > 0.93)			0.011 ***	
			(0.000)	
TA (IS ≤ 0.20)				0.022 ***
				(0.000)
TA (0.20 < IS ≤ 0.34)				0.014 ***
				(0.000)
TA (IS > 0.34)				−0.139 ***
				(0.000)
Constant	8.535 ***	8.617 ***	8.595 ***	8.480 ***
	(0.000)	(0.000)	(0.000)	(0.000)
R^2	0.737	0.846	0.800	0.753
F-test	38.23 ***	64.810 ***	44.62 ***	39.780 ***
Hausman test	19.70 ***			

Note: p values are reported in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Javier et al. argue that an excessive tourism-oriented economy may have less dynamic or low efficient growth [47]. Table 6 shows that most counties have a low level of tourism specialization. Two counties (i.e., Songpan and Jiuzhaigou) have high levels of tourism specialization, illustrating that tourism development is the main source of local economic activities in these two destinations.

Moreover, there exists non-synchronization between TA and TR in some counties (Table 6), meaning that a conflict may occur between tourism expansion and tourism quality. There are three situations: (1) TA is between the first and second threshold, while TR is below the first threshold (e.g., Dujiangyan, Dayi); (2) TA exceeds the second threshold, while TR is below the first threshold (e.g., Wenchuan); and (3) TA exceeds the second threshold, while TR is between the first and second threshold (e.g., Li). These situations show that the destinations are dominated by mass tourism and low-quality development.

Despite tourism expansion attracting more and more tourists to visit, traditional sightseeing is still the main form of tourism. Destinations that lack high-quality or diversified deep-experiential products may experience a low level of tourism expenditures. Some scholars also find that tourism expansion is less likely to promote long-term economic growth (Javier et al.). In addition, when tourist

arrival exceeds the maximum capacity of a destination, it will generate negative social, economic, and environmental problems and undermine the sustainable growth of the economy.

For the threshold value of IS, when IS exceeds the second threshold value (0.34), tourism development negatively influences economic growth. The reason for this may be attributed to the symptom of 'Dutch disease'. On the one hand, tourism may lead to a reallocation of productive resources and labor from other traditionally productive sectors (e.g., agriculture, manufacturing, forestry) to the tourism-oriented sectors, weakening the competitiveness of traditional sectors [72,106]. This will cause a deindustrialization process and hamper long-term economic growth. On the other hand, the inflow of large amounts of short-term capital into the tourism sector may bring about an unduly rapid tourism expansion. This will lead to a rapid increase in local land prices, a crowding-out effect on local enterprises and an overall loss in social welfare [15,51,71].

In our study, the economic structure of most disaster-stricken counties, in the early stages, is dominated by the agriculture or manufacturing industries. Therefore, an unduly rapid expansion of the tourism sector may lead to a 'Dutch disease' effect on other economic sectors, eventually reducing the sustainability of economic growth in such counties as An and Fucheng.

Table 6. The level of threshold variables in each regime.

Counties	TA	Regime	TR	Regime	IS	Regime
An	7.40	1	0.14	1	0.38	3
Baoxing	15.61	1	0.28	1	0.15	1
Beichuan	10.62	1	0.43	1	0.19	1
Cangxi	4.57	1	0.15	1	0.14	1
Chaotian	9.67	1	0.39	1	0.15	1
Chongzhou	8.69	1	0.07	1	0.20	1
Dayi	19.25	2	0.14	1	0.21	2
Dujiangyan	24.07	2	0.37	1	0.30	2
Fucheng	3.46	1	0.08	1	0.34	2
Guanghan	6.78	1	0.08	1	0.16	1
Heishui	10.61	1	0.35	1	0.26	2
Jiange	5.46	1	0.3	1	0.14	1
Jiangyou	3.74	1	0.11	1	0.23	2
Jingyang	3.04	1	0.04	1	0.24	2
Jiuzhaigou	52.90	3	2.66	3	0.31	2
Langzhong	5.91	1	0.25	1	0.24	2
Li	38.77	3	0.71	2	0.19	2
Lizhou	12.67	1	0.17	1	0.15	1
Luojiang	7.26	1	0.1	1	0.17	1
Lushan	8.84	1	0.25	1	0.18	1
Mao	15.55	1	0.35	1	0.22	2
Mianzhu	3.77	1	0.07	1	0.20	1
Nanjiang	4.58	1	0.24	1	0.19	1
Pingwu	7.13	1	0.31	1	0.12	1
Qingchuan	10.19	1	0.37	1	0.14	1
Santai	4.97	1	0.2	1	0.13	1
Shifang	4.73	1	0.07	1	0.16	1
Shimian	12.62	1	0.16	1	0.21	2
Songpa	40.91	3	2.42	3	0.22	2
Wangcang	3.16	1	0.11	1	0.18	1
Wenchuan	44.18	3	0.4	1	0.24	2
Xiaojin	6.50	1	0.4	1	0.19	1
Yanting	1.79	1	0.03	1	0.21	2
Youxian	4.21	1	0.12	1	0.22	2
Yuanba	14.09	1	0.35	1	0.20	1
Zitong	8.18	1	0.28	1	0.19	1

Tourism-led growth is an evolutionary process of change. It reflects the fact that the non-linear tourism–growth nexus is stage-based. Our paper echoes Zuo and Huang [26], who also find that the non-linear impact of tourism-led growth depends on the different stage of the tourism destination life cycle. Namely, in the early stages of the destination, tourism generates increasing economic income and

promotes economic growth. When tourism specialization values exceed their critical levels, the impact of tourism on economic growth will decline. The estimated coefficients of tourism on economic growth vary across the different levels of tourism specialization, illustrating that destinations at different stages of the destination life cycle may experience various tourism–growth nexus issues. Lundgren examined the relationship between the attractiveness of tourists and tourism development, suggesting that in the initial stage, the graph curve of theoretical attractiveness reaches a high level, leading to a rise in the popularity of the area. In subsequent phases, the theoretical attractiveness begins to drop [82].

Therefore, in order to further explore the dynamism of the tourism–growth nexus along the different stages of different destinations, we divide the 36 destinations into six types based on Butler's destination life cycle model: Exploration-stage type, involvement-stage type, transition-stage type, development-stage type, consolidation-stage type, and stagnation-stage type. In the meantime, as TA and TR do not synchronously change, using any individual indicator cannot fully reflect the nature of destination life cycle evolution [26]. Hence, these above types are divided by the change of tourism specialization which consists of both TA and TR (see Table 7 and Figure 2).

Exploration-stage type

Two indicator values of tourism specialization (i.e., TA and TR) are found to be less than the first threshold values. These values do increase slowly. Before the Wenchuan earthquake, most resources were not exploited and tourism facilities were not developed. Tourist arrivals were scarce and the proportion of tourism receipt to GDP was very low. After the earthquake, local governments seized opportunities for tourism development and began to consider tourism as a pathway to stimulating economic recovery. Both tourism arrival and tourism receipt rose steadily but still remain at a low level. Destinations of the exploration-stage type are often in the initial stage of the tourism life cycle. The impact of tourism on economic growth is high. Jingyang and Yanting follow the exploration-stage type.

Involvement-stage type

The values of TA and TR are both below the first threshold but keep increasing. The contribution of tourism to economic growth is significant. The destination of the involvement-stage type often occurs in the early stage of the tourism life cycle. There are many reasons for this. One reason may be that, after the Wenchuan earthquake, the local governments began to consider tourism development as an important strategy for promoting economic recovery. More specifically, *The Sichuan Tourism Recovery and Reconstruction Plan for the Post-Wenchuan Earthquake* stated that the tourism industry should be a dominant and leading industry in the disaster-ruined area during the post-recovery and reconstruction phases. Therefore, local initiatives exploited potential resources, developed tourism facilities, and increased capital investments in tourism to cater to increasing numbers of tourists. Seventeen counties belong to the involvement-stage type.

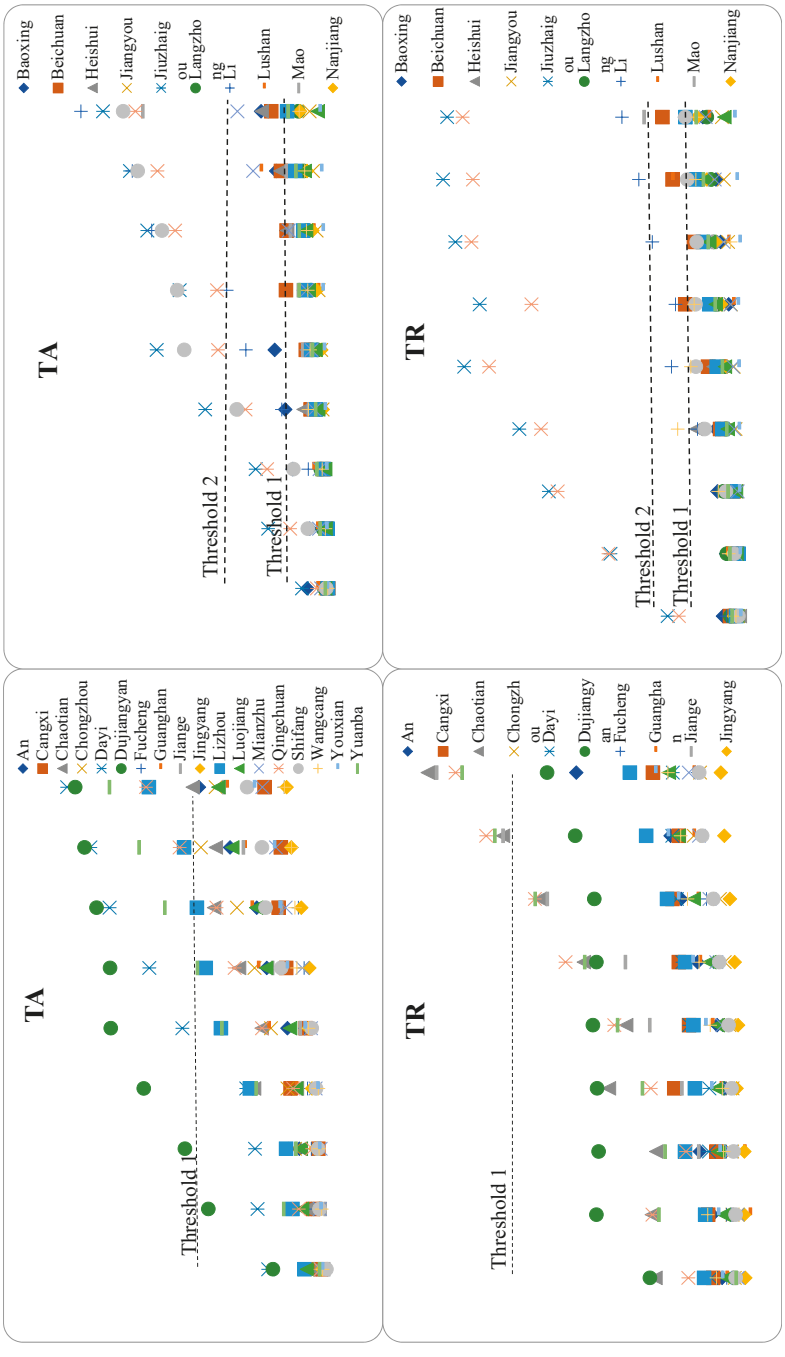

Figure 2. The dynamic evolution of tourism specialization between the years of 2008 and 2016.

Transitional-stage type

Whereas TA is below the first value, TR is between the first and second threshold values. Destinations of this type experience transition from the involvement stage to the development stage. As a result, a potential travel market begins to form. In spite of the relatively low number of tourist arrivals, many high quality and experiential tourism products or activities were developed to increase tourism expenditures, thus leading to relatively high tourist receipt. Tourism significantly contributes to economic growth in the transitional stage. The counties of Jiange, Pingwu, Zitong, and Nanjiang are included in the type.

Development-stage type

In this type, tourism development significantly facilitates economic growth. Two patterns are further classified in the development stage: Tourism expansion and tourism quality. In the pathway of tourism expansion, TA exceeds the first threshold value, whereas TR is lower than the first threshold value. In spite of the progressive growth in tourist arrival, a low-quality tourism expansion, which lacks high-quality or experiential products, may reduce tourism expenditure or short travel time. This leads to a low level of tourism receipt. Dujiangyan, Dayi, Lizhou, Beichuan, Shimian, and Baoxing belong to the tourism expansion type.

In the tourism quality mode, both TA and TR are between the first and second threshold values. This illustrates that the destinations have entered into a second life cycle through tourism innovations or high-quality tourism product development. This is a more sustainable manner of attracting an increasing the number of tourists. In the development stage, the travel market is booming, and tourism has already occupied a large proportion of the local economy. Yuanba, Chaotian, Qingchuan, and Heishui are in the tourism quality type.

Consolidation-stage type

Both TA and TR exceed the second threshold value and continue to grow. However, the growth rates of tourist arrival or tourist receipt may begin to drop. The destination of the consolidation-stage type is often considered to have a tourism-dominated economic structure [77,108], where tourism receipt is the main source of economic income. The travel market tends to be mature in this stage. The effect of tourism on economic growth becomes smaller compared with the early stages of tourism development. The destinations include Li, Mao, Songpan and Jiuzhaigou.

Stagnation-stage type

Whereas TA is larger than the second threshold value, TR is between the first and second threshold value. Although the number of tourist arrivals is high, they may face a diminishing rate of tourism receipt due to the extensive resource-relied mode, excessive competition, innovation and institutional inertia. Signs of a recession emerge in the travel market. Meanwhile, an excessive number of tourist arrivals likely result in economic, social, and environmental problems. The effect of tourism development, which relies solely on tourism expansion, on long-term economic growth is very limited.

Wenchuan is the only county that belongs to the stagnation-stage type. In the future, it may enter the decline stage. According to the Wenchuan official statistics in 2017, the number of tourist arrivals substantially drops by 25.9%, and tourism receipt decreases by 27.9%.

In addition, it should be noted that the regular evolution of the tourism life cycle may be interrupted by human-induced hazards or natural disasters [77,89,109], which require a long time to return to the normal track. In our study, two values of tourism specialization in the two counties of Sonpan and Jiuzhaigou decreased dramatically after the Wenchuan earthquake. This includes TA degenerating from the medium regime in 2007 to the low regime in 2008 and TR declining from the high regime in 2007 to the median regime in 2008.

Table 7. The distribution of the disaster-stricken counties according to each type.

Style	Number	Counties
Exploration-stage type	2	Jingyang, Yanting
Involvement-stage type	15	An, Cangxi, Chongzhou, Fucheng, Guanghang, Jiangyou, Langzhong, Lushan, Luojiang, Mianzhu, Santai, Shifang, Wangcang, Xiaojin, Youxian
Transitional-stage type	4	Jiange, Nanjiang, Pingwu, Zitong
Development-stage type	10	Tourism expansion: Baoxing, Beichuan, Dayi, Dujiangyan, Lizhou, Shimian
Consolidation-stage type	4	Tourism quality: Chaotian, Heishui, Qingchuan, Yuanba, Jiuzhaigou, Li, Mao, Songpan
Stagnation-stage type	1	Wenchuan

5. Conclusions and Managerial Implications

To date, few studies have investigated the causal relationship between tourism development and economic growth following disasters. Hence, we use cross-sectional data to examine the linear and non-linear impact of tourism development on economic growth in 36 disaster-stricken counties covering the period of 2008 through 2016, in an attempt to fill this gap. Then, we use this information to further explore the dynamism of the nonlinear tourism–growth nexus based on the theory of Butler's TALC.

This study involved many steps. First, we applied the fixed-effects panel regression model to investigate the linear impact of the tourism–growth nexus. The results illustrate that there is a positive and significant impact of tourism on economic growth, meaning that tourism development can significantly enhance economic growth. The results confirm the applicability of the TLGH for the disaster-stricken counties. The control variables (i.e., INV, HD and IS) were found to positively affect economic growth at the 1% statistic level. The dummy variable Y2008 negatively influences economic growth at the 1% statistic level, illustrating that the Wenchuan earthquake caused huge economic losses and led to a dramatic decline in the entire economy.

Secondly, the non-linear results obtained from the panel threshold regression model illustrate that non-linear relationships exist between tourism development and economic growth under the threshold variables of TA, TR and IS. These show that counties with different conditions of tourism specialization and industrial structure experienced various impacts on the tourism-led growth nexus.

For the variables TA and TR, the estimated coefficients of tourism on economic growth decrease when both TA and TR exceed the first and second threshold values. For the variable IS, tourism development negatively influences economic growth when IS is larger than the highest threshold value (0.34). This is due to the 'Dutch disease' effect, which implies that tourism development, with a high level of industrial structure, undermines the sustainable growth of the overall economy in disaster-stricken counties.

Thirdly, the tourism–growth nexus is a dynamic process of change, closely related to the evolution of the destination life cycle. The estimated coefficients of tourism on economic growth vary with the different levels of tourism specialization. This shows that destinations at different stages of the destination life cycle may have various kinds of influence on the tourism–growth nexus. Therefore, based on Butler's TALC theory, we further divided the 36 disaster-stricken counties into six types through the evolutions of two main indicators of tourism specialization (TA and TR): Exploration-stage type, involvement-stage type, transition-stage type, development-stage type, consolidation-stage type, and stagnation-stage type.

This article reveals some significant findings. First, although the 8-magnitude Wenchuan earthquake caused huge damage to some areas, it may also break the original economic structure and provide one opportunity of tourism for revitalizing the economy for non-tourism-based areas. Secondly, tourism policy is another driving factor of tourism contributing to economic growth [61,66,110,111]. Some polices, such as *The Sichuan Tourism Recovery and Reconstruction Plan for the Post-Wenchuan Earthquake (2008–2010), the State Council's Opinion on Supporting Policies and Measurement for Post Recovery and Reconstruction (2008),* emphasize tourism as the leading industry of stimulating economic recovery

in disaster-hit destinations. Thirdly, the economic growth is significantly influenced by transport accessibility, capital investment, industrial structure and disaster. Fourthly, for the tourism-dominated areas, the economic structure's over-reliance on tourism generates less economic benefit to other areas. It even brings about some adverse effects (e.g., 'Dutch disease' effect). Finally, based on Butler's TALC model, the impact coefficients of tourism on economic growth vary with different levels of tourism specialization, indicating that the tourism–growth nexus changes along with the different life stages of destinations. Hence, we conclude that tourism development is not only a source of stimulating economic recovery for the disaster-stricken area but also a huge power for incurring the industrial structure transformation in the destination economy. The results are generally applicable to policymakers seeking new ways of invigorating the economy in other disaster-hit destinations.

The empirical results in our study have theoretical and practical implications for policymakers in disaster-hit destinations. Local policymakers should establish suitable and effective tourism policies and measurements to promote economic growth based on the different stages of the tourism area life cycle. Destinations of the exploration-stage type and the involvement-stage type, with low levels of tourism specialization, should be concerned about how to exploit potential resources, perfect the diversified and high-quality tourism products, and improve transportation facilities to attract mass tourists. Destinations of the development-stage type should establish a comprehensive and diversified market; it should also improve the quality of the travel products. The destination of the consolidation-stage type should expand the travel market and diversify the economy. This can be accomplished by establishing strong links between the tourism sectors and the other industries to improve the travel market vitality. For the destination of the stagnation-stage type, policymakers should make innovative incentives for tourism development to extend the destination development life cycle, or they should focus on developing other more productive or more efficient industries, if the less-efficient tourism industry cannot be improved. In addition, tourism policymakers should fully recognize the vulnerability of tourism and take measures to strengthen the resistance of the tourism industry to natural disasters and human-induced hazards.

Like other tourism economic literature, this study has some limitations based on which it offers suggestions for future research. First, in terms of research technique, we focus on the effect of tourism development on economic growth following a disaster shock from a static perspective without considering the dynamic effect. Future study will explore the dynamic relationship using some economic techniques, such as the SYSGMM and the panel smooth threshold regression (PSTR) approach. Second, future studies will consider some variables related to tourism development, such as improved accessibility, better accommodation, and tourism attractiveness. In this study, we do not examine the inner relations between these tourism factors and tourism development due to the lack of statistical data. In our future work, we will explore the inner relations of the above factors with tourism development by collecting the data and text materials in various ways, for instance, from official reports, statistical yearbooks, relevant literature, and field investigations.

Note: *Notice of the State Council of China on printing and distributing the general plan for recovery and reconstruction after the Wenchuan Earthquake* announced the 39 disaster-stricken counties of the Sichuan province that were seriously affected by the Wenchuan earthquake. They include: Penzhou, Dujiangyan, Chongzhou, Dayi, Jingyang, Luojiang, Guanghan, Shifang, Mianzhu, Lizhou, Yuanba, Chaotian, Wangcang, Qingchuan, Jiange, Cangxi, Fucheng, Youxian, An, Santai, Yanting, Zitong, Beichuan, Pingwu, Jiangyou, Langzhong, Shimian, Lushan, Baoxing, Nanjiang, Wenchuan, Li, Mao, Songpa, Jiuzhaigou, Xiaojin, Heishui, Hanyuan, and Zhongjiang. Because there are large gaps in the data on tourism arrival and tourism receipt in Pengzhou, Hanyuan, and Zhongjiang, we select the other 36 counties for the case study. Source: http://www.gov.cn/zwgk/2008-09/23/content_1103686.htm.

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