Evaluating island tourism form the customer's perspective:
An analysis of online reviews

Maria Cristina de Souza Oliveira Rita

Thesis special presented for the fulfillment of the degree of Doctor of

Tourism Management

Supervisor:

Dr. Sérgio Moro, Assistant Professor, ISCTE-IUL,

Department of Information Science and Technology

December 2018

Evaluating island tourism form the customer's perspective:
An analysis of online reviews

Maria Cristina de Souza Oliveira Rita

Thesis specially presented for the fulfillment of the degree of

Doctor in Tourism Management

Jury:

Dr Maria de Fátima Ramalho Fernandes Salgueiro, Associate Professor, ISCTE -IUL;

Dr Maria Teresa Pinheiro Melo Borges Tiago, Assistant Professor, Universidade dos Açores

Dr Joaquim Gonçalves Antunes, Coordenating Professor, Instituto Politécnico de Viseu

Dr Nuno Miguel Fortes Fonseca Santos, Adjunct Professor Instituto Politécnico de Coimbra

Dr Antónia Jesus Henriques Correia, Full Professor, Universidade Europeia

Dr Sérgio Miguel Carneiro Moro, Assistant Professor, ISCTE – IUL

December 2018

ISCTE ◈ IUL
Instituto Universitário de Lisboa

Declaration of Honour

Thesis delivery

I, the undersigned, hereby declare:

- I am the exclusive author of the presented work, my work is original, and I used references and quoted all sources used.

- I authorize that my work be submitted to SafeAssign - plagiarism detection tool.

- I am aware that the practice of plagiarism, self-plagiarism and copying is an academic offence.

Maria Cristina de Souza Oliveira Rita

PhD in Tourism Management   Student Number 74808

mcsor@iscte-iul.pt

crisphdturismo@gmail.com

ISCTE-IUL, 28th December 2018

Signature

_____

References to Financing

Dedication

This thesis is dedicated to my always present mom Maria

and

to my beloved husband Paulo, without whom life would not have a meaning and

would not be a pleasant journey

Acknowledgments

Quote

"All our dreams can come true

if we have the courage to pursue them."

(Walt Disney – American entrepreneur)

Table of Contents

List of Tables

List of Figures

Page

List of Abbreviations

DTM – Document Term Matrix

INE – Instituto Nacional de Estatística

LDA – Latent Dirichlet Allocation

NTO – National Tourism Organization

SIDS – Small Island Developing States

TM – Text Mining

UGC – User Generated Content

UNCED - United Nations Conference on Environment and Development

UNDESA - United Nations Department of Economic and Social Affairs

UNWTO – United Nations World Tourism Organization

eWOM – electronic word-of-mouth

SM- Social Media

Abstract

Islands have been recognized as offering uniqueness to tourists visiting them as destinations. However, there is a gap in scientific literature using customer online reviews to assess tourism in islands. A critical literature review was applied in this study. This thesis develops a comprehensive review of the scientific literature addressing island tourism involving 395 articles published in 24 tourism and hospitality journals indexed in Scopus and belonging to quartiles 1 and 2 within a period of 18 years (from 2000 to 2017). A concept map based on the selected articles was elaborated including the analysis of 13 associated themes, constituting the first literature review to extensively map the research that has been conducted within the realm of tourism in islands.

The main components of tourist experiences in Island tourism based in social media were also identified by focusing on the two most important islands of the sun, Sal and Boa Vista (study 1)¸ and also for the two most important islands of the senses (study 2) Santo Antão and Fogo in Cape Verde, using both computer-based quantitative and narrative qualitative content analysis methods for data treatment of online reviews written by tourists who visited these islands. The first study addressed analysis of large quantity of data by extracting online reviews from TripAdvisor where the islands of the sun of Cape Verde were the target, namely Boa Vista and Sal. Text mining was applied to a large dataset. Results are reported from the perspectives of hotels, restaurants, and tourist attractions. In addition, a second study on the islands of the Senses, Santo Antão and Fogo researched the tourists' attractions most prominent themes. Results revealed 13 themes in Santo Antão and 9 themes in Fogo in description of performed tourist activities in these islands.

Keywords

Island Tourism; Small Island Developing States; Online Reviews; Text Mining, Social Media.

JEL Classification System

M31 Marketing

Z32 Tourism and Development

Resumo

As ilhas foram reconhecidas como oferecendo exclusividade aos turistas que as visitam como destinos. No entanto, existe uma lacuna na literatura científica usando revisões on-line de clientes para avaliar o turismo em ilhas. Uma revisão crítica da literatura foi aplicada neste estudo. Esta dissertação desenvolve uma revisão abrangente da literatura científica que aborda o turismo insular envolvendo 395 artigos publicados em 24 revistas de turismo e hotelaria indexadas na Scopus e pertencentes aos quartis 1 e 2, num período de 18 anos (de 2000 a 2017). Elaborou-se um mapa conceptual baseado nos artigos selecionados, incluindo a análise de 13 temas associados, constituindo a primeira revisão da literatura a mapear extensivamente as pesquisas realizadas no âmbito do turismo em ilhas.

Os principais componentes das experiências turísticas no turismo em ilhas baseados nas média sociais também foram identificados, concentrando-se nas duas ilhas mais importantes do sol, Sal e Boa Vista (estudo 1), e também para as duas ilhas mais importantes dos sentidos (estudo 2) Santo Antão e Fogo, em Cabo Verde, utilizando métodos de análise quantitativa e narrativa de conteúdo qualitativo, baseados em computador, para tratamento de dados de revisões online escritas por turistas que visitaram estas ilhas. O primeiro estudo abordou a análise de grande quantidade de dados através da extração de comentários online do TripAdvisor, onde as ilhas do sol de Cabo Verde foram objeto, nomeadamente as ilhas de Boa Vista e do Sal. A mineração de texto foi aplicada a um grande conjunto de dados. Os resultados são relatados a partir das perspetivas de hotéis, restaurantes e atrações turísticas. Além disso, um segundo estudo sobre as ilhas dos sentidos, Santo Antão e Fogo pesquisou as atrações turísticas como temas mais proeminentes. Os resultados revelaram 13 temas em Santo Antão e 9 temas na ilha do Fogo na descrição das atividades turísticas realizadas nestas ilhas.

Palavras-Chave

Turismo em Ilhas; Pequenos Estados Insulares em Desenvolvimento; Revisões Online; Mineração de Texto, Media Social

JEL Classification System

M31 Marketing

Z32 Tourism and Development

Graphical Abstract

Chapter I - Introduction

Tourism has become the largest sector in the world (UNWTO, 2017) showing many different facets and emphasizing an interdisciplinary approach whereby a wide range of disciplines meet and intersect (Darbellay & Stock, 2011; Echtner & Jamal, 1997).

Traditionally, academic research has heavily focused on destinations in mainland of continents (Sharpley, 2012) although a significant number of researchers have also paid attention to islands (Lim & Cooper, 2009). In fact, islands diversity and uniqueness (Moon & Han, 2018), as compared to mainland regions has posed various challenges and brought them to light in terms of relevance in this industry.

Islands' main resource to support its economy is their coastline (Jacob et al, 2010) that can also be complemented by other physical characteristics, like mountains and volcanoes. However, weather, insularity, distance (Conlin and Baum, 1995) and good infrastructures increases the desire for visiting. Islands as touristic destination has become very attractive (Lockhart, 1997, p.3).

For the choice of a tourism destination, the potential tourist's journey happens even before they reach destination. All the pre-conceptions, image and ideas are set with what they imagine together with online reviews from other customers past experience that assume the role of eWOM and peer's previous experiences (Neuhofen, Buhalis and Lookin, 2012) therefore, social media platforms are determinant as an information sources to tourists (Gretzel & Yoo, 2008) to influence tourists' final decision.

The advent of Web 2.0 opened up doors for a more interactive participation of the public with the development of social media (Neuhofer & Buhalis & Ladkin, 2014). Tourism was the pioneer industry to implement a popular format of social media on a worldwide scale using online review platforms (Moro & Rita, 2018). This carried with it a massive, fast content generated by users, known as user generated content (UGC). This content is also known as word-of-mouth (Kaplan & Haenlein, 2010), in this case, electronic word-of-mouth (eWOM), and has been on the map of potential tourists when they are faced with the need of going through the consumer decision making process, mainly when performing information search and evaluating

alternatives to decide what to purchase, where to go, stay, eat, among other issues (Taheri et al, 2019; Mariani et al., 2019). This search leads to websites such as TripAdvisor (Moro, Rita, Oliveira, Batista & Ribeiro, 2018) that are at the center of consumers attention when they have to make travel decisions. Trip Advisor in one of the most recognized, where users are encouraged to write their opinions about a destination they have visited (Sigala, 2015).

Schuckert, Liu & Law (2015) defends the importance that online reviews written after customers experience have nowadays. There is a number of research that has been undertaken in the tourism and hospitality areas on customers' experience expressed as electronic word-of-mouth (eWOM) in online reviews that show their strikingness and relevant influence in the decision making process of potential new tourists (Taheri et al. 2019), as well as studies that refer the antecedents and consequences of eWOM leveraging online reviews. (Ayeh, Au, & Law, 2013; Cantallops & Salvi, 2014; Mariani, Baggio, Buhalis, & Longhi, 2014; Baka, 2016; Banerjee & Chua, 2016; Casalo, Flavian, Guinaliu, & Ekinci, 2015; Filieri, 2016; Kwok, Xie, & Richards, 2017; Moro, Rita & Coelho, 2017). According to Ye et al (2011) the online reviews generated on a hotel booking website were considered a proxy to the significant increase impact they had on hotels' online sales. Likewise, Moro et al. (2018) identified online reviews as a proxy of customer experience and tourist satisfaction.

More recently, Taheri et al. (2019) identified that there I still a difference between online reviews posted from a mobile or from a desktop device both in terms of features and distribution and defends that mobile eWOM still needs to be more researched as destinations.

Malhotra (2018) points out that traditional survey-based questionnaires to assess consumer perceptions bring with them self-report bias since respondents tend to filter their answers to the questions posed to them. Hence, it is a good opportunity to go further and use online reviews (Rese, Schreiber & Baier, 2014). Interestingly, there is a research gap related with user generating content in the format of online reviews and tourism in islands

Being tourism an especially important sector for the economy and job creation of small islands developing states (SIDS)(Scheyvens & Momsen 2008) this work attempts at identifying, collecting and understanding tourists' opinions by analysing authentic and real content (user

generated content) created by the consumers who experienced Cape Verde as a touristic destinations.

Therefore, this research attempts at contributing primarily with Cape Verde's NTO, to improve destination image but it also attempts at contributing with products, service providers and also the local community by identifying topics that are most discussed on the destination and as so to increase customer's knowledge to help on the adoption of a more realistic decision making to improve, review and adapt products and services that have been offered.

This study's approach starts by applying a critical literature review on island tourism aiming to answer to the research questions posted: RQ1- what the main fields and currents of research in island tourism are; RQ2- what gap can be identified and covered in this study by empirical research, using UGC. These research questions are dealt with and answered in chapter 2 the thesis and they will be addressed again in the conclusion chapter.

 Thus, it starts its development with a chapter reporting a review of the scientific literature on island tourism (chapter 2). The hospitality and tourism complete database from EBSCO Information services was chosen since it is considered the most comprehensive one in hospitality and tourism. Journals indexed in Scopus Quartiles 1 and 2 (Q1 and Q2) in its Scimago journal and country rank (scimagojr.com) subject category of "tourism, leisure and hospitality management" were pre-selected. A search was performed to extract all the articles published in the Q1 and Q2 journals on "island tourism" from 2000 to 2017 generating a list of 395 papers.

Considering that in the initial literature review the customer journey themes seems to be less explored, the two studies developed attempted to through collection and analyzes of UGC regarding tourists' experiences in Small Island Developing State (SIDS), contribute to fulfil this gap.

Thus, the two empirical studies are reported next in chapters 3 and 4 with the following research questions that are dealt with and answered throughout the thesis and addressed again in the conclusion chapter: RQ3 what are the customers' experiences shared by tourists after visiting hotels, restaurants and tourist's attractions the islands of the sun? RQ4 What are the customers' experiences shared by tourists after visiting the attractions islands of the senses as destinations in Cape Verde? RQ5 what were the senses expressed in the topics? RQ6 Are the above

identified features in alignment with Cape Verde National Tourist Office's online marketing communication?

For both studies we searched and collected secondary date in the most known eWOM platform, TripAdvisor, the largest user generated content (UGC) online review travel and tourism website in the world (Sigala, 2015).

In chapter 3 a large data was collected by web scraping online reviews from TripAdvisor with regard to the islands of the sun of Cabo Verde, namely Boa Vista and Sal. In this study we analyzed tourist attractions, hotels and restaurants. A total of 37,962 reviews were collected and were subjected to a text mining analysis with R software which allowed to consider word frequencies and the identification of the most relevant topics using Latent Dirichlet Allocation (LDA).

In chapter 4, for this study that a total of 472 web reviews were extracted on the two most important islands of the senses of Cabo Verde, Santo Antão and Fogo focusing on their tourist attractions. The content analysis that was implemented allowed to assess customer experience since Leximancer was used to identify semantic patterns, generate concept maps and characterize the most common themes used by tourists for each of the two islands and check how the NTO's promotions strategies are aligned with customer's real experience.

Finally, this thesis addresses some final considerations in chapter 5, with a summary of main results, research contributions, managerial implications and recommendations, limitations of the research and suggestions future research.

Chapter II - A Literature Analysis on Island Tourism

1. Introduction

Islands have unique characteristics that differentiate them from other territories based in mainland. Due to the shortage of resources in islands, development projects need to consider their sustainability dimension as it assumes an even greater importance (Dodds & Graci, 2012)

Tourism in islands is often perceived as exclusive and charming whereby island destinations offer frequently unique and different experiences as compared to continental or mainland tourism, thus making tourism in islands quite attractive (Chang, 1999; Nunkoo & Gursoy, 2012). Indeed, increasing number of tourists look for this type of destination. It is crucial to study not only what attracts tourists to island destinations but also what are the scarcity resources intrinsic to these destinations in order to be able to follow a rationale for creating a value proposition to tourism in islands.

Research on island tourism have focused on: individual islands, such as Cyprus (Kilic and Okumus, 2005), Mauritius (Khadaroo and Seetanah, 2007), Barbados (Cashman and Moore, 2012) and Aruba (Rivera, Croes and Zhong, 2016); archipelagos, like the Canary islands (Santana-Gallego, Ledesma-Rodríguez and Pérez-Rodríguez, 2011), Madeira (Almeida, Correia and Pimpão, 2014) and Azores (Moniz, 2012); regions (Park, 2011), such as Asia/Pacific, the Caribbean, and Europe; and others have been purely theoretical (Hall, 2010; Northcote and Macbeth, 2006). Currently, there is no holistic view about tourism in islands which constitutes a research gap in the literature on island tourism.

Historically speaking, islands used to economically support themselves mostly through agriculture, fishing and sometimes handicraft (Markwick, 2001). This limitation of resources led to put more pressure on tourism. Hence, tourism came into the scene to contribute to the island development, even though sometimes local communities found tourism disrupting and it was also perceived negatively by them (Ko & Stewart, 2002). From a business diversification perspective, increase of employment and infrastructure improvement, the socio-economic pillar of many islands has been going for decades through an evolution and development driven by the new dominant role of tourism (Sharpley, 2003).

However, there is the other side of the coin that is related to the pitfalls or negative impacts of tourism, namely the wearing out that island destinations suffer from their limited resources and fragile environment. These sort of consequences attached to tourism development have been mentioned by many authors such as Harrison (2001), Lockhart & Drakaris-Smith (1997) and Wrangham (1999). In addition, if one considers lifecycle models of development (e.g. Butler, 1980; Forster, 1964; Van der Borg, 1991) these cannot be applied to tourism in a straightforward way as there is a number of spatial scales and multidimensional products with different lifecycles. Moreover, sustainability criteria analysis is rarely considered or integrated in the development options of interest groups (Briassoulis, 2003).

Tourism in island is quite different from tourism in mainland territories. In general, islands are characterized by relative sparseness (Mitchell & Reid, 2001) such as in lodging, food and transportation which usually makes them more expensive than they would be at a mainland destination. However, island destinations are normally attractive based on weather, climate and scenery that tends to offer striking and desirable contrast to the tourist´s everyday location. As a consequence, the tension between attractiveness and scarcity (Klint et al., 2012) for each dimension of the tourist experience (e.g., specific tourist attractions) creates a value proposition that ends up influencing customer satisfaction. Indeed, customers perceive the value on some scale between satisfactory and unsatisfactory.

Individual islands have been studied to address a number of relevant issues. Following the recognition of limited literature on productivity management in small island hotels, Kilic and Okumus (2005) developed an empirical research study to identify influencing factors from the perspective of hotel managers in Cyprus. Interestingly, respondents showed a narrow view of productivity based on an input-oriented approach including staff recruitment and training, meeting guest expectations and service quality, but failing to extend their view to output-oriented productivity management strategies involving technology, marketing and forecasting. Other authors studied the impact of foreign direct investment (FDI) on economic growth of islands, such as Mauritius (Khadaroo and Seetanah, 2007), comparing FDI with both domestic private and public investment.

Many small island developing states (SIDS) have shifted their economies towards the tourism industry. Since sustainability of tourism can be potentially affected by climate change, Cashman and Moore (2012) examined this issue in Barbados. Indeed, this SIDS might be

negatively affected by an increase in conscious of tourists from its long-haul source markets of their carbon foot print. Hotels in the island are also likely to have to put up with increasing operating and cooling costs as well as higher insurance premiums as a consequence of climate change impacts. On another perspective, due to the strong increase in the use of mobile devices, Rivera, Croes and Zhong, 2016) set out to investigate tourists´ use preferences toward mobile applications on a small island destination, specifically Aruba. Type of content information, coupons and location awareness were found to be the most important attributes.

As a whole, archipelagos have also been researched from the point of view of tourism in islands. An example is the study conducted by Santana-Gallego, Ledesma-Rodríguez and Pérez-Rodríguez (2011) who studied the relationship between tourism and international trade in small islands taking the specific case of the Canary Islands. Since rural tourism has been communicated as a counterpoint to mass tourism in island destinations, Almeida, Correia and Pimpão decided to segment and profile rural tourists in Madeira. Based on benefits sought, these authors identified four clusters: relaxer cluster, rural segment, family-oriented cluster and "want it all" segment. Furthermore, considering the importance of repeat visits, Moniz (2012) analyzed the underlying reasons behind precisely repeat visits to the Azores archipelago, finding overall satisfaction with the destination as well as specific satisfaction with destination attributes as paramount variables supporting the repeat tourist.

Tourist experience has been acknowledge as a very important research area in studying consumer behavior. Quan and Wang (2004) investigated food experience in tourism, and stated that eating, sleeping, transportation and other activities performed by tourists need to be clearly understood. Restaurants, hotels, attractions meet these requirements with a likelihood of being supporting consumer experience or even being peak tourist experiences. In addition, whereas Mossberg (2007) argued that some important factors influence tourists´ experiences, such as personnel, other tourists and physical environment, Larsen (2007) reviewed both tourism and psychological literature and stressed that tourist experiences are influenced by expectancies and events, thus following a cognitive approach to the subject.

According to Litvin, Goldsmith and Pan (2008), word of mouth (WOM) is considered one of the most important information sources when a consumer is making a purchase decision, being particularly relevant in the tourism sector since its intangibility make it difficult to evaluate services prior to their consumption. The digitalization of WOM, turning it into eWOM, brings

new challenges to tourism marketing due to its large-scale and new ways of identifying, analyzing and interpreting its influence. Following this line of reasoning, Cantallops and Salvi (2014) later analyzed both review-generating factors, i.e. which factors lead tourists to write reviews, and impacts of eWOM from consumer as well as company perspectives.

The influence of online user-generated reviews in the tourism industry constituted the aim of an empirical study conducted by Ye, Law, Gu and Chen (2011) who were able to identify the impact of online user-generated reviews on business performance by using data extracted from a major online Chinese travel agency. These authors found out that travel reviews had a significant impact on online sales since an increase of just 10 percent in traveler review ratings led to an increase of online bookings of over five percent. Furthermore, online reviews are considered as a proxy of customer experience and tourist satisfaction (Moro, Rita, Oliveira, Batista and Ribeiro, 2018).

There is an enlarged body and increasing number of scientific publications on island tourism published in top-ranked journals as so the need to identify, review and summarize comprehensive information throughout the literature in a format that compares scope, themes and methods. As so it is important to bring to academia a research contribution focused on the identification of convergent and divergent characteristics between several geographies and regions in island tourism, for these reasons the following literature analysis was performed.

The aim of this chapter is to present a state-of-the-art review of the research done on island tourism in order to identify what insights does current literature offer regarding this topic. As so this study aims at answering the narrative, themes and research focus and currents of previous research in island tourism and identify the gaps so that it can be covered in this study by empirical research, using UGC.

The structure of this chapter is as follows: a theoretical background from literature review is provided before methodological information is given with regard to the data collection procedure used to gather the 395 articles from Scopus quartiles 1 and 2 scientific journals within the Tourism, Leisure and Hospitality Management category; results are then presented and discussed with main conclusions and future research directions being addressed in the last section of this chapter.

2. Methodology

Due to the increasing amount of new manuscripts published in scientific journals, literature reviews are now being published with increasing frequency in many different areas in tourism, such as in outbound tourism (Keating & Kriz, 2008), sustainable tourism (Carter et al., 2015), adventure tourism (Cheng et al., 2016), sports tourism (Martin & Assenov, 2012; Weed, 2006), tourism networks (van der Zee & Vanneste, 2015).

This study presents the status of research on island tourism. A hybrid design (e.g., Tsang & Hsu, 2011) was adopted whereby both narrative (Ryan et al., 2011) and quantitative review (Yang et al., 2017) methods were applied, complemented by semantic network analysis (e.g., Xiang et al., 2009). This approach allowed to identify the geographical spread of the papers by author, year, destination of interest and the research methods used as well as data analysis techniques and primary themes areas. The narrative discussion within each of the topical areas indicates research production in that area, explores merging themes and methods, and identifies knowledge gaps for future research directions. Finally, the semantic network analysis further explores connections among key theme areas. Themes and keywords were also analyzed using Leximancer, a software program that automatically extracts semantic networks from qualitative data, identifying the connections among themes and concepts.

The selected database was the "Hospitality & Tourism Complete" from EBSCO Information Services. This is a full-text database that is considered the most comprehensive one available on the topic and a unique resource for information covering all areas of hospitality and tourism. The "Hospitality & Tourism Complete" full database includes nearly 500 full-text publications and nearly 1.4 million records.

The data collection consisted in developing a logical expression. In our study, the search used included: island tourism. This keyword would limit the search results to only those documents containing the two keywords together. Hence, all published articles that included "island tourism" either in their title, abstract or keywords were selected, taking into account that they had to be published within the last eighteen years, between 2000 and 2017 (Appendix).

Twenty-four journals in tourism indexed in Scopus as Q1 or Q2 were found to have published a total of 395 articles on island tourism published from 2000 to December 2017. A single

publisher, Taylor & Francis, accounts for almost half of those journals (11). This is followed by Sage with one-fourth of journals (6) and Elsevier with one-eight (3) Moreover, the 395 articles appearing in journals by the identified six publishers tend to be close to their respective share in terms of journals with a striking exception of Elsevier that achieves twice as much share in articles published as in journals, respectively 24.8% versus 12.5%. (Table1).

Table 1. Main selected Publishers

Publishers	Journals		Papers	
	N	%	N	%
Taylor & Francis	11	45.8%	169	42.8%
Sage	6	25.0%	83	21.0%
Elsevier	3	12.5%	98	24.8%
Emerald	2	8.3%	13	3.3%
Wiley	1	4.2%	22	5.6%
Cognizant	1	4.2%	10	2.5%
	24	100.0%	395	100.0%

Source: Own Elaboration

3. **Results and Discussion**

3.1. Descriptive analysis

This descriptive analysis includes an evaluation of the number of articles on island tourism published by journals and authors, keywords most used in research, islands, countries and regions most studied as well as research methods used.

3.1.1. Publications by Journals and Authors

Sixty-six of the 395 papers were published in Tourism Management, the journal that by far has addressed more island tourism, thirty-seven in the Journal of Sustainable Tourism, thirty–three in Asia Pacific Journal of Tourism Research, thirty-one in Tourism Economics, and twenty-nine in Current Issues in Tourism and Tourism Geographies, respectively (Table 2)

Table 2. Number of articles by Journal and Period

Journal	2000-2005	2006-2011	2012-2017	Total	Quartile	SJR	#
Tourism Management	13	20	33	66	Q1	2.58	2
Journal of Sustainable Tourism	6	10	21	37	Q1	1.687	8
Asia Pacific Journal of Tourism Research	3	20	10	33	Q2	0.726	25
Tourism Economics	4	12	15	31	Q2	0.624	28
Current Issues in Tourism	7	8	14	29	Q1	1.232	14
Tourism Geographies	12	7	10	29	Q1	1.112	17
Annals of Tourism Research	2	13	11	26	Q1	2.205	3
International Journal of Tourism Research	5	5	12	22	Q1	1.144	16
Journal of Travel Research	10	5	7	22	Q1	3.04	1
Journal of Travel and Tourism Marketing	4	9	5	18	Q1	1.179	15
Tourism Analysis	0	4	6	10	Q2	0.435	41
Tourist Studies	2	2	5	9	Q2	0.827	22
Journal of Hospitality and Tourism Research	1	1	6	8	Q1	1.553	10
International Journal of Contemporary Hospitality Management	2	2	3	7	Q1	1.745	7
Journal of Vacation Marketing	2	4	1	7	Q2	0.76	24

Cornell Hospitality Quarterly	5	1	0	6	Q1	1,996	4
International Journal of Hospitality Management	1	2	3	6	Q1	1.056	5
Journal of Tourism Communication and Change	0	2	4	6	Q2	0.476	35
Tourism Review	0	1	5	6	Q2	0.476	34
International Journal of Heritage Studies	1	4	0	5	Q2	0.481	33
Journal of Hospitality Marketing and Management	0	4	1	5	Q1	1.556	9
Journal of Sports & Tourism	1	1	1	3	Q2	0.461	38
International Journal of Hospitality and Tourism Administration	0	1	1	2	Q2	0.422	42
Scandinavian Journal of Hospitality and Tourism	0	0	2	2	Q2	0.484	32
Total	**81**	**138**	**176**	**395**			

Source: Own elaboration based on www.scimagojr.com

By far the most prolific author publishing articles in top Q1 and Q2 Scopus indexed scientific journals on island tourism has been Professor Robertico Croes (14 papers) from the University of Central Florida, Orlando, USA (Table 3). He is followed by Konstantinos Andriotis (9) from Middlesex University, UK, Jorge Ridderstaat (6) also from the University of Central Florida and Zibin Song (6) from Hainan University in China. The list of scholars who published at least 5 papers is closed by Chris Ryan (5) from the University of Waikato, New Zealand, and Haywantee Ramkissoon (5) from Curtin University, Australia.

Table 3. Most Productive Researchers and Number of Publications (from 2000 to 2017)

Author	No of Papers
Robertico Croes	14
Konstantinos Andriotis	9
Jorge Ridderstaat	6
Zibin Song	6
Chris Ryan	5
Haywantee Ramkissoon	5
Bill Bramwell	4
Fevzi Okumus	4
Muzaffer Uysal	4
Peter Nijkamp	4
Philip Feifan Xie	4
Prakash K. Chathoth	4
Richard Sharpley	4
Rob Law	4
Robin Nunkoo	4
Winston Moore	4
Brendan Canavan	3
Bruce Prideaux	3
David Harrison	3
Dogan Gursoy	3
Girish Prayag	3
Jo Ann Ho	3
Kei Wei Chia	3
Mark P. Hampton	3
Michael McAleer	3
Noel Scott	3
Riaz Shareef	3
Robert J. Johnston	3
Siew Imm Ng	3
Sridar Ramachandran	3
Tien-Ming Cheng	3
Timoth J. Tyrrell	3

Source: Own Elaboration

3.1.2. Keywords

By analyzing the most frequently used keywords among the 395 journal articles focused on island tourism, 21 keywords were used in over 100 papers, leading to the word cloud presented in figure 1, and frequencies shown in table 4.

As expected, tourism and island were the two most frequently used keywords in the papers. Studies on islands as tourist destinations (Del Chiappa & Presenza, 2013), tourism development (Seetanah & Sannassee, 2015), and sustainable tourism (Canavan, 2014) were the focus of many researchers. Special attention was also given to small islands (Rivera, Croes & Zhong, 2016) due to their fragilities, scarce resources and in many cases high dependence from the tourism industry. Although many studies are usually taking the tourist perspective, a significant number were also concerned with the host community (Hwang, Stewart & Ko, 2012) and residents' (Nunkoo & Gursoy, 2012) point of view.

Figure 1. Word Cloud with Most Frequent Keywords

Source: Own Elaboration

The management (Northcote & Macbeth, 2006) and marketing (Park, Hsieh & McNally, 2010) disciplines were brought to the table due to their recognized relevance for tourism in islands.

Moreover, macro variables such as economic (Seetanah, 2011), cultural/heritage (Buch, Milne & Dickson, 2011; Ryan, Chaozhi & Zeng, 2011), social (Fallon, 2004), and environmental (Cheng & Wu, 2015) factors and their respective impacts were also extensively researched. Furthermore, theory building and conceptual model development (Tsaur & Wang, 2007) were addressed in these studies as well as an emphasis placed in investigating tourist satisfaction.

Table 4. Word cloud frequencies (>100)

Words	Frequency
tourism	336
island	318
destination	297
development	277
sustainable	259
small	241
tourist	226
community	212
management	199
marketing	187
economic	177
cultural	167
model	158
theory	150
impacts	143
social	136
environmental	124
analysis	114
heritage	109
resident	105
satisfaction	101

Source: Own elaboration

3.1.3. Islands, Countries and Regions

The top researched islands were Cyprus (25), Mauritius (20), Aruba (19) and Barbados (18) (Table 5). Of the top studied islands, most of them are located in Latin America and the Caribbean (6 islands), Europe (4) and Oceania (3), followed by Asia (2) and Africa (2). Despite Oceania having numerous islands, the Caribbean has been more studied. This might be due to population size, tourism being more developed for longer time, better accessibility (e.g., more flights) and closeness to main generating markets.

Table 5. Main islands explored in studies reviewed

Islands	Nº Articles
Cyprus	25
Mauritius	20
Aruba	19
Barbados	18
Canary Islands	17
Fiji	14
Jamaica	13
Jeju Island	13
New Zealand	13
Crete	12
Hainan Island	12
Vanuatu	10
Bahamas	10
Malta	9
Cuba	8
Grenada	8
Seychelles	8

Source: Own Elaboration

China and the USA are the countries that aggregate most studies in island tourism (Table 6), 27 each, followed by European countries such as Cyprus (25), Spain (24), Greece (22), and the UK (22). The top spot for both China and the United States of America is likely to be due to a high number of researchers in tourism from those two countries.

Table 6. Main Countries explored in studies reviewed

Country	Nº Articles
China	27
USA	27
Cyprus	25
Spain	24
Greece	22
UK	22
New Zealand	21
Mauritius	20
Aruba	19
Australia	18
Barbados	18
Fiji	14
South Korea	14
Taiwan	14
Jamaica	13
Indonesia	12
Canada	11
Thailand	11
Bahamas	10
Vanuatu	10

Source: Own elaboration

The majority of the studies have researched islands in regions exhibiting higher tourism development located in the Latin America and Caribbean region as well as Europe, followed

by Asian islands, and Oceania (Table 7). Comparatively, Africa and North America have a much less number of papers studying tourism in their islands.

Table 7. Regions explored in studies reviewed

Region	Nº Articles
LA & Caribbean	150
Europe	145
Asia	128
Oceania	100
Africa	54
North America	40

Source: Own Elaboration

3.1.4. Small Island Developing States

Jafari (1974) stated that at that time almost every nation in the world realized the potential and importance of tourism as an economic and prosperous industry. Although there is a number of well established, fully functioning and popular tourist islands in the world, such as Honolulu, Santorini, Crete, Cyprus, Capri, Bora Bora, Bali, Phuket, Cozumel, Oahu and Kauai, there is also a number of small islands that are still going through development. Small Island Developing States (SIDS) were first recognized as a distinct group of developing countries at the United Nations Conference on Environment and Development in June 1992 (UNCED, 1992). A list of small island developing states divided by geographic regions were extracted from the United Nations Department of Economic and Social Affairs (UNDESA), Division for Sustainable Development Goals website and can be seen in table 8 and figure 2:

https://sustainabledevelopment.un.org/topics/sids/list

Table 8. Small Island Developing States (28)

Africa (6)
Cabo Verde; Comoros; Maldives; Mauritius; São Tomé e Príncipe; Seychelles
Caribbean (10)
Antigua and Barbuda; Bahamas; Barbados; Dominica; Grenada; Jamaica; Saint Kitts and Nevis; Saint Lucia; Saint Vincent and the Grenadines; Trinidad & Tobago
Oceania (12)
Fiji; Kiribati; Marshall Islands; Micronesia (Federated States of); Nauru; Palau; Samoa; Solomon Islands; Timor-Leste; Tonga; Tuvalu; Vanuatu

Figure 2. Small Island Developing States
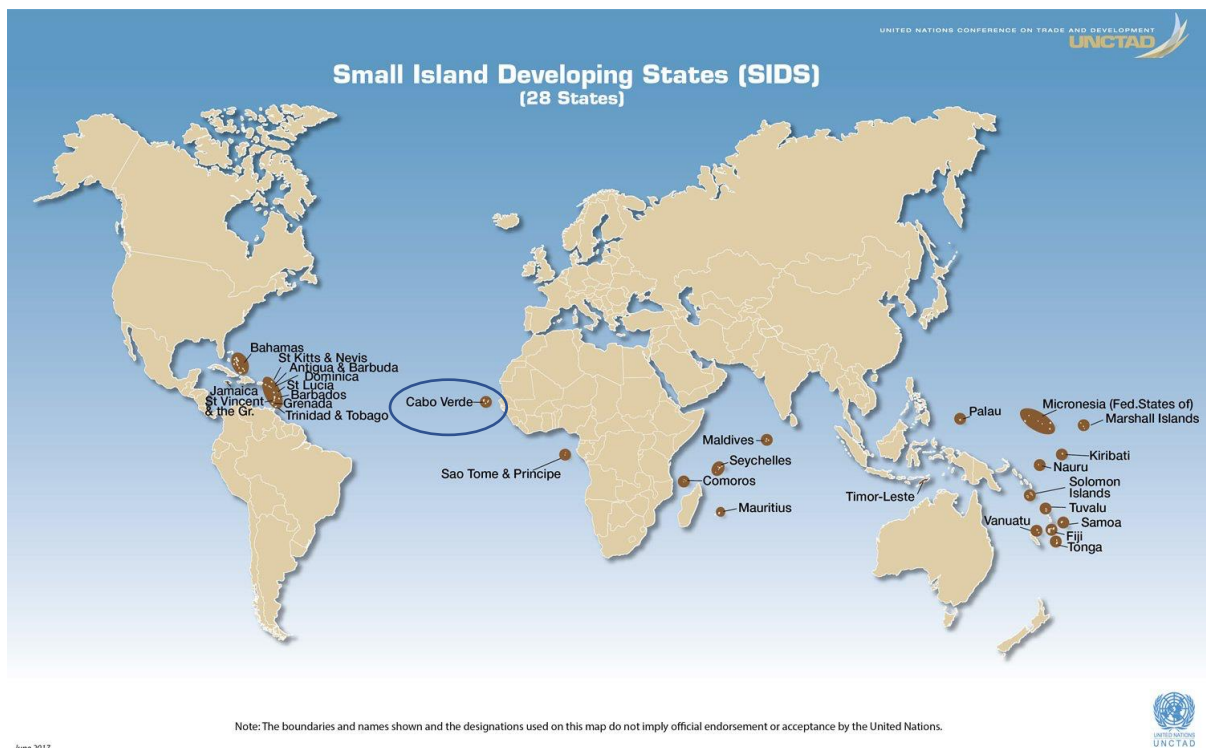
Although islands suffer from general scarcity, as mentioned before, the idea of out of reach, difficult access make it an attractive and exclusive destination. As so islands are becoming an even more attractive destination. The number of international tourists visiting SIDS has increased almost 300% in the decade up to 2011, from over 12 million to reach 41 million. (UNWTO, 2012). The UNWTO in its 2012 world report (Rio +20) as well as later (UNWTO, 2014) explained that international tourism is an essential economic source that promotes growth, foreign exchange, income redistribution, poverty alleviation and job opportunities in Small Island Developing States (SIDS).

As they are becoming more known in the globe, SIDS strategic development needs to ensure their sustainable growth. UNWTO (2012) argued that tourism development planned and managed in a sustainable way would bring huge economic benefits as well as development to small islands. This report also stated that tourism had already helped Cabo Verde and the Maldives to move up position from their previous category of least developed countries. They have a number of challenges to deal with, whether environmental and climate change, water shortage, natural disasters, external economic shocks or dependency of imports. To support their development, international summits and conferences were set up. Furthermore, according to UNTWO (2014), the Barbados Program of Action was developed to assist SIDS in their sustainable development efforts. Also, an action platform was developed to help and monitor implementation of pledges and commitments of partnerships.

The 2030 United Nations agenda is a balanced economic, social and environmental plan of action for sustainable development where a worldwide collaborative partnership was established. Among other things the plan seeks to eradicate poverty as the basis for sustainable development. All countries and stakeholders will make part of it in a collaborative partnership. They will give special attention to Small Islands Developing States in pursuing sustainable development
 (https://sustainabledevelopment.un.org/post2015/transformingourworld).

Of the most studied islands (17) in tourism (table 5) less than half (8) are small island developing states (SIDS). Moreover, within the top 20 most research countries (table 6) on island tourism less than a third (6) are focused on SIDS, more specifically: Bahamas, Barbados and Jamaica (Caribbean); Fiji and Vanuatu (Oceania); Mauritius (Africa). Grenada (Caribbean) and Seychelles (Africa) are only shown in the list of islands.

3.1.5. Research Methods

The extracted journal articles were analyzed also with regard to research methods used, more specifically in terms of targeted respondents, research design and sample size represented in tables 9, 10, 11, 12.

In terms of type of respondents who participated in previous studies, forty percent of respondents were tourists (Table 9), managers/businesses accounted for nearly sixteen percent, community residents for almost fourteen percent, and a variety of other respondent types (including staff, government officials, experts) achieved twelve percent of the total. Interestingly, nearly twenty percent of the papers used multiple stakeholders when collecting primary data.

Table 9. Respondent Types

Respondent Type	Nº papers	Percentage
tourists	109	39.9%
managers/business	43	15.8%
residents	37	13.6%
staff	9	3.3%
government agencies	5	1.8%
taxi drivers	3	1.1%
students	6	2.2%
Other stakeholders	7	2.6%
Experts	3	1.1%
Multiple	51	18.7%
Total	273	100.0%
Not Available	66	
Primary Data	339	
Secondary Data or Conceptual	56	
Total Nº Papers	**395**	

Source: Own Elaboration

More than 85% of the articles collected primary data, nearly 10% used secondary data, and about 5% were conceptual papers (Table 10). Within the manuscripts that included primary data, almost 60% used a quantitative research design (dominated by surveys), one-third followed a qualitative approach (in-depth interviews, focus groups) and close to 10% considered a mixed research strategy.

Table 10. Research Designs in Publications Reviewed

Research Design	N° papers	Percentage
Primary Data	**339**	**85.8%**
Qualitative	112	33.0%
Quantitative	194	57.2%
Mixed	33	9.7%
Secondary Data	**37**	**9.4%**
Conceptual Paper	**19**	**4.8%**
Total Nº Papers	**395**	**100.0%**

Source: Own elaboration

Of the 194 quantitative studies, 137 identified the size of their respective samples (Table 11). Only one-fourth (25.5%) of quantitative studies had smaller sample sizes of less than 200 respondents, over forty percent (42.3%) used samples of between 201 and 500, nearly twenty percent (19.0%) considered 501-1000 respondents, and still thirteen percent (13.1%) used large sample sizes of more than 1000 subjects.

Table 11. Quantitative Studies (Sample Size)

Sample Size (quantitative)	Nº papers	Percentage
<=100	14	10.2%
101-200	21	15.3%
201-300	19	13.9%
301-400	24	17.5%
401-500	15	10.9%
501-1000	26	19.0%
>1000	18	13.1%
Total	**137**	**100.0%**
Not Available	57	
Quantitative	**194**	

Source: Own Elaboration

With regards to qualitative studies, of the identified 112 papers, 69 reported their sample size (Table 12). More than half (56.5%) used samples of between 21 and 50 subjects, more specifically interviewees or focus group members. One-fourth (24.6%) used smaller samples of 20 or less participants, and close to one-fifth (18.8%) considered larger samples of more than 50 subjects.

Table 12. Qualitative Studies (Sample Size)

Sample Size (qualitative)	Nº papers	Percentage
<=20	17	24.6%
20-50	39	56.5%
>50	13	18.8%
Total	**69**	**100.0%**
Not Available	43	
Qualitative	**112**	

Source: Own Elaboration

3.2. Semantic Analysis

The semantic analysis using Leximancer was performed to generate a concept map with themes and concepts associated with scientific research on island tourism Leximancer (a software specifically developed for textual content analysis) revealed that the main studied themes were: destination, development, tourists impacts, industry, visitors, cultural, management, experience, policy, hotel (Figure 3). The concept map shows a visual display of the concepts that appear most frequently in the text and their relationships to each other. The size of a concept´s dot is a reflection of its connectivity with other concepts in the map. Concepts appearing together often in the same pieces of text are clustered into higher-level "themes" to aid interpretation and are shown in colored circles on the map. Themes are mapped to indicate their importance, with hot colors (red, orange) denoting the most important themes while cool colors (blue, green) denoting the less important ones. Each theme is given a name according to the most connected concepts within that circle.

3.2.1. Tourism

The first theme, "Tourism" (1,161 hits), includes the concepts tourism (relevance: 100%), island (relevance: 40%), and environmental (relevance: 5%), as shown in table 13.

Small islands may suffer from diverse negative environmental consequences of tourism decline, even if they successfully achieve diversification into other industries, leading to feelings of isolation and loss of local attractiveness by residents (Canavan, 2014). Environment concerns have also been the focus of a study by Cheng and Wu (2015) who developed an integrated model including environmental knowledge, environmental sensitivity, place attachment and environmental responsible behavior. When tourists show higher levels of environmental knowledge, they usually portray stronger environmental sensitivity, place attachment and demonstrate also stronger environmentally responsible behavior. Graci (2013) explored the implementation of a multi-stakeholder partnership which illustrated a successful collaboration that could be further applied in order to generate the implementation of innovative environmental-friendly initiatives in island tourism. In addition, many small islands exhibit fragile environments and marginal economies that enhance the importance of developing tourism as an important economic activity. Thus, their geographical and environmental limitations foster the need to develop and manage tourism in such a way as to explore potential

strategies to promote environment-oriented tourism (Kokkranikal, McLellan and Baum, 2003). Yet other studies address the environmental impact of island tourism using ecological footprint indicators (Martín-Cejas and Sánchez, 2010).

3.2.2. Destination

The theme "destination" (476 hits) encompasses the concepts destination (28%), relationship (7%), international (5%), different (6%), and marketing (5%).

Managing islands as tourist destinations requires the establishment of relationships between both public and private local stakeholders. Del Chiappa and Presenza (2013) examined tourism destinations from a network perspective, measuring levels of intensity, collaboration and integration in the relationships between stakeholders, and recommending to destination marketers and policy makers to conduct internal marketing and branding operations. Other types of relationships were investigated by Santana-Gallego, Ledesma-Rodríguez and Pérez-Rodríguez (2011), specifically the relationships between international trade and tourism in small island regions and found that whereas in the short-term the link is mainly based in the trade generated by tourist arrivals, in the long-run bidirectional relationships exist between tourism and trade. Park, Hsieh and McNally (2010) identified four motivational factors for international island tourism, namely experience, facilities and services, natural resources and special events, and also found that marketing drivers are likely to moderate the effect of motivation on trip duration and group size.

Figure 3. Island Tourism Concept Map and Themes (based on 395 abstracts)

Theme	Hits
tourism	1161
destination	476
development	409
tourists	373
impacts	368
industry	216
visitors	130
cultural	115
management	105
experience	92
policy	73
hotel	52
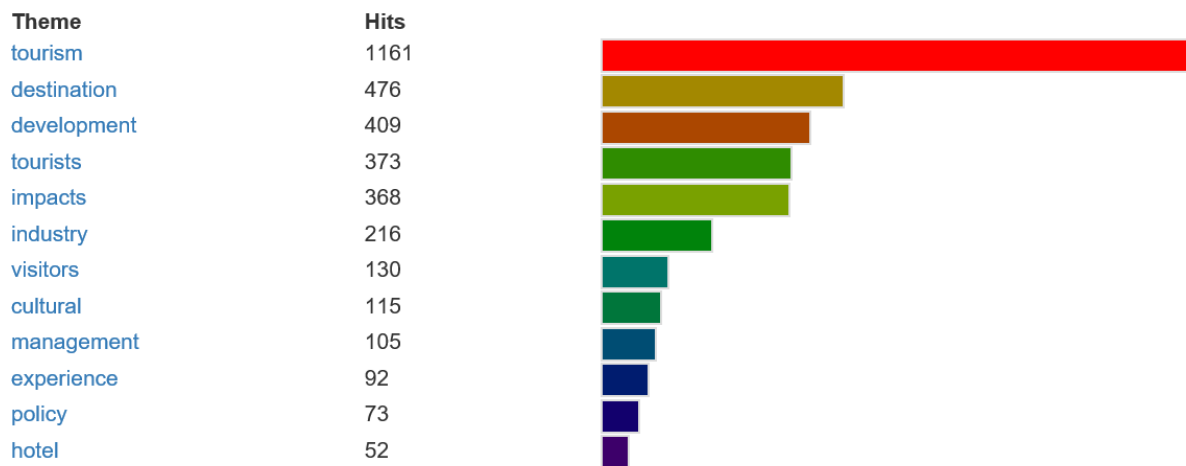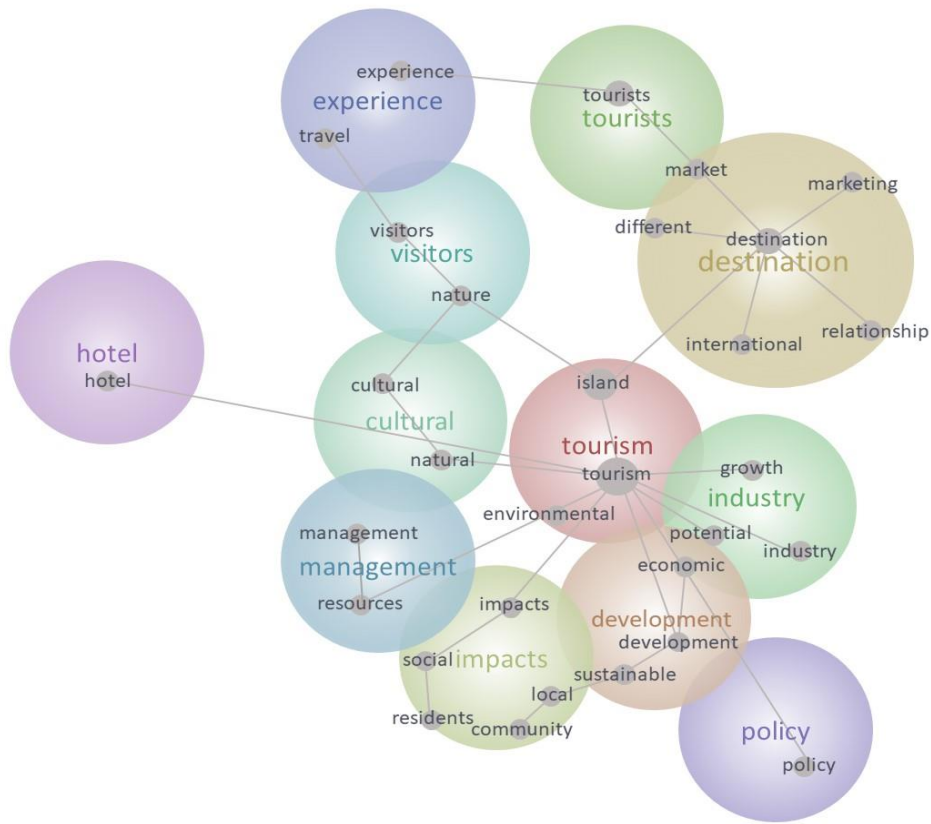
Source: Own Elaboration using Leximancer

3.2.3. Development

The theme "development" (409 hits) includes the concepts development (25%), economic (13%), and sustainable (11%).

The need for sustainable tourism was triggered as a response to the impacts of tourism development. According to Canavan (2014), sustainable management has an even more critical role to play when small islands face tourism decline, de-growth and economic replacement, with urban and rural landscape protection likely to reduce adverse effects of economic decline. Due to the links between tourism and a broad range of political, social and economic issues, there is a need to look at tourism in an integrated way, specifically involving local communities in tourism development. Otherwise, incidents such as those of social nature (e.g., riots) will undermine sustainability (Fallon, 2004). Small islands can develop sustainable-related activities, mainly connected to the attractiveness of the environment, such as snorkeling, diving and round-island trips as suggested by Jaafar and Maideen (2012) that contribute to economic sustainability of islands´ businesses. Furthermore, Martin and Assenov (2015) applied a methodology called Surf Resource Sustainability Index, comprising 27 social, economic, environmental and governance indicators, to quantify attributes for conservation development of surf beaches and were able not only to identify key areas of concern but also to formulate action to tackle emerging issues.

3.2.4. Tourists

The theme "tourists" (373 hits) has the concepts tourists (31%), and market (6%).

In order to assist tourism organizations in segmenting markets and developing more efficient marketing strategies, Xia et al. (2010) proposed a three stage method consisting of (1) identifying dominant movement patterns of tourists, (2) discovering the characteristics of those groups of tourists and segment them based on socio-demographic and travel behavioral variables, (3) selecting target markets. Market studies can be conducted to explore differences in both attitudinal and behavioral characteristics of tourists visiting and island destination and according to key socio-demographic variables. That is what Agrusa, Kim and Wang (2011) researched with regards to Chinese tourists traveling to Hawaii. Different levels of preference regarding hotel categories were found depending on the tourists being on their first, second or

third time visit as well as in terms of their interest in shopping tourism. Results allowed to support managerial decisions on establishing marketing policies across several engaged stakeholders to enhance tourists´ satisfaction and their revisit intention. Due to the diverse market for sport tourism, it is useful to segment travelers in order to reach different target groups with unique service offers depending on their preferences. Hallman, Feiler and Breuer (2012) created two indices for sport and travel motivation and established consumer profiles, leading to the identification of two distinct clusters. Significant differences were detected between the two groups in terms of sport and holiday consumption patterns as well as sport expenditures.

3.2.5. Impacts

The theme "impacts" (368 hits) includes the concepts impacts (12%), local (10%), community (9%), social (6%), and residents (7%).

The social impact of island tourism on local communities and residents is an important issue to be addressed. Dillete et al. (2017) investigated residents´ perceived benefits, positive/negative impacts and support for volunteer tourism activities and how these could predict their support for cross-cultural understanding between residents and tourists visiting the Bahamas. Community involvement, empowerment, dependency, education, and communication were major themes found in this study. The relevance of understanding relationships between tourism impacts and community identity led Hwang, Stewart and Ko (2012) to study community-based actions that took place in Jeju Island, South Korea, for the purpose of protecting the community from outside threats from developers. This research brought to light the importance of local residents negotiating the quality of tourism development. Further, Nunkoo and Gursoy (2012) confirmed the importance of both social exchange and identity theories in providing explanation to community support in island economies.

3.2.6. Industry

The theme "industry" (216 hits) includes the concepts industry (10%, growth (7%), and potential (5%).

Tourism significantly contributes to the economic growth with tourism development on island economies showing comparatively higher growth effects (Seetanah (2011). Tourism marketing

and promotion was found to be a crucial element to attract tourists to small island states (Seetanah and Sannassee, 2015). The potential of tourism as an industry is also reflected on its capability to generate employment, namely in islands where there are few other alternatives to create jobs. Andriotis and Vaughan (2004) assessed the main characteristics of the tourism workforce researched in academia and discussed tourism policy issues as applied to the island of Crete. The tourist industry needs also to be analyzed through the lens of risk management. Indeed, risk scenario planning should be used to describe a range of specific vulnerabilities in the tourism sector and emphasize consequences of major natural disasters, such as earthquakes (Orchiston, 2012) and tsunamis (Cheung and Law, 2006). Crisis management and contingency planning must be rigorously put in place in order to have answers to major catastrophe impacting on tourism-related infrastructure, transport, food supply, rescue among others.

3.2.7. Visitors

The theme "visitors" (130 hits) includes the concepts visitors (8%), and nature (4%).

The value of visitor surveys in island tourism was stressed by Prideaux and Crosswell (2006) when they performed a quantitative research with tourists and confronted the results with assumptions island tourism industry interviewees relied on for developing marketing strategies. In fact, many of these were not validated by the quantitative findings. The attitudes of visitors toward nature, animals and environmental issues was investigated by Packer, Ballantyne and Hughes (2014) to assess tourists' sense of connection with, experience with, fear or dislike of animals, awareness, interest and concern about environmental issues. Their study was aimed at assisting in the design of visitor experiences and interpretive programs targeting the needs of interests of visitors to an island destination.

3.2.8. Cultural

The theme "cultural" (115 hits) includes the concepts cultural (8%), and natural (4%).

Carter (2004) studied the problem of sustaining tourism in cultural as well as natural environments, defending that growth is infrequent, requiring a process oriented focus via mutual adjustment between stakeholders. Authenticity has also been found to act as a determinant of tourists´ intention to consume culture in small island destinations (Ramkissoon

and Uysal, 2010) since it is increasingly valued by travelers. Later, Ramkissoon and Uysal (2011) also reported that perceived authenticity has a moderating effect on the relationships between motivation, information search behavior, destination imagery and cultural behavior intentions of tourists. In addition, Ramkissoon, Uysal and Brown (2011) confirm the relationship between destination image and behavioral intention of tourists regarding consumption of cultural attractions.

3.2.9. Management

The theme "management" (105 hits) includes the concepts management (6%), and resources (4%).

Careful management of resources from impacts associated with visitation is essential for protected natural areas. Cahill, Marion and Lawson (2008) surveyed visitors of a national park and found that whereas they supported trail development options to protect resource conditions with unrestricted visitor access with regard to an accessible and popular attraction, they supported no or limited trail development and access restrictions to protect resource conditions regarding remote undeveloped islands. Cruise tourism was also researched in terms of their positive impacts in islands subjected to the enhancement of tourism management systems, infrastructure and management of tourism resources (Park, 2011). Acknowledging that tourism development is more intense in island destinations due to their geographic limitations, Rodríguez, Parra-López and Yanes-Estévez (2008) used both the tourism area life cycle and the teleological models to explain the movement towards sustainability in an island destination in its maturity stage, and considered sustainability of natural, cultural, human and infrastructure resources as a strategic objective. In this perspective, sustainable tourism development became a tourism management guideline since its implementation leads to management of all resources fulfilling economic, social and aesthetic needs while keeping cultural integrity, essential ecological processes, biological diversity and life support systems (Tsaur and Wang, 2007).

3.2.10. Experience

The theme "experience" (92 hits) includes the concepts experience (4%), and travel (5%).

Experience of vacation travel was found to have a significant relationship with both cognitive and affective images of islands as tourist destinations which are also affected by socio-demographic characteristics, with tourists´ motivations also influencing the affective component of destination image (Beerli and Martín, 2004). Festival experience (Butch, Milne and Dickson, 2011) and winery experience (Dawson et al., 2011) were also studied, the latter found to be a major influencer of tourists´ decisions to travel to some island regions with recommendations towards to hold more and better proprietary tasting events and comprehensive wine tour packages, including fine dining and overnight accommodation.

3.2.11. Policy

The theme "policy" (73 hits) considers the concept policy (7%).

The importance of tourism policy with regard to a very sensitive issue such as climate change was studied within a small island tourism context by Belle and Bramwell (2005) in Barbados. These authors compared the views of policy makers and tourism managers and found that although both groups saw increasing public awareness as the most appropriate tourism response, tourism managers were more cautious about policy interventions.

3.2.12. Hotel

Finally, the theme "hotel" (52 hits) considers the concept hotel (5%).

Studying different facets of hotel management in islands has been a research interest among academics. Manasakis, Apostolakis and Datseris (2013) examined the relative efficiency between hotels operating under a brand and hotels operating independently in the island of Crete. Interestingly, whereas national branded hotels were relatively the most efficient, internationally branded were the least efficient. This finding was explained by the authors as a consequence of the interplay between operating under a brand and being flexible to changes in the local market´s conditions. On another note, Nicely, Palakurthi and Gooden (2011) aimed to understand the extent to which hotel managers in Jamaica were intrinsically motivated to learn. Managers reporting high work-related learning levels also showed to have high-risk taking abilities as well as more positive attitudes towards learning.

Identified concepts were later ranked according to their relevance (Table 13). Tourism and island topped the list. Many papers addressed research on tourists (Agrusa, Kim & Wang, 2011) and visitors (Moniz, 2012), and among those travel experience (Packer, Ballantyne & Hughes, 2014) was frequently assessed. The residents (Dillette et al., 2017), host community (Hwang, Stewart & Ko, 2012) and local perspectives were also of concern by the authors. In addition, the impacts of tourism from the point of view of economic (Jaafar & Maideen, 2012), socio-cultural (Ramkissoon & Uysal, 2010) and environmental / sustainable (Graci, 2013) factors constituted also an important stream of research, with the latter stemming relevant studies about nature, natural (Briassoulis, 2003) resources. Furthermore, particular attention to islands has targeted their role as destinations (Beerli & Martín, 2004) as well as their development (Khadaroo & Seetanah, 2007), growth (Carter, 2004) and associated policies (Sharpley, 2003). The management (Orchiston, 2012) arena has been pivotal in many of the selected journal articles, accompanied by an emphasis on marketing (Seetanah & Sannassee, 2015) and differentiation strategies, market potential and international dimensions (Cashman & Moore, 2012).

Table 13. Ranked Concepts

Word-Like	Relevance
tourism	100%
island	40%
tourists	31%
destination	28%
development	25%
economic	13%
impacts	12%
sustainable	11%
local	10%
industry	10%
community	09%
visitors	08%
cultural	08%
residents	07%
policy	07%
growth	07%
relationship	07%
social	06%
management	06%
different	06%
market	06%
international	05%
potential	05%
marketing	05%
environmental	05%
hotel	05%
travel	05%
experience	04%
resources	04%
nature	04%
natural	04%

_____Source:

Own Elaboration using Leximancer

4.   **Conclusion and Future Research**

This review outlines current achievements and future directions for island tourism research and is pertinent to both theory building and professional practice.

This is the first study performing a comprehensive literature review on tourism in islands. The hospitality and tourism complete bibliographic database from EBSCO was used in order to search for all the articles published in scientific journals for the last eighteen years (from 2000 to 2017) focusing on island tourism by analyzing their respective titles, keywords and abstracts. The selection procedure considered the extraction of the papers published in top journals (quartiles 1 and 2 from Scopus) in the hospitality, tourism and leisure management area generating a total of 395 articles from 24 academic journals.

Over forty percent of the manuscripts are available in journals published by Taylor & Francis, with one-fourth being from Elsevier (table 1). The Tourism Management Journal has clearly lead publications in island tourism, followed by Journal of Sustainable Tourism, Asia Pacific Journal of tourism Research, and Tourism Economics (table 2).

There is a clear leader in the number of papers published in this topic, Professor Robertico Croes from Rosen College of Hospitality Management, University of Central Florida, Orlando, USA, with fourteen papers (Table 3).

Some of the 21 keywords most used use in the journal articles on Island Tourism (Table 4) included tourism, island, destination, development, sustainable, small, tourist, community, management, marketing, etc.

Cyprus is the most researched island in reviewed tourism studies (table 5), with China and USA (table 6) being the countries accounting for more research reporting island tourism, and Latin America & Caribbean and Europe as the leading regions (table7). All the 28 small islands developing states (SIDS) and their location in the map are presented in table 8 and figure 2. The 6 that have more studies (table 6) are Mauritius, Barbados, Fiji, Jamaica, Bahamas and Vanuatu.

Most studies reported tourists as being their focus respondents but managers and business (Table 9) were also considerably researched within tourism in islands as well as residents.

Hence, both demand and supplier sides have been addressed as well as community in the destination (table 9).

In terms of research designs (table10), primary data have been used most of the time rather than secondary data, with more emphasis being given to quantitative studies over qualitative ones. Nearly half of the quantitative papers (table 11) used sample sizes between 100 and 400 respondents whereas in qualitative research (table12) most samples comprised between 20 and 50 subjects.

The semantic analysis that was performed using Leximancer software generated a concept map (Figure 3) with the most studied themes among others: tourism, destination, development, impacts, industry, management, being visitors' experience one of the least researched themes. These have been analyzed more thoroughly in the results section of this chapter and contextualized with specific citations of illustrative papers.

This review limited its search to a database specialized in tourism, although considered the most comprehensive one in the world. Moreover, its results were subjected to a further screening with the final selection including only articles published in journals Q1 and Q2 from Scopus. Thus, foreseeable studies could consider other databases (e.g. web of knowledge) and also other journals (e.g., Q3 and Q4 as well).

Despite the fact that the African continent has several archipelagos of known islands, studies on islands in Africa are scarce, with the only exceptions of the Mauritius and Seychelles islands, located off the coast of East Africa. Thus, future research could also pay more attention to the role of government in island tourism and analyze other islands within SIDS that lack tourism research. Therefore, there is a real need to do research on such islands.

Due to the hedonic nature of tourism it is recommended to foster research progress in studying tourist experience (Figure 3) and apply it to SIDS that are lacking studies. The next chapters attempt at fulfilling this gap. Thus, the development of study 1 and 2 in chapters 3 and 4, attempt at identifying which experiences' dimensions on Cape Verde as a SIDS were the most relevant to the visitors, which senses are referred and compare them with what Cape Verde NTO promote in terms of attractions.

Chapter III - Online Reviews of Islands of the Sun using Large Quantity of Data in Cape Verde

1. Introduction

Tourism destination image can be influenced by the preconceptions formed through the informative process. The customer's journey does not start when the tourist arrives at destination island, but rather when (s)he starts to dream about it. Moreover, image formation relies on both past experiences and peers' experiences (Neuhofen, Buhalis and Lookin, 2012) thus making social media platforms determinant as an information sources to tourists (Gretzel and Yoo, 2008). Hence, the comments and reviews from other tourists assume the role of eWOM influencing their final decision.

Thus, validation of place is only complete when the tourism performance takes place; then, customer's opinions are based in that experience and psychological evaluation will generate a reaction that can trigger valuable reviews posted in social media websites (Rose et al., 2011; Rickly-Boyd et al, 2010; Echtner & Ritchie 2003; Gentile, Spiller, & Noci 2007; Shaw & Ivens 2005). Erkan et al. (2016) identified dominant factors on customer experience's opinion accessed through electronic word of mouth (eWoM) or user generated content (UGC) in social networks that power and support other prospective customers during the consumer decision making purchase process. Social Media is also such an important support tool to help companies perform managerial promotion decision making (Diţoiu & Căruntu, 2014; Diţoiu, Stăncioiu, Brătucu, Onişor, & Botoș, 2014; Diţoiu, Stăncioiu, Teodorescu, Onişor, & Anamaria-Cătălina, 2014; Mudambi & Schuff, 2010). Moro et al, (2018) studied customer's reviews on hotels' experience as a proxy of satisfaction. In a study by Ye et al. (2011) online reviews were also described as a proxy to the significant increase impact on hotels' online sales

Small Island Developing States (SIDS) depend on the tourism industry as an important source for their Gross Domestic Product (GDP). Consequently, tourism is seen as a viable and sometimes the only means of economic growth (Pratt, 2015; Antonakakis et al., 2015), job creation and earnings (Lee & Chang, 2008). However, lack of studies were found in SIDS in regard to analyzing customers' experience and satisfaction, and even more so when considering online reviews.

As a consequence of the market positioning strategy developed and communicated by Cabo Verde´s National Tourism Organization (NTO) it is justified to study the tourists´ opinions perceived through the various experienced elements when visiting Cabo Verde as a destination. As so this research aims to challenge Cabo Verde´s NTO marketing communication approach by exploring directly the real data source of what were the most valued experiences that tourists have. More specifically, based on reviews of previous visitors this research attempted to identify and analyze the specific features that are more relevant for an island tourism destination, Cabo Verde.

Ultimately, it is believed that this data will certainly be of great interest for Cabo Verde's NTO as it may help to refine and adapt the way it deals and promotes tourism as well as improves and develops new products. As so, it is thought to be important to study tourism in Cabo Verde´s Sal and Boa Vista islands from the tourist perspective, since these two islands have not been studied yet and exhibit their own specificities as islands of the sun. Further, as studied before by Moro et al (2018) and Ye et al (2011), it is relevant to use online reviews as a proxy for evaluating tourist experience at the destination.

Thus, this empirical study attempts at answering what are the most relevant customers' experiences shared by tourists after visiting hotels, restaurants and tourist's attractions the islands of the sun based on user generated content posted as online reviews of Cape Verde as a destination. Also if senses were expressed in the topics or terms, and finally if the above identified features are in alignment with Cape Verde National Tourist Office's online marketing communication.

This research was conducted with its focus on two islands that are promoted as island of the sun in this archipelago: Sal and Boa Vista. The contributions of this investigation are:
- To study tourists' experiences expressed through opinions in the form of reviews which are shared after they visit to the islands of the sun, Cabo Verde, and to determine what are the topics and terms which tourists most comment on with regard to tourist attractions, hotels and restaurants;
- To provide information that might be essential to NTO´s marketing decision makers to help in developing a more assertive promotional image as well as the development of the necessary support instruments to assist and enhance the whole tourist experience; finally, also to contribute to the theoretical development of social media analysis, via

opinions related to hospitality products, identifying features that influence satisfaction of customers using lodging, attraction and restaurant services.

2. Background

2.1. Island Tourism

Islands are usually associated with unique, exclusive and different experiences granted to tourists who visit these destinations (Nunkoo & Gursoy, 2012), thus emphasizing the importance of studying tourism in islands. These are usually characterized by: remoteness and insularity; susceptibility to natural disasters; institutional capacity constraints resulting from the lack of human capital and the lack of economies of scale; limited economic diversification, which also involves a low degree of employment diversification; the small states economic pattern gives importance to the service sector, often tourism; openness which for small economies results in a high level of external dependency, socioeconomic and cultural vulnerability, and emigration; remittances remain a major ingredient of the small states growth model; income volatility and poverty. Although there is no definite evidence of higher levels of poverty among small countries, their external dependency and vulnerability lend themselves to considerably uncertain income levels.

In the past, islands used to rely on agriculture, fishing and eventually handicraft as pillars of their economy (Markwick, 2001). The recognized limited economic diversification due to poorness of resources turned attention to tourism as a solution to bring more diversification, employment and better infrastructure (Sharpley, 2003). Nevertheless, tourism activities have also brought negative impacts to islands seen by their local communities (Ko & Stewart, 2002). Indeed, islands have also suffered from wearing out of their limited resources and fragile environment (Harrison, 2001). Furthermore, the use of sustainability criteria is not always integrated in the development options of interest groups (Briassoulis, 2003).

Besides, it should also be stated that islands normally feature relative shortage in transportation, food and lodging making them more expensive than they would be if located in the mainland (Mitchell & Reid, 2001). Since island destinations are also attractive to tourists based on weather, climate, nature and scenery, they end up being challenged by a permanent tension

between attractiveness and scarcity for each dimension experienced by tourists (Klint et al., 2012).

Previous academic studies have researched tourism from several perspective layers. On the one hand, as individual islands, like Aruba (Rivera, Croes and Zhong, 2016), Barbados (Cashman and Moore, 2012), Cyprus (Kilic & Okumus, 2005), and Mauritius (Khadaroo and Seetanah, 2007); on the other hand, as archipelagos, such as the Azores (Moniz, 2012), Canary islands (Santana-Gallego, Ledesma-Rodríguez and Pérez-Rodríguez, 2011), and Madeira (Almeida, Correia & Pimpão, 2014); finally, as regions, like Asia/Pacific, the Caribbean, and Europe (Park, 2011).

2.2. Social Media in Tourism: e-word-of-mouth, user-generate-content and online reviews

Tourists´ expectations of a destination can be influenced by a number of information available whether through pamphlets, tourism agencies, word of mouth, NTO online promotion information. Finding out what they enjoyed most has always existed whether through questionnaires, interviews or focus groups. Those have always been the basis for better understanding tourist's opinions on products/services. More recently, with the advent of the web 2.0 users have access to tools to express their opinions through user generated content in online reviews and this is beneficial for the national and private business tourism sector.

Assessing customer's opinions include electronic word of mouth (eWOM) that is a way of the users to generate content (UGC) that is posted as online reviews in different available platforms. In the tourism area TripAdvisor, Booking, Expedia, and Yelp are the most popular ones. Tourism was the pioneer industry to implement a popular format of social media on a worldwide scale using online review platforms (Moro & Rita, 2018). One of the most recognized is TripAdviso**r**, where users are encouraged to write their opinions about a destination they have visited (Sigala, 2015). Thus, it makes sense for potential customers to refer to post experience perspectives to obtain feedback from previous tourists.

There is a number of studies that confirm customers tend to rely on word-of-mouth (Nelson, 1970) and online reviews (Klein, 1998) as trusted important data that are posted in an independent and authentic way. For Filieri, Alguezaui and McLeay (2015), trust is related with word of mouth and the quality of the consumer generated media (CGM). Furthermore, Cheung

et al. (2008; 2009) found that trust is related with information usefulness and credibility. Trust on e-WOM related with affective commitment was identified by Nusair et al. (2011).

Consumers intention of leaving a review was studied by Cheung & Lee (2012) whereby among other motivations they found enjoyment of helping other consumers. Fu et al. (2015) found out that positive eWOM was more driven by attitude, whereas negative eWOM was more driven by subjective norms. In restaurant experience, Jeong and Jang (2011) shared that positive reviews were triggered by satisfaction experience with food, staff, appearance and ambience, while price was not a key driver for positive reviews.

Benefits to the tourism industry are reported in studies in which electronic word of mouth (eWOM) had a significant increase on online sales of an online travel agency. The relation of hotel rooms booked through a website and the posts reviews it generated was considered as a proxy for the increase of hotels' booking (Ye, Law, Gu, & Chen, 2011). Product development, quality and brand building were studied by Dellarocas in 2003. In summary, previous studies have confirmed the real importance of user-generated content in influencing the decision making process of a potential client of experience goods or services leading to purchase.

2.3. Cape Verde

Cabo Verde was classified as a SIDS back in 1992 (UNCED, 1992). Historically speaking, Cabo Verde was discovered and colonized by Portuguese explorers establishing in the 15th century the first European settlement in the tropics. Only in 1975 Cabo Verde achieved its independence from Portugal. This archipelago with 10 islands of volcanic origin is located in west Africa. It is part of the Macaronesia eco-region in the central Atlantic Ocean along with the Portuguese Madeira and the Spanish Canary islands. As of 2018, the total population of Cabo Verde is just over half a million (circa 553 thousand) with nearly 64% of the inhabitants living in urban areas. The total land area of this country is 4,039 km2, with a density of 137 people per km2 (worldpopulationreview.com). Due to the lack of natural resources, its developing economy is mostly service-oriented. However, there has been a growing focus on tourism and on foreign investment (UNWTO, 2014).

According to INECV (2016), by far the most visited islands are the Islands of the Sun, represented by Sal (293k), Boa Vista (203k), followed by the Islands of the Essence, Santiago

(72k) and São Vicente (38k), and then the Islands of the Senses. The main tourists generating markets are the UK (131k), Germany (71k), Portugal and France (64k each), Benelux (62k) and Italy (46k). In this considered small island developing state (UN, 2016) there are four islands (Brava, Fogo, Santo Antão, São Nicolau) being promoted by its national tourism organization (NTO) as islands of the senses (www.guidadecaboverde.cv); three (Boavista, Maio, Sal) are promoted as islands of the sun, and two (Santiago, São Vicente) are communicated as islands of the essence; one (Santa Luzia) is an inhabited island.

The islands of the senses are promoted to foster intimate contact between tourists and nature, emphasizing uniqueness and true experience with the people and culture of Cabo Verde. The four islands are associated with awakening of all senses and said to share the conditions for the practice of nature-based tourism or ecotourism in its purest state being sought after by visitors who seek unique sensory experiences. Specifically, tourists can: (1) climb the imposing mountains of Santo Antão, with the "Cova" in the background; (2) challenge the famous volcano of Fogo, with the "Manecon" fruity wine as host. These were studied and reported in chapter 3.

The islands of the essence, Santiago and São Vicente, are where tourists can find a good part of the history, culture and traditions of Cabo Verde. The two largest cities of the archipelago, Praia (Santiago) and Mindelo (São Vicente) are located in these islands, as the mythical Old City (Santiago), birthplace of the Creole nation, the first capital of the country classified as Intangible Heritage of Humanity by Unesco since 2009. These islands are expected to have visitors being carried away in a unique trip between past and present, full of unforgettable experiences, such as the "morabeza" (a word that defines the art of well-being), to relive the history, listen to the music, know the traditions, and taste the flavors of these two islands.

Finally, the islands of the sun are communicated as offering beaches of white sand to lose sight on the horizon, some deserted, virgins in pure state. Waters are tepid and translucent, sometimes a turquoise blue to remind tourists of true gemstones. Visitors are able to dive with fish and let the body go to the waves while the sun shines high, practically 365 days a year. They provide activities aimed for travelers who do not dispense unique moments by the sea or long walks by the sand, while picking up shells. Tourist may surf some waves, paddle, or venture into windsurfing or kitesurfing. These islands are targeted to those in love with the sun and the sea.

The islands of the sun, Sal and Boa Vista islands, are located closer to Africa and the Sahara desert when compared to the remaining Cabo Verde islands, with more sand, better suited to beach tourism. There are several international chains (e.g. Iberostar, Riu, Decameron) operating in both Sal and Boa Vista. Cabo Verde is positioned in online social media platforms, such as TripAdvisor. Nowadays it is vital for a national tourist office to keep updated useful tourism information as well as to be able to make more assertive tourism destination online promotions.

3. Materials and Methods

This study adopted a holistic approach by encompassing all feedback gathered on Boa Vista and Sal islands from TripAdvisor, the largest online reviews' tourism platform (Moro et al., 2018), among others such as Expedia and Yelp (Xiang et al., 2017). According to Statista (2018), this American internet-based travel firm established in 2000 accounts with more than 600 million user reviews, covering almost seven million listings of attractions, hotels and restaurants. This early adopter of user generated content is a public traded company in the Nasdaq stock exchange with a market capitalization of more than 7 billion US dollars (Yahoo, 2018).

Automated data collection used the R statistical tool, an open-source software characterized by its wide range of packages published in the CRAN (Comprehensive R Archive Network) website: https://cran.r-project.org/. A web scraping procedure was performed (Munzert et al., 2014; Mitchell, 2018). Specifically, a web scraping script was developed to efficiently gather automatically all online reviews from three major tourist categories, according to TripAdvisor's format of information: attractions, hotels, and restaurants. The result was a total of almost 38 thousand online reviews from 324 units available in the two islands (Table 14). Moreover, considering the land area of both islands (Boa Vista: 620 km^2; Sal: 216 km^2), these figures highlight the relevance of tourism to both.

Table 14. Total units and reviews collected.

		Units	Reviews
Boa Vista	Attractions	38	3052
	Hotels	25	7951
	Restaurants	42	1903
Sal	Attractions	90	4189
	Hotels	49	12817
	Restaurants	80	8050
		324	37962

The analysis of such volume of data requires automated tools that enable to extract the relevant patterns of information from text. Thus, we adopted a text mining approach (Figure 4) based on the methods used by Calheiros et al. (2017) and Moro and Rita (2018). Text mining involves normally two processes for building the corpus of reviews: (1) cleaning the text from irrelevant words, like articles and adverbs; (2) stemming, i.e. reducing words to a single root word (e.g., "diving" is reduced to "dive"). First, a word frequency count took place to quantify the information, which was stored in a document-term matrix. In this step, we did not use an input dictionary because we aimed at an unguided approach without restricting the word frequency to a set of terms. To match variations of words for the same family, a stemming procedure was conducted based on the study by Guerreiro and Moro (2017). Finally, the document-term matrix (DTM) was used as an input to obtain a coherent set of topics characterized by words used in the reviews. In our case, we adopted the Latent Dirichlet Allocation (LDA) algorithm, since it offers a simple yet effective approach to aggregate topics (Moro et al., 2017).

The reviews and each of the terms considered constitute the two dimensions of the document matrix, whereby each of the cells contains the frequency each term occurs in each of the reviews. As output, a table of frequencies counts the number of occurrences of each term.

Figure 4. Text Mining Analysis Procedure
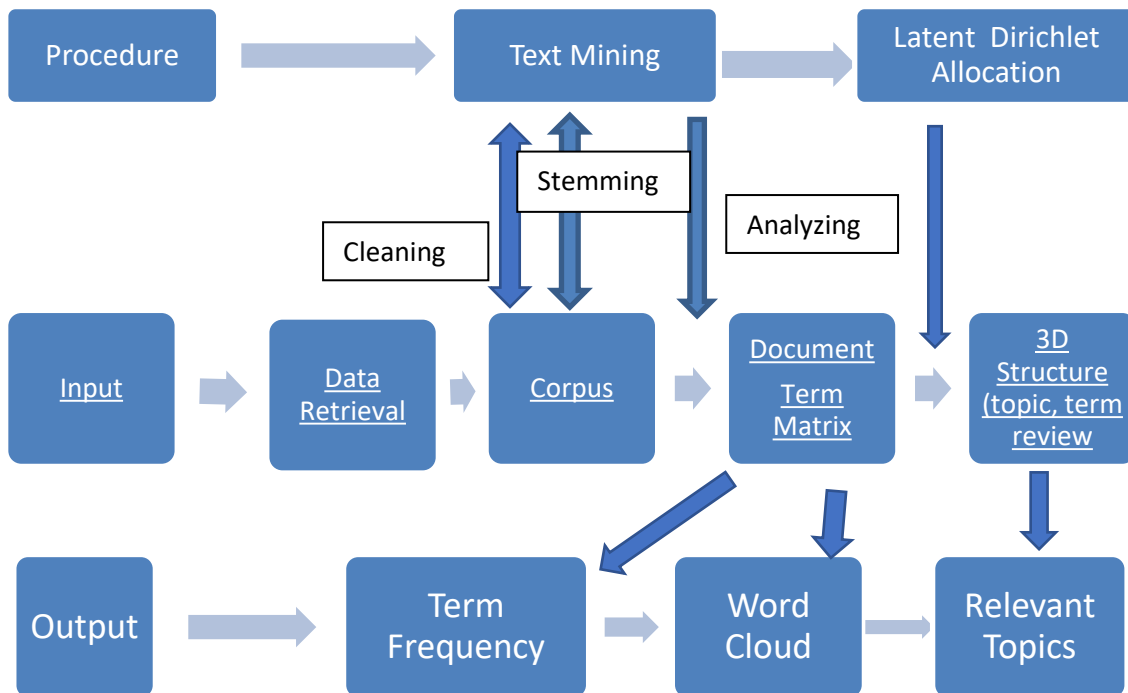
The document term matrix is used as input for the LDA topic modeling that is a three-level hierarchical Bayesian modeling process grouping collections of items in topics defined by identified words/terms and the probability that each of them characterizes the topic (Blei, 2012). This allows the analysis of the relative relevance of each term using the β distribution value that characterizes the relationship between the topic and the given term. A stronger relation between a term and its corresponding topic is represented by a β closer to zero. The LDA final output is a tridimensional matrix encompassing terms, reviews, and topics.

All the undertaken experiments were conducted using the R statistical tool, namely through the packages "tm" and "topicmodels" for executing the required text mining functions (Hornik & Grün, 2011).

4. Results and Discussion

This section focuses on text mining and Latent Dirichlet Allocation topics. The results are shown divided by the two islands, Boa Vista and Sal, and the three categories (attractions, hotels, and restaurants). Thus, six word frequency tables and six topic tables are shown, enabling to enrich the discussion through the comparison of the results. The number of topics

was tuned according to the recommendations by Moro et al. (2015) and Delen & Crossland (2008), reaching an optimal level of seven topics.

4.1. **Term Frequency**

4.1.1. Boa Vista island

"Tour" constitute the most frequent word in Attractions implying that for consumers touring Boa Vista island is a cornerstone motivation for their visit (Table 15). This is also reinforced by the relevance of "trip"(fifth most used word in online reviews about tourist attractions in Boa Vista island). Since this is one of the islands of the Sun in the Cabo Verde archipelago, it is understandable why "beach" comes second in the ranking. Moreover, "quad" (8th) shows up in the top ten as quad-bikes are often used as means of transport for tourists to enjoy a "great" (4th) experience and absorb "beautiful" (7th) scenery.

In hotels, "room" stands out as number one, underlying the importance given to hotels in fulfilling their accommodation function. Both "beach" (3rd) and swimming "pool" (2nd) have similar importance judging by their frequency. Does this happen because hotels invest significantly in swimming pool areas? This is true for resorts that exist in Boa Vista (e.g., Riu, Iberostar). The importance of managing human resources in hotels, namely those that interact with guests, is stressed by the frequent use of the term "staff" (5th). Furthermore, The relevance of hotels providing bar services is also denoted in the appearance of "bar" (9th). "Good" (6th) and "love" (10th) observe overall sentiments of appreciation shared by guests as far as their experience in hotels of this island.

A large number of restaurants are located by the "beach" (1st) and this is recognized by the tourists when writing their reviews. Due to characteristics involving the service encounter, staff (8th) is also listed as one of the most frequently used words. Interestingly, "bar" (6th) and "drink" (9th) are also emphasized in the online reviews about restaurants in Boa Vista island. There seems to be overall positive sentiments judging by the frequently use of the words "great" (2nd), "good" (4th) and "love" (5th). Finally, it is surprising why the word "food" does not show up in the top ten list of most frequently used words in online reviews of Restaurants.

Comparing the word frequencies for the island of Boa Vista across Attractions, Hotels and Restaurants, it is striking the importance of "beach" (2nd, 3rd and 1th positions, respectively). Since "staff" appears both in hotels (5th) and restaurants (8th) but not in tourist attractions would it make sense to invest more in staff associated with tour activities? As expected, "bar" is significant for both hotels (9th) and restaurants (6th). Some words work as proxy for customer satisfaction, such as "great", "good" and "love". Interestingly, only Restaurant reviews include all those three (ranked 2nd, 4th and 5th respectively), whereas online reviews of Hotels include two, "good" (6th) and "love" (10th). Reviews of tourist Attractions use only one, i.e. "great" (4th), but this is accompanied by another word, "beautiful" (6th) that is indeed more suitable to be used for Attractions than for Hotels or Restaurants.

Table 15. Word frequencies for Boa Vista.

Attractions		Hotels		Restaurants	
Word	Frequency	Word	Frequency	Word	Frequency
tour	3299	room	13159	beach	946
beach	2535	pool	10548	great	930
day	2517	beach	10511	place	838
great	2475	day	9721	good	812
trip	2074	staff	9564	love	676
book	1607	good	9286	bar	609
beautiful	1490	time	6871	visit	574
quad	1383	one	6748	staff	542
back	1358	bar	6674	drink	528
thank	1189	love	6426	friend	504

4.1.2. Sal Island

In the tourist Attractions of Sal island, "dive" (3rd), "beach (4th) and "sea" (10th) show how important is this island of the Sun as a beach and sea destination where diving is placed at the forefront of tourist activities (Table 16). In addition, tourist experience seems to be rewarded by the use of "great" (2nd), "good" (5th) and "love" (6th) adjectives.

The focus on Hotels start with "room" (1st). Both "beach" (2nd) and "pool" (5th) seem to be perceived by guests as must services associated to Hotels. "Staff" (3rd) is very important in hotel units while "bar" (7th) is also a service valued by customers. The fact that "good" (4th), "great" (9th) and "love" (10th) appear in the list suggests an overall quite positive assessment by guests.

Restaurants in Sal island receive attention regarding their "service" (7th) and as a "place" (3rd) to be with "friends" (5th). "Staff" (4th) is important in Restaurants, and interestingly "drink" (10th) is in the list but not "food", thus underlining just the "B" of "F&B", i.e. "Food & Beverage". Overall, satisfaction with Restaurants seems to be significant since the following four words are included: "good" (1st), "great" (2nd), "nice" (6th) and "love" (8th).

"Beach" seems to be more relevant for Attractions (4th) and Hotels (2nd) than for Restaurants (not in the top ten). Conversely, "staff" receives more attention in Hotels (3rd) and Restaurants (4th). In general, all types of services are perceived positively by tourists with the words "great", "good" and "love" appearing in the top 10 lists of Attractions, Hotels and Restaurants, with the latter adding also "nice" (6th).

Table 16. Word frequencies for Sal.

Attractions		Hotels		Restaurants	
Word	Frequency	Word	Frequency	Word	Frequency
day	1912	room	19499	good	4564
great	1739	beach	16154	great	3294
dive	1473	staff	14725	place	3133
beach	1463	good	14582	staff	2439
good	1156	pool	13896	friend	2339
love	1137	day	12901	nice	2193
time	1115	bar	11948	service	2157
back	1113	one	10472	love	2092
see	1091	great	10342	visit	2063
sea	1084	love	9749	drink	1812

Both for Boa Vista and Sal islands "beach" is a key attraction making them as part of the cluster of the islands of the sun. However, whereas Boa Vista is more associated with "tour" and "trip" in quad-bikes, Sal is more characterized by "diving" activities. Unlike tourist attractions where we can find some differences between the two islands, regarding hotels these islands seem to be similar since both receive online reviews focused on hotel "rooms", "beach" and "pool", "staff" and "bar" with also overall positive evaluations by guests. Finally, in restaurants, a common denominator between across the islands is "staff" and "drink". Curiously, the term "food" does not show in neither one.

4.2. **Relevant Topics**

The second level of analysis used Latent Dirichlet Allocation (LDA) parametrizing seven topics for attractions, hotels and restaurants in each of the islands that are shown in tables 19 to 24. Topics are presented in horizontal lines whereby the column labeled "Topic" shows the most relevant terms. The distribution values in each row refer to their respective topic, with the dominant (first) term (word) being the one that has Beta value closer to 0. The four most relevant terms are shown for each topic. Very interesting results were obtained from the analysis performed in the next six tables whereby analysis of representative online reviews per topic is also provided in the text.

4.2.1. Attractions

"Beach" is clearly the main attraction, being the first term in topic 1, mentioned in 981 reviews, and associated with positive words such as "great" and "best" (Table 17); it is also the first word in topic 4 being addressed in 380 reviews. Online reviews: "we headed off road to a nearby beautiful beach and got some great pictures"; "we went to a beautiful beach only accessible off road which I can say is the best I have ever seen (even in the Caribbean!!!)"; "one of the best beaches I ever been on, beautiful with powder soft sand and blue sea with waves crashing on the deserted beach"; "then we stopped at a beach with a cave and had photos taken, then the best part of me was driving through the sand dunes on the way back"; "rated in the top ten beaches in the world, Santa Monica beach in Boa Vista Cabo Verde is truly amazing".

The importance of "tour" can be assessed by the fact that it appears five times: two as first word (topics 5 and 6, with 342 and 291 reviews); two as third word (topics 2 and 3, with 456 and 448

reviews); one as fourth word (topic 4, with 380 reviews). Online reviews: "we went through sand dunes (very funny ride!) and saw beautiful beaches"; "I enjoyed the tour in quad"; "we had a tour with a very small group (4 quads in total) nicer than the big groups of tourists going out with 20 quads"; "the tour itself was fantastic! we were taken off road through some amazing routes"; "the tour gave us a full detailed description everything which we found extremely interesting, we also experienced forest tracks"; "worth a trip, it´s a very beautiful place to be, endless amounts of beach and beautiful blue sea to gaze into".

Whereas quad bikes are important means of transport when performing some tours ("quad" is second word in both topics 5 and 6), diving is a relevant activity ("dive" is first word in topic 3). Online reviews: "great day on the quad bike back and take his other quad tour!!"; "we were taken straight to the quad bikes from our hotel and given a prompt but detailed description of how to use them safely"; "I was able to dive through the waves whilst making sure not to get out of my depth, have had a really enjoyable swim"; "we went to the dive base on our second day and after a few information we began our diving theory lessons in the afternoon, we had so much fun after the first dives, we can really recommend this diving base".

The topics show three types of attractions standing out: beach, dive, and quad bike.
Three topics emphasize attractions during the day (topics 1, 3 and 7) and one at night (topic 2).

Table 17. Topics for Boa Vista's attractions.

Topic	Nr. Reviews	1st word		2nd word		3rd word		4th word	
		word	β	word	β	word	β	word	β
1	981	beach	3.33	great	4.01	day	4.02	best	4.26
2	456	trip	2.58	night	3.40	tour	3.57	saturday	3.60
3	448	dive	3.28	day	3.56	tour	3.59	amazing	3.67
4	380	beach	3.25	book	3.26	beautiful	3.37	tour	3.55
5	342	tour	2.79	quad	3.30	thank	3.33	back	3.80
6	291	tour	3.03	quad	3.24	bike	3.73	safe	3.83
7	154	great	2.92	day	3.33	can	3.55	see	3.79

To make a "day trip to see the sharks" was the topic number 1 in Sal Island Attraction. "Beach" is mentioned three times in tourist attractions of Sal island, being the first term in topic 3 with 684 reviews (Table 18). Online reviews: "the beach and sea are both beautiful"; "the beach was beautiful and free entertainment watching surfers and kite surfers enjoying themselves in the big rolling waves"; "you can kite comfortably along the beach with relatively flat water, superb temperatures and warm safe waters".

Moreover, while "dive" is the first word in topic 2, "surf" appears in two topics (2 and 6). Online reviews: "the diving in Sal is amazing"; "I have dived all over the world and this is one of my favorite destinations"; "baby nurse sharks and turtles on our first dive was a great start to a really enjoyable week"; "plenty of activity going on with some very talented local surfers".

Tourist experience assessed by online reviews show positive impressions such as "great", "love", "nice" and "like".

Thus, for both islands the relevance of "beach" is paramount. Although in the topic analysis "diving" also emerges for Boa Vista island, this activity is more pronounced in Sal island together with "surf", whereas in the former tours in quad-bikes are more emphasized.

Table 18. Topics for Sal's attractions.

Topic	Nr. Reviews	1st word		2nd word		3rd word		4th word	
		word	β	word	β	word	β	word	β
1	1308	see	3.84	day	3.98	trip	3.98	shark	4.24
2	1039	dive	3.23	great	3.75	time	4.20	surf	4.20
3	684	beach	3.40	horse	3.47	love	3.68	clean	3.95
4	485	salt	3.59	people	3.82	can	3.83	nice	3.85
5	312	plastic	3.54	day	3.74	beach	3.75	bus	3.78
6	208	activities	3.59	surfer	3.63	beach	3.96	first	4.00
7	153	salt	2.89	place	3.74	think	3.88	like	3.98

4.2.2. Hotels

In table 19, "beach" is the first word in topic 1 for hotels in Boa Vista but also appears fourth word in topic 5 and second word in topic 6. Online reviews: "beautiful hotel, stunning view of the Atlantic ocean and untouched beaches"; "our beach days were very enjoyable"; "the beach day is fantastic as they take you to a beach where the sea is turquoise and calm"; "we enjoyed lovely walks along the beach".

Swimming "pools" are important for hotels as these are the leading words in three topics (4, 5 and 7). Online reviews: "big and never overly crowded pool"; "a pool to swim near the room"; "pool is immaculate"; "plenty of space around the pool"; "loved the pool overlooking the ocean"; "round the clock entertainment around the pool".

The relevance of "room" is witnessed by the fact it is not only the first word in topics 3 and 6, but also its inclusion in topics 1, 4 and 7. Online reviews: "rooms are 5 star or plus"; "I love this hotel, the rooms are clean and spacious"; "rooms were lovely"; "our room was spacy with view to the ocean".

Both "staff" (topics 5 and 6) and "bar" (topics 2 and 3) appear twice. Online reviews: "all the staff worked very hard to ensure we had a great time"; "staff were really friendly and helpful right across the whole hotel"; the staff make the hotel what is it, they are fantastic"; "found the staff very friendly and helpful"; "staff is friendly and polite"; "good choice of drinks at bars – better choice than some all-inclusive"; "DJ was good and bar staff were excellent". "Good" (four times) and "love" (twice) are also worth noting in terms of the positive feelings they represent.

Table 19. Topics for Boa Vista's hotels.

Topic	Nr. Reviews	1st word		2nd word		3rd word		4th word	
		word	β	word	β	word	β	word	β
1	1337	beach	3.43	good	4.10	room	4.12	love	4.26
2	1270	good	3.92	love	4.43	bar	4.47	friend	4.50
3	1171	room	3.83	good	4.22	bar	4.29	people	4.45
4	1132	pool	3.93	room	4.01	main	4.30	stay	4.35
5	1039	pool	4.07	staff	4.17	even	4.19	beach	4.34
6	1017	room	4.02	beach	4.09	staff	4.09	day	4.38
7	985	pool	3.75	room	3.96	good	4.31	one	4.48

The importance of "room" regarding hotels in Sal is clear since it appears in four of the seven topics and leads topic 3 (Table 20). Online reviews: "the hotel was lovely with very good room"; "firstly good the rooms were a good size"; "the building rooms and general layout are just as I favor"; "bedrooms are well equipped with sea view".

Location near the "beach" seems to be valued by guests as it is shown in three topics, in two of which is the first term (topics 5 and 6). Online reviews: "a lovely beach"; "you could go to the beach and sun loungers are provided there"; "although the beach is public it´s very quiet with plenty of sun loungers"; "this is a lovey hotel perfectly situated on the beach in its own grounds".

Swimming "pool" is also of relevance being presented twice (topics 1 and 7). Online reviews: "great kids´ pool"; "nice pool"; "great breakfasts taken outside by the pool"; "the pool area was great and there was always plenty of sun loungers free anytime of the day".

Both "staff" resources and "bar" service are worth noticing as these show up twice in the top seven topics generated from analyzing online reviews. Online reviews: "lovely staff"; "hotel staff was very good"; "all hotel staff was brilliant, any minor complaints were dealt with quickly"; "we enjoyed the snack bar food"; "we ate at the pool and beach bars and found the food varied and tasty".

Finally, in more than one fifth of the topics x words, the terms "good" (four times) and "love" (twice) are present.

As was seen in the analysis of term frequency, hotels in both islands seem to share similar features in online reviews, with emphasis being given to "beach and "pool", "room" and "bar", and "staff". Nevertheless, "room" is more stressed in Sal while "beach" and "pool" are more underlined in Boa Vista.

Table 20. Topics for Sal's hotels.

Topic	Nr. Reviews	1st word		2nd word		3rd word		4th word	
		word	β	word	β	word	β	word	β
1	2495	good	3.60	pool	3.66	love	3.97	beach	4.09
2	2159	staff	3.74	room	3.86	day	4.07	clean	4.39
3	2047	room	3.64	staff	3.72	bar	3.89	stay	4.14
4	1578	one	3.94	room	4.09	good	4.35	bar	4.42
5	1563	beach	4.04	night	4.19	good	4.23	time	4.45
6	1495	beach	3.88	room	4.17	holiday	4.28	good	4.30
7	1480	one	4.02	pool	4.04	even	4.41	love	4.57

4.2.3. Restaurants

The importance of "beach" for Restaurants in Boa Vista island is clearly shown by its first position in topics 3, 4 and 5 and a third one in topic 6 (Table 21). Online reviews: "that and a superb beach location made for a very pleasant afternoon"; "fantastic meal was worth the walk up the beach"; "great location, love this place"; "this is a terrific place to have a relaxed meal and then rest in the sunshine on a beautiful beach"; "we were taken to the beach restaurant where we were welcomed by photographers and given a coconut drink, we then chose our food and watched the sunset".

Although far away, "bar" and "drink" are also noteworthy. Online reviews: "this bar is a great place to spend a night out!"; "lovely bar, service excellent, evening show was very entertaining"; "loved this bar! Such a gem to the island! Playing relaxing music, good food and drinks"; "loved this bar! Absolutely fantastic! All round food atmosphere and service".

It is striking the relevance of adjectives with a positive valence such as "love" (appears four times), "great" (three times), "good", "amazing" and "beautiful" (once each), totaling ten appearances, i.e. more than one third of the total.

Table 21. Topics for Boa Vista's restaurants.

Topic	Nr. Reviews	1st word		2nd word		3rd word		4th word	
		word	β	word	β	word	β	word	β
1	430	good	2.73	great	3.25	place	3.33	drink	3.80
2	275	friend	3.65	night	3.73	bar	3.83	time	3.86
3	255	beach	3.44	amazing	3.96	visit	4.01	even	4.02
4	245	beach	3.78	visit	3.80	love	3.95	staff	4.14
5	244	beach	3.49	great	3.53	place	3.63	love	3.79
6	233	place	3.31	love	3.83	beach	4.11	beautiful	4.16
7	221	great	3.36	bar	3.96	love	3.99	friend	3.99

Online reviews of Restaurants from Sal reveal the importance of their location as "place" is seen four times in Table 22. Online reviews: "I cannot speak highly enough of this place"; "great place to watch football, good food"; "nice friendly place well priced with large portions"; "a good place specially for lunches"; "good place, great atmosphere"; this is a great place to eat"; "a great place to start your night out".

"Service" and "staff" are also given some importance, although apparently much less. Online reviews: "delicious food, great service and lovely atmosphere"; "nice friendly service"; "good service"; "the best thing about this place is the staff"; "friendly staff".

What is striking is the number of times adjectives qualifying tourist experience are present in the top seven topics generated from online reviews: "good" is the first word in an impressive

number of four topics (topics 3, 5, 6, 7), "great" in one, appearing three times in total, "nice" is also present three times, "love" is shown twice and "delicious" once, reaching a total of over 45% of share in the four top word of the seven topics.

By comparing results from Boa Vista and Sal, the location of restaurants is valued ("beach", "place") in both island, but whereas the reviews for the first also give some relevance to "bar" and "drink", the second receives more reviews focused on "service" and "staff".

Table 22. Topics for Sal's restaurants.

Topic	Nr. Reviews	1st word		2nd word		3rd word		4th word	
		word	β	word	β	word	β	word	β
1	1424	service	3.31	love	3.62	visit	3.87	delicious	4.01
2	1262	great	3.06	place	3.58	staff	3.71	nice	4.05
3	1258	good	2.80	nice	4.07	table	4.20	also	4.21
4	1204	friend	3.36	place	3.67	love	3.90	nice	3.97
5	1037	good	3.42	place	3.47	great	3.51	friend	3.53
6	998	good	3.37	drink	4.13	will	4.23	table	4.26
7	867	good	3.45	place	3.75	great	4.11	beach	4.11

5. Conclusions

The image of a tourist destination is in the eyes of the beholder who in tourism marketing is undoubtable the consumer. Existing tourists share their experience via writing online reviews which influence perception of potential tourists when they read them during the consumer journey leading to decision making of choice and purchase. Experience goods are tested only when the tourist is in the actual destination (Klein, 1998), whether in experiencing a destination attractions, a hotel, or a restaurant. Thus, after tourists experience the various elements available during their visit (Rickly-Boyd et al., 2010), it is their free and spontaneous decision to generate content to share with others their opinions as visitors to a destination, hotel, restaurant or tourist attraction. As so this user-generated content can be posted in platforms as online reviews and they represent important available data that has been very useful for other visitors who read

those reviews as a means of information to help in the decision making process about their tourist destination choice.

Reviews are also very useful for all companies interested in gathering information from previous visitors about their services or products. This abundance of diversified unstructured data available in a number of social media sites that are growing exponentially in relevance and quantity every day are considered unstructured data as it does not fit neatly into a database. This data is very valuable as a way to obtain market and customer intelligence. So, business processes need to be fueled with this information as well as analyze it; otherwise, they will get rapidly obsolete and risk losing market share by not understanding, adapting or predicting costumer needs as well as their perceptions of the brand. Through a number of text mining software it is possible to extract and analyze useful information and knowledge hidden in text content.

Tourism has become a key activity sector for many small island developing states which feel the pressure coming from lack of resources while at the same time see an opportunity in tourism to foster job creation, generate revenue and create better conditions for economic growth. This is underlined by the fact that islands portray uniqueness and show attractiveness to prospective customers.

Online reviews on tourist attractions in both islands of the sun stress the importance of the beach (after all these are islands of the sun), trip and dive. Whereas in Boa Vista tours by quad bikes throughout the dunes or around the island are frequently talked about,in Sal, activities related with trips to see the sharks, or for surfing, horse riding and salt floating are more prominent as a tourist activity and the referred qualifiers that showed the biggest appreciation for these activities were great, love and clean for the horses. Although Sal has a bigger variety of attractive activities, Boa Vista's qualifiers for their attractions appear more times besides having the strongest ones: great, best, beautiful, amazing, safe. Most of the trips or tours are made with guides/staff, although they do not appear directly in the topics or terms but in some reviews they are very important in the way they relate with the tourists have a great impact in the success of their tour or trip day.

Hotels and restaurants are perceived as a more common denominator across islands. Hotels' guests besides focusing on rooms, they also value their location near the beach, the available

swimming pool as well as to their offer in terms of bar, and interaction with staff. Cleanliness was identified as a topic of hotels in Sal, while in Boa Vista friendly staff was more valued.

On restaurants, customers emphasize their staff, drinks and place where they are set as very relevant features of restaurants for Sal and Boa Vista. Interestingly food is not found to be a main topic in any of the islands, but it is referred as being in the all-inclusive hotel's packages. However, out of the hotels food or meals experiences also appears in Sal reviews and it is described as delicious. In Boa Vista, restaurants' meals appear but with more emphasis on the environment or place where it is set (are in a relaxing place), also there, the restaurants bars on the beach at night are more relevant as they enjoy their cocktails and drinks, service is not mentioned. Boa Vista's restaurants have more and better qualifiers than Sal's. Compelling also, the term "beach" is present in attractions, hotels and restaurants in Boa Vista, but not in restaurants in Sal, while staff is addressed in both islands regarding hotels and restaurants but not in attractions although tours, trips and guides are related with staff. Most reviewers show appreciation by using adjectives such as "good", "great", "love" in all three dimensions, plus "nice" in restaurants and "beautiful" in attractions.

This research was able to identify the more relevant features for accommodations (hotels), restaurants and tourist attractions' services in both Cabo Verde islands of the sun, i.e., Boa Vista and Sal. These results are bound to support decision making for the national service management as well as for the private companies operating in Cape Verde and for the local population These results can also benefit the umbrella organization leading tourist promotion of these islands to the international tourist generating markets. Indeed, by acquiring knowledge about tourist experience in the islands as destinations via online reviews on tourist attractions, hotels and restaurants, it is possible to identify strengths to be stressed in marketing communications and to take actions to improve weaknesses that ought to be overcome.

Our study aims to contributes to research by showing how the experience of tourists visiting islands as destinations can be useful to understand what are the characteristics of the services that most impact on visitors in a comprehensive approach incorporating attractions, hotels and restaurants.

Future research should consider applying a similar analysis to other SIDS islands as tourist destinations, non-SIDS and even consider a comparison between mainland and archipelago

always from the perspective of consumers via online reviews as proxy of their experiences as tourists.

Chapter IV - Tourist Experiences in the Islands of the Senses, Cape Verde

1. Introduction

The conducted literature review in chapter 2 showed that studies on African islands are lacking. Besides, there is also a research gap in the scientific literature regarding the investigation on SIDS and online reviews from their customers' experience after visiting their island. In fact, even recent studies addressing online reviews in tourism have not paid attention to islands as tourism destinations but rather other issues such as differences by submission device (Mariani, Borghi & Gretzel, 2019), status seeking of reviewers (Liu, Schuckert & Law, 2018), webcare strategies (Casado-Diaz, Andreu, Beckmann & Miller, 2018), and consumer evaluation modes (Tan, Lv, Liu & Gursoy, 2018).

The archipelago of Cape Verde located in the central Atlantic Ocean off the west coast of the continent of Africa. It is part of the Macaronesia ecoregion, which includes the Azores, Canary Islands, Madeira, and the Savage Isles. Cape Verde is considered by the United Nations (UN, 2011) as one of the small island developing states (SIDS).

As a consequence to its diversity, Cape Verde promotes four of their ten islands of this archipelago as islands of the senses: Santo Antão, Fogo, São Nicola and Brava. Customer experience is linked with senses. As so the islands of the senses are promoted as a destination that are going to awaken all senses of their visitors. According to the Cape Verde National Tourism Organization, Santo Antão and Fogo are islands likely to produce feelings/touch from their several options for eco-walks as well as vision/sightseeing of nature and clear waters, and smell of local gastronomy/food.

In fact, in consumer perception, senses involve vision, scent, sound, touch and taste (Solomon, 2017). These can foster hedonic consumption, namely in the service industries such as tourism. Indeed, in sensory marketing, organizations think carefully about the impact of sensations on consumer experiences (Krishna, 2012). For example, vision is stimulated when airlines decide about trade dress of their crew (Hultén, 2011). Moreover, different colors have different associations and marketing applications (Labrecque et al., 2013), e.g. black is associated with the concepts of powerful and sleek, thus being used when marketing luxury products.

In this study we consider the islands of the senses that are more visited and with higher number of reviews, i.e. Santo Antão and Fogo islands. This study aims to identify the main themes and concepts of the tourist experience in two of these islands, Santo Antão and Fogo, based on user generated content (UGC), . The senses perceived based on the themes and compare with what the NTO promotes.

This chapter is structured as follows: it starts by performing a brief review of the literature to the topics of island tourism, social media, and social media in island tourism;then, methodological issues are addressed regarding research context, data collection and content analysis; results on both Santo Antão and Fogo islands are presented and compared; finally, the empirical findings are object of discussion in light with academic literature, and conclusions given taking also into account research contributions, managerial implications, limitations of the study and future research directions.

2. Literature Review

2.1. Island Tourism

Island tourism has grown in importance due to the uniqueness of these places as destinations (Uysal & Modica, 2016). Indeed, tourism in islands is often seen as exclusive and charming whereby island destinations offer frequently unique and different experiences as compared to continental or mainland tourism, thus making tourism in islands quite attractive (Nunkoo & Gursoy, 2012).

Islands are normally characterized by relative sparseness (Mitchell & Reid, 2001) like in lodging, food and transportation that makes them more expensive than mainland destination. In addition, island destinations are usually attractive based on weather, climate and scenery which offer different and desirable contrast to the tourist´s everyday location, thus contributing to the tension between attractiveness and scarcity (Klint et al., 2012) for each dimension of the tourist experience (e.g., specific tourist attractions).

In island-based tourism the natural environment has been a major attraction for recreational activities (Lee, Jan and Huang, 2015). Indeed, islands usually offer various attractions such as beautiful scenery, natural resources, water-based activities and exoticism, thus creating a wide

variety of recreational experiences likely to be seen as real attractions to visitors (Prayag and Ryan, 2012), beyond their supply of local culture and history as well as accommodation specificities.

Senses are at the center of how humans collect information and use it as foundation to understand meanings, generating cognitive activities like attitudes and behavior (Krishna, 2012). In tourism, travelers explore places, see, hear, smell, taste and touch, which articulates with their reasoning abilities and past experiences. Hence, the appeal to tourist senses by destinations, and more so by islands is expected to happen across a range of contexts and environments.

2.2. Social Media

Social media plays a pivotal role in online travel information search since online travel reviews and comments written by users (user-generated content: UGC) have a positive impact on tourist decision making (Aye, Au & Law, 2013). Previous studies have shown the importance of online review platforms such as TripAdvisor for e-WOM and customer feedback in tourism (e.g., Miguéns, Baggio & Costa, 2008). Extracting decision-relevant knowledge from UGC (Munar & Jacobsen, 2014; Moro et al., 2018) is paramount, in particular to leverage the need to classify tourist reviews based on sentiment analysis (Park & Allen, 2013; Calheiros et al., 2017). Attitude toward using UGC has the strongest impact on behavior intention, thus constituting a strong predictor of the tourist intention to purchase (Aye, Au & Law, 2013). Consumer-generated ratings rather than editor reviews show a positive relation to consumer intention to visit a restaurant ́s webpage (Zhang et al., 2010).

Social media constitute a substantial part of search engine results, hence directing travelers to social media sites (Xiang & Gretzel, 2010). Consumer studies have focused more on the use and impact of social media at the information search phase of the tourist ́s planning process (Leung et al., 2013). E-WOM and online reviews/recommendations are increasingly used in tourism services (Sotiriadis & Van Zyl, 2013). Tourists consider information posted by customers as most useful and trustworthy (Sparks, Perkins & Buckley, 2013). Online reputation in tourism, particularly applied to tourism destinations, can be assessed by analyzing UGC whereby individuals publish online their opinions which can be seen as proxies of reputation (Marchiori & Cantoni, 2011).

eWOM and user generated content in tourism has shown many benefits whether in terms of decision making and increase of purchase or in terms of evaluation of experienced services to benefit NTO's and private companies with knowledge for decision making (Ye et al., 2011; Mariani et al., 2014; Baka, 2016; Moro et al., 2018)

2.3. Social Media in Island Tourism

Distribution channels in tourism have been subjected to significant changes during the current decade. Actually, whereas we have witnessed the increasing disappearance of traditional travel agents, new forms of online communication and distribution have surged with emphasis to social media and in particular online review sites playing a cornerstone role for tourism destinations (Dieck, Fountoulaki and Jung, 2018).

Only few studies have recently focused on social media in island destination such as Munar & Jacobsen (2013) who explored Scandinavian tourists' perceptions of online information sources and assessed influence of electronic social media on holidaymakers' information sharing in Mallorca, Munar & Jacobsen (2014) who this time investigated the motivations for sharing tourism experiences via social media of visitors to Mallorca, Kiráľováa & Pavlíčeka (2014) who studied the development of a social media campaign in the Hamilton Island (Australia) aimed at creating a buzz around the island by mass meeting between Instagram users from across the globe on the island. There is still a research gap in the study of customer feedback via online reviews in islands as tourist destinations, and also in particular with regard to African islands.

3. Method

3.1. Research Context

The national tourist office of Cabo Verde has referred that their archipelago includes a group of islands of the senses (www.guiadecaboverde.cv) claiming that to have intimate contact with nature, unique and true experiences with the people and culture of Cabo Verde can be accomplished by visiting their four islands of senses, namely Fogo, Brava, Santo Antão and São Nicolau, i.e. the island of fogo (island of fire) with unique features due to its plantations in volcanic land and a focus on taste (wine/tea). Indeed, these islands are suited to those pursuing sensory experiences, practicing nature or ecotourism, climbing the mountains of Santo Antão with the "Cova" in the depth, view the famous volcano of Fogo, walk through the Natural Park of Monte Gordo, under an endless green blanket in São Nicolau, or contemplate the stunning landscape of Fajã d'Água on the island of the flowers (Brava).

Since two (São Nicolau and Brava) of the so-called islands of the senses do not show significant number of activities/units and online reviews, this study focused on the other two (Santo Antão and Fogo) that show both relevant tourism supply and number of reviews (See table 23).

Table 23. Number of Activities/Units and Reviews per Island of the Senses (CaboVerde)

Island	Things to Do	Lodging	Restaurants
Santo Antão	10 (413 reviews)	57 (2,028 reviews)	20 (793 reviews)
Fogo	5 (222 reviews)	30 (614 reviews)	8 (220 reviews)
São Nicolau	6 (16 reviews)	7 (73 reviews)	4 (18 reviews)
Brava	NA	12 (53 reviews)	1 (3 reviews)

Source: TripAdvisor

INECV (2018) published the top generating markets for both of the most visited islands of the senses, Santo Antão and Fogo are France, UK, Germany and Portugal, with the fifth being Netherlands in Santo Antão and Russia in Fogo. Most tourists travel as couples or with friends.

3.2. Data Collection

The use of traditional marketing research methods (e.g., surveys), to study tourist experience has been recognized to have limitations, such as high fieldwork costs, poor response rates and self-report bias (Zhang & Cole, 2016). Due to the widespread use of Web 2.0 websites, namely online review platforms, visitors can now rely on those reviews written by other tourists who have decided to leave their feedback and thus assisting in consumer decision making, since reviews are usually written by tourists with no commercial interests, being considered trustworthy and genuine (Au, Buhalis & Law, 2014).

The present study based on the collection of online reviews from TripAdvisor.com, the World's Largest Travel Site, accounting with over 385 million traveler reviews, and which company, TripAdvisor Inc., is valued almost 5.5 billion US dollars in market capitalization (Bloomberg, 2018). Data was manually collected regarding tourist attractions (type, name), reviews (title, content), and reviewers (nationality, tourist type).

Specifically, a total of 472 web reviews were collected from tourist attractions of the islands of Santo Antão (286 reviews) and Fogo (186) which are considered islands of the senses in the archipelago of Cabo Verde.

French tourists lead the origin generating markets to both Santo Antão and Fogo islands (Table 24), followed by English, German, and Portuguese visitors. Whereas Deutch were the fifth group by nationality visiting Santo Antão, Russians were the fifth with regard to Fogo island. Couples dominated the type of tourists visiting both islands, followed by friends. In Santo Antão, families were ahead of singles, but the opposite happened in Fogo. Visitors travelling for business were last in both islands.

Table 24. Sample Profile

SANTO ANTÃO			FOGO		
Nationality	Frequency	Percentage	**Nationality**	Frequency	Percentage
French	113	39.5%	French	74	39.8%
English	74	25.9%	English	49	26.3%
German	40	14.0%	German	28	15.1%
Portuguese	24	8.4%	Portuguese	16	8.6%
Deutch	22	7.7%	Russian	7	3.8%
Others	13	4.5%	Others	12	6.5%
	286	100.0%		186	100.0%
Tourist Type	Frequency	Percentage	**Tourist Type**	Frequency	Percentage
Couples	162	56.6%	Couples	99	53.2%
Friends	68	23.8%	Friends	41	22.0%
Families	29	10.1%	Single	27	14.5%
Single	22	7.7%	Families	15	8.1%
Business	5	1.7%	Business	4	2.2%
	286	100.0%		186	100.0%

3.3. Content Analysis

For content analysis, the Leximancer software was used since it can analyze fragmented pieces of evidence from text by applying algorithms that use nonlinear Dynamics and machine learning (Wu, Wall & Pearce, 2014). Words, concepts and themes constitute the most important units in Leximancer´s semantic pattern extraction process (Figure 5). Words appearing most frequently in text are identified first and then clustered in order to discover concepts. In turn, these are clustered into higher-level themes that aid interpretation and are shown as colored circles on a concept map whereby the 'hottest' theme is represented in red followed by orange and so on according to the color wheel.

Figure 5. Semantic Pattern Extraction in Leximancer
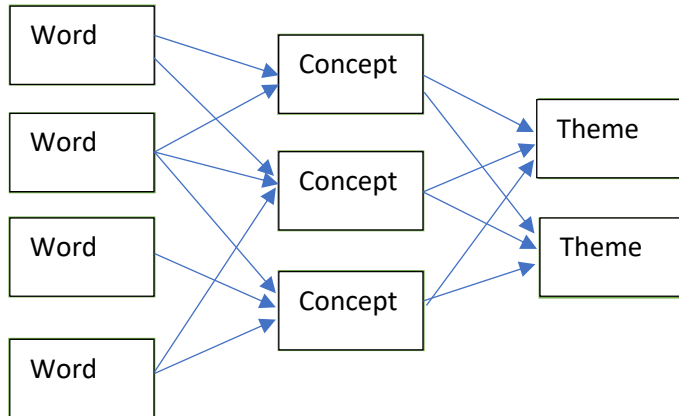
Source: Crofts & Bisman (2010)

Leximancer has been recently used by some research studies within the realm of tourism to address tourist experience in shared economy (Brochado et al., 2017), analyze online review comments of airbnb users (Cheng & Jun, 2018), customer experience in surf camps (Brochado et al., 2018), experience of visitors to Transylvania (Lupu et al., 2017), and to study medical tourism (Rodrigues et al., 2017).

4. Results

Next, the customer experiences shared by tourists after visiting a Santo Antão and Fogo islands as destinations are presented

4.1. Santo Antão Island

A concept map was generated in order to exhibit the most common themes and concepts generated from the online reviews in the sample. The concepts are represented by nodes and grouped into themes represented by larger shaded circles. Thirteen themes were identified and ranked according to their level of importance (see Figure 6): crater, view, hike, place, landscape, island, sea, clouds, people, guide, taxi, mountain, water.

Figure 6. Concept Map – Tourist experiences in Santo Antão island
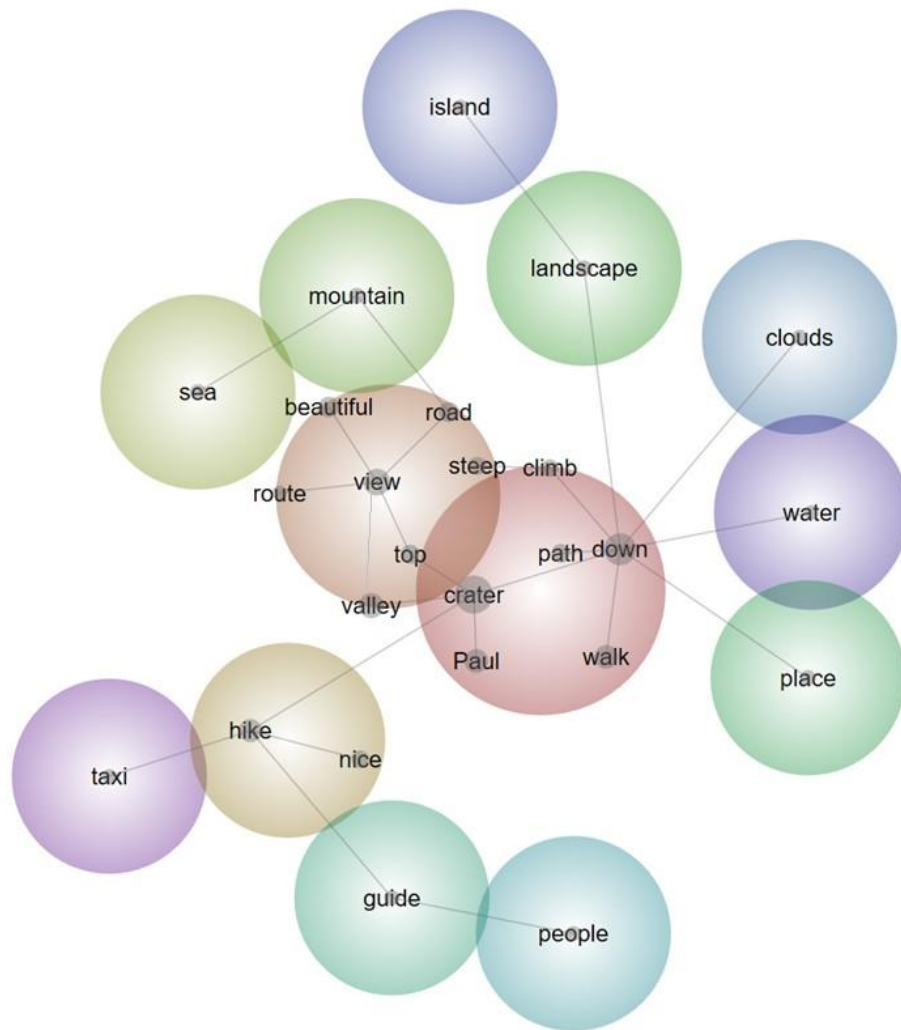
4.1.1.Crater

The crater theme (hits: 150) includes the concepts "crater", "down", "Paul", "walk", "path" and "climb", being the most prominent theme. The Cova is a mountain, a caldera and an extinct volcano located in the island of Santo Antão, Cabo Verde. It has 1,176 meters of altitude, the length of the crater is 1.2 km north to south and almost 1.1 km wide. It constitutes an excellent natural tourist attraction for walking activities.

A visitor wrote, "Walk crater to St Paul. Beautiful walk over in the beginning steep path down" (Deutsch; travelling as a couple).

Another tourist referred, "An unforgettable descent .... Our companion dropped us at the bottom of the crater of Cova and we went back down the Paul valley by the path hanging on the cliff. Turned back when the path into Paul was just a foot-breadth wide, walked back through the crater, then down the road to Corda, which was beautiful (pines, wild flowers, great views), encountered a few families; a little girl brought us a little flower bouquet she'd picked; the woman I was with had had the presence of mind to bring a nice little ring to give her. It is possible for you to do as we did, namely the climb, the crater tour and the descent with another path (less marked) or to arrive to the crater and descend to the valley of Paul. In short there is something for everyone! We go down to the bottom of the crater (almost perfect crater) which is cultivated then we go back up. For the downhill part it is a small paved road that serves the few houses, the climb is a path." (French; travelling as a couple).

4.1.2.View

The view theme (hits: 105) encompasses the concepts "view", "valley", "beautiful", "road", "top", "steep" and "route". Beautiful views can be experienced at the top of the mountain overlooking both the valley and the coast of the island.

A tourist wrote, "it's steep but it's worth it ... and more, if you push to the Pic Da Cruz offering beautiful views between the valley of Pául, on one side and the coast with Porto Novo on the other, magnificent" (French; travelling as a couple).

Another visitor stated, "Excellent view on a crater that is no longer active except for the local agricultural village." (Belgian; travelling as a couple).

Other tourist referred, "Strenuous day's walk with wonderful views. For Ascension (the path that comes out of the "standard route" at the top of the road to Pico da Cruz), hike to & in the

crater and then descent takes about 6 hours, but the views are fantastic! Leaving Manuel Do Santos, the climb took us 1:30 to arrive at the top ... there the view is beautiful, both on the crater but also on the entire valley Paul! The views of Paul Valley from the top are wonderful. When we went there the road had some poorly maintained areas but otherwise it is phenomenal. It is quite a long drive up by road, but the road is quite good, and the views at the top make it worthwhile. You can park near the top and it is a relatively short walk to the viewpoint (a rise of about 400 feet in ascent)." (German; travelling as a couple).

4.1.3. Hike

The hike theme (hits: 55) has the concepts "hike" and "nice". Hiking is the recommended activity to tourists in order to achieve scenic views.

A tourist mentioned, "Very nice hike through fields and past a farm to get into the Paul Valley." (German; travelling as a couple). Another visitor shared, "Very nice hike. The hike to do absolutely in Santo Antão!" (French; travelling as a couple). Other tourist referred, "Superb hike. Very nice hiking to do hiking freedom or with guide with the agency Nobai hiking trails and varied scenic. Very nice views to the sea. Good, as much as possible ankle-high hiking boots necessary." (Belgian; travelling with family). Yet other visitor mentioned, "Beautiful crater, more information would be nice. The crater is very impressive and beautiful, even if only viewed from above (without hiking down)." (Swiss; travelling with friends).

4.1.4. Place

The place theme (hits: 14) just includes the concept "place". The Paul valley that is part of a protected natural park of the island is by itself a place to visit by tourists.

One visitor stated, "Perfect entrance to Paul Valley. It's an incredible place!" (Spanish; travelling as a couple). Other tourist mentioned, "Fantastic place. Departure of the ride for the Ribeira de Paul." (French; travelling as a couple). Another visitor shared, "Memorable sight. It is unlikely that you will stay there for a long time, but it is unlikely that you will easily forget this place. I shall never forget this place." (Russian; travelling as a couple). Yet another tourist referred, "Very interesting. Very interesting place with magnificent landscapes, interesting to verify the tenacity of the man to live in such remote places and the relative harmony with the nature that exists in this place" (Portuguese; travelling for business).

4.1.5.Landscape

The landscape theme (hits: 14) has only the concept "landscape". It is considered by tourists as magical, wonderful, amazing.

A tourist shared, "Sumptuous landscapes with some mists to change the landscape." (French; travelling as a couple). Other visitor mentioned, "Magical landscape. A real feeling of freedom, and at the same time the impression of being very small in the face of this impressive nature, however, take care to take a sweater, it is height, it is not always very hot, even walking." (French; travelling as a couple). Another tourist stated, "Wonderful landscape. Equipped with good shoes, great place to make impressive hikes." (Belgian; travelling as a couple). Yet other visitor referred, "Amazing landscape. The floor of the crater consists of many small vegetable gardens. On this route there is exuberant vegetation to be enjoyed and in the month of April blow fresh and pleasant winds. The landscape is worth the time spent on the course." (Portuguese; travelling as a couple).

4.1.6.Island

The island theme (hits: 13) encompasses uniquely the concept "island". Santo Antão offers tourists a contrast of features depending on which side of the island one is visiting, e.g., the dry south versus the northeast green. One visitor wrote, "The island inside looks like "Jurassic Park!". The part of the island facing the south is almost completely dry, while the northeast zone enjoys relatively regular rainfall and is fairly green. A major product of the island is "grogue", a type of brand produced locally and very popular throughout the archipelago.

Pleasant tiredness and satisfaction from conquering another island." (Portuguese; travelling with family). Other tourist stated, "The island visit takes your breath away. Words or photos cannot express the beauty of this island. It is a must to visit this island" (English; travelling as a couple).

4.1.7.Sea

The sea theme (hits: 12) includes the concept "sea". This island offers tourists the opportunity to climb to the mountain and enjoy the scenery from up there that includes views over the sea. A tourist shared, "Best trekking to do in Cabo Verde. The volcanic crater of Cova is a crater of an ancient extinct volcano, situated 1,585 meters above sea level. Many mountain gardens are surviving due to Dutch developments, using drip irrigation. The sea appeared unexpectedly. If you want to go to the sea, you have to count down 5 hours." (English; travelling as a couple). Another visitor mentioned, "The beauty of contrasts. The visit to this attraction of Santo Antão will put you in touch with the best to appreciate in Santo Antão, the contrast between the sea and the mountain. On the other side (we came from the Paul valley) you have a beautiful view over the sea and Sao Vicente" (Brazilian; travelling for business).

4.1.8.Clouds

The clouds theme (hits: 11) has just the concept "clouds". Due to the relatively high altitude of the mountain, tourists can experience the sensation of being over the clouds.
A visitor referred, "An hour later they emerged under the clouds and finally saw the horizon. It was there we had to get there in 3 hours. The government allocates considerable budgetary funds to support the regions in the zone of risky farming ... The main assistant of the peasants is highlands and clouds. Or you look (often through clouds of mist) from above into him. A great natural spectacle! Beautiful especially the passage above the clouds because there are many. Difficult descent 1,500 m of altitude difference! The higher we climbed, the closer the clouds became. Until they became so dense that they could hardly find a descent." (Russian; travelling as a couple).

4.1.9.People

The people theme (hits: 11) only encompasses the concept "people". Interestingly, locals use the inside of the caldera to explore small farms such as pasture, fruits and vegetables, some of them not grown in lower areas of the island. A tourist stated, "For people with fear of heights, not a real winner." (Deutsch; travelling as a couple). Other visitor mentioned, "It's fascinating to see how people live and cultivate food on the plain." (Swiss; travelling with friends). Yet other tourist referred, "Impressive. different than most people we started our hike at sea-level

and walked the Paul Valley up to Cova. Can be chilly (to cold for some people) at the start, because of the possible fog." (Austrian; travelling as a couple).

4.1.10.Guide

The guide theme (hits: 11) only includes the concept "guide". The importance of having a guide when visiting the island is stressed by this theme extracted from the online reviews. A visitor said "Do it anyway with a guide because it allows you to discover some secret places and some explanations on the flora." (French; travelling as a couple). Another tourist wrote, "Recommend note 20/20 serious, adaptation to all requests (travel with guide, without guide, hiking sports or not)." "Not a single boredom on 18 days of travel while we visited several islands (*Fogo*, *São Vincente*, *Sao Antão*). For our part we took a local guide who for 25 euros per person per day provided transportation, lunch at home and hiking all day." (French; travelling as a couple). "It is safer with a guide."

4.1.11.Taxi

The taxi theme (hits: 10) has just the concept "taxi". This theme emphasizes the importance of taking a taxi to get to the natural tourist attraction Cova crater.
A tourist stated, "Arrived by taxi to Cova Crater and then walked through Paul Valley with lunch in O Curral and overnight in Aldeia Manga." (German; travelling as a couple).
Other visitor referred, "One must see or wander. Drop your luggage from the port to your accommodation and take a taxi to Cova Crater for reaching the driveway (about 3 hours)." "You can also share a taxi with another person." "Can be chilly (to cold for some people) at the start, because of the possible fog." "To get there you need a taxi, but can be a bit expensive, make sure you negotiate price upfront". "Get to the taxi early in the morning", "the ride may be complicated because they all drive by the new road on the coast"; "ask the day before if someone takes this road to a driver". "In the opposite direction, it will be easier because there will be those taxis that passes in the aprem (in the afternoon) according to the schedules of boats, but there will be maybe one." (Swiss; travelling as a couple).

4.1.12.Mountain

The mountain theme (hits: 10) encompasses the concept "mountain". Indeed, the mountain itself exerts a pull effect on tourists since that allows them to experience very appealing sightseeing experiences.

One visitor wrote, "Aborigines with the mobility and agility of mountain goats run down the slope. Where the tourist steps carefully - a step behind the step - trained legs in 20-30 seconds deliver the body down." "Many mountain gardens are surviving due to Dutch developments, using drip irrigation. The sea appeared unexpectedly." (Russian; travelling as a couple). Another tourist shared, "The beauty of contrasts. The visit to this attraction of Santo Antão will put you in touch with the best to appreciate in Santo Antão, the contrast between the sea and the mountain. However, it is spectacular to arrive at the top of the mountain and then suddenly, when you look down the other side, seeing a very peaceful agricultural landscape. Small fields, cows, goats." "Even without a hike it makes sense to have a look at the crater, when driving on the mountain road from Porto Novo to Ribeira Grande. There is a viewpoint with an information board in Portuguese, French and English." (Brazilian; travelling for business).

4.1.13.Water

The water theme (hits: 8) includes the sole concept of "water". Due to the physical effort demanded to tourists, these are stressing the importance of bringing water throughout the hiking activities.

A very careful visitor shared, "Magnifique spectacle epoustouflant(breathtaking). Leave with good shoes and walking sticks and especially a camera a lot of water really essential." "Carry supplies, especially water. Sun protection should also be enhanced. 12km trekking from Cova to Paul (mainly downhill), 3-4 hours long, there are some restaurants and places to buy water and food in the asphalted part". "1300m lost in vertical along the way. Unique experience for those who enjoy medium-effort walks (but the legs will claim the descent the other day yes ...)." "Do not forget to bring water, food, hat, sunscreen and a warm coat - the temperature can change abruptly." "Now Cova plays the role of the nurturing mother because from there, many people from the village are supplied with water and practice farming and gardening. Anyway for the descent". (French; travelling as a couple).

4.2. Fogo Island

Figure 7 portrays the concept map showing the most common themes and concepts generated from the online reviews. Nodes represent concepts and are grouped into themes represented by larger shaded circles. Nine themes were identified and ranked according to their level of importance: climb, village, volcano, guide, fogo, lava, trip, place, water.
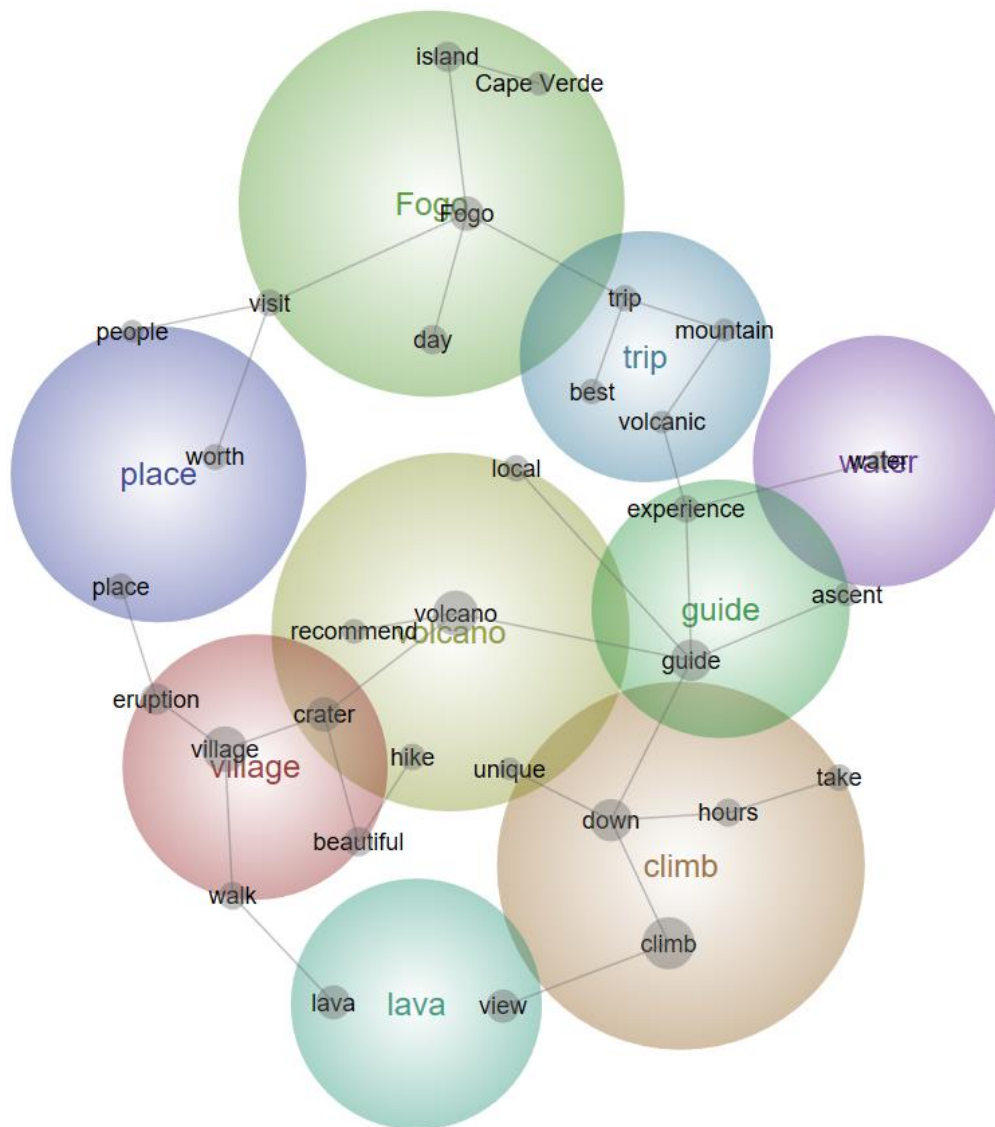

Figure 7. Concept Map – Tourist experiences in Fogo island

4.2.1. Climb

The climb theme (hits: 225) is the most prominent theme, and includes the concepts "climb", "down", "hours", and "take". This theme is focused on the experience of going up and coming down from the pico and the physical effort and time needed to perform such activity.

A tourist said "Unique and wonderful the big pico. It takes about 4 hours to climb; start very early to avoid getting into the heat of the day" (French; travelling as a couple). Another visitor wrote "I'm middle aged and with a delicate knee and I still made it, taking a slow 3 hours up and 2 hours and 10 minutes down. Coming down was so much easier than I expected as 2/3s was through the soft lava sand, like sliding - stepping through deep soft 'snow' - but warm and black" (North-American; traveling alone). Other tourist referred "It is superb! It takes breath on the climb but what experience the descent!" (French; travelling with friends).

4.2.2. Village

The village theme (hits: 170) encompasses the concepts "village", "crater", "eruption", "beautiful", and "walk". The referred village is Chã das Caldeiras, a small community within the crater of the volcanic pico do fogo and that accounts for approximately 1 thousand inhabitants. At an elevation of about 1,700 metres, it is considered the highest village in Cabo Verde.

A visitor stated "We left our taxi at the road somewhere in the middle of the Caldeira and walked towards the well visible Pico Pequeno, which came into being with the eruption of April 1995. Just about 100m away from its crater another eruption took place in November 2014" (Swiss; travelling as a couple). Another tourist shared "Unforgettable day with walk on the lava in the crater. And always beautiful and big sun" (French; travelling alone). Yet other visitor mentioned "Arrived at Cha das Caldeiras, the breath is suspended, we have the feeling that we have reached the end of the world, reduced to our insignificance before the grandiosity of the 9 km of crater with 1 km of height of the border. And we are simply wondering how beautiful it is" (Portuguese; travelling with family).

4.2.3. Volcano

The volcano theme (hits: 150) has the concepts "volcano", "hike", "local", "recommend" and "unique". The Fogo island reaches the highest altitude of all the islands in Cabo Verde, rising to 2,829 meters above sea level at the summit of its volcano, named Pico do Fogo. Hiking is highly recommended due to the uniqueness of its experience and stunning views. A tourist said "Experience unique enchanting place, I recommend to run the hike up to the volcano as you can rely on a good guide the summit can be reached with about 4 hours of climbing quite challenging. The effort is rewarded by an enchanting spectacle that can be enjoyed from above" (Italian; travelling with friends). Another visitor wrote "The place itself is stunning, even though my original plan was to climb the Pico itself, I was not disappointed with the hike over the new eruption, as that was something unique" (Deutch; travelling alone). Other tourist referred "Nowadays, it's possible to hike up Bordeira, the rim of the big caldera and the new eruption. Arrange with someone in Sao Felipe though, as guide is recommendable for the hike" (Deutch; travelling alone).

4.2.4. Guide

The guide theme (hits: 135) includes the concepts "guide", "experience", and "ascent". In order to ascend to the top of Pico do Fogo, and absorb its enriching experience it is very important to be accompanied and oriented by a local guide.

A visitor stated "The ascent to the summit of the volcano, which for those who have not had a geologist training like me is certainly best assisted by some expert local guide, is an unforgettable experience even more than the famous night climb to Stromboli to see the explosions that they cut on the dark" (Italian; travelling as a couple).

Another tourist shared "Only in the middle of the road did we notice the colorful markings on the stones that help the guides to orient themselves in the mountain kingdom. The first half an hour is a gentle, prolonged ascent" (Russian; travelling as a couple). Yet other visitor mentioned "At the top. The ascent to the *Fogo* is only possible with a local guide" (German; travelling alone).

4.2.5. Fogo

The fogo theme (hits: 132) encompasses the concepts "fogo", "island", "day", "visit", and "Cabo Verde". This theme emphasizes the relevance of the Fogo island within the archipelago of Cabo Verde as well as the importance of tourists to dedicate time to pay it a visit when choosing this country as a destination.

A tourist said "On our 3 week visit to 5 of the 9 islands the people on *Fogo* are possibly the most friendly ones" (Austrian; travelling as a couple). Another visitor wrote "*Fogo* is perhaps the only island of *Cabo Verde*, with *Sant'Antao*, to deserve a one-week trip (better nine days) just for her, even without touching other island destinations. Yet other tourist referred "Arriving in Cabo Verde without first trying to spend a few days in Fogo, it is like from Germany "go on holiday in Naples" and book two weeks in Scamp a, having Capri 30 km away, without going there" (Italian; travelling as a couple).

4.2.6. Lava

The lava theme (hits: 105) has the concepts "lava", and "view". This theme underlines the beautiful scenery that can be appreciated by tourists due to the associated lava coming from several eruptions that took place in the last few decades.

A visitor stated "The view of the Caldeira is impressive, you can see exactly the lava runs of the eruptions of the 50's, 1995 and 2014. The view from the top is wonderful and try to go down via the "Small Pico" running into the lava stones. An unforgettable experience!" (German; travelling as a couple). Another tourist shared "The view is superbly beautiful with lava flows in the Cha, apple fields, grapes etc. The descent is very easy on the small volcano and it takes only a few tens of minutes by sliding on the gravel" (Malian; travelling alone). Other visitor mentioned "once we reached the crater the views along the valley as far as the sea were beautiful, if unearthly, as you could clearly see the variations of colour in the lava flows from different eruptions. Coming down was the complete antithesis of the ascent - quick, easy and so much fun - ash-running all the way!" (English; travelling with friends).

4.2.7. Trip

The trip theme (hits: 79) includes the concepts "trip", "best", "mountain", and "volcanic". It addresses specificities of the trip through the volcanic mountain of this island.

Tourist said "Now you can slide down the ultra-long volcanic ash with great strides down the seemingly endless mountain. Although this is also hard on, but it's fun!" "Once on the black volcanic "sand" part you can let loose and tear down the mountain at full speed. This run back down is unforgettable and so rewarding after the climb up." "The slide down the volcanic sands was one of the highlights of our trip" (German; travelling alone). Another visitor wrote "We were staying in a hotel in Sao Filipe and were very lucky to find an excellent local guide in the evening before we made this trip. It's a long walk after a taxi trip up the mountain, so he advised us to start early (6 AM)" (English; travelling as a couple).

4.2.8. Place

The place theme (hits: 71) encompasses the concepts "place", "worth", and "people". Tourists associate the uniqueness of this place by extending it to the people living there.

A visitor referred "It is a mixture of feelings between the beauty of the place and the shock of seeing the tragedy so close that it happened there, but the most impressive thing is to check the resilience of the people who live there. The whole island is worth the visit, with places of very diverse beauty and very special people" (Portuguese; travelling with friends). Another tourist stated "A special place. It is actually a very special place populated by even more special people" (Portuguese; travelling with friends). Yet other visitor shared "Incredible place!!! We have visited Fogo, flew there by little plane which was scary but worth a trial!" (English; travelling as a couple).

4.2.9. Water

The water theme (hits: 15) has only the concept "water". Due to the physical effort involved in climbing pico do fogo, tourists advert to the need of bringing plenty of water.

A tourist mentioned "Even in February, the sun is violent, and it is prudent to provide hat, sunscreen and water. Two 1.5-liter bottles of water per person for adults, one for 1.5 liters plus one for 0.5 for children between nine and 13-14 years old. Bring compass, paper and binoculars. Due to lack of water, their taste is saturated and tart" (Italian; travelling as a couple).

Finally, another visitor said "You will be covered in dust which finds its way into everything. Take plenty of water and food. If you go to Fogo it's a must but just make sure you are armed with water and a snack" (English; travelling with friends).

4.3. Comparison between Santo Antão and Fogo Islands

When comparing Santo Antão and Fogo, three of the themes are common in both islands as included in online reviews written by tourists, namely Guide, Place, and Water. This makes sense since tourists focus a lot on the place being visited, and the nature of the destinations attractions require most of the times to consider tourist guides. Interestingly, water is used with two different meanings: on the one hand, to see water surrounding the islands landscape from a top spot constitutes a thrill for visitor; on the other hand, bottled water consumption is recommended due to the physical efforts needed to be performed.

There are also a few themes in one island that are concepts in the other one. Specifically, six of the themes in Santo Antão, i.e. Crater, View, Hike, Island, People and Mountain, are concepts in Fogo island, being associated with other themes, respectively, Village, Lava, Volcano, Fogo, Place and Trip. These relationships can be well understood if one looks at the relevance given to both islands in terms of their volcanos, craters and lava, the locals (people) living in small villages by those places, as well as the trips and hiking activities that are taken to climb the associated mountains in order to enjoy their magnificent views.

Although Fogo island had half the alternatives of things to do and close to half of the reviews of Santo Antão it was interesting to note that qualifiers related with the visit to the islands were stronger for Fogo Island – unique, worth, beautiful, best, breath away, recommend; than for Santo Antão with the only strong qualifier referred to beautiful.

In terms of senses the one that was referred most related to view and taste of the local water for both islands. Touch was referred in Fogo island referring the soft lava sand.

Finally, both islands share some similar concepts such as down, walk, beautiful. However, depending on the island being addressed those concepts are associated with different themes. Whereas down and walk are part of the Crater theme and beautiful of the View one in Santo Antão, down is included in Climb, and walk and beautiful are part of the Village theme of Fogo

island. These connections are understandable since the activity of walking down and up (climb) the craters constitute an important motivation for tourists as well as to enjoy the beautiful views and the experience of visiting the villages by the volcanos.

5.Discussion and Conclusion

The present research focused on experiences in island tourism in order to identify their main dimensions based on visitors´ narratives in online reviews. The obtained results intend to add potential value to the literature by contributing to a better understanding of tourist experience in the context of tourism in islands in an understudied country, Cabo Verde.

Zhang & Cole, (2016) underlined the usefulness of performing text analyses of online reviews as an alternative to traditional survey methods by giving significant insights into tourist experiences when travelling in islands and thus facilitating the identification of the most significant dimensions of those experiences.

The present content analysis of online reviews revealed the existence of 13 themes in Santo Antão island. The two most frequently mentioned in online reviews were clearly crater and view, followed by hike. Next came place, landscape, island, and sea. Finally, clouds, people, guide, taxi, mountain, and water were also worth mentioning. Next, we discuss our findings in light of academic literature with regard to the seven more relevant themes found in our results.

Volcanoes and tourists are like magnets, likely to attract each other. Some tourists when nearing a volcano are drawn ever more strongly to its summit or crater (Newhall, 2014). The study of craters as tourist attractions is an emerging theme in the scientific literature. Putri, Soemarno & Hakim (2015) have recently addressed the strategic management of nature based tourism in Ijen crater, East Java, Indonesia and identified three competitive tourism aspects, namely something to see (mountain landscape), something to do (trekking, hiking, bird watching), and something to buy (meals). This same crater has also been the focus of research by Zen & Wulandari (2016) who obtained data through interviews, observation, and documentation.

The theme view is associated with the concept valley that has been also a major driver of previous studies. In fact, Fakeye & Crompton (1991) had already studied both first-time and repeat long-stay winter visitors to the lower Rio Grande Valley in Texas in order to assess

destination image conceptualized as evolving from an organic image, through an induced image, to a complex image. Later, Ritchie (1999) addressed policies to ensure long-term protection and development of national parks in the Canadian Rockies by studying a complex set of integrated research efforts within the Banff-Bow valley.

The hike theme has been discussed in terms of its relevance and potentialities as a tourist activity by Kastenholz & Rodrigues (2007) who identified three groups of hikers and distinguished them by the amount of money spent per day during their visit on the walking path. Moreover, Mehmetoglu (2007) developed a typology of nature tourists based on trip activities leading to the identification of three clusters: "culture and pleasure activity oriented", "nature activity oriented", and "low activity oriented".

The importance of the theme place for tourism has been the focal point for a diverse range of studies. Sims (2009) recorded ways in which local foods were conceptualized as "authentic" products that symbolized the place and culture of the destination. Trauer & Ryan (2005) suggested that in the scientific literature about place location may be secondary since the quality of experience is primarily determined by the existing intimacies between people at that place, specially between visitors.

The interesting landscape theme was focused by Steen (2007) in a review of photo-based landscape perception research approaches that could be used for assessment of tourists' visual landscape perceptions. Later, Sun, Zhang & Ryan (2015) reported findings derived from responses made to a process of showing photographs of South Island, New Zealand to Chinese tourists, and posing a series of options asking which were preferred and why. Images triggering strong favorable responses were those that showed snow covered mountains reflected in lake waters.

Island as destinations have been studied from multiple perspectives, including sustainability such as by Wall (1993) who described the Bali Sustainable Development Project and the procedures, definitions and criteria employed in the formulation of a sustainable development strategy for Bali as well as by Sharpley (2002) who explore the extent to which the diversification role for rural tourism represents a realistic tourism development policy.

The importance of the theme sea in a tourist destination has received attention by many researchers such as Koutra & Karyopouli (2013) indicating that the sun and sea image prevails and determines visitations to the island of Cyprus, dissuading tourists from seeing it as a year-round destination. Further, Triantafillidou & Petala (2016) found that the experiential dimensions of hedonism, escapism, and socialization were positive antecedents of tourists' satisfaction and behavioral intentions of sea adventure tourists.

The analysis of the content of online reviews regarding Fogo island revealed 9 themes. The most mentioned were clearly climb, village, and volcano. These were followed by guide, Fogo, and lava. Finally, came trip, place, and water. These findings are discussed next, contextualizing them within previous studies.

Tourism in SIDS is recognized in terms of dependency. Sharpley & Ussi (2014) paid attention to the role of the state in small island developing states and argued for the critical importance of supporting tourism as an agent of development. Due to geographical limitations of islands, this approach should be coupled with the need for sustainability of island destinations which led Rodriguez et al. (2008) to apply the tourism area life cycle model to Tenerife and integrating also strategic aspects. Sustainable tourism development in small islands is actually seen by Twining-Ward & Butler (2002) as a real need, thus leading them to develop such indicators to Samoa.

As a consequence of particular challenges posed by communities living in mountainous islands, Mitchell & Reid (2001) investigated tourism planning and management in the Andean community of Taquile island in Peru proposing a Framework of resident integration in tourism. Sinha & Bushell (2002) argued for the need to understand the relationship between biodiversity and tourism in small islands to promote biodiversity conservation and ecotourism, since villagers and the tourism activity depend on the same ecological resources. They found in a coastal village in Fiji that by fostering the connection of local people with the land that is manifested in the daily lives of the villagers the interaction between these and tourists could be enhanced.

Hampton (1998) studied Gili Trawangan island in Lombok, Indonesia and defended that encouraging backpacker tourism might alleviate some of the excesses of international mass tourism. McElroy & De Albuquerque (1998) went on to construct a composite tourism

penetration index involving per capita visitor spending, daily visitor densities per 1,000 population and hotel rooms per square kilometer, and illustrated the behavior of small islands at different levels of penetration in the Caribbean.

Fogo island has the only active volcano in the archipelago of Cabo Verde. As a consequence of that activity there is a conical aspect of the island, a caldera on its top and a main volcanic cone rising up the caldera floor (Costa, 2011). Cheng & Lu (2013) studied the experience of tourists when visiting Lyudao island in China, and found that destination image generates greater perception of novelty, promotes hedonics and perceived value, and leads to tourist behavioral intention to revisit the island.

The relevance of place in island tourism is recognized by several authors in previous studies. Cheng, Wu & Huang (2013) examined the impact of place attachment on the relationship between destination attractiveness and environmentally responsible behavior in the island of Penghu, Taiwan, which was indeed found to influence significantly that relationship as well as being positively associated with attractiveness of island tourism. Later, Cheng & Wu (2015) proposed an integrated approach for sustainable island tourism involving not only the influence of place attachment on environmentally responsible behavior but also how this is affected by both environmental knowledge and sensitivity. The importance of place image had also been addressed before by Selby and Morgan (1996) when they studied Barry island in Wales.

Water can be seen as a major asset for islands as tourist destinations since it surrounds them and in many cases contributes to beautiful panoramic views of the island landscape. However, due to the more fragile nature of islands as opposed to most mainland territories, water supply problems are likely to occur, and also as a consequence of tourism activity pressures on the environment, the need of bringing bottled water in their hiking is referred in the themes identified in this study. Such concerns led Essex, Kent and Newnham (2004) to investigate water supply issues in the island of Mallorca as an example that illustrates other Mediterranean islands as well as small islands located in other regions.

Both islands present tourists' experiences references to natural features and related experiences, enriched by local's interaction. In Fogo island references are connected mostly to the volcanoes and its unique characteristics. Although both are islands, the sea is not truly mentioned in the Fogo island, while in Santo Antão it appears in the comments related with the view.

The NTO promotes the islands as islands of the senses, and even thought it is not the main focus of the comment, it is possible to identify some senses-related aspects such as view and taste of the island water for both islands and touch for Fogo islands.

Despite this study´s useful findings, it has some limitation that ought to be made explicit. Only reviews of two islands were examined and no consistent data was available in relation with reviewers´ profiles. Future research should also include other islands from the archipelago of Cabo Verde, such as the island of São Vicente that is related with sound, i.e. music ("morna"), local festivities and bars. Moreover, the dimensions of tourist experience identified in this study could be linked with reviewers´ demographic and psychographic profiles.

 Finally, the increasing number of online reviews on both the islands of Santo Antão and Fogo as well as their content allows to conclude on the importance of promoting these two as islands of the senses as tourist destinations

Chapter V - Conclusion

5.1. Research Contributions

This PhD thesis was aimed at bringing research contributions in two ways:

i) Developing a literature review chapter on island tourism within a large time span of eighteen years (2000 to 2017) which constituted a pioneer manuscript ending up considering almost four hundred articles published in tourism and hospitality journals indexed in Scopus quartiles 1 and 2.

ii) Assessing tourist experiences via online reviews after visiting islands' destinations that was a research gap found in academic studies; this endeavor was performed by analyzing secondary data regarding a Small Island Developing State (SIDS), specifically in Cape Verde, with regard to their islands of the sun and of the senses.

The review of the literature on island tourism (RQ1) encompassed a thorough identification of articles published in indexed scientific journals pertaining to top quartiles 1 and 2 of Scopus and classified in the area of tourism and hospitality management. It resulted in covering 395 manuscripts which were analyzed from three perspectives, namely narrative and semantic network analysis. The content analysis enabled the design of a concept map including thirteen associated themes.

The main publishers and journal outlets which published studies in island tourism were, respectively: Taylor & Francis (46% journals; 43% papers), Sage (25%; 21%), and Elsevier (13%; 25%); Tourism Management (66 papers), Journal of Sustainable Tourism (37), Asia Pacific Journal of Tourism Research (33), Tourism Economics (31), Current Issues in Tourism and Tourism Geographies (29 papers each).

The authors that most investigated island tourism were Robertico Croes (14 papers), Konstantinos Andriotis (9), Jorge Ridderstaat and Zibin Song (6 papers each), Chris Ryan and Haywantee Ramkissoon (5 papers each).The major keywords, and themes under investigation were, respectively: tourism (336 articles), island (318), destination (297), development (277), sustainable (259) and small (241); tourism (1161 hits), destination (476), development (409),

tourists (373), impacts (368), industry (216), visitors (130), cultural (115), management (105), experience (92), policy (73), and hotel (52).

The main islands, countries and regions most researched were, respectively: Cyprus (25 studies), Mauritius (20), Aruba (19) and Barbados (18); China and USA (27 manuscripts each), Cyprus (25), Spain (24), Greece and the UK (22 each); Latin America & Caribbean (150 papers), Europe (145) and Asia (128).

The respondent types, research methods most used in scientific articles addressing island tourism were, respectively: tourists (40% of papers), managers (16%), and residents (14%); primary data (86% of articles), secondary data (9%), and conceptual paper (5%); whereas most qualitative studies used sample sizes of 20-50 individuals, more than forty percent of quantitative studies considered samples of between 200 and 500 respondents.

Due to an identified existing research gap (RQ2) in the scientific literature regarding the use of online reviews as a proxy of customer experience in studying islands as tourist destinations, two studies were developed to address this issue. Moreover, considering the acknowledge importance of the tourism industry for Small Island Developing States (SIDS), such a country was selected to conduct those empirical studies, Cabo Verde. This archipelago includes groups of islands that portray different characteristics: (1) on the other hand, Boa Vista and Sal are considered the island of the sun and the most visited of the archipelago of Cape Verde; (2) on the one hand, the Santo Antão and Fogo are the two most important islands of the senses.

For the islands of the sun, Boa Vista and Sal, online reviews from TripAdvisor were studied. A total of 37,962 were collected via web scraping and subjected to text mining using in both situations the R statistical tool. In this research tourist attractions, hotels and restaurants were also analyzed.

In the islands of the Sun (RQ3), Boa Vista and Sal, tourist attractions are focused on beach experience, diving, taking tours and trips. Staff is not referred in the attractions. Sal has a bigger number of attractions/activities alternatives than Boa Vista, but the latter attractions' have far more and better qualifiers in terms of tourists' satisfaction reviews than Sal does.

Hotels features that are more referred are *room, beach, pool, staff, and bar*. Many of the reviews referred to their hotels as being all inclusive, as so they had all the meals they needed at the hotels. These two islands receive attention regarding their *rooms*, the staff that interacts with guests, the *bar services*, available *swimming pool* and *location* near the beach. In addition, online reviews emphasize bars and drinks associated with restaurants, their staff members as well as their location near a beach. Both islands customers' experience qualify hotels as *good,* and *love* that is more referred in Boa Vista. *Clean* room was a topic in Sal hotels while Boa Vista refers to *friendly staff* in hotels.

For restaurants *staff, place and drinks* are the main topics common to both islands of the Sun. Sal refers service and table as important features for restaurants while Boa Vista shows more relevance on *bars, drinks and cocktails*, no service is mentioned. *Food or meal* were not found in the topics, but they appear inside the reviews in both islands. However, having a meal in Boa Vista is related with the nice place to relax or to drink something, while Sal is more specific about food, service when they refer to "delicious". *Cachupa*, the national dish was not mentioned in the topics, but they were found in a few positive reviews.

It is important to mention that local produced drinks such as *grogue* brandy, coffee and the *manecon* wine were not mentioned in the topics or in the reviews. To conclude Boa Vista reviews present more satisfaction when they evaluate restaurants with more frequent and stronger qualifiers than Sal customers' experience reviews do to their experiences in Sal's restaurants.

In contrast, and with different offers are the Islands of the Senses, a total of 472 online reviews about tourist attractions were collected from TripAdvisor on the islands of the senses, specifically Santo Antão (286) and Fogo (186).

Using Leximancer software, thirteen themes were identified and ranked according to their level of importance regarding Santo Antão: crater, view, hike, place, landscape, island, sea, clouds, people, guide, taxi, mountain, water. In relation to Fogo island, the following nine themes were found: climb, village, volcano, guide, fogo, lava, trip, place, water (RQ4)

Crater, Mountain and People are the common features of most interest in both islands. Volcano, eruption, lava and village are specific to Fogo attractions. Santo Antão refers to Pául Valley,

landscape, sea route and road. In both islands of the senses consumers activities are related with taking trips by hiking and climbing.

The crater and volcano are places to hike and climb in order to achieve beautiful sceneries from the islands' landscapes, grandiosity and views. Particularly in Santo Antão going up the mountain enables tourists to be above the clouds but that may cause one to not find his way back down. The importance of meeting local people and get to know villages is also relevant. In addition, tourists in both islands recommend considering guides but they are not always appreciated when visiting the two islands. In both islands they suggest that hikers bring their own bottled water, as local water is saturated and tart.

It is also interesting to mention that in terms of strong qualifiers related to both islands, Fogo Island has the biggest number; *unique, worth, beautiful, best, breath away, recommended*, while Santo Antão takes only *beautiful* as a strong qualifier.

Identified senses in the islands of the sun (RQ 5) were sight, taste for food and drinks, and hear referring to the music at night in Boa Vista island. In the islands of the senses, sight and taste for the water are common to both islands, but touch is only referred on soft lava sand in Fogo island.

In terms of the NTO Tourist experience offers and promotions (RQ6) they are not always made as close to the reality. This can cause a feeling of deceiving information and mistrust. As so there are services and products that should be reviewed so that they can be changed or improved. Some features promoted in the destination website were not identified on our reviews study.

- e.g. for the islands of senses "… making it an attractive place for adventure and sports, such as canyoning, sport fishing and others
- e.g. The islands of the senses "…are increasingly sought after for those seeking unique sensory experiences." – no sensory experiences were in the topics and not found in the reviews – the only sense we found were with sight for both islands and touch related with walking on the soft lava.
- e.g. for the islands of the sun "Warm waters, translucent, sometimes a turquoise blue to resemble true gemstones." – not mentioned in the topics

- e.g. "the island of Sal offers unique conditions for water sports, and also for fishing and swimming." - fishing was not a topic, nor swimming

This study identified one hidden trend that could be more explored in the NTO's promotion strategy. The hidden trend is about solidarity tourism, present in the most relevant concepts, themes, topics and terms that were identified based on the customers experience such as *"meeting local people", "tragedy so close", "resilience of the people", "special and unique people"*; and also related with the theme on environment concern by the tourists with the *"plastic problem".*

5.2. Managerial Implications

Besides academia, destination marketing organizations, businesses and local community can benefit from the empirical findings from this research since it maps out a number of core issues that should constitute priority attention if management in order to better adapt tourist promotion and services and products to the requirements shown by the analysis performed on the online reviews of tourists and as so play its role in the development of islands as tourism destinations.

Following the results of this research some recommendation are proposed to attractions, hotels and restaurants.

For the attractions area we suggest that more emphasis should be taken in Volcanoes Tourism "Volcanoes islands are very attractive"

➔ Create a modern visitor interpretation with photos and videos history documentaries; relevant flora education and identification, fauna information including bird watching

➔ Geologic center with volcanic information; A visitor experience room with realistic senses mechanisms, sound and smell (burn and sulfate), sight and touch with the heating of the lava.

➔ Also, as the weather is good almost all year round to launch an open-air spa treatment massage exploring the benefits of the lava mold might be a good suggestion.

Tour and trips are mentioned frequently, and the importance of local guides were visible in the reviews only. Some references to them: *"guides were ok, not so engaged and interested in guiding"; "The guide was aggressive…"*

➔ We recommend official guide training and issue of an ID license for those who would like to work, this will give economic activity for the population and security for the tourists.

Also, the need to drink water during their hiking and tours is real and to have to carry heavy bottles of water while doing all that effort may be even more tiring.

➔ We suggest that kiosks be opened in the middle of the hiking routes to sell water, drinks and snacks. This would be beneficial for the tourists as well as to the local community, not just for the big hotel chains that tend to monopolize the income inside their premises.

The only environmental issue that came into the topics was on the plastic problems of some beaches in Sal. It is mandatory that environment education projects are offered for the local community.

➔ Post signs and pamphlets to create a cooperation mind set among tourists and local community. Also, to stimulate businesses operating there to adopt and practice social responsibility daily. Gather groups of voluntaries to help to clean the beaches. Also contract local people for the cleaning, rent machines to help collect the rubbish of the beaches daily. Implement rules and stimulus for the commercialization and replacement for material less harmful for the nature. Also offer tax return of plastic or glass containers. Last but not least and under the solidarity tourism trend we found, invite tourists to participate in the cleaning of the beaches.

Recommendations for restaurants and hotels is related with possibility of increasing sales, production, jobs, better use of the land

➔ To create an Official License and quality certificate for local restaurants to operate under rules and become more popular.

Food - Cachupa National Dish

➔ Develop exclusive Cooking techniques inside the calderas (like the *furnas* Stew in the Azores)

➔ Stimulate and Promote offers to increase consumption of food outside of the hotels

Drinks - Local production

➔ To foster proper promotion of the nationally produced drinks. *Manecon* wine, *Grogue*, the coffee, develop new cocktails recipes through competition including these 3 drinks, add

local soft music (*morna*) in the environment and dance shows every night in places where other guests who are not interested do not feel disturbed.

Final Recommendations – Invest in Education and Infrastructure

- ➔ Support Entrepreneurship projects
- ➔ Create a technical tourism educational system
- ➔ Create a technical biologic land/agricultural tourism educational system for food growing not just to feed locals but also the hotels and invite tourists to visit
- ➔ Implement a Solidarity tourism project and promote it
- ➔ Implement and control a sustainable infrastructure consortium for development
- ➔ Include all islands' communities

5.3. Limitations and Future Research Directions

This research has limitations coming from the fact that it was focused on a single small independent developing state (SIDS), Cabo Verde, and investigated customer experience taking into account online reviews in four islands (two islands of the sun and two other of the senses). Furthermore, it analyzed attractions, hotels and restaurants when addressing the islands of the sun but only considered tourist attractions when studying the islands of the senses.

Expand the collection of data to all other islands of Cape Verde in this archipelago for establishing further comparisons. Only negative reviews should be considered as in this study due to the higher number of topics identified were mostly positive. It is also suggested to study other small island developing states in Africa and also expand to other continents and regions such as in Latin America and the Caribbean.

Future research questions may include: (1) Why does it seem like hotels chains are operating almost like a cruise ship, with all inclusive? (2) How much real benefit from the tourism industry is the social community really gaining?

Bibliography

Agrusa, J., Kim, S. S., & Wang, K. C. (2011). Mainland Chinese tourists to Hawaii: Their characteristics and preferences. *Journal of Travel & Tourism Marketing*, *28*(3), 261-278.

Almeida, A. M. M., Correia, A., & Pimpão, A. (2014). Segmentation by benefits sought: the case of rural tourism in Madeira. *Current Issues in Tourism*, *17*(9), 813-831.

Anatosakis, N.; Dragouni, M.; Filis, G. (2015) How strong is the linkage between tourism and economic growth in Europe?, *Economic Modelling*, 44**,** 142-155

Andriotis, K., & Vaughan, D. R. (2004). The tourism workforce and policy: Exploring the assumptions using Crete as the case study. *Current Issues in Tourism*, *7*(1), 66-87.

Au, N., Buhalis, D., & Law, R. (2014). Online complaining behavior in Mainland China hotels: the perception of Chinese and non-Chinese customers. *International Journal of Hospitality & Tourism Administration*, *15*(3), 248-274.

Ayeh, J. K., Au, N., & Law, R. (2013). "Do we believe in TripAdvisor?" Examining credibility perceptions and online travelers' attitude toward using user-generated content. Journal of Travel Research, 52(4) 437–452.

Babak Taheri, Sameer Hosany & Levent Altinay (2019) Consumer engagement
in the tourism industry: new trends and implications for research, *The Service Industries Journal, 39*:7-8, 463-468.

Baka, V. (2016). The becoming of user-generated reviews: Looking at the past to understand the future of managing reputation in the travel sector. *Tourism Management*, *53*, 148-162.

Banerjee, S., & Chua, A. Y. (2016). In search of patterns among travellers' hotel ratings in TripAdvisor. *Tourism Management*, *53*, 125-131.

Beerli, A., & Martín, J. D. (2004). Tourists' characteristics and the perceived image of tourist destinations: a quantitative analysis—a case study of Lanzarote, Spain. *Tourism Management*, *25*(5), 623-636.

Belle, N., & Bramwell, B. (2005). Climate change and small island tourism: Policy maker and industry perspectives in Barbados. *Journal of Travel Research*, *44*(1), 32-41.

Blei, D. M. (2012). Probabilistic topic models. *Communications of the ACM*, 55 (4), 77–84. doi:10.1145/2133806.2133826

Bloomberg (2018) Bloomberg.com (accessed May 6, 2018).

Briassoulis, H. (2003). Crete: endowed by nature, privileged by geography, threatened by tourism? *Journal of Sustainable Tourism*, *11*(2-3), 97-115.

Brochado, A., Stoleriu, O., & Lupu, C. (2018). Surf camp experiences. *Journal of Sport & Tourism*, *22*(1), 21-41.

Brochado, A., Troilo, M., & Shah, A. (2017). Airbnb customer experience: Evidence of convergence across three countries. *Annals of Tourism Research*, *63*, 210-212.

Buch, T., Milne, S., & Dickson, G. (2011). Multiple stakeholder perspectives on cultural events: Auckland's Pasifika festival. *Journal of Hospitality Marketing & Management*, *20*(3-4), 311-328.

Butler, R. W. (1980). The concept of a tourist area cycle of evolution: implications for management of resources. *The Canadian Geographer/Le Géographe canadien*, *24*(1), 5-12.

Cahill, K. L., Marion, J. L., & Lawson, S. R. (2008). Exploring visitor acceptability for hardening trails to sustain visitation and minimise impacts. *Journal of Sustainable Tourism*, *16*(2), 232-245.

Calheiros, A. C., Moro, S., & Rita, P. (2017). Sentiment classification of consumer-generated online reviews using topic modeling. Journal of Hospitality Marketing & Management, 26(7), 675-693.

Canavan, B. (2014). Sustainable tourism: development, decline and de-growth. Management issues from the Isle of Man. *Journal of Sustainable Tourism*, *22*(1), 127-147.

Cantallops, A. S., & Salvi, F. (2014). New consumer behavior: A review of research on eWOM and hotels. *International Journal of Hospitality Management*, *36*, 41-51.

Carter, R. W. (2004). Implications of sporadic tourism growth: extrapolation from the case of Boracay Island, The Philippines. *Asia Pacific Journal of Tourism Research*, *9*(4), 383-404.

Carter, R. W., Thok, S., O'Rourke, V., & Pearce, T. (2015). Sustainable tourism and its use as a development strategy in Cambodia: a systematic literature review. *Journal of Sustainable Tourism*, *23*(5), 797-818.

Casado-Díaz, A. B., Andreu, L., Beckmann, S. C., & Miller, C. (2018). Negative online reviews and webcare strategies in social media: effects on hotel attitude and booking intentions. *Current Issues in Tourism*, 1-5.

Casalo, L. V., Flavian, C., Guinaliu, M., & Ekinci, Y. (2015). Do online hotel rating schemes influence booking behaviors?. *International Journal of Hospitality Management*, *49*, 28-36.

Cashman, A., & Moore, W. (2012). A market-based proposal for encouraging water use efficiency in a tourism-based economy. *International Journal of Hospitality Management*, *31*(1), 286-294.

Chang, T. C. (1999). Local uniqueness in the global village: Heritage tourism in Singapore. *The Professional Geographer*, *51*(1), 91-103.

Cheng, M., Edwards, D., Darcy, S., & Redfern, K. (2016). A tri-method approach to a review of adventure tourism literature: Bibliometric analysis, content analysis, and a quantitative

systematic literature review. *Journal of Hospitality & Tourism Research*, 1-24. DOI: 10.1177/1096348016640588

Cheng, M., & Jin, X. (2018). What do Airbnb users care about? An analysis of online review comments. *International Journal of Hospitality Management*, *76*, 58-70.

Cheng, T. M., & Lu, C. C. (2013). Destination image, novelty, hedonics, perceived value, and revisiting behavioral intention for island tourism. *Asia Pacific Journal of Tourism Research*, *18*(7), 766-783.

Cheng, T. M., & Wu, H. C. (2015). How do environmental knowledge, environmental sensitivity, and place attachment affect environmentally responsible behavior? An integrated approach for sustainable island tourism. *Journal of Sustainable Tourism*, *23*(4), 557-576.

Cheng, T. M., C. Wu, H., & Huang, L. M. (2013). The influence of place attachment on the relationship between destination attractiveness and environmentally responsible behavior for island tourism in Penghu, Taiwan. *Journal of Sustainable Tourism*, *21*(8), 1166-1187.

Cheung, C., & Law, R. (2006). How can hotel guests be protected during the occurrence of a Tsunami? *Asia Pacific Journal of Tourism Research*, *11*(3), 289-295.

Cheung, C.M.K & Lee, M. K. O. (2012) What drives consumers to spread electronic word of mouth in online consumer-opinion platforms. *Decision Support Systems*, 53 (1)**,** 218-225

Conlin, M. V. & Baum, T. (1995). *Island Tourism: Management Principles and Practice*. Chichester: John Wiley & Sons Ltd.

Costa, F. L. (2011). Volcanic geomorphosites assessment of the last eruption, on April to May 1995, within the natural park of Fogo Island, Cape Verde. *Geojournal of tourism and geosites*, *8*(2), 167-177.

Croes, R., Lee, S. H., & Olson, E. D. (2013). Authenticity in tourism in small island destinations: a local perspective. Journal of Tourism and Cultural Change, 11(1-2), 1-20.

Crofts, K., & Bisman, J. (2010). Interrogating accountability: An illustration of the use of Leximancer software for qualitative data analysis. *Qualitative Research in Accounting & Management*, *7*(2), 180-207.

Darbellay, F., & Stock, M. (2011). Tourism as complex interdisciplinary research object. *Annals of Tourism Research*, 39(1), 441-458.

Dawson, H., Holmes, M., Jacobs, H., & Wade, R. I. (2011). Wine tourism: Winery visitation in the wine appellations of Ontario. *Journal of Vacation Marketing*, *17*(3), 237-246.

Del Chiappa, G., & Presenza, A. (2013). The use of network analysis to assess relationships among stakeholders within a tourism destination: An empirical investigation on Costa Smeralda-Gallura, Italy. *Tourism Analysis*, *18*(1), 1-13.

Delen, D., & Crossland, M. D. (2008). Seeding the survey and analysis of research literature with text mining. *Expert Systems With Applications*, 34, 1707–1720.

Dellarocas, C. (2003). The digitization of word of mouth: Promise and challenges of online feedback mechanisms. *Management science*, *49*(10), 1407-1424.

Dillette, A. K., Douglas, A. C., Martin, D. S., & O'Neill, M. (2017). Resident perceptions on cross-cultural understanding as an outcome of volunteer tourism programs: the Bahamian Family Island perspective. *Journal of Sustainable Tourism*, *25*(9), 1222-1239.

Diţoiu, M. C., & Căruntu, A. L. (2014). Sensory experiences regarding five-dimensional brand destination. *Procedia-Social and Behavioral Sciences*, *109*, 301-306.

Diţoiu, M. C., Stăncioiu, A. F., Brătucu, G., Onişor, L. F., & Botoş, A. (2014). The sensory brand of the destination. Case study: Transylvania. *Theoretical and Applied Economics*, *21*(5 (594)), 37-50.

Diţoiu, M. C., Stăncioiu, A. F., Teodorescu, N., Onişor, L. F., & Anamaria-Cătălina, R. A. D. U. (2014). Sensory experience–between the tourist and the marketer. *Theoretical and Applied Economics*, *18*(12 (601)), 37-50.

Dodds, R., & Graci, S. (2012). *Sustainable tourism in island destinations*. Routledge.

Echtner, C. M., & Jamal, T. B. (1997). The disciplinary dilemma of tourism studies. *Annals of tourism research*, 24(4), 868-883.

Echtner, C. M., &. Ritchie, J. R. B (1993). "The Measurement of Destination Image: An Empirical Assessment." *Journal of Travel Research*, 31 (4): 3–13

Erkan, Ismail & Evans, Chris (2016) The influence of eWOM in social media on consumers' purchase intentions: An extended approach to information adoption. *Computers in Human Behavior*, 61, 47-55.

Essex, S., Kent, M., & Newnham, R. (2004). Tourism development in Mallorca: is water supply a constraint? *Journal of sustainable tourism*, *12*(1), 4-28.

Fakeye, P. C., & Crompton, J. L. (1991). Image differences between prospective, first-time, and repeat visitors to the Lower Rio Grande Valley. Journal of travel research, 30(2), 10-16.

Fallon, F. (2004). After the Lombok riots, is sustainable tourism achievable? *Journal of Travel & Tourism Marketing*, *15*(2-3), 139-158.

Filieri, R. (2016). What makes an online consumer review trustworthy?. *Annals of Tourism Research*, *58*, 46-64.

Filieri, R., Alguezaui, S., & McLeay, F. (2015). Why do travelers trust TripAdvisor? Antecedents of trust towards consumer-generated media and its influence on recommendation adoption and word of mouth. *Tourism Management*, *51*, 174-185.

Forster, J. (1964). The sociological consequences of tourism. *International journal of Comparative sociology*, *5*, 217.

Fu, Jen-Ruei; Ju, Pei-Hung; Hsu, Chiung-Wen (2015) Understanding why consumers engage in electronic word-of-mouth communication: Perspectives from theory of planned behavior and justice theory. *Electronic Commerce Research and Applications*, 14 (6), 616-630.

Gentile, C., Spiller, N., & Noci, G. (2007). How to sustain the customer experience:: An overview of experience components that co-create value with the customer. *European management journal*, *25*(5), 395-410.

Graci, S. (2013). Collaboration and partnership development for sustainable tourism. *Tourism Geographies*, *15*(1), 25-42.

Gretzel, U., Fesenmaier, D. R., Lee, Y. J., & Tussyadiah, I. (2010). 11 Narrating travel experiences: the role of new media [J]. *Tourist experience: Contemporary perspectives*, 171.

Gretzel, U., & Yoo, K. H. (2008). Use and impact of online travel reviews. *Information and communication technologies in tourism 2008*, 35-46.

Guerreiro, J., & Moro, S. (2017). Are Yelp's tips helpful in building influential consumers?. *Tourism Management Perspectives*, 24, 151-154.

Hall, M. C. (2010). Island destinations: a natural laboratory for tourism: introduction. *Asia Pacific Journal of Tourism Research*, *15*(3), 245-249.

Hallmann, K., Feiler, S., & Breuer, C. (2012). Sport motivation as driver for segmenting sport tourists in coastal regions. *Tourism Review*, *67*(2), 4-12.

Hampton, M. P. (1998). Backpacker tourism and economic development. *Annals of tourism research*, *25*(3), 639-660.

Harrison, D. (Ed.). (2001). *Tourism and the less developed world: issues and case studies*. Cabi, Oxon, UK.

Hornik, K., & Grün, B. (2011). Topicmodels: An R package for fitting topic models. *Journal of Statistical Software*, 40 (13), 1–30.

Hultén, B. (2011). Sensory marketing: the multi-sensory brand-experience concept. *European Business Review*, *23*(3), 256-273.

Hwang, D., Stewart, W. P., & Ko, D. W. (2012). Community behavior and sustainable rural tourism development. *Journal of Travel research*, *51*(3), 328-341.

INE (2016) Instituto Nacional de Estatística, Cabo Verde.

Jaafar, M., & Maideen, S. A. (2012). Ecotourism-related products and activities, and the economic sustainability of small and medium island chalets. *Tourism Management*, *33*(3), 683-691.

Jacob, M., Florido, C., & Aguiló, E. (2010). Research note: Environmental innovation as a competitiveness factor in the Balearic *Islands. Tourism Economics, 16*(3), 755-764.

Jafari, J (1974) The socio-economic costs of tourism to developing countries. *Annals of Tourism Research*, 2, (5), 237–245

Jeong, EunHa & Jang, SooCheong (Shawn) (2011) Restaurant experiences triggering positive electronic word-of-mouth (eWOM) motivations. *International Journal of Hospitality Management*, 30 (2), 356-366.

Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of Social Media. *Business horizons*, *53*(1), 59-68.

Kastenholz, E., & Rodrigues, Á. (2007). Discussing the potential benefits of hiking tourism in Portugal. Anatolia, 18(1), 5-21.

Keating, B., & Kriz, A. (2008). Outbound tourism from China: Literature review and research agenda. *Journal of Hospitality and Tourism Management*, *15*(1), 32-41.

Khadaroo, J., & Seetanah, B. (2007). Transport infrastructure and tourism development. *Annals of Tourism Research*, *34*(4), 1021-1032.

Kilic, H., & Okumus, F. (2005). Factors influencing productivity in small island hotels: evidence from Northern Cyprus. *International Journal of Contemporary Hospitality Management*, *17*(4), 315-331.

Kiráľová, A., & Pavlíčeka, A. (2014). Development of social media strategies in tourism destination. *Procedia-Social and Behavioral Sciences*, *175*, 358-366.

Klint, L. M., Wong, E., Jiang, M., Delacy, T., Harrison, D., & Dominey-Howes, D. (2012). Climate change adaptation in the Pacific island tourism sector: analysing the policy environment in Vanuatu. *Current Issues in Tourism*, *15*(3), 247-274.

Ko, D. W., & Stewart, W. P. (2002). A structural equation model of residents' attitudes for tourism development. *Tourism management*, *23*(5), 521-530.

Kokkranikal, J., McLellan, R., & Baum, T. (2003). Island tourism and sustainability: A case study of the Lakshadweep Islands. *Journal of Sustainable Tourism*, *11*(5), 426-447.

Koutra, C., & Karyopouli, S. (2013). Cyprus' image—a sun and sea destination—as a detrimental factor to seasonal fluctuations. Exploration into motivational factors for holidaying in Cyprus. Journal of Travel & Tourism Marketing, 30(7), 700-714.

Krishna, A. (2012). An integrative review of sensory marketing: Engaging the senses to affect perception, judgment and behavior. *Journal of Consumer Psychology*, *22*(3), 332-351.

Kwok, L., Xie, K. L., & Richards, T. (2017). Thematic framework of online review research: A systematic analysis of contemporary literature on seven major hospitality and tourism journals. *International Journal of Contemporary Hospitality Management*, *29*(1), 307-354.

Labrecque, L. I., Patrick, V. M., & Milne, G. R. (2013). The marketers' prismatic palette: A review of color research and future directions. *Psychology & Marketing*, *30*(2), 187-202.

Larsen, S. (2007). Aspects of a psychology of the tourist experience. *Scandinavian Journal of Hospitality and Tourism*, *7*(1), 7-18.

Lee, C.C. & C.P. Chang, C. P. (2008) Tourism development and economic growth: A closer look at panels. *Tourism Management*, *29* pp. 180-192

Lee, T. H., Jan, F. H., & Huang, G. W. (2015). The influence of recreation experiences on environmentally responsible behavior: The case of Liuqiu Island, Taiwan. *Journal of Sustainable Tourism*, 23(6), 947–967.

Leung, D., Law, R., Van Hoof, H., & Buhalis, D. (2013). Social media in tourism and hospitality: A literature review. Journal of Travel & Tourism Marketing, 30(1-2), 3-22.

Lim, C. C., & Cooper, C. (2009). Beyond sustainability: optimising island tourism development. *International journal of tourism research*, 11(1), 89-103.

Litvin, S. W., Goldsmith, R. E., & Pan, B. (2008). Electronic word-of-mouth in hospitality and tourism management. *Tourism management*, *29*(3), 458-468.

Liu, X., Schuckert, M., & Law, R. (2018). Utilitarianism and knowledge growth during status seeking: Evidence from text mining of online reviews. *Tourism Management*, *66*, 38-46.

Lockhart, D. G. (1997). Islands and tourism: an overview. In D.G. Lockhart, and D. Drakakis-Smith (Eds.), *Island Tourism: Trends and Prospects*. London: Pinter.

Lockhart, D., & Drakakis-Smith, D. W. (Eds.). (1997). *Island tourism: Trends and prospects*. Thomson Learning, New York, USA.

Lupu, C., Brochado, A., & Stoleriu, O. M. (2017). Experiencing Dracula's homeland. *Tourism Geographies*, *19*(5), 756-779.

Malhotra, N. (2018). *Marketing Research: An Applied Orientation* (7/E). Pearson.

Manasakis, C., Apostolakis, A., & Datseris, G. (2013). Using data envelopment analysis to measure hotel efficiency in Crete. *International Journal of Contemporary Hospitality Management*, *25*(4), 510-535.

Marchiori, E., & Cantoni, L. (2011). The online reputation construct: Does it matter for the tourism domain? A literature review on destinations' online reputation. Information Technology & Tourism, 13(3), 139-159.

Mariani, M., Baggio, R., Buhalis, D., & Longhi, C. (Eds.). (2014). *Tourism management, marketing, and development: volume I: the importance of networks and ICTs* (Vol. 1). Springer.

Mariani, M. M., Buhalis, D., Longhi, C., & Vitouladiti, O. (2014). Managing change in tourism destinations: Key issues and current trends. *Journal of Destination Marketing & Management*, *2*(4), 269-272.

Mariani, M. M., Borghi, M., & Gretzel, U. (2019). Online reviews: differences by submission device. *Tourism Management*, *70*, 295-298.

Markwick, M. C. (2001). Tourism and the development of handicraft production in the Maltese islands. *Tourism Geographies*, 3(1), 29–51. doi:10.1080/14616680010008694

Markwell, K. (2001). "An intimate rendezvous with nature"?: Mediating the tourist-nature experience at three tourist sites in Borneo. *Tourist Studies, 1(1), 39–57.* doi:10.1177/146879760100100103

Martin, S. A., & Assenov, I. (2012). The genesis of a new body of sport tourism literature: A systematic review of surf tourism research (1997–2011). *Journal of Sport & Tourism*, *17*(4), 257-287.

Martin, S. A., & Assenov, I. (2015). Measuring the conservation aptitude of surf beaches in Phuket, Thailand: An application of the surf resource sustainability index. *International Journal of Tourism Research*, *17*(2), 105-117.

Martín-Cejas, R. R., & Sánchez, P. P. R. (2010). Ecological footprint analysis of road transport related to tourism activity: The case for Lanzarote Island. *Tourism Management*, *31*(1), 98-103.

McElroy, J. L., & De Albuquerque, K. (1998). Tourism penetration index in small Caribbean islands. *Annals of Tourism Research*, *25*(1), 145-168.

Mehmetoglu, M. (2007). Typologising nature-based tourists by activity—Theoretical and practical implications. Tourism management, 28(3), 651-660.

Miguéns, J., Baggio, R., & Costa, C. (2008). Social media and tourism destinations: TripAdvisor case study. *Advances in tourism research*, *26*(28), 1-6.

Mitchell, R. (2018). *Web Scraping with Python: Collecting More Data from the Modern Web*. O'Reilly Media, Inc.

Mitchell, R. E., & Reid, D. G. (2001). Community integration: Island tourism in Peru. *Annals of tourism research*, *28*(1), 113-139.

Moniz, A. I. (2012). A dynamic analysis of repeat visitors. *Tourism Economics*, *18*(3), 505-517.

Moon, H., & Han, H. (2018). Destination attributes influencing Chinese travelers' perceptions of experience quality and intentions for island tourism: A case of Jeju Island. *Tourism Management Perspectives*, *28*, 71-82.

Moro, S., Cortez, P., & Rita, P. (2015). Business intelligence in banking: A literature analysis from 2002 to 2013 using text mining and latent Dirichlet allocation. *Expert Systems with Applications*, 42(3), 1314-1324.

Moro, S., & Rita, P. (2018). Brand strategies in social media in hospitality and tourism. *International Journal of Contemporary Hospitality Management*, 30(1), 343-364.

Moro, S., Rita, P., & Coelho, J. (2017a). Stripping customers' feedback on hotels through data mining: the case of Las Vegas Strip, *Tourism Management Perspectives*, Vol.23, pp.41.

Moro, S., Rita, P., & Cortez, P. (2017). A text mining approach to analyzing Annals literature. *Annals of Tourism Research*, 66, 208-210.

Moro, S., Rita, P., & Oliveira, C. (2018). Factors influencing hotels' online prices. *Journal of Hospitality Marketing & Management*, 27(4), 443-464.

Moro, S., Rita, P., Oliveira, C., Batista, F., & Ribeiro, R. (2018). Leveraging national tourist offices through data analytics. *International Journal of Culture, Tourism and Hospitality Research*, *12*(4), 420-426.

Mossberg, L. (2007). A marketing approach to the tourist experience. *Scandinavian journal of hospitality and tourism*, *7*(1), 59-74.

Mudambi, S. M., & Schuff, D. (2010). What makes a helpful review? A study of customer reviews on Amazon. com. *MIS quarterly*, *34*(1), 185-200.

Munar, A. M., & Jacobsen, J. K. S. (2013). Trust and involvement in tourism social media and web-based travel information sources. *Scandinavian Journal of Hospitality and Tourism*, *13*(1), 1-19.

Munar, A. M., & Jacobsen, J. K. S. (2014). Motivations for sharing tourism experiences through social media. Tourism management, 43, 46-54.

Munzert, S., Rubba, C. Meibner, P., & Nyhius, D. (2014) *Automated Data Collection with R – A Practical Guide to Web Scraping and Text Mining*. John Wiley & Sons.

Nelson, P. (1970). Information and consumer behavior. *Journal of political economy*, *78*(2), 311-329.

Neuhofer, B., Buhalis, D., & Ladkin, A. (2012). Conceptualising technology enhanced destination experiences. *Journal of Destination Marketing & Management*, *1*(1-2), 36-46.

Neuhofer, B., Buhalis, D., & Ladkin, A. (2014). A typology of technology-enhanced tourism experiences. *International Journal of Tourism Research*, *16*(4), 340-350.

Newhall, C. (2014). A Dilemma for Tourists and Land Managers Alike: What Risks to Take? In Volcanic Tourist Destinations (pp. 351-353). Springer, Berlin, Heidelberg.

Nicely, A., Palakurthi, R., & Denise Gooden, A. (2011). Behaviors linked to high levels of hotel managers' work-related learning. *International Journal of Contemporary Hospitality Management*, *23*(6), 764-783.

Northcote, J., & Macbeth, J. (2006). Conceptualizing yield: Sustainable tourism management. *Annals of Tourism Research*, *33*(1), 199-220.

Nunkoo, R., & Gursoy, D. (2012). Residents' support for tourism: An identity perspective. *Annals of Tourism Research*, *39*(1), 243-268.

Nusair, K., Parsa, H.G., Cobanoglu, C., 2011. Building a model of commitment for Generation Y: an empirical study on e-travel retailers. *Tourism Management*, 32, 833–843.

Orchiston, C. (2012). Seismic risk scenario planning and sustainable tourism management: Christchurch and the Alpine Fault zone, South Island, New Zealand. *Journal of Sustainable Tourism*, *20*(1), 59-79.

Packer, J., Ballantyne, R., & Hughes, K. (2014). Chinese and Australian tourists' attitudes to nature, animals and environmental issues: Implications for the design of nature-based tourism experiences. *Tourism Management*, *44*, 101-107.

Park, S. Y. (2011). Examining potential for cruise business in the American-affiliated pacific islands. *Asia Pacific Journal of Tourism Research*, *16*(1), 1-19.

Park, S. Y., & Allen, J. P. (2013). Responding to online reviews problem solving and engagement in hotels. Cornell Hospitality Quarterly, 54(1), 64-73.

Park, S. H., Hsieh, C. M., & McNally, R. (2010). Motivations and marketing drivers of Taiwanese island tourists: Comparing across Penghu, Taiwan and Phuket, Thailand. *Asia Pacific Journal of Tourism Research*, *15*(3), 305-317.

Pratt, S (2015) The economic impact of tourism in SIDS. *Annals of Tourism Research*, 52, 148-160

Prayag, G., & Ryan, C. (2012). Antecedents of tourists' loyalty to Mauritius: The role and influence of destination image, place attachment, personal involvement, and satisfaction. *Journal of Travel Research, 51*(3), 342–356.

Prideaux, B., & Crosswell, M. (2006). The value of visitor surveys: The case of Norfolk Island. *Journal of Vacation Marketing*, *12*(4), 359-370.

Putri, S. D., Soemarno, S., & Hakim, L. (2015). Strategic Management of Nature-Based Tourism in Ijen Crater in the Context of Sustainable Tourism Development. Journal of Indonesian Tourism and Development Studies, 3(3), 123-129.

Quan, S., & Wang, N. (2004). Towards a structural model of the tourist experience: An illustration from food experiences in tourism. *Tourism management*, *25*(3), 297-305.

Ramkissoon, H., & Uysal, M. (2010). Testing the role of authenticity in cultural tourism consumption: A case of Mauritius. *Tourism Analysis*, *15*(5), 571-583.

Ramkissoon, H., & Uysal, M. S. (2011). The effects of perceived authenticity, information search behaviour, motivation and destination imagery on cultural behavioural intentions of tourists. *Current Issues in Tourism*, *14*(6), 537-562.

Ramkissoon, H., Uysal, M., & Brown, K. (2011). Relationship between destination image and behavioral intentions of tourists to consume cultural attractions. *Journal of Hospitality Marketing & Management*, *20*(5), 575-595.

Rese, A., Schreiber, S., & Baier, D. (2014). Technology acceptance modeling of augmented reality at the point of sale: Can surveys be replaced by an analysis of online reviews?. *Journal of Retailing and Consumer Services*, *21*(5), 869-876.

Rickly-Boyd, JM & Metro-Roland, M.M. (2010) Background to the fore: the prosaic in tourist places. *Annals of Tourism Research*, 37, 1164-1180

Ritchie, J. B. (1999). Policy formulation at the tourism/environment interface: Insights and recommendations from the Banff-Bow Valley study. Journal of Travel Research, 38(2), 100-110.

Rivera, M., Croes, R., & Zhong, Y. (2016). Developing mobile services: A look at first-time and repeat visitors in a small island destination. *International Journal of Contemporary Hospitality Management*, *28*(12), 2721-2747.

Rodrigues, H., Brochado, A., Troilo, M., & Mohsin, A. (2017). Mirror, mirror on the wall, who's the fairest of them all? A critical content analysis on medical tourism. *Tourism Management Perspectives*, *24*, 16-25.

Rodríguez, J. R. O., Parra-López, E., & Yanes-Estévez, V. (2008). The sustainability of island destinations: Tourism area life cycle and teleological perspectives. The case of Tenerife. *Tourism Management*, *29*(1), 53-65.

Rose, S., Hair, N., & Clark, M. (2011). Online customer experience: A review of the business-to-consumer online purchase context. *International Journal of Management Reviews*, *13*(1), 24-39.

Ryan, C., Chaozhi, Z., & Zeng, D. (2011). The impacts of tourism at a UNESCO heritage site in China–a need for a meta-narrative? The case of the Kaiping Diaolou. *Journal of Sustainable Tourism*, *19*(6), 747-765.

Santana-Gallego, M., Ledesma-Rodríguez, F., & Pérez-Rodríguez, J. V. (2011). Tourism and trade in small island regions: The case of the Canary Islands. *Tourism Economics*, *17*(1), 107-125.

Scheyvens, R., & Momsen, J. (2008). Tourism in small island states: From vulnerability to strengths. *Journal of sustainable tourism*, *16*(5), 491-510.

Schuckert, M., Liu, X., & Law, R. (2015). Hospitality and tourism online reviews: Recent trends and future directions. *Journal of Travel & Tourism Marketing, 32*(5), 608-621.

Seetanah, B. (2011). Assessing the dynamic economic impact of tourism for island economies. *Annals of Tourism Research*, *38*(1), 291-308.

Seetanah, B., & Sannassee, R. V. (2015). Marketing promotion financing and tourism development: The case of Mauritius. *Journal of Hospitality Marketing & Management*, *24*(2), 202-215.

Selby, M., & Morgan, N. J. (1996). Reconstruing place image: A case study of its role in destination market research. *Tourism Management*, *17*(4), 287-294.

Sharpley, R. (2002). Rural tourism and the challenge of tourism diversification: the case of Cyprus. Tourism management, 23(3), 233-244.

Sharpley, R. (2003). Tourism, modernisation and development on the island of Cyprus: Challenges and policy responses. *Journal of Sustainable Tourism*, *11*(2-3), 246-265.

Sharpley, R., & Ussi, M. (2014). Tourism and governance in small island developing states (SIDS): the case of Zanzibar. *International Journal of Tourism Research*, *16*(1), 87-96.

Shaw, C. and Ivens, J. (2005) *Building Great Customer Experiences*. MacMillan, New York.

Sharpley, R. (2012). Island tourism or tourism on islands? *Tourism Recreation Research*, 37(2), 167-172.

Sigala, M. (2015). The application and impact of gamification funware on trip planning and experiences: The case of TripAdvisor's funware. *Electronic Markets*, *25*(3), 189-209.

Sims, R. (2009). Food, place and authenticity: local food and the sustainable tourism experience. Journal of sustainable tourism, 17(3), 321-336.

Sinha, C. C., & Bushell, R. (2002). Understanding the linkage between biodiversity and tourism: a study of ecotourism in a coastal village in Fiji. *Pacific Tourism Review*, *6*(1), 35-50.

Solomon, M. (2017) *Consumer Behavior: Buying, Having, and Being* (12th Edition). Pearson, USA.

Sotiriadis, M. D., & Van Zyl, C. (2013). Electronic word-of-mouth and online reviews in tourism services: the use of twitter by tourists. Electronic Commerce Research, 13(1), 103-124.

Sparks, B. A., Perkins, H. E., & Buckley, R. (2013). Online travel reviews as persuasive communication: The effects of content type, source, and certification logos on consumer behavior. Tourism Management, 39, 1-9.

Statista (2018) *The Statistics Portal*: https://www.statista.com/topics/3443/tripadvisor/

Steen Jacobsen, J. K. (2007). Use of landscape perception methods in tourism studies: A review of photo-based research approaches. Tourism Geographies, 9(3), 234-253.

Stylidis, D., Terzidou, M., & Terzidis, K. (2008). Islands and destination image: The case of Ios. *Tourismos: an international multidisciplinary refereed journal of tourism*, *3*(1), 180-189.

Sun, M., Zhang, X., & Ryan, C. (2015). Perceiving tourist destination landscapes through Chinese eyes: The case of South Island, New Zealand. Tourism Management, 46, 582-595.

Taheri, B., Hosany, S., & Altinay, L. (2019). Consumer engagement in the tourism industry: new trends and implications for research. The Service Industries Journal, 39 (7-8), 463-468.

Tan, H., Lv, X., Liu, X., & Gursoy, D. (2018). Evaluation nudge: Effect of evaluation mode of online customer reviews on consumers' preferences. *Tourism Management*, *65*, 29-40.

Tom Dieck, M. C., Fountoulaki, P., & Jung, T. H. (2018). Tourism distribution channels in European island destinations. *International Journal of Contemporary Hospitality Management*, 30(1), 326-342.

Trauer, B., & Ryan, C. (2005). Destination image, romance and place experience—an application of intimacy theory in tourism. Tourism Management, 26(4), 481-491.

Triantafillidou, A., & Petala, Z. (2016). The role of sea-based adventure experiences in tourists' satisfaction and behavioral intentions. Journal of Travel & Tourism Marketing, 33(sup1), 67-87.

Tsang, N. K., & Hsu, C. H. (2011). Thirty years of research on tourism and hospitality management in China: A review and analysis of journal publications. *International Journal of Hospitality Management*, *30*(4), 886-896.

Tsaur, S. H., & Wang, C. H. (2007). The evaluation of sustainable tourism development by analytic hierarchy process and fuzzy set theory: An empirical study on the Green Island in Taiwan. *Asia Pacific Journal of Tourism Research*, *12*(2), 127-145.

Twining-Ward, L., & Butler, R. (2002). Implementing STD on a small island: Development and use of sustainable tourism development indicators in Samoa. *Journal of sustainable tourism*, *10*(5), 363-387.

UN (2011) Small Island Developing States, United Nations, New York.

UNCED (1992) *United Nations Conference on Environment and Development*, UN, New York,

UNWTO (2012) *Tourism: a development opportunity for Small Island States*, UNWTO report, PR No: PR12038.

UNWTO (2014) *Conference on Small Island Developing States*, Apia Samoa.

UNWTO (2017) Tourism Highlights. *World Tourism Organization*, Madrid, Spain.

Uysal, M. & Modica, P. (2016). Island Tourism: Challenges and Future Research Directions. *Sustainable Island Tourism: Competitiveness and Quality of Life*, 173-188.

Van der Borg, J. (1991). Tourism and urban development. *Erasmus Universiteit, Rotterdam*.

Van der Zee, E., & Vanneste, D. (2015). Tourism networks unraveled; a review of the literature on networks in tourism management studies. *Tourism Management Perspectives*, *15*, 46-56.

Wall, G. (1993). International collaboration in the search for sustainable tourism in Bali, Indonesia. Journal of Sustainable Tourism, 1(1), 38-47.

Weed, M. (2006). Sports tourism research 2000–2004: A systematic review of knowledge and a meta-evaluation of methods. *Journal of Sport & Tourism*, *11*(1), 5-30.

Wrangham, R. (1999). Management or domination? planning tourism in the banda islands, eastern indonesia. *International Journal of Contemporary Hospitality Management*, *11*(2/3), 111-115.

Wu, M. Y., Wall, G., & Pearce, P. L. (2014). Shopping experiences: international tourists in Beijing's silk market. *Tourism Management*, *41*, 96-106.

Xia, J. C., Evans, F. H., Spilsbury, K., Ciesielski, V., Arrowsmith, C., & Wright, G. (2010). Market segments based on the dominant movement patterns of tourists. *Tourism Management*, *31*(4), 464-469.

Xiang, Z., Du, Q., Ma, Y., & Fan, W. (2017). A comparative analysis of major online review platforms: Implications for social media analytics in hospitality and tourism. *Tourism Management*, 58, 51-65.

Xiang, Z., & Gretzel, U. (2010). Role of social media in online travel information search. Tourism management, 31(2), 179-188.

Xiang, Z., Gretzel, U., & Fesenmaier, D. R. (2009). Semantic representation of tourism on the Internet. *Journal of Travel Research*, *47*(4), 440-453.

Yahoo (2018) *Yahoo Finance*: https://finance.yahoo.com/quote/TRIP/

Yang, E. C. L., Khoo-Lattimore, C., & Arcodia, C. (2017). A systematic literature review of risk and gender research in tourism. *Tourism Management*, *58*, 89-100.

Ye, Q., Law, R., & Gu, B. (2009). The impact of online user reviews on hotel room sales. *International Journal of Hospitality Management, 28*(1), 180–182.

Ye, Q., Law, R., Gu, B., & Chen, W. (2011). The influence of user-generated content on traveler behavior: An empirical investigation on the effects of e-word-of-mouth to hotel online bookings. *Computers in Human* Behavior, 27(2), 634–639.

Zen, M. H., & Wulandari, D. (2016). Development Strategy of The Tourism Industry in Banyuwangi Regency (Case Study: Natural Park Ijen Crater Banyuwangi). Journal of Business and Management, 18(8), 41-47.

Zhang, Y., & Cole, S. T. (2016). Dimensions of lodging guest satisfaction among guests with mobility challenges: A mixed-method analysis of web-based texts. *Tourism Management*, *53*, 13-27.

Zhang, Z., Ye, Q., Law, R., & Li, Y. (2010). The impact of e-word-of-mouth on the online popularity of restaurants: A comparison of consumer reviews and editor reviews. International Journal of Hospitality Management, 29(4), 694-700.

Appendix

Limiters:

TI island tourism OR AB island tourism OR KW island tourism

Date Published: 20000101-20170531

Later in January 2018 the same query was applied but for the remaining time period for completion of the year 2017, i.e. 20170601-20171231.

Below is the search string used to narrow down the results.

TITLE (island AND tourism) OR ABS (island AND tourism) OR KEY (island AND tourism) AND DOCTYPE (ar) AND PUBYEAR > 1999 AND PUBYEAR < 2018 AND (LIMIT-TO (DOCTYPE , "ar")) AND (LIMIT-TO (SUBJAREA , "BUSI")) AND (LIMIT-TO (LANGUAGE , "English")) AND (LIMIT-TO (EXACTSRCTITLE , "Journal of Travel Research") OR LIMIT-TO (EXACTSRCTITLE , "Tourism Management") OR LIMIT-TO (EXACTSRCTITLE , "Annals of Tourism Research") OR LIMIT-TO (EXACTSRCTITLE , "Cornell Hospitality Quarterly") OR LIMIT-TO (EXACTSRCTITLE , "International Journal of Hospitality Management") OR LIMIT-TO (EXACTSRCTITLE , "Journal of Services Management") OR LIMIT-TO (EXACTSRCTITLE , "International Journal of Contemporary Hospitality Management") OR LIMIT-TO (EXACTSRCTITLE , "Journal Of Sustainable Tourism") OR LIMIT-TO (EXACTSRCTITLE , "Journal of Hospitality Marketing and Management") OR LIMIT-TO (EXACTSRCTITLE , "Journal of Hospitality and Tourism Research") OR LIMIT-TO (EXACTSRCTITLE , "Sport Management Review") OR LIMIT-TO (EXACTSRCTITLE , "Cities") OR LIMIT-TO (EXACTSRCTITLE , "Applied Geography") OR LIMIT-TO (EXACTSRCTITLE , "Current Issues in Tourism") OR LIMIT-TO (EXACTSRCTITLE , "Journal Of Travel and Tourism Marketing") OR LIMIT-TO (EXACTSRCTITLE , "International Journal of Tourism Research") OR LIMIT-TO (EXACTSRCTITLE , "Tourism Geographies") OR LIMIT-TO (EXACTSRCTITLE , "International Journal Of Sport Policy") OR LIMIT-TO (EXACTSRCTITLE , "European Sport Management Quarterly") OR LIMIT-TO (EXACTSRCTITLE , "Journal of Hospitality and Tourism Technology") OR LIMIT-TO (EXACTSRCTITLE , "Tourism Management Perspectives") OR LIMIT-TO (EXACTSRCTITLE , "Tourist Studies") OR LIMIT-TO (EXACTSRCTITLE , "Leisure Sciences") OR LIMIT-TO (EXACTSRCTITLE , "Journal of Vacation Marketing") OR LIMIT-TO (EXACTSRCTITLE , "Asia Pacific Journal of Tourism

Research") OR LIMIT-TO (EXACTSRCTITLE , "Journal of Hospitality And Tourism Management") OR LIMIT-TO (EXACTSRCTITLE , "Journal of Leisure Research") OR LIMIT-TO (EXACTSRCTITLE , "Tourism Economics") OR LIMIT-TO (EXACTSRCTITLE , "Leisure Studies") OR LIMIT-TO (EXACTSRCTITLE , "Journal of Hospitality, Leisure, Sports and Tourism Education") OR LIMIT-TO (EXACTSRCTITLE , "International Journal Of Culture, Tourism, and Hospitality Research") OR LIMIT-TO (EXACTSRCTITLE , "Scandinavian Journal of Hospitality and Tourism") OR LIMIT-TO (EXACTSRCTITLE , "International Journal of Heritage Studies") OR LIMIT-TO (EXACTSRCTITLE , " Tourism Review") OR LIMIT-TO (EXACTSRCTITLE , "Journal Of Tourism and Cultural Change") OR LIMIT-TO (EXACTSRCTITLE , "International Journal of Retail and Distribution Management") OR LIMIT-TO (EXACTSRCTITLE , "Space and Culture") OR LIMIT-TO (EXACTSRCTITLE , "Journal of Sport and Tourism") OR LIMIT-TO (EXACTSRCTITLE , "Tourism Planning and Development") OR LIMIT-TO (EXACTSRCTITLE , "Journal of Place Management and Development") OR LIMIT-TO (EXACTSRCTITLE , "Tourism Analysis") OR LIMIT-TO (EXACTSRCTITLE , "International Journal of Hospitality and Tourism Administration"))