

Satisfaction on the Tourism Sector

A Bibliometric Analysis applied to the Hospitality Sector

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Abstract

The growth of attention suffered by the Tourism industry in the last decades is justified by the perception of its positive contributions to economics, society and culture of countries. The field of customer satisfaction has also accompanied this fast growth of interest. Its relevant impacts on numerous aspects of society have significantly influenced the strategic and management definition processes of governments, institutions and companies.

This study uses bibliometric techniques to analyse research trends related to satisfaction on the tourism sector, with an emphasis on sustainability. Biblioshiny app (Bibliometrix R tool) was used. This study analysed 102 articles from Scopus and Web of Science databases.

The bibliometric analysis of the 102 collected articles through both Scopus (43 articles) and Web of Science (59 articles) databases concluded that the most prolific period regarding the number of published articles was 2018-2019 and the most productive journal was Sustainability. The relatively recent awareness towards sustainable practices on the tourism and hospitality sectors is highlighted by the collected results of this study. The most productive authors for the bibliometric analyses performed through both databases have only published 2 articles each, and the most productive institutions were linked to a maximum of 3 articles each. This fact clearly portrays that the inclusion of the sustainability topic into satisfaction on the tourism and hospitality sectors is recent, with a high potential growth. Given this, it is expected that future researchers will deepen out this relationship, finding effective ways to include sustainability into satisfaction measurement.

KEYWORDS: Satisfaction, Tourism, Hospitality, Sustainability, Bibliometric Analysis, PRISMA.

Resumo

O crescente interesse nas últimas décadas na indústria do Turismo é justificado pela percepção das suas contribuições positivas a nível económico, social e cultural. A área da satisfação do consumidor também tem acompanhado este aumento de interesse. Os seus impactos significativos em diversos aspetos da sociedade têm tido grande influência nos processos de definição de estratégia e de gestão de governos, instituições e empresas.

Este estudo utiliza técnicas bibliométricas para analisar tendências na literatura relativa à satisfação no setor do turismo, com ênfase na sustentabilidade. O software Biblioshiny App (Bibliometrix R tool) foi utilizado para analisar 102 artigos das bases de dados Scopus e Web of Science.

A análise bibliométrica dos 102 artigos recolhidos nas bases de dados Scopus (43 artigos) e Web of Science (59 artigos) revelou que o período 2018-2019 foi o mais produtivo em número de publicações e que o jornal mais produtivo foi o Sustainability. O interesse relativamente recente acerca das práticas de sustentabilidade no âmbito do turismo nos setores do turismo e da hotelaria é evidenciado pelos resultados deste estudo. Os autores mais produtivos em ambas as análises bibliométricas têm apenas 2 artigos publicados cada um, e as instituições mais produtivas estão apenas associadas a 3 artigos, cada. Este facto mostra que a inclusão da sustentabilidade na satisfação nos setores do turismo e da hotelaria é um tema recente, com muita margem de progressão. Assim sendo, espera-se que futuros investigadores aprofundem esta relação, encontrando formas efetivas de integração da sustentabilidade na medição da satisfação.

PALAVRAS-CHAVE: Satisfação, Turismo, Hotelaria, Sustentabilidade, Análise Bibliométrica, PRISMA.

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1 Introduction

This chapter provides a contextualization of the problem and enunciates the motivations of this study. The main objectives of the study and the structure of the dissertation are highlighted.

1.1 Problem Contextualization

Before the Covid-19 pandemics, the Tourism industry had increased on a large scale, receiving each year more attention not only by the relevant stakeholders involved in the sector, but also by people non-related to this industry. Tourism is an industry that comprises several experiences and activities performed by tourists in a destination different from their official residence or local environment. This sector is one of the fastest-growing industries and has been gaining relevance due to the positive contributions it gives economically, socially and culturally to the respective countries. Therefore, governments have been investing and conceding funds into the development of the several areas linked to the Tourism sector, considering that the higher the effort to provide the best services and infrastructures for the visitors, the higher the satisfaction of their interests and needs. This could result, in the future, on higher returning chances of visitors to destinations and on attracting new visitors in result of a good experience review in the end.

To take advantage of all the benefits related to this sector, governments have been trying to provide laws that enhance, favour and protect this valuable way of income. This income can be divided in two segments: physical income – related to the money that tourists spend when traveling to a destination; immaterial income – related to a good experience overview caused by the satisfaction of the tourist when traveling to a destination. The immaterial income is most important, since it allows the creation of a loyalty feeling towards the destination and can assure not only a future visit by the tourist but also a good recommendation for others to visit the same destination. The idea that increasing customer satisfaction will result in higher revenues for the entities present in the destination was shared by Dmitrović *et al.* (2009). Accordingly, there is a connection between customer satisfaction and customer's behavioural intentions, since the first one influences (positively or negatively) the second. If a consumer has a good overview experience on some hotel or touristic destination, he is prone to return to the same place and repeat the experience, or to recommend it to potential tourists so that they can also benefit from the positive experience. On the opposite side, if a customer has a bad overview experience on some hotel or touristic destination, the chances of returning and recommending it to potential tourists is reduced.

Satisfaction is a concept that has tremendous relevance on the tourism sector. The satisfaction of a tourist is a measure of the extension of matching between the tourist's expectations and the service effectively delivered. Therefore, a satisfied tourist is an objective for all entities involved in the area, since it can lead to the development of mutually beneficial long-term, trusty and loyal relationships between these entities and consumers.

Accordingly, many authors have been focusing their efforts and work on identifying the factors that affect and influence customer satisfaction, and the effect it produces on driving the consumer behavioural intention on returning or not to a touristic destination. Nevertheless, there is still no unified consensus on either the factors that influence customer satisfaction (Xia *et al.*, 2009) or the consequences of this phenomenon (Campo & Yagüe, 2009). This leads to different approaches on the way satisfaction is measured, as authors propose several dimensions for the process (Yoon & Uysal, 2005). Customer satisfaction is nowadays a strongly investigated topic, since companies and institutions want not only to know how their actions can influence tourists' behaviour, but also to include this knowledge in their management acting plans. Although, a consistent and unified theory relating customer satisfaction and its causes and consequences is lacking (Line & Runyan, 2012).

Across the last decades, an increasing number of authors have been studying the tourism sector in its various features, leading to an upgrowing level of published articles in tourism, leisure and hospitality fields. According to Mulet-Forteza *et al.* (2018), this increase has been caused by the interest of scholars in the matter and consequently by the proliferation of journals related to these fields. Also, as countries are recognizing the importance of the tourism sector to their economic, social and cultural development, several studies have been made related to the customer satisfaction field, in a way to clarify its implications on the tourism sector. Governments, politicians, companies and all entities involved in the tourism and hospitality sectors find it crucial to understand what factors influence customer satisfaction and its measuring forms, in an attempt to adequate their offer to the customers' expectations. A satisfied customer carries a high probability of returning to a touristic destination or recommending the place to others.

This recent and intense interest on both tourism and satisfaction fields has led to different perspectives in what concerns these two topics, as the authors share different backgrounds and therefore different visions about these subjects. In addition, the increasing awareness towards sustainability and the development of green practices are shaping the development patterns of the tourism industry, as in several other sectors of society.

1.2 Dissertation Objectives

Despite the increasingly growing interest on satisfaction and its relationship with several sectors, there is a gap in literature regarding satisfaction in tourism, moreover with a sustainability approach. A literature review article which pictures the extent of research in satisfaction on the tourism sector (particularly on the hospitality sector) with an emphasis on sustainability is missing.

The pertinence and relevance of this study lies on the possibility of consolidating and systematizing knowledge on the existing literature regarding satisfaction in the tourism and hospitality sectors with a sustainability perspective. Through this work, scholars will have access to a complete and updated review about the trends and developments in research around these subjects, responding to a recent and growing interest in understanding customer behaviour and the consequences of satisfaction for the different stakeholders involved. Bibliometric techniques were used for analysing the most influential authors, institutions, countries and journals.

The purpose of this work is to develop a systematic review and a bibliometric analysis by investigating, collecting, synthesising and examining the most relevant contributions and conclusions in existing literature related to satisfaction in the hospitality and tourism sectors, with a sustainability perspective. This bibliometric review will focus on satisfaction not only on the hospitality sector, but also on a touristic destination level. By offering a condensed source of the main conclusions on previous research made, this work will be a guiding structure for future researchers and scholars interested on these research topics, allowing them not only to better understand what the evolution regarding these matters has been, but also to start their own future research. This study also intends to provide new insights on this matter, highlighting future directions of research.

1.3 Dissertation Structure

This dissertation is composed of five chapters, as follows:

Chapter 1 – Introduction (3 Pages) – This chapter provides a contextualization of the problem and enunciates the motivations of this study. The main objectives of the study and the structure of the dissertation are highlighted.

Chapter 2 – Problem Definition (10 Pages) – This chapter provides a contextualization of both tourism and hospitality sectors, their main features and impacts in society.

Chapter 3 – Literature Review (16 Pages) – This chapter provides a systematization of knowledge, according to the existing literature, regarding the main topics of the study: satisfaction, sustainability and the relationship between both in the tourism and hospitality sectors.

Chapter 4 – Methodology (7 Pages) – This chapter presents and justifies the adopted methodology for the current dissertation work and will answer to the defined research objectives stated for this dissertation study.

Chapter 5 – Results (39 Pages) – This chapter presents the results of the bibliometric analysis performed for the 102 collected articles from both Scopus and Web of Science databases.

Chapter 6 – Conclusions and Future Work (2 Pages) - This chapter highlights the main conclusions of this dissertation work and outlines limitations of this study and future work to be developed.

2 Problem Definition

This chapter provides a contextualization of both tourism and hospitality sectors, their main features and impacts in society.

2.1 The Tourism Sector

Tourism can be seen as a socio-economic industry that comprises the experiences and activities performed by tourists in a destination different from their official residence and local environment and supplied by the entities that assure tourism-related services in the destination region. The set of activity experiences and services constitutes the tourism product, in which tourism-related entities seek to supply different services that meet the desired demand and needs of tourists according to their expectations.

This linkage between demand and supply reflects the tourism system, that requires a precise and extensive study and planning for an effective comprehension of the types and characteristics of both market and customers in hands. The demand side includes the tourists, the people that temporarily stay in a destination outside their living areas for a short period of time with a specific purpose of trip and that, therefore, have specific needs and preferences that want to see fulfilled during their stay. On the other hand, the supply side involves all the tourism-related infrastructure and services provided designed to meet the visitors' expectations and preferences, and can be managed by the government, private enterprises, non-profit organisations or innovative and sustainable partnerships. The functioning of the tourism industry is related with both flows of resources (goods, capital, labour and tourists' expenditure) and flows of marketing, experience reviews and souvenirs from the touristic destination to the home region.

The tourism industry links different sectors on the provision of the tourist experience. For this reason, it is essential that governments develop efforts on assuring the required means for enabling a sustainable and effective cooperation between them. This can be assured by providing the correct political and institutional frameworks that enhance tourism, by investing on tourism-related infrastructures served by several modes of transportation, and by improving marketing and promotion initiatives. The development of a structured, detailed tourism-oriented plan influences the success of this complex relation between sectors, contributing to significant generations of revenues.

The tourism industry has established itself as one of the fastest developing areas in the business environment during the last decades, increasing each year its economic relevance and impact on overall economy. Following the United Nations World Tourism Organization data, it can be observed that in 2019 (the last year before the Covid-19 pandemics), record values for International Tourist Arrivals and International Tourism Receipts were achieved (UNWTO, 2021). 1.466 million International Tourist Arrivals were reached, representing a 4% increase (an absolute change of 53 million) in comparison to data from 2018 and a 5% average annual growth in the past 10 years. In what concerns the International Tourism Receipts, a record value of 1.466 USD billion was reached, representing a 3% relative change

in real terms (an absolute change of 27 USD billion) in comparison to 2018 data. These data reflect the important role that this sector represents into the economic development of touristic destinations, having positive impacts on the development of adequate infrastructure, creation of employment opportunities and, of course, on capturing external/foreign receipts (Li *et al.* 2018).

The important boost that tourism transmits into a destinations' economy has been analysed by several authors and through different dimensions. The tourism impact on a destinations' economy is present at numerous levels. A direct impact is seen on its contribution on "employment, income levels, sales and tax levels" resulting from the tourists spending (Li *et al.* 2018; Brida *et al.*, 2008; Khan *et al.*, 1990). The same authors also note indirect effects such as "prices, quantity and quality of products and services, taxes and property, and social and environmental impacts" (Li *et al.* 2018; Chen, 2008; Dwyer, 2007; Goncalves, 2013). They say that impacts go further and also affect productivity and efficiency of the tourism sector entities involved.

The growth of the tourism industry justifies the increasing interest of scholars and researchers on the study of this industry, to understand the causes and effects of this phenomenon.

The recent Covid-19 pandemic has not only interrupted this rampant growth of the tourism industry, but also put the sector in severe struggle because governments established strict sanitary laws to massively avoid the spread of the virus inside their respective countries. During these times, all participants of the tourism industry suffered the negative impact of the Covid-19 pandemic. Businesses were temporarily or permanently closed, since international touristic trips were forbidden with the closing of international borders, and national trips were also strongly inadvisable and strictly controlled by the authorities. Many people working on the sector have lost their jobs or their businesses, feeling impotent to fight the reality of not getting revenues and therefore not being able to assure their employees' salaries or to face their businesses' costs. In fact, International Tourist Arrivals have decreased 73% to only 394 million in 2020, 1.072 million arrivals less than in 2019, according to the data available on the United Nations World Tourism Organization website (UNWTO, 2021).

2.2 Impacts of Tourism in Society

The tourism industry affects society in several fields. Although it is commonly understood that tourism brings mostly benefits, the fact is that some destinations are being victims of this intense phenomenon and are paying the costs of such development. A planning strategy must be strictly designed for every destination, in order for the region to take advantage of its strengths and opportunities and to maximize them in a sustainable way. Also, weaknesses and possible threats must be well identified, so that the region can mitigate them and protect itself from possible ruptures in its identity, way of life, local ambience, traditions and daily basis of locals. Not every destination suffers the impacts of tourism (positive and negative) the same way, and these impacts can also change over time, depending on the touristic activity of the region. The extent of both kinds of impacts is a consequence of the region's characteristics: cultural and leisure attractions, security, traditions, locals welcoming. Each destination has its pros and cons that are differently valued by travellers according to their preferences, and this reflects on the extension of impacts caused by the touristic activity. For example, well recognised

destinations by their beaches can easily experience overcrowded months during summer, which brings positive impacts, through the expenditure benefitting local commerce and hospitality establishments, and negative impacts, through the overpopulation which can negatively affect the daily routines of locals.

The impacts of tourism in destinations can be analysed in four major perspectives: Economic, Cultural, Social and Environmental (Tourism Notes, 2021).

In the Economic sphere, tourism is responsible for creating several benefits for the touristic region, such as: generation of local employment directly in the sector, as well as indirectly, in related sectors, providing support and resource management; investment in better tourism infrastructures; an increase in the efficiency and profitability of local industries (lodging facilities, Food and Beverage (F&B) services, transport networks, local commerce and guide services); direct injection of foreign capital into the local economy, contributing to its diversification; increase in tax revenues from tourism. Yet, these benefits entail costs for the local population, since it is expected that the increasing demand associated with the tourism activity determines a raise in the prices of land, accommodation and other related necessary activities. Also, in the overcrowded months of a seasonal touristic destination, public local and state budgets will be used to respond to an increase in demand of health services provision and police security services.

Social impacts are probably the most perceived ones, since they directly affect the daily routines of the “heart” of a destination: the residents. Society benefits from the tourism industry in a sense that the investments in recreational, leisure and cultural facilities to attract visitors will also be available to the residents. Also, with a rise of tourists into a certain destination, local communities perceive the attraction value of their region, strengthening bonds among themselves and reinforcing their sense of uniqueness towards foreigners. On the other hand, societies are also a victim of this phenomenon in many ways. Intense tourism in a region may damage the identity and authenticity of the local social and cultural environments in a way that local customs and values might be lost in the long-term to meet the visitors’ ones, which could lead to a disruption of the identity of a local community. Characteristic monuments of public interest could be transformed and adapted into tourism facilities, for example. As said before, strict planning and management must be done to avoid social disruptions related to the tourism industry. Crime, vandalism, overcrowding and lack of suitability of local infrastructures are examples of disruptions caused by an unpredicted and unexpected tourism growth. The development of a destination with the aim of attracting visitors must be done in a sustainable way, so that the community structure is preserved, and social disruptions are avoided.

In what concerns the Cultural impacts, tourism can enhance and stimulate local cultural awareness, impelling residents to deep down their knowledge about the history, traditions and features of the region. Visitors’ expenditure may also provide a huge contribution for the preservation of historical and cultural infrastructures.

Environmentally speaking, a nature-based form of tourism may be enhanced, if an increase in the tourism activity of a destination is aimed, since tourists usually enjoy pleasant walks through a park or contact with nature as an escape from their stressful routines. Local administrations improve their waste

management systems, ecological preservation and awareness for the environment among residents, in order to give tourists a positive and attractive image of a destination for tourists. On the other hand, parks, ecological reserves and the surrounding ecosystems may be damaged due to intense tourism activities.

2.3 Tourism Definition

The importance of the Tourism sector has been increasing over the past decades and, since then, many authors have been unsuccessfully trying to reach a unanimous definition for Tourism (Table 1). The problem lays on the difficulty of understanding what it involves and on the different areas of knowledge that authors base themselves on to build their perspectives about this topic. The Tourism definition is also affected by the understanding that each tourist has of it, since, for example, many travellers qualify themselves differently when traveling to a place for the first time or repeatedly. Also, many travellers do not consider themselves as tourists when they travel to a place to meet family or friends, since they usually stay at their homes. The different types of tourists are presented in Table 2 and Table 3.

The definition of Tourism has evolved over the past two hundred years, as authors keep trying to reach the most complete definition possible by adding new views and perspectives to the concept.

Table 1 - Tourism Definition

Tourism Definition	Author
"the business activity connected with providing accommodation, services and entertainment for people who are visiting a place for pleasure"	Oxford Learner's Dictionaries (2021).
"the sum of the operations, mainly the economic ones which are directly connected to the entrance, permanence and displacement of foreigners in and out of a country, city, or region"	Schullern (1911) apud Wahab (1977).
"Concept of discovering, trip, recognition and exploration."	Fuster (1971).
"A human intentional activity that serves as a mean of communications and as a link of interaction between the peoples, inside a country or even beyond its geographical demarcations. It involves the temporary displacement of people from one region to another, country or even continent, with the objective of satisfying necessities and not the realization of remunerated activity. For the visited country, tourism is an industry whose products are consumed in loco, producing invisible exports."	Wahab (1977).

Tourism Definition	Author
<p>This definition excludes the displacement caused by the exercise of an individual's remunerated activity."</p>	
<p>"Tourism is a social, cultural and economic phenomenon which entails the movement of people to countries or places outside their usual environment for personal or business/professional purposes. These people are called visitors (which may be either tourists or excursionists; residents or non-residents) and tourism has to do with their activities, some of which involve tourism expenditure."</p>	<p>UNWTO (2010).</p>
<p>"Tourism is the study of the man (the tourist) away from his usual habitat, of the touristic apparatus and networks, and of the ordinary (non-tourism) and non-ordinary (tourism) worlds and their dialectic relationship."</p>	<p>Jafari (1995) apud Netto (2009).</p>
<p>"Tourism is essentially an activity engaged in by human beings and the minimum necessary features that need to exist for it to be said to have occurred include the act of travel from one place to another, a particular set of motives for engaging in that travel (excluding commuting for work), and the engagement in activity at the destination."</p> <p>This definition excludes the displacement caused by the exercise of an individual's remunerated activity.</p>	<p>Tribe (1997).</p>
<p>"It is the system involving the discretionary travel and temporary stay of persons away from their usual place of residence for one or more nights, excepting tours made for the primary purpose of earning remuneration from points <i>en route</i>."</p>	<p>Leiper (1979).</p>
<p>"Tourism can be thought of as a whole range of individuals, businesses, organizations and places which combine in some way to deliver a travel experience. Tourism is a multidimensional, multifaceted activity, which touches many lives and many different economic activities."</p>	<p>Cooper <i>et al.</i> (1993) based on the system approach suggested by Leiper (1979).</p>
<p>"A visit to a country other than one's own or where one usually resides and works."</p> <p>This definition excluded Domestic Tourism</p>	<p>The Rome Conference on Tourism (1963) apud Tourism Notes (2021).</p>

Tourism Definition	Author
“The movement of people from their normal place of residence to another place (with the intention to return) for a minimum period of twenty-four hours to a maximum of six months for the sole purpose of leisure and pleasure.”	Tourism Notes (2021).
“Temporary short-period movement of people to destination outside the places where they normally live, work; and activities during their stay at these destinations.”	Tourism Society of Britain (1976) apud Tourism Notes (2021).

Table 2 - Tourist Definition

Tourist Definition	Author
“One who makes a tour or tours. One who does this for recreation, one who travels for pleasure or culture, visiting a number of places for their objects of interest, scenery or the like”.	The Shorter Oxford English Dictionary (1800) apud Fuster (1971).
“People who travel to and stay in place outside their usual environment for not more than one consecutive year for leisure, business and other purposes not related to the exercise of an activity remunerated from within the place visited”.	UNWTO (2020).

2.4 Elements that constitute the Tourism Sector

To characterize the Tourism sector, it is important to study what it involves and what are the elements that constitute it. According to the UNWTO (2020), the tourism sector is “the cluster of production units in different industries that provide consumption goods and services demanded by visitors. Such industries are called tourism industries because visitor acquisition represents such a significant share of their supply that, in the absence of visitors, their production of these would cease to exist in meaningful quantity.”. Given the definition, it is important to clarify some fundamental concepts and present some definitions on the matter in order to understand the sector.

As presented before when detailing the Tourism definition, any form of tourism involves the movement of people to countries or places outside their usual environment for personal or business/professional purposes. The most important element on the Tourism Sector and that makes the entire sector work is the Human Element. Therefore, a person who travels can be classified as visitors (tourists or excursionists, residents or non-residents).

Table 3 - Types of Tourists.

Type of tourist	Description
Traveller	“Someone who moves between different geographic locations, for any purpose and any duration.”
Visitor	“The visitor is a particular type of traveller and, consequently, tourism is a subset of travel. A visitor is a traveller taking a trip to a main destination outside his/her usual environment, for less than a year, for any main purpose (business, leisure or other personal purpose) other than to be employed by a resident entity in the country or place visited (UNWTO, 2010). A visitor (domestic, inbound or outbound) is classified as a tourist (or overnight visitor), if his/her trip includes an overnight stay, or as a same-day visitor (or excursionist) otherwise.”.
Domestic Visitor	“Someone who travels within his/her country of residence and his/her activities are part of domestic tourism.”.
International visitor	Qualified “if: (a) he/she is on a tourism trip and (b) he/she is a non-resident travelling in the country of reference or a resident travelling outside of it.”.
Same-day visitor (or excursionist)	“A visitor (domestic, inbound or outbound) is classified as a same-day visitor (or excursionist), if his/her trip does not include an overnight stay.”.
Tourist (or overnight visitor)	“A visitor (domestic, inbound or outbound) is classified as a tourist (or overnight visitor), if his/her trip includes an overnight stay.”.
Residents/non-residents	“The residents of a country are individuals whose centre of predominant economic interest is located in its economic territory. For a country, the non-residents are individuals whose centre of predominant economic interest is located outside its economic territory.”.
Travel group	A travel group is made up of individuals or travel parties travelling together: examples are people travelling on the same package tour or youngsters attending a summer camp.

Source: United Nations of World Tourism Organisation (UNWTO, 2010).

Having a more detailed characterization of the human element on this sector, it is important to focus on the tourists’ actions, what do they do in order to be classified as travellers.

A Trip refers to the travel by a person from the time of departure from his/her usual residence until he/she returns. This idea of returning to the starting place thus refers to a round trip. Trips taken by visitors are tourism trips. A trip is made up of visits to different places. The term “Tourism visit” refers to a stay in a place visited during a tourism trip (UNWTO, 2010).

A traveller always moves from his usual environment towards a destination. Touristic destination (main destination of a trip) means the place visited that is central to the decision to take the trip.

It is a fact that not every person travels in the same circumstances. So, tourism is divided into two categories: International Tourism and Domestic Tourism. Furthermore, International Tourism is divided into Inbound Tourism and Outbound Tourism. The different types of tourism are presented in Table 4.

Table 4 - Types of Tourism.

Definition	Description
Domestic tourism	Comprises the activities of a resident visitor within the country of reference, either as part of a domestic tourism trip or part of an outbound tourism trip.
Inbound tourism	Comprises the activities of a non-resident visitor within the country of reference on an inbound tourism trip.
Outbound tourism	Comprises the activities of a resident visitor outside the country of reference, either as part of an outbound tourism trip or as part of a domestic tourism trip.
Internal tourism	Similar to domestic tourism and inbound tourism, meaning the activities of resident and non-resident visitors within the country of reference as part of domestic or international tourism trips.
International tourism	Comprises inbound tourism and outbound tourism, that is to say, the activities of resident visitors outside the country of reference, either as part of domestic or outbound tourism trips and the activities of non-resident visitors within the country of reference on inbound tourism trips.
National tourism	Comprises domestic tourism and outbound tourism, that is to say, the activities of resident visitors within and outside the country of reference, either as part of domestic or outbound tourism trips.

Source: United Nations of World Tourism Organisation (UNWTO, 2010) .

The selected form of Tourism is intensively linked to the purpose of a Tourism Trip.

The main Purpose of a tourism trip is defined as the purpose in the absence of which the trip would not have taken place (UNWTO, 2010). Classification of tourism trips according to the main purpose refers to nine categories, according to the UNTWO (2010): 1. Personal (1.1. Holidays, leisure and recreation; 1.2. Visiting friends and relatives; 1.3. Education and training; 1.4. Health and medical care; 1.5. Religion/pilgrimages; 1.6. Shopping; 1.7. Transit; 1.8. Other); 2. Business and professional. Yet, other classifications of forms of tourism are adopted according to their purpose, giving an even more detailed perception of the different forms of tourism. The most important ones are: Adventure Tourism, Beach Tourism, Cultural Tourism, Ecotourism, Geotourism, Medical Tourism, Religious Tourism, Rural Tourism, Sports Tourism, Sustainable Tourism and Wildlife Tourism; and highlights the main purpose of travel for tourists.

2.5 Forms of Tourism

Furthermore, these forms of Tourism according to the purpose of travel can be clustered in six major categories:

Recreational/Leisure – Includes forms of tourism under which travellers intend to enjoy their leisure time happily and with no worries, attempting to escape from their daily routines. For this reason, tourists often choose destinations that provide experiences they could not have contact within their living areas, which leads to some previously mentioned forms of tourism such as Ecotourism, Rural Tourism, Wildlife Tourism, Beach Tourism, for example.

Cultural – Category that involves forms of tourism under which travellers intend to learn more about a destination's culture by visiting places or monuments that present a major importance on cultural, historical, religious or intellectual levels. Religious pilgrimage is a form of tourism under which people travel for religious purposes.

Sports/Adventure: A recent category under which people tend to visit a destination that enables them to practice a certain sport or experience certain extreme sports. Tourists with these purposes often look for challenging experiences that allow them to live unfamiliar situations requiring special skills. Some well-known sports that sustain this category are ski, hike, surf, golf, etc.

Health – Category under which people travel in order to receive medical treatments or benefit from healthcare services. Destinations with hot springs are frequently visited by people with respiratory diseases. Another very common situation is when people travel to a specific destination for getting a surgery.

Convention – A category that has been gaining importance during the last decades and in which tourists visit different destinations in order to attend conventions related with their professional areas or particular interests.

Incentive - A new form of tourism in which companies and institutions offer a touristic trip to their employees as a noncash reward for achieving specific key business objectives.

2.6 The Hospitality Sector

The characterization of the hospitality sector starts with understanding the concept of "hotel" and what it involves. A hotel is a building where people stay, usually for a short time, paying for their rooms and meals (Oxford Advanced Learner's Dictionary, 2015). There are many similar definitions, but the main idea to retain is that a hotel is a commercial establishment that provides accommodation, meals and services related with the tourist experience, usually for a short staying duration.

Both tourism and hospitality sectors are deeply interconnected, as hotels are established for offering accommodation, services and facilities that meet the tourists' needs and tastes during their tourism trips to chosen destinations. Tourists' expectations differ according to the establishment classification, since quality requirement standards differ.

2.7 Types and Classification of Hotels

The hotel classification is important for consumers, enabling them not only to know what kind of services and facilities are provided, but also if they match their needs and preferences. Consumers are different from one another, since each one has his own preferences and does not value the same things in the same way. Different hotels exist to satisfy this heterogeneous demand, by offering different services to match all types of costumers' preferences. Given this, hotels can be classified in different categories, namely: size, location, clients, guest stay duration and level of services.

The most widely recognised method for rating hotels is based on the star classification system, in which each hotel is given a certain number of stars between one and five, according to the type and quality of services and facilities provided.

As a synthesis, tourism is a socio-economic industry that comprises a set of activities and experiences performed by people (tourists) in a destination different from their official residence and local environment. These activities and experiences are supplied by several entities that assure tourism-related services in a destination region. These entities belong to several sectors in society. This justifies the relevant and multiple impact that tourism has on different fields of society, namely on the economic, social, cultural and environmental spheres. Over time, numerous definitions have been proposed for tourism; the different backgrounds of the authors produced conflicting definitions. In what concerns the tourist as the central actor of the tourism sector, his characterization depends on the guest stay duration, the purpose of the trip and the chosen destination relatively to the official residence or local environment. Both tourism and hospitality sectors are deeply interconnected, as hotels are established for providing accommodation, services and facilities that meet the tourists' needs during their stays.

3 Literature Review

This chapter provides a systematization of knowledge, according to the existing literature, regarding the main topics of the study: satisfaction, sustainability and the relationship between both in the tourism and hospitality sectors.

3.1 Bibliometric Studies in Tourism

A very important feature offered when developing a bibliometric review is the capacity of investigating the major contributions that had been made by scholars around a certain topic or thematic field, providing state-of-the-art insights that enable every researcher to be better acquainted with the topic in hands, to establish a well-grounded starting point for them to support their desired studies and to build their ways of approaching a certain topic. This fact explains the reason why bibliometric reviews are used for studying themes belonging to the most variate fields, as shown in Table 5.

Table 5 - Bibliometric studies in several fields.

Field	Author(s)	Bibliometric Indicators Used	Main Conclusions
Economics	Bonilla <i>et al.</i> (2015)	h-index; N° of publications; N° of citations	The authors analysed the academic research in economics in Latin America between 1994 and 2013, concluding that Argentina, Brazil, Chile, Colombia and Mexico produce a significant number of publications in the Web of Science database. Although, Costa Rica and Uruguay present relevant results in terms of publications <i>per capita</i> . The study also highlighted that health, agriculture and development are the most relevant topics in Latin America.
Management	Vogel & Güttel (2012)	Bibliographic coupling	The authors aimed to explore the scope of the Dynamic Capability View – a recognised approach in strategic management – and to identify current research priorities, focusing the analysis from past trends to current ones. The analysis included literature published between 1994 and 2011.
Marketing	Kim <i>et al.</i> (2019)	Citation and Co-citation analysis	The authors intended to identify and review influential cited studies in Digital Marketing Communication, in a way of determining how these studies have developed the status of research in this area.
Innovation	Cancino <i>et al.</i> (2017)	N° of publications; N° of citations, h-index	The aim was to analyse the most productive and influential universities in innovation research. Results showed that universities in the United States are the most productive ones, since they account for the most publications with higher values of number of citations and <i>h</i> -index. However, universities present in the Netherlands and in the United Kingdom are the most involved ones in publishing in specialized journals in innovation research.
Accounting	Zhong <i>et al.</i> (2016)	N° of publications;	Bibliometric analysis and social network analysis were used. Natural resource accounting has suffered a rapid increase since 2001. The

Field	Author(s)	Bibliometric Indicators Used	Main Conclusions
		countries', authors' and institutions' productivity; keyword analysis.	Journal of Environmental Management, The United States, University of California and Dr. Chen appeared respectively as the most productive journal, country, institution and author. Water and energy are the natural resources that attract the highest attentions.
Health	Clarke <i>et al.</i> (2007)	Country publication rates	The authors aimed to overview Public Health research literature in Europe and to compare country publication rates by population, Gross Domestic Product, burden of disease and language. A comparison was also made between European countries and other major publication producers around the world.

In what concerns research in the fields of Tourism, Leisure and Hospitality, there are also numerous bibliometric studies, and can follow different approaches. One approach is examining the most influential journals, and the following studies are examples of this. García-Lillo *et al.* (2016) performed a bibliometric analysis to study the existing literature on hospitality management from all research articles published in *The International Journal of Hospitality Management* (IJHM) for the period 2008-2014. In order to identify the main research trends around this area, the authors used the bibliometric methods of author citation and co-citation analyses (ACA). Another bibliometric method used was Social Network Analysis (SNA) to perform a visualization of the structure of the main research trends. Therefore, the study enabled a better understanding of the intellectual structure of research in hospitality management for the selected period of time.

Strandberg *et al.* (2016) provided an overview of the evolution in Tourism and Hospitality research in the journal *Tourism and Hospitality Research* between 2000 and 2014 as well as the main trends in current research involving these industries. The analysis is based on six key metrics of the journal's publications: the nature of authorship, the most influential articles, the most influential authors, the most prolific authors, themes covered, and the manuscript characteristics of the articles published during this period of time.

Jamal *et al.* (2008) offered a critical analysis of journal rankings and citation analysis in tourism studies. Another approach can be the analysis of topics in the most influential journals and Okumus *et al.* (2018) present an example of this by examining the evolution of food and gastronomy research in 16 leading journals in the field of Hospitality and Tourism between 1976 and 2016. Another example is brought by Jiménez-Caballero & Polo Molina (2016), where a bibliometric analysis is used to analyse the presence of financial research applied to tourism in high-impact tourism journals for the period between 1995 and 2012.

Some studies have focused the most productive institutions (Law *et al.*, 2010), while others studied the number of publications by the most influential authors (Figuroa-Domecq *et al.*, 2015). Park *et al.* (2011)

offered a complete study in which the productivity of authors, universities and countries were analysed using research contributions to top Hospitality and Tourism journals. Published articles between 2000 and 2009 were examined in the six most commonly cited journals in Tourism and Hospitality fields: *Journal of Hospitality and Tourism Research*, *Cornell Hospitality Quarterly*, *International Journal of Hospitality Management*, *Annals of Tourism Research*, *Tourism Management* and *Journal of Travel Research*.

Another remarkable work is presented by Koseoglu *et al.* (2016) in which 190 papers with bibliometric analyses from leading hospitality and tourism journals were selected and analysed. This work also portrays trending themes, while offering critical discussions for theory development and future research.

3.2 Satisfaction Definition and the Decision-making Process Towards Satisfaction

As mentioned before, customer satisfaction has been a very trendy topic recently and the cause of many debates in literature, as authors keep searching for what this concept means and how can this intangible term be measured, as well as the consequences when achieving different levels of satisfaction.

According to the dictionary, satisfaction is generally defined by “the good feeling that you have when you have achieved something or when something that you wanted to happen does happen; the act of fulfilling a need or desire;” (Oxford Learner's Dictionaries, 2021).

Gundersen *et al.* (1996) stated that satisfaction is a post-consumption evaluative judgement concerning a certain product or service that can, in turn, be measured by the assessment of the guests' evaluation of performance on specific attributes. For Chen (2008), satisfaction is defined as a psychological concept that involves a feeling of happiness resulting from an experience with products or services. Satisfaction can also be defined as an overall evaluation of the value perceived by tourists (Chen & Tsai, 2007). Vuuren *et al.* (2012) stated that tourist satisfaction is an emotional response present when evaluating the difference between expectations and perceptions of service performance and actual perceptions obtained through physical interaction with products and services businesses. According to Dmitrović *et al.* (2009), loyalty is a consequence of tourist satisfaction, represented by the repeated act of purchase, the ability to pay a higher price and the phenomenon of word-of-mouth recommendations.

Another effect of customer satisfaction is the ability to create sustainable advantages, by attracting consumers back, constructing a loyalty feeling towards the brand, and reducing the cost of attracting new customers (Lovelock & Wright, 2007). For Yoon & Uysal (2005), tourist satisfaction evaluation must be considered in a variety of dimensions due to each tourist's subjectivity and individual preferences. Given this, there is a need for a model that integrates the various models in literature of tourist satisfaction, so that the measurement of tourist satisfaction can be more effective and consensual.

Martin *et al.* (2008) stated that a growing body of literature suggests that positive and negative emotions associated with the service encounter play an important role in defining satisfaction and in predicting future behavioural intention (Allen *et al.*, 1992; Oliver, 1993b; Richins, 1997; Barsky & Nash, 2002). Furthermore, there is a general acceptance towards the idea that customer satisfaction levels and long-term behavioural intention are influenced by emotions during the pre-, actual and post-consumption

stages of the service encounter (Oliver, 1997; Cronin Jr. *et al.*, 2000; Barsky & Nash, 2002). This work highlighted the need to measure both cognitive and affective elements of customer satisfaction in order to acquire a better understanding of its formation and likely effects on behavioural intention, in opposition to the previous idea that excluded the affective component. The results of this study enabled to support the theory that satisfaction is better explained when including the emotional aspect than without it. It could also be concluded that emotionally-based satisfaction is a stronger indicator of future behavioural intention than the previous cognitive measures.

Another definition is the one proposed by Chi & Qu (2008), where customer satisfaction was defined as a psychological concept that involves the pleasure and feeling of well-being that results from obtaining exactly what a person expects from a certain product or service. Satisfaction is created by the comparison between the customer's expectation before and after consumption so that the higher the similarity between the customer's expectations, the higher the degree of satisfaction produced. The authors aimed to offer an integrated approach to understand destination loyalty by analysing the empirical evidence on the causal relationships between destination image, attribute satisfaction and overall satisfaction, and concluded that: destination image directly influences attribute satisfaction; destination image and attribute satisfaction were direct precursors of overall satisfaction; and overall satisfaction and attribute satisfaction had positive impacts on loyalty towards a destination. Rojas (2010) defined customer satisfaction as a result of a client's perception of the value received by a product or service. Del Bosque & Martín (2008) developed a model that explained the relationships among the psychological variables (cognitive and affective) that affect the tourist in pre-experience and post-experience stages. Research involved 807 individuals visiting a destination in Spain and the results portrayed that a preconceived image of the destination has impact on expectations and tourist loyalty towards the destination. In addition, the impact of expectations and emotions on satisfaction was proven, having a relevant influence on behavioural intentions.

According to Baker & Crompton (2000), satisfaction refers to a tourist's emotional state after exposure to an opportunity. The authors developed a structural equations model that confirmed that perceived performance quality has a stronger impact on behavioural intentions than satisfaction. Gallarza & Saura (2006) indicated that quality is an antecedent of perceived value and satisfaction is the behavioural consequence of perceived value, being loyalty attitude the final outcome. The results confirmed a quality-value-satisfaction-loyalty chain and showed the complexity of very sensitive value dimensions to the tourism experience. There is also evidence that there is a positive and direct correlation between the attributes of tourism facilities and customer satisfaction but, surprisingly, satisfaction and loyalty are tenuously linked. Clarifying, despite tourists' loyalty is especially influenced by hotel design and amenities, their satisfaction depends mostly on hotel ambience and facilities (Skogland & Siguaw, 2004).

Oliver (1999) agrees that despite most loyal consumers are satisfied, the opposite is not always true. In other words, a satisfied consumer is not immediately a loyal one. In fact, satisfaction is a needed step towards loyalty formation but loses relevance when loyalty starts setting through factors like personal determinism or social bonding at the institutional or personal level. Another conclusion extracted was that, due to the nature of the product category or consumer disinterest, loyalty cannot be achieved as a

defined objective by providers. Bigné *et al.* (2001) focused the relationship between the image of a tourism destination perceived by tourists and their behavioural intentions, and between this image and the post-purchase evaluation of the stay. Together, the authors proposed a structural equation model to jointly analyse the relationship between quality and satisfaction, and between these variables and tourists' behaviour variables. The results showed that the image of a tourism destination is a direct predecessor of perceived quality, satisfaction, intention to return and willingness to recommend the destination to others. In addition, quality was confirmed to have a positive influence on satisfaction and on the intention to return, and also determines the willingness to recommend the destination. The idea that the satisfaction levels of a tourist are deeply related with behavioural intentions is highlighted.

According to Bigné & Andreu (2004), consumers that experience greater pleasure show higher satisfaction levels and more favourable behavioural intentions, reflected in a future loyalty feeling and intention to visit the destination. For Bigné *et al.* (2005), satisfaction is responsible for mediating the relationship between experienced/produced emotions and behavioural intentions. Other authors stated that overall satisfaction can be determined by push and pull motivations (Caber & Albayrak, 2016). Pestana *et al.* (2018) developed a model associated with the previous idea, explaining the mediation role played by satisfaction in the relationship between motivation, emotion and behavioural intentions.

Adinegara *et al.* (2017) showed a framework elaborated by Mohamad *et al.* (2011) which represents the connections between service quality, customer perceived value, intention to return, destination image, satisfaction and word of mouth recommendation. The framework consists of eight variables (Figure 1).

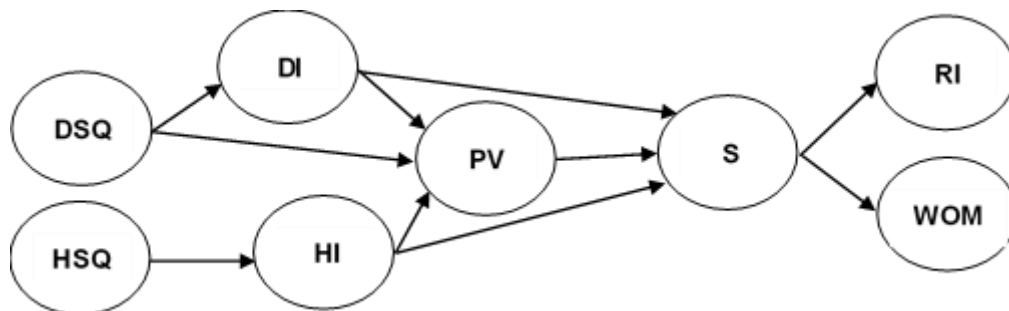


Figure 1 - Tourist Satisfaction Model; Adapted from Mohamad *et al.* (2011).

Abbreviations: DSQ – Destination Service Quality; HSQ – Hotel Service Quality; DI – Destination Image; HI – Hotel Image; PV – Perceived Value; S = Satisfaction; RI – Revisit Intention; WOM – Word of Mouth Communication.

3.3 Satisfaction Measurement

Following the increasing interest in the field of Customer Satisfaction across the last 50 years, several methods of measuring satisfaction have been developed, and literature presents different scales that have been used to measure customer satisfaction in surveys. In general, they can be divided in three main groups: performance, disconfirmation and satisfaction.

Through literature, we can see a vast number of scales commonly used in consumer satisfaction research, and these include constant sum, paired comparison, Likert, rank order, graphical and semantic differential. As said before, in the customer satisfaction measurement process, these scales can be grouped into three broad categories: performance scales (ranging from “poor”, “fair”, “good” to “excellent”); disconfirmation scales (ranging from “worse than expected” to “better than expected”); and satisfaction scales (ranging from “very dissatisfied” to “very satisfied”) (Devlin *et al.*, 2003 & Haddrell, 1994).

Haddrell, (1994) goes further and contrasts these three types of scales (performance, disconfirmation and satisfaction) on six criteria in order to determine their comparative strengths and weaknesses. These criteria are: reliability, convergent and discriminant validity, predictive validity, skewness, face validity and managerial value. Through the design and implementation of a study of hotel guests in which guests were asked to rate the key service attributes during their stay, the author concluded that the disconfirmation scale was superior to both performance and satisfaction scales in all criteria except for predictive validity, sharing this way the same conclusions of Devlin *et al.* (2003) and Rust & Zahorik (1993). In addition, the performance scale produced generally better results than the satisfaction scale on some of these criteria.

According to Haddrell (1994), a review of literature showed over 40 different scales for measuring consumer product or service satisfaction. The author also stated that there are two broad types of scales used in customer satisfaction surveys: single-item and multi-item scales.

Single-item scales have been widely used to map “very satisfied” to “very dissatisfied” into 2-9 points/scores (Andreasen & Best, 1977; Oliver, 1997; Olshavsky, 1972). Despite the easiness of use of single-item scales, they present two faults, according to (Yi, 1990). The first one is that the single-item scale cannot provide information on components and cannot assess various dimensions separately, therefore it may not capture the complexity of customer satisfaction entirely. Second, it is very difficult to assess reliability with a single-item measure, with the only reliability estimate being that of a test-retest format (Yi, 1990). Later, the paradigm of measuring customer satisfaction in literature has changed, and authors started tending to use multi-item scales (Danaher & Mattsson, 1994; Oliver, 1980; Rust & Zahorik, 1993). With this type of scales, survey answerers are not only asked to give an overall evaluation of their satisfaction with a service, but also to rate the key components of the service process. Multi-item scales examples include verbal, graphic, semantic differential, Likert and inferential scales, and Westbrook & Oliver (1981) studied the reliabilities of them. They found that, on average, the semantic differential scale had the highest reliability.

Other studies have also shown multi-item measures to be more reliable compared with their single-item counterparts (Oliver, 1980; Churchill & Surprenant, 1982; Bearden & Teel, 1983).

3.4 The Field of Sustainability

The field of Sustainability has established itself as an emerging topic during the last few decades of the 20th century, becoming a global megatrend in research and in practice. The general sense of urgency

and importance given to the development of sustainable practices and measures in the numerous areas of activity of society is not only consensual, but an obligation so that life as we know cannot be damaged or even extinguished.

Considering the vast application areas of sustainability in society, literature around this topic has been studied by different academic disciplines, causing an intense debate around what it means and the ways it can be achieved. Therefore, numerous conflicting definitions have been shared by many researchers, who emphasize different aspects of sustainability related to their research areas, such as: economic and social sustainability, ecological sustainability, sustainability of agricultural resources, political economy and political ecology approaches. Curran (2009) alerts for the importance of effectively integrating the different disciplines and expertise areas together towards the development of a viable decision-support framework, capable of delivering an overall answer with regard to environmental decision-making.

Previous research on sustainable practices and behaviour of firms has focused different dimensions. Prudhomme & Raymond (2013) have dealt with the economic dimension of sustainability, but other authors have focused mainly on the environmental dimension (Fraj *et al.*, 2015; Ramanathan *et al.*, 2016; Yu *et al.*, 2017; Garay *et al.*, 2019). However, an integrative approach of the three pillars of sustainability was also used to study sustainability management of firms (Horak *et al.*, 2018; Gerd *et al.*, 2019; Kuokkanen & Sun, 2019).

In his work, Curran (2009) stated that, with the increasing awareness for environmental issues, businesses and industries have been trying to change their operational processes by integrating sustainable and “greener” measures alongside the entire supply chain. Such measures include pollution prevention and cleaner production strategies or environmental management systems to improve environmental performance.

The increasing importance given to the development of sustainable measures that protect the environment has enabled numerous scholars and authors to study the field of sustainability in its multiple features.

3.5 Definition of Sustainability

In 1983, the United Nations appointed the former Norwegian prime minister Gro Harlem Brundtland to run the new World Commission on Environment and Development. Despite the effort to raise living standards through industrialization, extreme poverty was still a problem faced by many countries. Countries around the world and the United Nations realised that economic development compromising ecological health did not lead to long-lasting prosperity, and so, it was necessary to find a harmonious way to link ecology with prosperity. The Brundtland Commission came up in 1987 with the “Our Common Future” report, defining Sustainable Development as the “development that meets the needs of the present without compromising the ability of future generations to meet their own needs”. This definition tried to join environmentalism to the existent social and economic concerns involving the development plans and needs of countries, and brings a notion of compromise between environmental protection and

economic development. In other words, sustainable development defends economic growth based on reduced impact on the environment. The “Development” concept itself has been reformulated and if it previously was understood as a synonym for “economic development”, presently the concept includes the social and cultural development dimensions.

For many decades, environmental protection and economic development were seen as two contradictory realities since economic development often contributes to a degradation of the environment as well as to a depletion of natural resources. Furthermore, environmental protection measures require conceded funds, increasing the cost of economic development.

The Brundtland definition is vague and open to interpretation, leading to quantification and implementation issues. It assumes that the Earth is able to provide sufficient resources to meet both present and future needs. However, a major problem of this assumption lies on the fact that the majority of widely used resources are finite and are being depleted at a higher rate than their production/restoration. In addition, the distribution of resources is unequal between and within countries. Due to this, our lifestyle, society structure and satisfaction of our current needs could be threatened. According to data provided by the Global Footprint Network, the humankind’s consumption rate of resources for 2021 would take 1,7 Earths to generate such resources and absorb all our CO₂ emissions. In other words, we are using the resources that 1,7 Earths could generate, which is, of course, unsustainable in a relatively short-term perspective (Geneva Environment Network, 2021).

Another issue is related with the definition of “needs”. Governments and societies have acknowledged that not every need has the same relevance, some of them are more important than others. Therefore, a hierarchy of needs was established, reflecting the differences in relevance attributed to each need. According to a 1976 report elaborated by the International Labour Office, the satisfaction of basic needs means meeting the minimum requirements of a family for personal consumption: food, shelter, clothing; safe drinking-water, sanitation, health, transport and education. This definition for basic needs seems consensual but, unfortunately, it is not a reality in many developing countries. Despite this, the interpretation of “needs” may differ and involve different aspects as we are considering developed countries or developing countries. As societies in developed countries benefit from a higher quality of life which includes many commodities regarded as needs for a daily life basis, societies in developing countries do not have those possibilities. In example, cars and heating/refrigeration systems at home may be regarded as needs for societies in developed countries, but are not affordable for developing countries’ societies. Another difficulty lies on the meeting level of these needs and on the measures to determine it. Is there a reference meeting level that should be assured for these needs? How can we determine if everyone’s needs are being satisfied? Since societies are different between them and have different conceptions about needs, what are we referring to as everyone’s needs? It is important to clarify these questions in order to take further, precise and impactful steps towards an effective sustainable society.

Another definition is proposed by Curran (2009), for whom sustainability is a destination that we aspire to reach with the selection of the sustainable pathways that we choose as we proceed along the journey.

Once some of the currently used definitions for sustainability have been presented, it is important to analyse and understand what this concept involves, how it is characterized and what implications it produces when integrated in the different aspects of society.

3.5.1 Dimensions of Sustainability

Sustainability is a holistic approach which states that environmental, economic and social dimensions must be considered together in order to reach long-lasting prosperity. These three dimensions (economics, environment and society) constitute the three pillars of sustainability. The idea that long-lasting overall prosperity can only be achieved by considering these three fields, changed the previous paradigm in which development was attributed to economic growth alone. According to Curran (2009), there was a general consensus by the time of the 1992 United Nations Conference on Environment and Development that the concept of sustainability should adopt the idea that economic, social and environmental spheres cannot be understood individually but rather simultaneously in an interrelated approach, in which each dimension can impact the others. The approach of the interrelation between the three pillars of sustainability answered this issue and is represented in Figure 2.

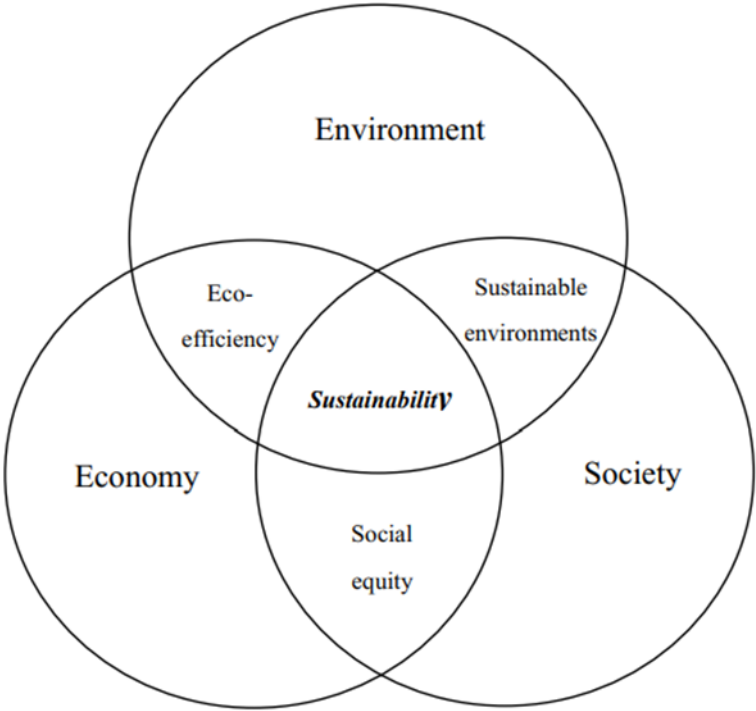


Figure 2 - Sustainable practices (at the intersection) allow for satisfactory outcomes for human and the environment while fulfilling the social and economic needs of current and future generations. Source: Curran, M. A. (2009).

In addition, Elkington, 1997 apud Berkovics (2010) conceptualised the triple bottom line framework, through which corporations could assess the profits they are making through their sustainable behaviour. This profit is not just in terms of economic value, but also in terms of environmental or social value.

The environmental dimension refers to aspects concerning the quality and health of our environment, the management and monitorization of consumption waste and emissions, the use of natural resources, pollution prevention and biodiversity protection. In brief words, environmental sustainability is assured when there is an equilibrium in the totality of earth's environmental systems, as natural resources within them are consumed at a rate where they are able to replenish themselves. It is important that companies start including green policies values across all levels of management.

The social dimension cares about social justice, social equality and security, and is traduced by aspects related to living standards, providing equal opportunities to all members of society, and availability of jobs and education. Social sustainability is achieved when Universal Human Rights and basic needs are attainable by all citizens. People should have access to enough resources so that they can keep their families and communities healthy and safe.

Finally, the economic factors are drivers for profit, economic growth and investments into research and development. Economic sustainability can be measured by the impact a business has on the economic environment it is part of, and is achieved when communities in the world have access to the resources they need (financial or others) to meet their needs (McGill University, 2015; Environmental Management Solutions, 2013; John A. Dutton, 2020).

Liu (2009) points out that, besides the previously referred three dimensions of sustainability, other dimensions have been proposed (political, ethical, philosophical, etc.), increasing the sustainability scope. The author also refers that it is important to clearly define and recognise which indicators of sustainability are accurate and useful, though ecological Footprint is gaining relevance in this matter.

3.5.2 Types of Sustainability

The great flexibility around this topic means that several approaches can be used to integrate sustainable measures into many sectors of society, and therefore, different types of sustainability were introduced in literature. Curran (2009) gives us some examples of different types of sustainability.

- **Environmental Sustainability**

Sustainability and environment are two inevitably intrinsic realities. The author refers that the sustainability paradigm has a significant environmental-focus, derived from an ecological or environmental science perspective. Environmental sustainability cares with maintaining and preserving the ecosystem integrity and health. Researchers work for the development of models and measuring indicators that can help them identifying and understanding existent vulnerabilities in ecological systems caused by external factors (i.e., pollution levels, climate change, invasive species, land use patterns). The preservation of ecosystems, the promotion of sustainable and reasonable use of water and land as well as the protection of biodiversity are major concerns in this type of sustainability, due to the relevant impacts that could be caused for all species in general.

- **Urban Sustainability**

This type of sustainability is highly concerned with urban planning (including infrastructure and transportation) for optimization of energy, materials and land uses, and refers to the environment protection in urban ecosystems. Different studies are taken to analyse and positively influence community-based decision-making. The monitorization of community-based social, economic, ecological and human health indicators is very helpful to control possible problems and disparities. Urban sustainability can be achieved by: effective and efficient use of green spaces in urban environments, post-consumer recycling, controlling population growth and urbanization levels, resource conservation, and sustainable patterns of production and consumption among growing demands.

- **Business Sustainability**

Business sustainability considers the integration of economics, ecology and equity in decision-making processes in a business context. Businesses in general should also focus on corporate social responsibility (CSR) – an increasingly important approach of this type of sustainability -, apart from the financial perspective of operations and the development of efficient lean procedures that save money, materials and energy. Curran also stated that some people believe that CSR is the private sector's way of integrating the environmental, economic and social imperatives of their activities, a similar approach as the one related to the triple bottom line. Due to the imperative needs for change to get along with sustainability trends, companies are being pushed to implement several changes in the way they design, produce and deliver products and services to their customers. The author referred that it is expected that the actual economy will be characterized by a decrease in the material and energy content of products in exchange for an increase in their knowledge content. Governments and businesses will face the challenge of pursuing and achieving a continued economic development model that is simultaneously ecologically and socially sustainable. According to Curran (2009), this task will require globally life cycle rethinking as well as full commitment and cooperation between the numerous stakeholders involved, since each one should care for integrating a meaningful measure of given corporate contributions towards a sustainable future. To do so, it is important to learn from the past, to identify where previous approaches have failed and how they can be improved to integrate positive sustainable measures that could led to a more sustainable way of life.

- **Industrial Ecology**

Influenced by an engineering perspective, industrial ecology cares with functional design and material selection for products and product systems. Its aims are to maximize energy and material efficiency and also to minimize possible environmental impacts over multiple product life cycles. Life cycles rethinking will also be required, as the webs of material flows within and across regions must be optimized.

3.6 Sustainability on the Hospitality and Restaurant Sector

Restaurant sustainability refers to practices on food businesses that minimise their impact on Earth. This can be achieved by addressing issues such as their carbon footprint, food waste, sustainable farming, recycling, shortening their supply chain, water and energy consumption, etc.

The importance given to sustainability in every activity sector is increasing at a large scale, and the catering sector is also taking part of this change into a more sustainable world. In fact, evidence shows an increase in the number of customers who prefer restaurants with active measures for protecting the environment. The increasing customer awareness for sustainable measures is aligned with their will to actively and positively contribute to a needed change. According to a 2020 survey carried out in the UK by CGA in association with UKHospitality, over 4 in 5 respondents (83%) expect hospitality brands to take part in sustainable practices, and 41% said they would be willing to pay more for sustainable dining. These data prove that customers are valuing not only the food in itself but also how it is produced, which is a challenge for restaurants who want to differentiate themselves from competition.

In what concerns the benefits of implementing a sustainable-oriented strategy, it does not stay limited to protecting the environment. Business can also be positively influenced by the implementation of sustainable practices, and Table 6 presents some of the benefits of implementing a sustainable-oriented strategy.

Table 6 - Benefits of implementing a sustainable-oriented strategy.

Benefit	Description
Brand Loyalty	The alignment between both values of restaurants and customers turns customers more likely to return. For the customer, there is a sense of positive contribution, enjoyment and fulfilment when choosing a restaurant with sustainable practices.
Growth of Customer-base	Sharing an innovative and sustainability-oriented strategy with the public can attract possible new customers, who follow the same sustainable values.
Increased profits and recovered costs	An increase in the customer base can lead to increasing profits. Sustainability practices performed such as minimising food waste can reduce lost earnings.
Employee engagement	A strong social conscience image shared by a restaurant can boost staff morale, retention and motivation, as they feel proud for the contribution their work gives to a positive cause.
Higher awareness levels	The development and execution of sustainable practices can positively inspire and influence individuals who are not yet fully aware of its positive impacts for the environment.
Improvement of the supply chain	Reducing the carbon footprint can be achieved by shortening the supply chain. A shorter supply chain gives a higher level of visibility and control of the whole chain.

Adapted from Burton (2020).

3.6.1 Hotel Attributes with Impact for Customer Decision

The process of customers choosing a hotel depends of numerous factors and attributes. Several methods have been used in research to identify which hotel attributes are relevant for guests. Chow *et al.* (1995) categorized hotel attributes into: (a) Security, (b) Quality and Dependability of Service, (c) Reputation and Name Familiarity, (d) Physical Appearance, (e) Location, and (f) Price. In turn, Callan (1995, 1998) grouped 166 hotel attributes into: (a) Location, (b) Image, (c) Price/Value, (d) Competence, (e) Access, (f) Security, (g) Additional Services, (h) Tangibles (bedroom), (i) Tangibles (other), (j) Leisure Facilities, and (k) Service Provider. In turn, Chu & Choi (2000) identified six selection factors: (1) Service Quality, (2) Business Facilities, (3) Value, (4) Room and Front Desk, (5) Food and Recreation, and (6) Security. Dolnicar & Otter (2003) examined 21 studies published between 1984 and 2000 in hospitality, tourism research and business journals, and identified 173 attributes which were organized afterwards into: (a) Image, (b) Price/Value, (c) Hotel, (d) Room, (e) Services, (f) Marketing, (g) Food and Beverage (h) Others, (i) Security, and (j) Location. Berezan *et al.* (2014) developed the same research and reviewed the same journals in those areas from 2001 to 2010 in order to investigate how increased environmental awareness had impacted research. Table 7 presents the results of the study, and the authors found out that a new category had emerged: Green Efforts. This category is related to specific hotel attributes such as its environmental record or doing business with environmentally-friendly service providers.

Table 7 - Frequency ranking of hotel areas studied (1984-2010).

Attribute Category	Frequency of Inclusions		
	Dolnicar and Otter (1984-2000)	Current Research (2001-2010)	Total (1984-2010)
Services	173	205	378
Room	177	111	288
Hotel	125	112	237
Price/value	64	37	101
Food & Beverage	73	27	100
Location	49	19	68
Security	29	32	61
Image	42	14	56
Green Efforts	0	28	28
Marketing	14	5	19
Other	6	7	13

Adapted from Berezan, O. & Millar, M. (2014)

Hotels and other entities on the Hospitality industry have also started to include sustainable practices into their activities, answering to the latest trends and awareness towards the importance of adopting such measures. This change of paradigm has been largely led by governmental incentives and pressures, and by a global acknowledgement that resources preservation is an issue with the highest

priority. These practices include reuse and recycling, waste reduction, purchasing local products, water and energy conservation, implementing rigorous LEED (Leadership in Energy and Environmental Design) certification standards, indoor air quality, sensitization communication and education (Berezan *et al.*, 2013; Berezan *et al.*, 2014). A Deloitte Consumer Survey found out that 95% of the 1000 responding business travelers in April 2008 thought that hospitality facilities should adopt green practices (Deloitte, 2009). Also, 48% of respondents to Deloitte's October 2008 travel survey said that they try to undertake green and sustainable practices when traveling (an increase of 41% in comparison to the year before). As the awareness level of customers for environmental issues increase, the implementation of sustainable practices is being seen as a way of enhancing hotels' competitiveness (Lee *et al.*, 2010) and building a competitive advantage (Manaktola & Jauhari, 2007).

The increasing awareness towards the need to "go green" has changed the paradigm of customers' expectations, which means that costumers have become more demanding in what concerns the expected services to be offered in hotels. Customers now expect environmental attributes in hotels (Robinot & Gianneloni, 2010).

Green hotels are environmentally-friendly hotel establishments that incorporate green principles and practices into their daily operations (i.e., water and energy savings, reduction of solid waste and emissions) with the purpose of not only protecting the environment, but also to improve the hotel's efficiency by saving costs (Melvin & Melvin, 2008). The term "green" has several synonyms and is also referred to "environmentally friendly", "environmentally responsible" or eco-friendly" (Melvin & Melvin, 2008).

3.6.2 Sustainable Behaviour and Customer Satisfaction

According to Curran (2009), the tourism industry brings significant economic benefits for many countries, although these benefits arise with a cost – the cost of threatening environmental health. The satisfaction of the tourists' growing needs brings negative impacts related with the biosphere degradation, the destruction of coastal and mountain areas by the construction of hotels, parking and entertaining places (Middleton & Hawkins, 1998). Organisations in the tourism industry should adopt a sustainable development orientation strategy to minimize these negative impacts on the environment. Therefore, efforts must be implemented to educate society for the importance of protecting the environment and to develop practices aligned with it. Over the last few decades, concerns related to preservation and protection of the environment have been a major issue in society, with people and firms being increasingly aware for ecological problems and adopting an environmentally conscious posture, which leads to more environmentally friendly buying behaviours (Laroche *et al.*, 2001; Manaktola & Jauhari, 2007) and other ATGB (Attitude Towards Green Behaviours).

Several authors have studied the impact of implementing sustainable practices on overall guest satisfaction. Assaf & Magnini (2012) stated that regardless of the commitment to sustainable practices, hotels must focus on customer satisfaction in order to be able to compete in the industry. In fact, this study provides empirical evidence that not considering customer satisfaction in hotel efficiency studies may lead to significant differences in the mean and ranking of hotel efficiency scores. For Berezan *et al.*

(2013), hotel managers should clearly understand how to integrate and achieve sustainability into their businesses according to the three pillars of sustainability, in a way that enables customer satisfaction to be either maintained or increased. In their study, the authors also concluded that green practices have an overall positive relationship on guests' satisfaction levels and intention to return. It is important that hotels recognise what customers expect in order to meet those expectations (Robinot & Giannelloni, 2010). This task can be truly challenging since there might be disparities over what costumers expect for hotel environmental practices because not every costumer has the same preferences or requests. In fact, Robinot & Giannelloni (2010) concluded that not every green attribute can be viewed as differentiating criteria when choosing for a certain hotel, some of them are actually expected to be part of the service offer. In example, the reuse of linens and towels was considered a basic attribute expected from hotels by guests, and the absence of this measure was considered to negatively affect customer satisfaction. On the other hand, the study also concluded that the fact that a hotel used clean and renewable energy sources was considered a "plus" attribute that could contribute to the hotel's competitive advantage and could lead to greater satisfaction levels.

Berezan *et al.* (2014) analysed satisfaction ratings and concluded that there were minimal differences between demographic groups, which means that sustainable hotel practices are attractive in general. Despite this, the study also showed that sociocultural backgrounds may influence the way customers perceive and view environmentally-friendly practices in hotels. While Mexican respondents showed more concern with emotional aspects valuing peaceful, natural and comfortable qualities, US-American guests were more familiar with functional aspects of sustainability such as water and energy conservation. These results suggest differences in certain hotel sustainable practices expectations in what concerns customer satisfaction.

Lee *et al.* (2010) developed a study that tested the relationship between green attributes, hotel's image and customers' behavioural intentions. The authors found out that customers' emotions and cognition were involved in the process of formation of customers' opinions of an overall green image of a hotel. Relating cognition to functional green attributes (i.e., linens reuse measure) and emotions to emotional green attributes (i.e., tranquillity), the authors concluded that the implementation of these functional and emotional green attributes into the daily hotel operations was intimately related with the creation of an overall green hotel image. The findings confirmed that cognitive image components (namely value and quality attributes) can positively influence a green hotel's affective and overall images. The affective image was also found to have a positive influence on a green hotel's overall image. In addition, the study was also helpful to demonstrate that an overall green hotel image was positively related to customers' behavioural intentions (such as intention to revisit, intention to offer positive recommendations to others or word-of-mouth and willingness-to-pay a premium). Manaktola & Jahuari (2007) also shared the conclusion that the image of a hotel worried about environmental practices can result in favourable behavioural intentions by customers, leading to the intention to return.

The heterogeneity of the customer profile caused by the different sociocultural backgrounds, values and beliefs, expectations and preferences, turns the task of studying the willingness to pay a premium for green practices very hard. Numerous authors have studied this relationship and the developed studies

found out conflicting, inconsistent and inconclusive results. Mendleson & Polonsky (1995) showed that many consumers would be willing to pay extra for products that were less harmful to the environment. On the other hand, Manaktola & Jauhari (2007) concluded that consumers in India would prefer staying in hotel facilities that follow environmental practices than those who don't, but were not willing to pay more for this type of services. If the price increase component can be a negative issue in customers' acceptance towards green practices, Kim & Han (2010) found out, in an undertaken study, that respondents were keen to have minor inconveniences during their stay in order to cope with proposed sustainable measures such as reusing towels and using recycled products, as well as to learn about the positive environmental attributes of green hotels.

The Kasim (2004b) study of visitors to Penang, Malaysia, showed that, despite customers were environmentally conscious, this didn't necessarily mean that they would prefer a hotel that adopted environmental policies over one that didn't. In addition, respondents were not so willing to pay premium price for hotels that showed socio-environmentally responsible attributes. Furthermore, Kasim (2004b) stated that most tourists base their hotel choice on parameters such as price, quality of service, and physical attractiveness, rather than on environmental attributes. In fact, the author found out that some tourists actually preferred some nongreen attributes (i.e., fresh towels and air conditioning) rather than environmentally-friendly alternatives. Given these results, Kasim (2004b) concluded that not only there was no incentive for hotels to enhance competition to be environmentally and socially responsible, but also that investing on green practices could be a waste of a hotel's resources.

The study developed by Berezan *et al.* (2014), in which they identified which green practices satisfy guests the most, showed that hotel guests were willing to pay a daily premium at different levels for environmentally-friendly hotel practices. In addition, the study revealed that discounts and frequent guest points were the most effective ways to motivate guests' participation in green programs/practices. For Berezan *et al.* (2014), despite minimal differences between different demographic groups regarding satisfaction with green practices, management should consider customers' sociocultural backgrounds and should develop efforts on sensitizing guests about the benefits of balancing social responsibility with service expectations.

In general, customers who have a positive Attitude Towards Green Behaviours (ATGB) tend to change their buying behaviours, willing to pay extra in order to buy a product or service from a firm that follows environmental practices. In other words, environmentally conscious customers who are willing to change their buying behaviours, build more favourable Overall Images (OI) of firms that follow environmental practices (Lee *et al.*, 2010; Kim & Han, 2010).

As a synthesis, responding to a growing interest in tourism, leisure and hospitality, numerous bibliometric studies have been developed over the last few decades, to systematize existing knowledge on these subjects. Furthermore, an increasing awareness towards sustainable practices led society sectors to include green practices into their management acting plans. Customers became more demanding in what concerns the protection of the environment, and so, companies had to study how these concerns towards sustainability impacted customer satisfaction. Given this, the tourism, hospitality and other related sectors had to find effective ways to satisfy customers accordingly.

4 Methodology

This chapter presents and justifies the adopted methodology for the current dissertation work and will answer to the defined research objectives stated for this dissertation study.

4.1 An Introduction to Systematic Literature Reviews

According to Canabal & White III (2008), Hao *et al.* (2019) and Kumar *et al.* (2020), a topic or subject matter advances when new studies are developed upon prior studies by consolidating existing findings, identifying gaps in literature, solving conflicting findings and by providing auxiliary suggestions about the path of development for the future. Marabelli & Newell (2014) stated that systematic reviews allow critical discussions on a specific research topic by integrating existing literature, synthesizing previous studies, identifying literature gaps not addressed before and developing new theoretical frameworks. Literature issues may arise when there is poor understanding about a certain field or there is a research gap of knowledge in the existing findings, theories, contexts or widely applied methods for a certain subject. Systematic reviews are a powerful tool addressing this issue as they provide state-of-the-art insights about a relevant topic, using several methods and procedures to critically review certain topics, as well as suggesting guiding directions for future research (Paul & Criado, 2020). The possibility of consolidating knowledge about a specific theme builds a solid starting point for future researchers, because by having contact with the actual state-of-the-art and research guiding directions, they can better establish their way of approaching the issue in hands. And this is why Bibliometrics is a powerful tool.

According to Paul & Criado (2020), there are four broadly classification categories for systematic literature review articles: domain-based, theory-based, method-based and meta-analytical reviews. Domain-based reviews include structured-reviews, framework-based reviews, bibliometric reviews, hybrid reviews and reviews aiming for theory development. Table 8 presents the different types of systematic literature reviews, its characteristics and examples of each one of them in literature.

Table 8 - Types of systematic literature reviews.

Classification Category	Type of review	Description	Examples in Literature
Domain-based reviews	Structured reviews	<p>Scientifically and specifically structured domain-based reviews based on widely used methods, theories and constructs in the form of tables and figures, enabling readers to have insightful information from the reported content.</p> <p>The information is usually presented in appropriately designed, clear and visually appealing tables, with articles presenting usually 5-10 useful structured tables.</p> <p>Junior researchers can understand the variety of methods used and theories applied.</p> <p>Researchers can identify research gaps in methods, theories and constructs based on the compiled information.</p>	<p>Paul & Feliciano-Cestero (2021). The authors systematically examined the empirical and theoretical research on Foreign Direct Investment (FDI) through the analysis of 500 articles published during the last five decades. Theoretical models, methods, context and contributions to scholarship were reviewed to highlight the key theories, paradigms and articles.</p> <p>The authors not only concluded that FDI has evolved as the most significant area of international business, but also provided directions for further research.</p>
	Framework-based reviews	<p>Domain-based type of review in which authors develop a framework for the review.</p>	<p>Paul & Benito (2017). From an extensive coverage of studies published for the 1993-2017 period, the authors provided an overview of literature on different dimensions and characteristics of outward foreign direct investment (OFDI) by firms from emerging countries. Using the Antecedents, Decisions and Outcomes (ADO) format as an organizing framework for the review procedure, the authors identified analytical areas, the key theories and methodologies of OFDI research, as well as the characteristics and variables that have been examined.</p>

Classification Category	Type of review	Description	Examples in Literature
	Bibliometric reviews	<p>Bibliometric reviews analyse an extensive amount of published research by using statistical tools in order to figure out trends, citations and/or co-citations of a specific topic by year, country, author, journal, method, theory and research problem.</p> <p>Different softwares can be used to graphically represent the previously enunciated data.</p> <p>A relatively small number of articles represent a major part of the total citations in the analysis.</p>	<p>Rialp <i>et al.</i> (2019). The authors conducted a bibliometric review of the leading trends regarding the journal's publications and citations for the 1992-2016 period. The study analysed the most productive authors, universities and countries, and also the most cited papers and articles of the International Business Research journal. Basing on both Scopus and Web of Science databases, the authors performed a bibliographical mapping of research through the VOS (Visualisation Of Similarities) viewer software, using co-citation, bibliographic coupling and co-occurrence of author keywords. Results showed that European authors and universities are the most productive ones.</p>
	Hybrid reviews	<p>Can be developed in, at least, two different ways:</p> <p>When integrating a framework to provide directions for future research for a narrative-oriented type of literature review;</p> <p>When integrating the principles of both bibliometric and structured reviews.</p>	<p>Paul <i>et al.</i> (2017). The authors reviewed literature on the exporting challenges and problems of small and medium enterprises (SMEs) in the current globalization era. By synthesising the findings and analysing several dimensions, the authors sought to facilitate further research and the growth of SMEs in the long run. The aim of the review was not only to identify and understand research gaps and opportunities, but also to outline future research projects based on the study's propositions.</p>
	Reviews aiming for theory development	<p>Theory-building review articles through the development of theoretical models and/or testable hypotheses or prepositions.</p>	<p>Paul & Mas (2020). The authors developed a 7-P theoretical framework for strategic planning as part of international marketing (Potential, Path, Process, Pace, Pattern, Problems and Performance) with theoretical propositions. The framework was presented as a benchmark typology for firms that aim to succeed in international marketing from any geographical region, culture or industry. Results showed that developing countries from Latin America face Cognitive bias, Liability of foreignness and Resource constraints when internationalising their operations.</p>

Classification Category	Type of review	Description	Examples in Literature
Theory-based reviews		<p>Type of systematic review focused on analysing the role and influence of a specific subject field.</p> <p>Articles of this type synthesize and help advancing a body of literature that uses and/or empirically applies a given theory.</p>	<p>Rindfleisch & Heide (1997). Considering the relevant contributions given by Marketing scholars in extending and refining the original conceptual framework of Transaction Cost Analysis (TCA), the authors provided a synthesis and integration of recent contributions to TCA by marketers and scholars of related disciplines. An evaluation of recent criticism and agenda for future research was also provided.</p>
Method-based reviews		<p>Method-based review articles synthesize and extend a body of literature that uses an underlying quantitative or qualitative methodology.</p>	<p>Voorhees <i>et al.</i> (2016). The authors systematically reviewed existent approaches for assessing discriminant validity in marketing contexts. Through a Monte Carlo simulation, the authors determined which tests were the most effective for the purpose.</p>
Meta-analytical reviews		<p>Widely recognised quantitative technique for statistical assessment of available data and findings from previous quantitative and empirical studies on a specific subject.</p> <p>Help researchers to identify directions and effect sizes based on prior studies, using weighted average techniques.</p>	<p>Klier <i>et al.</i> (2016). The authors studied the effect of knowledge-based and experience-based resources on a firm's establishment mode choice, and the moderating impact of cultural distance on these relationships. Their theoretical framework was validated by a meta-analysis which integrated 31 studies with 13 559 establishment mode choices.</p>

4.2 Bibliometric Reviews

A bibliometric review is one of many approaches of performing a systematic review. According to Paul & Criado (2020), it consists of analysing a vast number of published research articles using statistical tools in order to understand research trends and citations or co-citations of a certain subject by year, author, country, research problem, theory, method and journal. Graphical bibliometric reviews can also be performed using Viewer software programs to perform graphical analysis of data concerning a certain subject, area or field. VOS Viewer (Visualization of Similarities) program is a widely used software to perform this type of bibliometric reviews. Other authors share their conceptions of bibliometrics. For example, Ye *et al.* (2012) stated that bibliometrics examines the results of research, including topics and methods, while Zupic & Čater (2015) defined bibliometrics as a tool for analysing the evolution of subjects based on different structure levels: conceptual, intellectual and social.

According to Broadus (1987) and Liao *et al.* (2018), Bibliometrics was developed and emerged as a cross-disciplinary science aiming to analyse bibliographic data quantitatively by using mathematical and statistical tools. The main feature and contribution of this method is the possibility of analysing a specific research topic and then extract valuable and meaningful conclusions (Liao *et al.*, 2018). Scholars interested in the Tourism and Hotel sectors as well as in the Customer Satisfaction field will be able to identify the most influential countries and institutions to base on when developing their own research (Law & Chon, 2007), developing their careers or carrying out their doctoral studies (Law *et al.*, 2010).

4.3 Methodology Adopted for this Study

Considering that the purpose of this study is to analyse the state-of-art by identifying the most relevant trends and actors (authors, journals, countries, institutions), a bibliometric analysis was performed, since it is the best-suited methodology for the purpose of the study.

The research data used in this study were retrieved from the Web of Science (WoS) and Scopus databases, since they are the most widely recognized international databases (Garrigos-Simon *et al.*, 2018). Previous studies using bibliometric analyses resorted to these two databases (Park & Jeong., 2019; García *et al.*, 2020), reinforcing the importance and credibility of them.

For the collection and extraction of the articles used for the bibliometric analyses, the PRISMA method was selected. The PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-analysis) method is a widely recognized tool for data selection, collection and extraction. Consisting of a 27-item checklist and a four-phase flow diagram, this method was developed to enable authors to ensure complete, transparent and detailed reporting of systematic reviews and meta-analyses (Liberati *et al.*, 2009). The checklist is divided in seven sections that should be considered (title, abstract, introduction, methods, results, discussion and other information), and the four phases (identification, screening, eligibility, included) enable scholars to filter their basis of articles to work with.

Before identifying the articles that were used for the study, it was important to select the databases used as a source for the articles' search. Then, it was important to define the keywords that filtered the articles'

search in order to identify the ones which served the purpose of this study. The search for documents in these databases (accessed in December 2021) was carried out using the keywords “Satisfaction” AND “Tourism” AND (“Hospitality” OR “Hotel”) AND (“Sustainable” OR “Sustainability”) in the articles’ title, abstract and keywords. Different inclusion and exclusion criteria were added to filter the results in order to reduce the sample of articles to work with. Therefore, only articles published during the 2000-2021 period were selected in the English language. In what concerns the articles’ source, not every journal was considered for the selection. The SCImago Journal Rank indicator is a measure of journal’s impact, influence or prestige, and expresses the average number of weighted citations received in the selected year by the documents published in the journal in the three previous years. Therefore, only journals with a SCImago Journal Rank Indicator associated with a Q1 or Q2 evaluation category for the articles’ year of publication were considered. The choice of a reliable journal as articles’ source is important to give credibility to the developed study, since an article published in a top-tier journal is expected to be associated with high-quality researchers and research. It is important to notice that for the 2000-2021 period, some selected journals had a SCImago Journal Rank Indicator associated with a Q3 or Q4 for certain years, but it was assured that the selected articles from these journals were published in a year associated with Q1 or Q2 evaluation categories for these specific journals.

In synthesis, inclusion criteria included articles published during the 2000-2021 period, in English language and in top ranked journals regarding the tourism and hospitality fields. Exclusion criteria included document types such as reviews, conference papers, reports, book chapters, books, conference reviews, letters, notes and editorials.

In this study, two different methods were used to perform the bibliometric analysis: performance analysis and science mapping. Performance analysis consists of measuring the scientific impact and citations through different indices (García *et al.*, 2020) and aims to evaluate the citation impact of the scientific production of different scientific actors. These indexes or indicators used for measuring the scientific output of researchers can be: Production indicators, focused on the counting of published papers by different scientific actors (total number of published papers, number of papers published in a period of time); Impact indicators based on received citations (total number of citations, average number of citations per paper, number of highly cited papers, h-index, etc.); Indicators based on the impact of the journal: Impact Factor, SJR (SCImago Journal Rank), relative citations ratio, etc. (Gutierrez-Salcedo *et al.*, 2017). The h-index was proposed by Hirsch with the aim of measuring the productivity of a researcher and considering his/her publications and citations achieved. With this indicator, the number of publications and their impact are combined, enabling the characterization of a researcher’s scientific output.

Science mapping represents scientific research and its evolution through time in the conceptual, intellectual and social fields (Gutierrez-Salcedo *et al.*, 2017). It is a spatial representation of the relationship between disciplines, fields, documents or authors altogether (Small, 1999). In science mapping analysis, the scientific knowledge is seen as a complex system, where the network structure is used to model the interaction between scientific actors (authors, keywords, journals, references, etc.)

(Boccaletti *et al.*, 2006). According to Batagelj & Cerinsek (2013), there are three types of bibliometric or bibliographic networks:

- Collaboration networks: enable the representation of the relationship between authors or institutions with each other, in the field of scientific research. Co-author network is the most widely used type of collaboration networks, and enable to identify groups of regular authors, influent authors, relevant institutions in a certain research area (Glänzel, 2001).
- Conceptual networks: enable the representation of relations between concepts or words in a set of papers, establishing a network for words that appear together in a document. Co-words network is an example of this kind of network and can be used to determine the most important and recent topics covered by research (Callon *et al.*, 1983; Cobo *et al.*, 2010).
- Publication Citation networks: enable the visualization of relationships between nodes, which represent publications, while the edges represent different aspects depending on the kind of network (co-citation, bibliographic coupling or direct link) (Small, 1973; Kessler, 1963).

Different data was used to perform the bibliometric analysis of the present study. The frequency of authors, journals, titles and keywords enabled not only to investigate the impact and productivity in literature of certain authors, journals and articles, but also to identify the main topics and trends related to satisfaction on the tourism sector with a sustainability approach. In addition, the network analysis was used to identify research topics through the construction of networks based on the co-occurrence of keywords.

5 Results

This chapter presents the results of the bibliometric analysis performed for the 102 collected articles from both Scopus and Web of Science databases.

5.1 Bibliometric Analysis through the *Scopus* Database

The search for documents in the Scopus database (accessed in December 2021) was carried out using the keywords “Satisfaction” AND “Tourism” AND (“Hospitality” OR “Hotel”) AND (“Sustainable” OR “Sustainability”) in the articles’ title, abstract and keywords, resulting in a collection of 82 records. The previously referred inclusion and exclusion criteria were added to the searching process following the steps mentioned above, achieving a sample of 44 articles screened, from which 1 of them was considered out of topic and, therefore, excluded, resulting in 43 articles included in synthesis. Figure 3 presents the different phases of the articles’ selection process through the Scopus database, according to the PRISMA method.

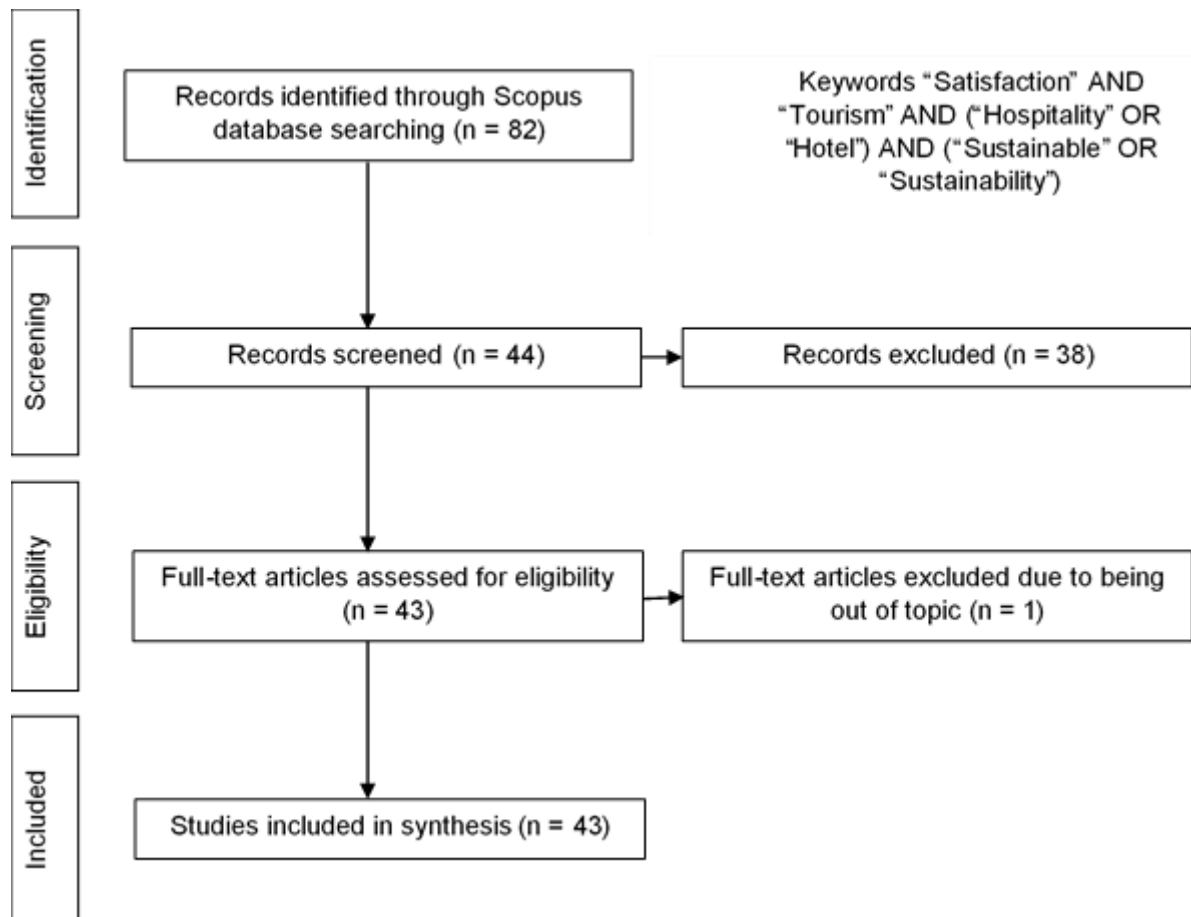


Figure 3 - Articles' selection process through the Scopus database, according to the PRISMA method.

5.1.1 Performance Analysis and Keywords

5.1.1.1 Evolution of scientific research on satisfaction on the tourism sector with an emphasis on Sustainability

As previously said, the tourism sector has been increasing in a large scale and been gaining relevance over the last decades. Literature has been accompanying this growth, since an upgrowing number of scholars and researchers want to study this sector, its features, impacts and consequences, future trends, etc. The recent and increasing concerns towards the implementation of sustainable and green practices into the various sectors of society are also contributing to a recent increase of research on the sustainability approach to satisfaction on the tourism sector, but the reality is that this field is not very studied yet.

The first publication collected from the Scopus database regarding satisfaction on the tourism sector with an emphasis on sustainability was published in 2008. From 2008 to 2014, the number of publications was relatively stable, varying between 0 and 1 articles. Then, a rapid growth was verified, going from 3 articles in 2015 to 12 articles in 2021. The highest variation in productivity was verified in the 2018-2019 period, with an increase from 1 article in 2018 to 10 articles in 2019 in this topic. For the 2008-2021 period, an annual growth rate of 28,21% was verified to a total of 43 collected articles. The evolution of scientific research on satisfaction on the tourism sector with an emphasis on sustainability regarding the quantity of publications per year from 2008 to 2021 is shown in Figure 4.

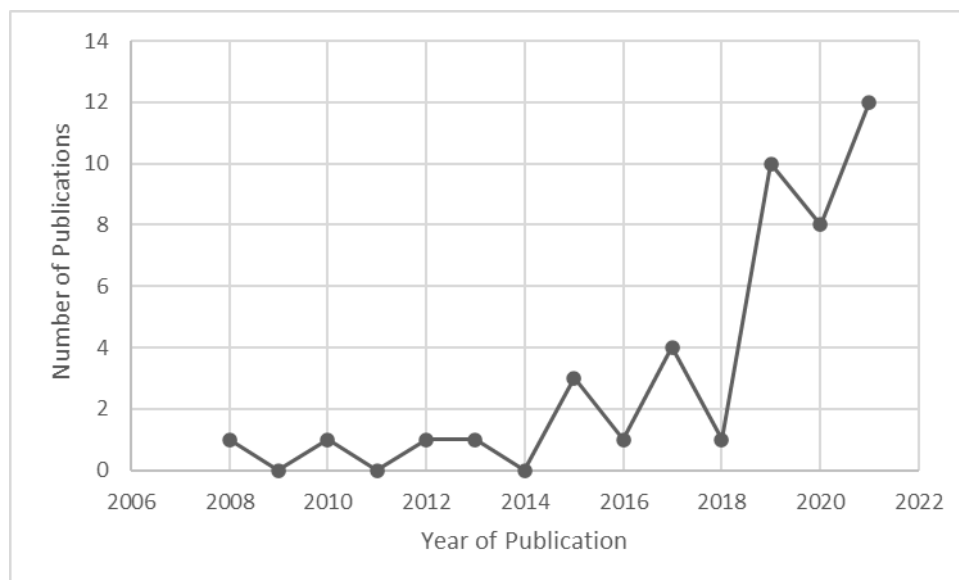


Figure 4 - Evolution of scientific research on satisfaction on the tourism sector with an emphasis on sustainability. Source: Biblioshiny app based on Scopus data.

5.1.1.2 Leading journals on the topic of satisfaction on the tourism sector with an emphasis on sustainability

The 43 collected articles from the Scopus database were published in 24 different journals, and Table 9 shows the productivity of some of these journals, ordered by number of articles published.

Table 9 - The top-5 most productive journals in satisfaction on the tourism sector with an emphasis on sustainability.

Journal	Nº of Articles
Sustainability (Switzerland)	16
Journal of Cleaner Production	3
Journal of Sustainable Tourism	2
Tourism Review	2
Amfiteatru Economic	1

Source: Biblioshiny app based on Scopus data.

From the available data presented by Table 9, it was concluded that the most productive journal was *Sustainability* by far, standing out with 16 articles published on the current topic of satisfaction on the tourism sector with an emphasis on sustainability, representing 37,2% of the total sample. The next most productive journals by number of publications, with significantly lower scores, are the *Journal of Cleaner Production* with 3 articles published (7%), the *Journal of Sustainable Tourism* and the *Tourism Review*, both with 2 articles published each (4,7%). The majority of journals (83,3%) published only 1 article on the study's subject. The significant difference between the *Sustainability* journal to the rest is justified by the large scope of this journal regarding the sustainability topic. This journal approaches the topic of sustainability from different perspectives, namely social, environmental, cultural and economic, which justifies the large number of published articles on the current topic.

Table 10 - Journal productivity for satisfaction on the tourism sector with an emphasis on sustainability.

Journal	NP	TC	ATC	PY_start	h_index	h-index (by SCImago JR)
Sustainability (Switzerland)	13	195	15	2015	6	85
Journal of Cleaner Production	3	46	15,33	2019	3	200
Journal of Sustainable Tourism	2	90	45	2012	2	103
Tourism Review	2	24	12	2017	2	32
Amfiteatru Economic	1	19	19	2013	1	20
Asia Pacific Journal of Tourism Research	1	12	12	2008	1	37
Current Issues In Tourism	1	21	21	2020	1	74
Environment, Development and Sustainability	1	6	6	2021	1	56
Geosciences (Switzerland)	1	8	8	2020	1	26

Journal	NP	TC	ATC	PY_start	h_index	h-index (by SCImago JR)
International Journal of Contemporary Hospitality Management	1	84	84	2015	1	86
International Journal of Culture, Tourism, and Hospitality Research	1	1	1	2016	1	31
International Journal of Hospitality Management	1	5	5	2021	1	122
International Journal of Tourism Cities	1	15	15	2017	1	12
International Journal of Tourism Research	1	14	14	2010	1	58
Journal of Small Business and Enterprise Development	1	28	28	2017	1	67
Ocean and Coastal Management	1	4	4	2020	1	84
Tourism Analysis	1	3	3	2019	1	36
Tourism Management	1	33	33	2019	1	199

Abbreviations: NP – Number of Publications; TC – Total Citations; ATC – Average Total Citations; PY_Start - Publishing Year Start; h-index – h-index. Source: Biblioshiny app based on Scopus data.

The software delivered data for only 18 out of the 24 journals, which means that some articles and journals were not considered in the analysis. This is the reason why the journal *Sustainability* delivers 13 published articles (NP) in Table 10 and 16 published articles in Table 9. The following journals did not deliver the data considered in the table above: Entrepreneurship and Sustainability Issues, International Journal of Economic Research, Journal of Family Business Management, Journal of Quality Assurance in Hospitality and Tourism, Polish Journal of Sport and Tourism, Urban Design International.

Sustainability is also the journal with the highest number of citations (195), averaging 15 citations per article published, meaning that this journal has the most impact on this research topic (Table 9).

The h-index enables to analyse the productivity of a journal based on their achieved citations and impact. With this indicator, the number of publications and their impact are combined, enabling the characterization of a journal's scientific output. The fact that *Sustainability* has an h-index of 6 means that this journal had 6 articles which were cited at least 6 times. The top-4 most productive journals, composed of *Sustainability*, *Journal of Cleaner Production*, *Journal of Sustainable Tourism* and *Tourism Review*, also lead the h-index, assigning 6, 3, 2 and 2, respectively.

5.1.1.3 Most productive authors, countries and Institutions in satisfaction on the tourism sector with an emphasis on sustainability

Despite the fact that the field of satisfaction on the tourism sector is being studied by many researchers over the last decades, the sustainability approach to this topic has not been widely studied yet, represented by the relatively reduced number of collected articles for this study.

In this 43-article sample obtained from the Scopus database, this research involved a total of 152 authors, with each article having an average of 3,5 authors. Table 11 presents the number of articles of the most productive authors in the field of satisfaction on the tourism sector with an emphasis on sustainability.

Table 11 - The top-5 most productive authors in satisfaction on the tourism sector with an emphasis on sustainability.

Author	Nº of Articles
Avci, T.	2
Sousa, B.B.	2
Zabkar, V.	1
Absah, Y.	1
Acampora, A.	1

Source: Biblioshiny app based on Scopus data.

The most productive authors on the study's subject are T. Avci and B. B. Sousa, with 2 published articles each. The relatively small dimension of this topic in literature is consistent with the fact that only 2 authors have published at least 2 articles (1,3%), with the remaining 150 authors publishing only 1 article (98,7%).

The 152 authors of these 43 collected articles were affiliated to 94 institutions. The affiliations are the institutions from where the authors developed their research and studies, and the top-10 most productive affiliations are presented in Table 12.

Table 12 – The top-10 most productive institutions in satisfaction on the tourism sector with an emphasis on sustainability.

Affiliations	Nº of Articles
Tomas Bata University in Zlin	3
Eastern Mediterranean University	2
Higher School of Hospitality and Tourism	2
Sejong University	2
South Ural State University	2
Ton Duc Thang University	2
Universitas Sumatera Utara	2
University of Economics Ho Chi Minh City	2
University of Innsbruck	2

Affiliations	Nº of Articles
University of Jeddah	2

Source: Biblioshiny app based on Scopus data.

In what concerns the most productive institutions, Table 11 shows that the Tomas Bata University in Zlín (Czech Republic) takes the first place with 3 published articles, which had at least one author affiliated to. It was followed by 11 institutions with 2 published articles each, with at least one author affiliated to (11,7% of the institutions). In addition, the remaining 87,2% of institutions had 1 article published by an affiliated author.

On Table 13, are represented the most productive countries on the subject of this study. Before analysing the data, it is important to clarify that an article is part of a country's scientific production if at least one of its authors is associated with an institution from that country. Since the majority of articles collected in this study are developed by more than one author, it is not correct to assign an article to only one author. An implication of this is that a certain article can be counted as scientific production of different countries, as many as the affiliation countries of its authors.

Table 13 - The top-10 most productive countries in satisfaction on the tourism sector with an emphasis on sustainability.

Country	Nº of Articles
China	11
Italy	9
South Korea	8
Romania	7
Serbia	7
Portugal	6
USA	5
Austria	4
Malaysia	4
Spain	4

Source: Biblioshiny app based on Scopus data.

According to Table 12, the most productive country is China, with 11 articles, each one of them with at least one author affiliated to a Chinese institution. In a similar way, Italy comes in second place regarding the most productive countries, since 9 articles had at least one author affiliated to an Italian institution. The least productive countries in the collected sample are Australia, Canada, Croatia, Germany, Greece, India, Iraq, Japan, Norway and Pakistan, with only 1 article each having at least one author affiliated to the respective country's institutions.

5.1.1.4 Citation structure and leading authors and articles in satisfaction on the tourism sector with an emphasis on sustainability

The influence, quality and popularity of a certain article within a specific research field can be shown through the analysis of the number of citations the article has. Therefore, the most influential articles in a field are the ones with the highest number of citations. The same happens with authors, in a sense that the most relevant authors usually are the most cited ones for a certain topic in literature.

Table 14 - The top-5 most Local Cited Authors in satisfaction on the tourism sector with an emphasis on sustainability.

Author	Local Citations
Zabkar, V.	1
Ahmadi, H.	1
Almukadi, W.	1
Battaglia, M.	1
Cvelbar, L.K.	1

Source: Biblioshiny app based on Scopus data.

Table 14 presents the most local cited authors in satisfaction on the tourism sector with an emphasis on sustainability. The relevance of an author in a research field is measured by the number of citations his articles have. Therefore, an author with the highest number of citations is usually considered the most influential author in the research field. Through Table 13, it can be noticed that V. Zabkar is the highest cited author in the field of satisfaction on the tourism sector with an emphasis on sustainability, but with only 1 citation. This value means that this subject is not yet widely studied by researchers, in a way that no author has actually acquired a relevant position and influence on the subject (measured for example by the number of citations).

Table 15 presents the 43 collected articles ordered by number of citations. It shows that the most cited article is the one by Martínez (2015) with a total of 84 citations, averaging 12 citations per year. The second most cited article is the one by Krizanova *et al.* (2019), with a total of 82 citations and the highest number of citations per year (27,3). Therefore, these two articles are the most influential ones on the subject of this study.

Table 15 - Number of Articles' Total Citations and Total Citations per Year in satisfaction on the tourism sector with an emphasis on sustainability.

Nº of the Article	Article	Author	Year	Journal	Total Citations	TC per Year
1	Customer Loyalty: Exploring Its Antecedents from a Green Marketing Perspective	Martínez, P.	2015	International Journal of Contemporary Hospitality Management	84	12
2	The Effectiveness of Marketing Communication and Importance of Its Evaluation in an Online Environment	Krizanova, A.; Lazaroiu, G.; Gajanova, L.; Kliestikova, J.; Nadanyiova, M.; Moravcikova, D.	2019	Sustainability	82	27,333
3	A Hotel Sustainability Business Model: Evidence from Slovenia	Mihalic, T.; Zabkar, V.; Cvelbar, L.K.	2012	Journal of Sustainable Tourism	63	6,3
4	The Relationship Between Sustainability and Customer Satisfaction in Hospitality: An Explorative Investigation Using EWOM as a Data Source	Gerdt, S.O.; Wagner, E.; Schewe, G.	2019	Tourism Management	33	11
5	Greening Competitiveness for Hotels and Restaurants	Iraldo, F.; Testa, F.; Lanzini, P.; Battaglia, M.	2017	Journal of Small Business and Enterprise Development	28	5,6
6	Drivers of Environmental Innovation in Majorcan Hotels	Razumova, M.; Ibáñez, J.L.; Palmer, J.R.M.	2015	Journal of Sustainable Tourism	27	3,857

Nº of the Article	Article	Author	Year	Journal	Total Citations	TC per Year
7	Organization Sustainability Through Human Resource Capital: The Impacts of Supervisor Incivility and Self-Efficacy	Alola, U.V.; Avci, T.; Ozturen, A.	2018	Sustainability	26	6,5
8	The Role of Environmental Practices and Communication on Guest Loyalty: Examining EU-Ecolabel in Portuguese Hotels	Preziosi, M.; Tourais, P.; Acampora, A.; Videira, N.; Merli, R.	2019	Journal of Cleaner Production	22	7,333
9	Consumer Perceptions Towards Sustainable Supply Chain Practices in the Hospitality Industry	Modica, P.D.; Altinay, L.; Farmaki, A.; Gursoy, D.; Zenga, M.	2020	Current Issues in Tourism	21	10,5
10	Tourist-Perceived Quality and Loyalty Intentions Towards Rural Tourism in China	Chi, X.; Lee, S.K.; Ahn, Y.J.; Kiatkawsin, K.	2020	Sustainability	20	10
11	A Hybrid Method with Topsis and Machine Learning Techniques for Sustainable Development of Green Hotels Considering Online Reviews	Nilashi, M.; Mardani, A.; Liao, H.; Ahmadi, H.; Manaf, A. A.; Almukadi, W.	2019	Sustainability	20	6,667

Nº of the Article	Article	Author	Year	Journal	Total Citations	TC per Year
12	Exploring the Relevance of Sustainability to Micro Tourism and Hospitality Accommodation Enterprises (mthaes): Evidence from Homestay Owners	Agyeiwaah, E.	2019	Journal of Cleaner Production	19	6,333
13	An Approach to Sustainable Development from Tourists' Perspective. Empirical Evidence in Romania	Dabija, D.C.; Babut, R.	2013	Amfiteatru Economic	19	2,111
14	Consumer Demand for Sustainability Benchmarks in Tourism and Hospitality	Tasci, A.D.A.	2017	Tourism Review	17	3,4
15	Factors Affecting European Tourists' Satisfaction in Nha Trang city: Perceptions of Destination Quality	Le, C.C.; Dong, D.X.	2017	International Journal of Tourism Cities	15	3
16	Assessing Visitors' Experiences at Hot Spring Recreation Areas in Taiwan	Lee, T.H.	2010	International Journal of Tourism Research	14	1,167
17	Sustainable Tourism Planning and Management Model for Protected Natural Areas: Xishuangbanna Biosphere Reserve, South China	Catibog-Sinha, C.; Wen, J.	2008	Asia Pacific Journal of Tourism Research	12	0,857

Nº of the Article	Article	Author	Year	Journal	Total Citations	TC per Year
18	Wellness Tourism Among Seniors in Taiwan: Previous Experience, Service Encounter Expectations, Organizational Characteristics, Employee Characteristics, and Customer Satisfaction	Chen, K.H.; Chang, F.H.; Liu, F.Y.	2015	Sustainability	10	1,429
19	Determiners in the Consumers Purchase Decision Process in Ecotourism Contexts: A Portuguese Case Study	Roseta, P.; Sousa, B.B.; Roseta, L.	2020	Geosciences	8	4
20	Tourism Research Progress: A Bibliometric Analysis of Tourism Review Publications	Leong, L.Y.; Hew, T.S.; Tan, G.W.H.; Ooi, K.B.; Lee, V.H.	2021	Tourism review	7	7
21	Does Health-oriented Tourism Contribute to Sustainable Mobility?	Schlemmer, P.; Blank, C.; Bursa, B.; Mailer, M.; Chnitzer, M.	2019	Sustainability	7	2,333
22	The Impacts of Location and Attributes of Protected Natural Areas on Hotel Prices: Implications for Sustainable Tourism Development	Mandic, A.; Petric, L.	2021	Environment, Development and Sustainability	6	6

Nº of the Article	Article	Author	Year	Journal	Total Citations	TC per Year
23	The Role of Human-machine Interactive Devices for Post-covid-19 Innovative Sustainable Tourism in Ho Chi Minh City, Vietnam	Van, N.T.T.; Vrana, V.; Duy, N.T.; Minh, D.X.H.; Dzung, P.T.; Mondal, S.R.; Das, S.	2020	Sustainability	6	3
24	A Conceptual Model for Green Human Resource Management: Indicators, Differential Pathways, and Multiple Pro-environmental Outcome	Ari, E.; Karatepe, O.M.; Rezapouraghdam, H.; Avci, T.	2020	Sustainability	6	3
25	Harmonization of Green Motives and Green Business Strategies Towards Sustainable Development of Hospitality and Tourism Industry: Green Environmental Policies	Yousaf, Z.; Radulescu, M.; Sinisi, C.I.; Serbanescu, L.; Paunescu, L.M.	2021	Sustainability	5	5
26	The Green B&B Promotion Strategies for Tourist Loyalty: Surveying the Restart of Chinese National Holiday Travel After Covid-19	Cai, G.; Xu, L.; Gao, W.	2021	International Journal of Hospitality Management	5	5
27	Exploring the Patterns of Food Waste Generation by Tourists in a Popular Destination	Wang, L.E.; Filimonau, V.; LI, Y.	2021	Journal of Cleaner Production	5	5
28	Environmental Sustainability and the Hospitality Customer Experience: A Study in Tourist Accommodation	Moliner, M.A.; Monferrer, D.; Estrada, M.; Rodríguez, R.M.	2019	Sustainability	5	1,667

Nº of the Article	Article	Author	Year	Journal	Total Citations	TC per Year
29	Analysis of the Island Tourism Environment Based on Tourists' Perception: A Case Study of Koh Lan, Thailand	Zhang, Z.; Plathong, S.; Sun, Y.; Guo, Z.; Munoy, T.; Ma, L.; Jantharakhantee, C.; Tanboot, L.	2020	Ocean and Coastal Management	4	2
30	Job Satisfaction as a Driver for Sustainable Development in the Hospitality Industry? Evidence From the Alpine Region	Heimerl, P.; Haid, M.; Perkmann, U.; Rabensteiner, M.	2020	Sustainability	4	2
31	Antecedents and Consequences of Brand Experiences in a Historical and Cultural Theme Park	Wang, J.; Kim, J.; Kang, S.	2019	Sustainability	3	1
32	Customer Perceptions of the Albergo Diffuso Concept: What Makes the Difference in Terms of Service Excellence?	Vallone, C.; Veglio, V.	2019	Tourism Analysis	3	1
33	Can the Quality of Hospitality Services Play a Role in Sustainable Equestrian Tourism in Slovenia? Mediations, Effects, and Implications	Pavic, L.; Blesic, I.; Petrovic, M.D.; Radovanovic, M.M.; Prisenk, J.	2019	Sustainability	1	0,333
34	Promoting Service Excellence for Tourist Destinations	Engeset, M.G.; Hull, J.S.; Velvin, J.	2016	International Journal of Culture, Tourism and Hospitality Research	1	0,167

Nº of the Article	Article	Author	Year	Journal	Total Citations	TC per Year
35	Corporate Security in Tourism: The example of Slovenia	Repnik, S.; Antosová, G.	2021	Polish Journal of Sport and Tourism	0	0
36	Configuration of an Integrated Quality-social Responsibility-performance Management System in the Hospitality Industry. Case Studies: Balneary Tourism Romania	Petcu, M.A.; Sobolevschl-David, M.I.; Curea, S.C.	2021	Sustainability	0	0
37	Rookie Tourism Destinations: The Effects of Attractiveness Factors on Destination Image and Revisit Intention with the Satisfaction Mediation Effect	Culic, M.; Vujcic, M.D.; Kalinic, C.; Dunjic, M.; Stankov, U.; Kovacic, S.; Vasiljevic, D.A.; Andelkovic, Z.	2021	Sustainability	0	0
38	Elements That Affect Foreign Tourists' Satisfaction: A Case Study in Seoul, Korea	Ryu, C.; Kwon, Y.	2021	Urban Destination International	0	0
39	Does Customer Orientation Matter? Direct and Indirect Effects in a Service Quality-sustainable Restaurant Satisfaction Framework in China	Xia, Y.; Ha, H.Y.	2021	Sustainability	0	0
40	Assessment of the Quality of the Service Perceived in Specific Contexts of Management of a Family Business	Igreja, C.M.; Sousa, B.B.; Silva, T.; Veloso, C.M.	2021	Journal of Family Business Management	0	0

Nº of the Article	Article	Author	Year	Journal	Total Citations	TC per Year
41	Guest Online Review: An Extraordinary Focus on Hotel Users' Satisfaction, Engagement, and Loyalty	Vo, N.T.; Hung, V.V.; Tuckova, Z.; Pham, N.T.; Nguyen, L.H.L.	2021	Journal of Quality Assurance in Hospitality and Tourism	0	0
42	Providing of Tourism Organizations Sustainability Through Triple Bottom Line Approach	Csiksova, A.; Janoskova, M.; Culkova, K.	2020	Entrepreneurship and Sustainability Issues	0	0
43	Marketing Analysis of North-Sumatera Tourism: An Empirical Study on Satisfaction and Sustainable Visit of the Asean-Region Tourists	Silaban, P.; Ginting, P.; Rini, E.S.; Absah, Y.	2017	International Journal of Economic Research	0	0

Source: Biblioshiny app based on Scopus data.

Table 16 presents the citation structure in satisfaction on the tourism sector with an emphasis on sustainability. Through this table, it is observable that, for the Scopus database, most articles have less than 10 citations (58,1%) and 9 of them have no citations at all (20,9%). In contrast, only 2 articles received at least 80 citations (4,7%) and 8 articles had received at least 20 citations (18,6%). A reason for the number of articles without citations lies on the fact that some of these articles are very recent (7 are from 2021 and 1 from 2020) in literature. Furthermore, older articles with a reduced number of citations may reveal that those articles do not present a significant academic interest to be cited in literature.

Table 16 - Citation structure in satisfaction on the tourism sector with an emphasis on sustainability.

Nº of Total Citations	Nº of Articles	Accumulated Nº of Articles	% of Articles	% of Accumulated Articles
≥ 80	2	2	4,7%	4,7%
≥ 50	1	3	2,3%	7,0%
≥ 20	8	11	18,6%	25,6%
≥ 10	7	18	16,3%	41,9%
1 to 9	16	34	37,2%	79,1%
0	9	43	20,9%	100,0%
Total	43		100,0%	

Source: Biblioshiny app based on Scopus data.

5.1.2 Keywords Analysis

The investigation of the most frequent keywords and their distribution was performed through the keywords co-occurrence technique. The keywords co-occurrence examines the keywords that appear together in the same article, and intends to highlight the most relevant research topics in a certain area. Keyword co-occurrence analysis produces a network of themes and their connections, representing the conceptual space of a research field (Mulet-Forteza *et al.*, 2018). For this study, the keywords co-occurrence focused the Keywords Plus. The Author's keywords technique enables the counting of the number of articles in which two keywords, highlighted by the authors in each article, appear simultaneously. Keywords Plus are words or phrases that frequently appear in the titles of an article's references and not necessarily in the title of the article or as Author's keywords. Keywords Plus is as effective as Author's keywords in terms of bibliometric analysis investigating the knowledge structure of scientific fields, but it is less comprehensive in representing an article's content (Zhang, et al., 2016). The Biblioshiny app identified the existence of 192 Author's keywords and 178 Keywords Plus over the 43 collected articles.

Table 17 presents the top-10 most frequent Keywords Plus, revealing that the analysed articles for satisfaction in the tourism sector in a sustainability approach are mainly focused on "sustainability" (11 occurrences), "sustainable development" (11 occurrences) and "tourism development" (10 occurrences).

Table 17 - The top-10 most frequent Keywords Plus on satisfaction on the tourism sector with an emphasis on sustainability.

Words	Occurrences
sustainability	11
sustainable development	11
tourism development	10
ecotourism	8
hospitality industry	7
tourism	7
tourist destination	7
tourist behavior	6
perception	5
tourism management	4

Source: Biblioshiny app based on Scopus data.

Figure 5 presents the co-occurrence network of Keywords Plus of satisfaction on the tourism sector with an emphasis on sustainability. In the figure, the main keywords of the study's subject and the size of the nodes are illustrated. Before analysing the figure, it is important to notice that the larger the node and the keyword, the greater the weight of the concept is for the subject (measured by the number of articles a Keyword Plus appears in). Also, the smaller the distance between the nodes, the stronger the relationship is between them (revealed by the number of articles in which two Keywords Plus appear together). Nodes and keywords with the same colour mean that they belong to the same cluster. A cluster is a group of related keywords. The Biblioshiny app created 6 clusters, indicated by the 6 different colours of the network nodes. As presented in Figure 5, the most frequent Keywords Plus for each cluster, revealed by the largest node of each colour, are: "sustainability" (in red), "sustainable development" (in blue), "ecotourism" (in green), "tourist behavior" (in purple), "psychology" and "tourist attraction" (in orange) and "tourism market" and "tourism economics" (in brown).

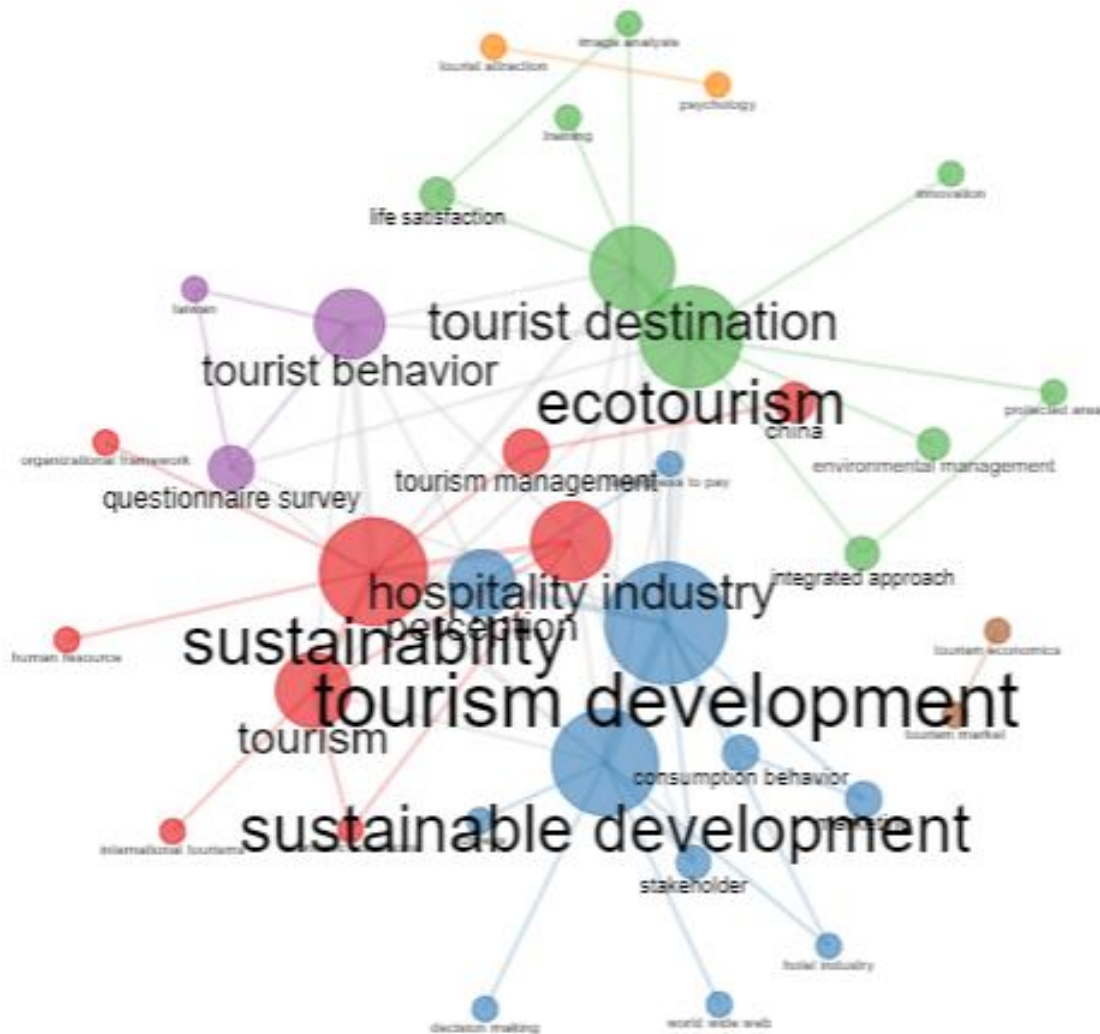


Figure 5 - Co-occurrence network of Keywords Plus of satisfaction on the tourism sector with an emphasis on sustainability. Source: Biblioshiny app based on Scopus data.

5.2 Bibliometric Analysis through the *Web of Science* Database

The search for documents in the WoS Core Collection database (accessed in December 2021) was carried out using the keywords “Satisfaction” AND “Tourism” AND (“Hospitality” OR “Hotel”) AND (“Sustainable” OR “Sustainability”) in the articles’ title, abstract and keywords, resulting in a collection of 155 records. The previously referred inclusion and exclusion criteria were added to the searching process following the steps mentioned above, achieving a sample of 101 articles screened, from which 42 of them were considered out of topic and, therefore, excluded, resulting in 59 articles included in synthesis. Figure 6 presents the different phases of the articles’ selection process through the Web of Science database, according to the PRISMA method.

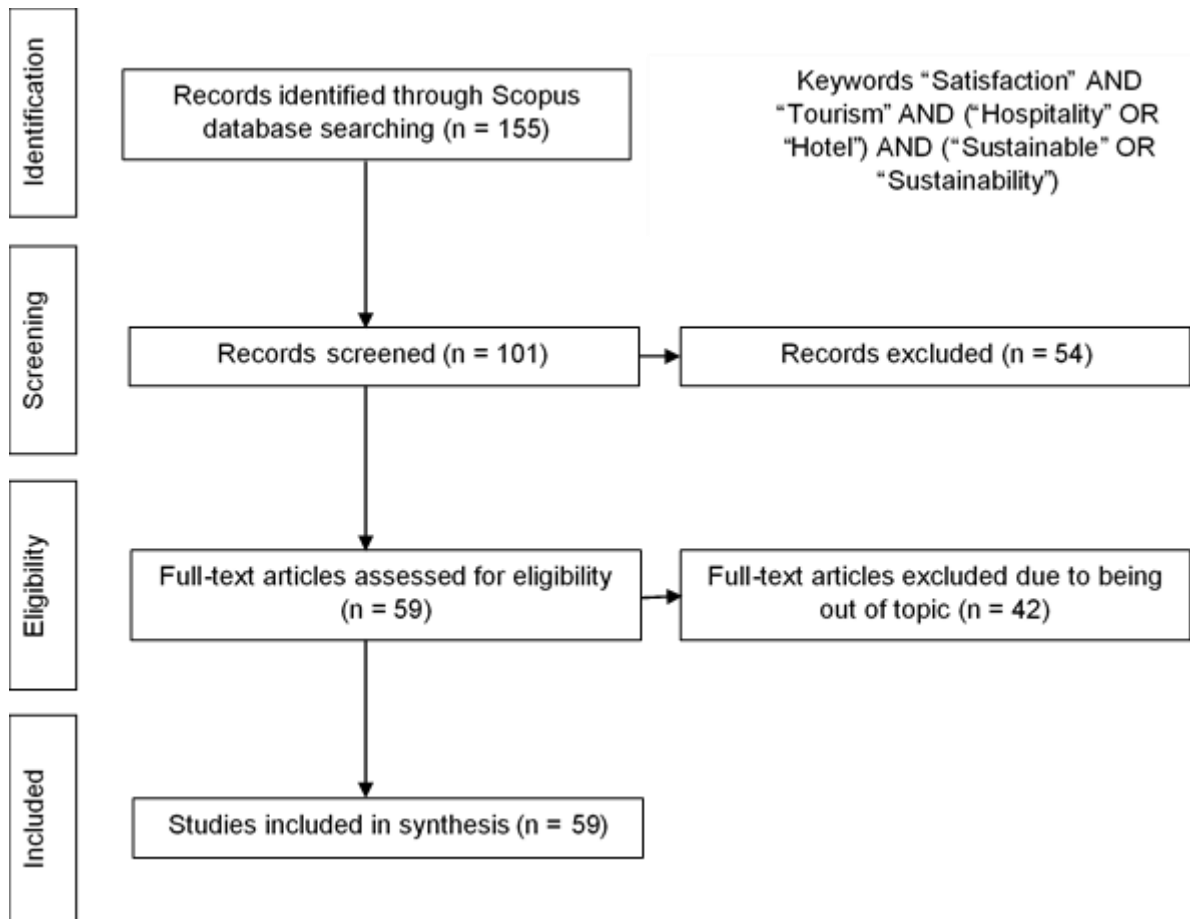


Figure 6 - Articles' selection process through the Web of Science database, according to the PRISMA method.

5.2.1 Performance Analysis and Keywords

5.2.1.1 Evolution of scientific research on satisfaction on the tourism sector with an emphasis on Sustainability

The first publication collected from the Web of Science database regarding satisfaction on the tourism sector with an emphasis on sustainability was published in 2012. From 2012 to 2018, the number of publications was relatively stable, varying between 0 and 3 articles. The highest variation in productivity was verified in the 2018-2019 period (similar to the previous presented study regarding the Scopus database), with an increase from 1 article in 2018 to 18 articles in 2019 in this topic. For the 2012-2021 period, an annual growth rate of 45,79% was verified to a total of 59 collected articles. The evolution of scientific research on satisfaction on the tourism sector with an emphasis on sustainability regarding the quantity of publications per year from 2012 to 2021 is shown in Figure 7.

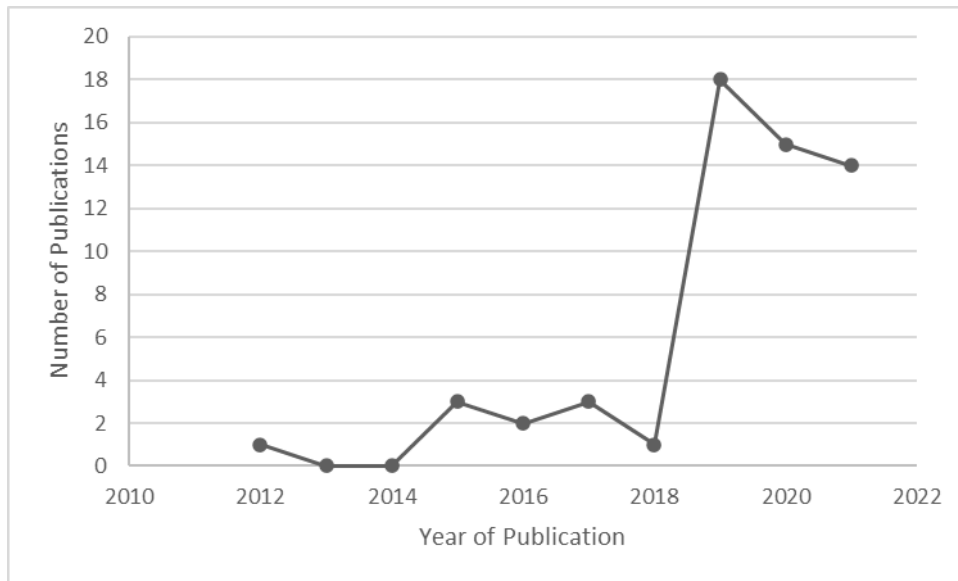


Figure 7 - Evolution of scientific research on satisfaction on the tourism sector with an emphasis on sustainability. Source: Biblioshiny app based on Web of Science data.

5.2.1.2 Leading journals on the topic of satisfaction on the tourism sector with an emphasis on sustainability

The 59 collected articles from the Web of Science database were published in 23 different journals, and Table 17 shows the productivity of some of these journals, ordered by number of articles published.

Table 18 - The top-5 most productive journals in satisfaction on the tourism sector with an emphasis on sustainability.

Journal	Nº of Articles
Sustainability	25
Journal of Sustainable Tourism	6
International Journal of Hospitality Management	5
Journal of Cleaner Production	4
Corporate Social Responsibility and Environmental Management	1

Source: Biblioshiny app based on Web of Science data.

From the available data presented by Table 18, it was concluded that the most productive journal was *Sustainability*, standing out with 25 articles published on the current topic of satisfaction on the tourism sector with an emphasis on sustainability, responsible for almost half of the total sample of collected articles (42,4%). The top-4 of the most productive journals by number of publications is completed by the *Journal of Sustainable Tourism* with 6 articles published (10,2%), the *International Journal of Hospitality Management* with 5 articles published (8,5%) and the *Journal of Cleaner Production* with 4 articles published (6,8%) on the study's subject. The majority of journals (82,6%) published only 1 article on the study's subject. Again, the significant difference between the *Sustainability* journal to the rest is justified by the large scope of this journal regarding the sustainability topic. This journal approaches the

topic of sustainability from different perspectives, namely social, environmental, cultural and economic, which justifies the large number of published articles on the current topic.

Table 19 - Journal productivity for satisfaction on the tourism sector with an emphasis on sustainability.

Journal	NP	TC	ATC	PY_start	h_index	h-index (by SCImago JR)
Sustainability	19	179	9,421	2016	6	85
International Journal of Hospitality Management	5	104	20,8	2015	3	122
Journal of Sustainable Tourism	5	140	28	2012	5	103
Journal of Cleaner Production	4	77	19,25	2019	4	200
Corporate Social Responsibility and Environmental Management	1	12	12	2019	1	73
Economic Research-Ekonomska Istrazivanja	1	2	2	2019	1	27
Environment, Development and Sustainability	1	4	4	2021	1	56
Geosciences	1	4	4	2020	1	26
International Journal of Contemporary Hospitality Management	1	73	73	2015	1	86
International Journal of Tourism Cities	1	13	13	2017	1	12
Journal of Hospitality and Tourism Management	1	27	27	2019	1	34
Journal of Small Business and Enterprise Development	1	23	23	2017	1	67
Journal of Travel and Tourism Marketing	1	21	21	2018	1	73
Management of Environmental Quality	1	5	5	2020	1	37
Ocean and Coastal Management	1	4	4	2020	1	84
Service Industries Journal	1	16	16	2019	1	66
Tourism Analysis	1	3	3	2019	1	36
Tourism Review	1	12	12	2017	1	

Abbreviations: NP – Number of Publications; TC – Total Citations; ATC – Average Total Citations; PY_Start - Publishing Year Start; h-index – h-index. Source: Biblioshiny app based on Web of Science data.

The software only delivered data for 18 from the 23 journals, which means that some articles and journals were not considered in this analysis. The following journals did not deliver the data considered in the table above: *Entrepreneurship and Sustainability Issues*, *Expert Systems with Applications*, *International Journal of Environmental Research and Public Health*, *Journal of Business Research*, *Journal of Family Business Management*.

Sustainability is also the journal with the highest number of citations (179), averaging 9,4 citations per article published, meaning that this journal has the most impact on this research topic (Table 19).

The h-index enables to analyse the productivity of a journal based on their achieved citations and impact. With this indicator, the number of publications and their impact are combined, enabling the characterization of a journal's scientific output. The fact that *Sustainability* has an h-index of 6 means that this journal had 6 articles which were cited at least 6 times. The top-4 most productive journals, composed of *Sustainability*, *International Journal of Hospitality Management*, *Journal of Sustainable Tourism* and *Journal of Cleaner Production*, also lead the h-index, assigning 6, 3, 5 and 4, respectively.

5.2.1.3 Most productive authors, countries and Institutions in satisfaction on the tourism sector with an emphasis on sustainability

As said before regarding the analysis for the Scopus database, despite the fact that the field of satisfaction on the tourism sector is being studied by many researchers over the last decades, the sustainability approach to this topic has not been widely studied yet, represented by the relatively reduced number of collected articles for this study.

In this 59-article sample obtained from the Web of Science database, this research involved a total of 214 authors, with each article having an average of 3,6 authors. Table 20 presents the number of articles of the most productive authors in the field of satisfaction on the tourism sector with an emphasis on sustainability.

Table 20 - The top-5 most productive authors in satisfaction on the tourism sector with an emphasis on sustainability.

Authors	Articles
Acampora, A.	2
Gomez-Lopez, R.	2
Gursoy, D.	2
Kong, H.Y.	2
Martinez, P.	2

Source: Biblioshiny app based on Web of Science data.

Regarding the most productive authors on the study's subject, it is interesting to see that 16 authors share the first place (7,5%), with 2 published articles each. The relatively small dimension of this topic in literature is consistent with the fact that the highest number of publications for an author is 2. The remaining 198 authors are responsible for the publication of 1 article each (92,5%).

The 214 authors of these 59 collected articles were affiliated to 138 institutions. The affiliations are the institutions from where the authors developed their researches and studies, and the top-10 most productive affiliations are presented in Table 21.

Table 21 - The top-10 most productive institutions in satisfaction on the tourism sector with an emphasis on sustainability.

Affiliations	Articles
Sejong University	3

Affiliations	Articles
University of Cantabria	3
University of Johannesburg	3
Griffith University	2
Heriot Watt University	2
Higher School of Hospitality and Tourism	2
Hong Kong Polytechnic University	2
Princess Nourah Bint Abdulrahman University	2
Shandong University	2
South Ural State University	2

Source: Biblioshiny app based on Web of Science data.

In what concerns the most productive institutions, Table 21 shows that the Sejong University (South Korea), the University of Cantabria (Spain) and the University of Johannesburg (South Africa) take the first place with 3 published articles each (2,2% of the institutions), which had at least one author affiliated to. They were followed by 19 institutions with 2 published articles each, with at least one author affiliated to (13,8% of the institutions). In addition, the remaining 84,1% of institutions had only 1 article published by an affiliated author.

On Table 22, are represented the most productive countries on the subject of this study. Before analysing the data, it is important to clarify that an article is part of a country's scientific production if at least one of its authors is associated with an institution from that country. Since the majority of articles collected in this study are developed by more than one author, it is not correct to assign an article to only one author. An implication of this is that a certain article can be counted as scientific production of different countries, as many as the affiliation countries of its authors.

Table 22 - The top-10 most productive countries in satisfaction on the tourism sector with an emphasis on sustainability.

Country	Nº of Articles
Spain	16
China	15
USA	10
Malaysia	9
Romania	9
Vietnam	9
Italy	8
South Korea	8
Serbia	7
UK	7

Source: Biblioshiny app based on Web of Science data.

According to Table 21, the most productive country is Spain, with 16 articles, each one of them with at least one author affiliated to a Spanish institution. In a similar way, China comes in second place regarding the most productive countries, since 15 articles had at least one author affiliated to a Chinese institution. The least productive countries in the collected sample are Austria, Belgium, Finland, India, Indonesia, Iraq, Japan, New Zealand, Poland and Sweden, with only 1 article each having at least one author affiliated to the respective country's institutions.

5.2.1.4 Citation structure and leading authors and articles in satisfaction on the tourism sector with an emphasis on sustainability

The influence, quality and popularity of a certain article within a specific research field can be shown through the analysis of the number of citations the article has. Therefore, the most influential articles in a field are the ones with the highest number of citations. The same happens with authors, in a sense that the most relevant authors usually are the most cited ones for a certain topic in literature.

Table 23 - The top-5 most Local Cited Authors in satisfaction on the tourism sector with an emphasis on sustainability.

Author	Local Citations
Martínez, P.	4
Acampora, A.	2
Merli, R.	2
Preziosi, M.	2
Abdou, A.H.	1

Source: Biblioshiny app based on Web of Science data.

Table 23 presents the most local cited authors in satisfaction on the tourism sector with an emphasis on sustainability. The relevance of an author in a research field is measured by the number of citations his articles have. Therefore, an author with the highest number of citations is usually considered the most influential author in the research field. Through Table 23, it can be noticed that P. Martínez is the highest cited author in the field of satisfaction on the tourism sector with an emphasis on sustainability, with 4 local citations.

Table 24 presents the 59 collected articles ordered by number of citations. The relevance of an article in a research field is measured by the number of citations it has. Therefore, an article with the highest number of citations is usually considered the most influential article in the research field. It shows that the most cited article is the one by Martínez (2015) with a total of 73 citations, averaging 10,429 citations per year. The second most cited article is the one by Baum *et al.* (2016), with a total of 72 citations and 12 citations per year. Therefore, these two articles are the most influential ones on the subject of this study.

Table 24 - Number of Articles' Total Citations and Total Citations per Year in satisfaction on the tourism sector with an emphasis on sustainability.

Nº of the Article	Article	Author	Year	Journal	Total Citations	TC per Year
1	Customer Loyalty: Exploring its Antecedents from a Green Marketing Perspective	Martínez, P.	2015	International Journal of Contemporary Hospitality Management	73	10,429
2	Sustainability and the Tourism and Hospitality Workforce: A Thematic Analysis	Baum, T.; Cheung, C.; Kong, H.Y.; Kralj, A.; Mooney, S.; Thanh, H.N.T.; Ramachandran, S.; Ruzic, M.D.; Siow, M.L.	2016	Sustainability	72	12
3	Influence of Sustainable Hospitality Supply Chain Management on Customers' Attitudes and Behaviors	Xu, X.; Gursoy, D.	2015	International Journal of Hospitality Management	62	8,857
4	A Hotel Sustainability Business Model: Evidence from Slovenia	Mihalic, T.; Zabkar, V.; Cvelbar, L.K.	2012	Journal of Sustainable Tourism	57	5,7
5	Hotels' Corporate Social Responsibility Practices, Organizational Culture, Firm Reputation, And Performance	Gonzalez-Rodriguez, M.R.; Martin-Samper, R.C.; Koseoglu, M.A.; Okumus, F.	2019	Journal of Sustainable Tourism	38	12,667
6	Preference Learning for Eco-Friendly Hotels Recommendation: A Multi-Criteria Collaborative Filtering Approach	Nilashi, M.; Ahani, A.; Esfahani, M.D.; Yadegaridehkordi, E.; Samad, S.; Ibrahim, O.; Sharef, N.M.; Akbari, E.	2019	Journal of Cleaner Production	37	12,333

Nº of the Article	Article	Author	Year	Journal	Total Citations	TC per Year
7	The Impact of Green Practices in Coastal Tourism: An Empirical Investigation on an Eco-Labelled Beach Club	Merli, R.; Preziosi, M.; Acampora, A.; Lucchetti, M.C.; Ali, F.	2019	International Journal of Hospitality Management	29	9,667
8	Residents' Perceptions of Hotels' Corporate Social Responsibility Initiatives and its Impact on Residents' Sentiments to Community and Support for Additional Tourism Development	Gursoy, D.; Bogan, E.; Dedeoglu, B.B.; Caliskan, C.	2019	Journal of Hospitality and Tourism Management	27	9
9	Drivers of Environmental Innovation in Majorcan Hotels	Razumova, M.; Ibañez, J.L.; Palmer, J.R.M.	2015	Journal of Sustainable Tourism	26	3,714
10	The Role of Environmental Practices and Communication on Guest Loyalty: Examining EU-Ecolabel in Portuguese Hotels	Preziosi, M.; Tourais, P.; Acampora, A.; Videira, N.; Merli, R.	2019	Journal of Cleaner Production	23	7,667
11	Greening Competitiveness for Hotels and Restaurants	Iraldo, F.; Testa, F.; Lanzini, P.; Battaglia, M.	2017	Journal of Small Business and Enterprise Development	23	4,6
12	Tourist-perceived Quality and Loyalty Intentions Towards Rural Tourism in China	Chi, X.; Lee, S.K.; Ahn, Y.J.; Kiatkawsin, K.	2020	Sustainability	21	10,5
13	Environmental Knowledge and Consumers' Intentions to Visit Green Hotels: The Mediating Role of Consumption Values	Wang, S.Y.; Wang, J.; Wang, Y.; Yan, J.; Li, J.	2018	Journal of Travel and Tourism Marketing	21	5,25
14	Visitors' Loyalty and Price Perceptions: The Role of Customer Engagement	Bergel, M.; Brock, C.	2019	Service Industries Journal	16	5,333

Nº of the Article	Article	Author	Year	Journal	Total Citations	TC per Year
15	Sustainability Commitment, New Competitors' Presence, and Hotel Performance: The Hotel Industry in Barcelona	Aznar, J.P.; Sayeras, J.M.; Galiana, J.; Rocafort, A.	2016	Sustainability	14	2,333
16	Marketing Sustainable Tourism: The Role of Value Orientation, Well-being and Credibility	Vinzenz, F.; Priskin, J.; Wirth, W.; Ponnappureddy, S.; Ohnmacht, T.	2019	Journal of Sustainable Tourism	13	4,333
17	Exploring the Relevance of Sustainability to Micro Tourism and Hospitality Accommodation Enterprises (mthaes): Evidence from Home-stay Owners	Agyeiwaah, E.	2019	Journal of Cleaner Production	13	4,333
18	Factors Affecting European Tourists' Satisfaction in Nha Trang city: Perceptions of Destination Quality	Le, C.C.; Dong, D.X.	2017	International Journal of Tourism Cities	13	2,6
19	Corporate Images and Customer Behavioral Intentions in an Environmentally Certified Context: Promoting Environmental Sustainability in the Hospitality Industry	Martínez, P.; Herrero, A.; Gomez-Lopez, R.	2019	Corporate Social Responsibility and Environmental Management	12	4
20	To Green or Not to Green: The Influence of Green Marketing on Consumer Behaviour in the Hotel Industry	Mele, P.M.; Gomez, J.M.; Garay, L.	2019	Sustainability	12	4
21	Consumer Demand for Sustainability Benchmarks in Tourism and Hospitality	Tasci, A.D.A.	2017	Tourism Review	12	2,4
22	Corporate Social Responsibility at Lux* Resorts and Hotels: Satisfaction and Loyalty Implications for Employee and Customer Social Responsibility	Ramkissoon, H.; Mavondo, F.; Sowamber, V.	2020	Sustainability	9	4,5

Nº of the Article	Article	Author	Year	Journal	Total Citations	TC per Year
23	Determinants of Sustainable Behavior of Firms and the Consequences for Customer Satisfaction in Hospitality	Koch, J.; Gerdt, S.O.; Schewe, G.	2020	International Journal of Hospitality Management	9	4,5
24	A Description of Green Hotel Practices and Their Role in Achieving Sustainable Development	Abdou, A.H.; Hassan, T.H.; El Dief, M.M.	2020	Sustainability	7	3,5
25	Exploring the Environmental Practices in Hospitality Through Booking Websites and Online Tourist Reviews	Foris, D.; Crihalmean, N.; Foris, T.	2020	Sustainability	6	3
26	The Mediating Role of Perceived Benefits on Intentions to Book a Sustainable Hotel: A Multi-group Comparison of the Swiss, German and USA Travel Markets	Ponnappureddy, S.; Priskin, J.; Vinzenz, F.; Wirth, W.; Ohnmacht, T.	2020	Journal of Sustainable Tourism	6	3
27	Harmonization of Green Motives and Green Business Strategies Towards Sustainable Development of Hospitality and Tourism Industry: Green Environmental Policies	Yousaf, Z.; Radulescu, M.; Sinisi, C.I.; Serbanescu, L.; Paunescu, L.M.	2021	Sustainability	5	5
28	Effects of Sustainability on WOM Intention and Revisit Intention, with Environmental Awareness as a Moderator	Kusumawati, A.; Utomo, H.S.; Suharyono; Sunarti	2020	Management of Environmental Quality	5	2,5
29	Environmental Sustainability and the Hospitality Customer Experience: A Study in Tourist Accommodation	Moliner, M.A.; Monferrer, D.; Estrada, M.; Rodriguez, R.M.	2019	Sustainability	5	1,667
30	Residents' Perception of Destination Quality: Key Factors for Sustainable Rural Development	Muresan, I.C.; Harun, R.; Arion, F.H.; Oroian, C.E.; Dumitras, D.E.; Mihai, V.C.;	2019	Sustainability	5	1,667

Nº of the Article	Article	Author	Year	Journal	Total Citations	TC per Year
		Ilea, M.; Chiciudean, D.I.; Gliga, I.D.; Chiciudean, G.O.				
31	Exploring the Patterns of Food Waste Generation by Tourists in a Popular Destination	Wang, L.E.; Filimonau, V.; Li, Y.Y.	2021	Journal of Cleaner Production	4	4
32	The Impacts of Location and Attributes of Protected Natural Areas on Hotel Prices: Implications for Sustainable Tourism Development	Mandic, A.; Petric, L.	2021	Environment, Development and Sustainability	4	4
33	Analysis of the Island Tourism Environment Based on Tourists' Perception: A Case Study of Koh Lan, Thailand	Zhang, Z.W.; Plathong, S.; Sun, Y.G.; Guo, Z.; Munnoy, T.; Ma, L.N.; Jantharakhantee, C.; Tanboot, L.	2020	Ocean and Coastal Management	4	2
34	A Conceptual Model for Green Human Resource Management: Indicators, Differential Pathways, and Multiple Pro-environmental Outcomes	Ari, E.; Karatepe, O.M.; Rezapouraghdam, H.; Avci, T.	2020	Sustainability	4	2
35	Job Satisfaction as a Driver for Sustainable Development in the Hospitality Industry? Evidence From the Alpine Region	Heimerl, P.; Haid, M.; Perkmann, U.; Rabensteiner, M.	2020	Sustainability	4	2
36	Determiners in the Consumer's Purchase Decision Process in Ecotourism Contexts: A Portuguese Case Study	Roseta, P.; Sousa, B.B.; Roseta, L.	2020	Geosciences	4	2
37	Age and Educational Diversification of Hotel Employees and its Impact on Turnover	Vetrakova, M.; Simockova, I.; Pompurova, K.	2019	Sustainability	4	1,333
38	The Green B&B Promotion Strategies for Tourist Loyalty: Surveying the Restart of Chinese National Holiday Travel After Covid-19	Cai, G.W.; Xu, L.; Gao, W.J.	2021	International Journal of Hospitality Management	3	3

Nº of the Article	Article	Author	Year	Journal	Total Citations	TC per Year
39	The Role of Human-Machine Interactive Devices for Post-Covid-19 Innovative Sustainable Tourism in Ho Chi Minh City, Vietnam	Van, N.T.T.; Vrana, V.; Duy, N.T.; Minh, D.X.H.; Dzung, P.T.; Mondal, S.R.; Das, S.	2020	Sustainability	3	1,5
40	Customer Perceptions of the Albergo Diffuso Concept: What Makes the Difference in Terms of Service Excellence?	Vallone, C.; Veglio, V.	2019	Tourism Analysis	3	1
41	The Role of Sustainable Restaurant Practices in City Branding: The Case of Athens	Karagiannis, D.; Andrinou, M.	2021	Sustainability	2	2
42	Direct and Indirect Tourism Online Channels. Do They Have a Different Potential for Customer Loyalty?	Mugica, J.; Berne, C.	2020	Sustainability	2	1
43	Sustainability of Hotel: How Does Perceived Corporate Social Responsibility Influence Employees' Behaviors?	Kong, H.Y.; Bu, N.P.; Yuan, Y.; Wang, K.P.; Ro, Y.H.	2019	Sustainability	2	0,667
44	Before a Hotel Room Booking, Do Perceptions Vary by Gender? The Case of Spain	Sevilla-Sevilla, C.; Mondejar-Jimenez, J.; Reina-Paz, M.D.	2019	Economic Research-Ekonomska Istrazivanja	2	0,667
45	Generating Socially Responsible Events at Ski Resorts	Taheri, B.; Thompson, J.	2020	International Journal of Hospitality Management	1	0,5
46	Can the Quality of Hospitality Services Play a Role in Sustainable Equestrian Tourism in Slovenia? Mediations, Effects, and Implications	Pavic, L.; Blesic, I.; Petrovic, M.D.; Radovanovic, M.M.; Prisenk, J.	2019	Sustainability	1	0,333
47	Antecedents and Consequences of Brand Experiences in a Historical and Cultural Theme Park	Wang, J.; Kim, J.; Kang, S.	2019	Sustainability	1	0,333

Nº of the Article	Article	Author	Year	Journal	Total Citations	TC per Year
48	An Analytical Approach for Big Social Data Analysis for Customer Decision-making in Eco-friendly Hotels	Nilashi, M.; Minaei-Bidgoli, B.; Alrizq, M.; Alghamdi, A.; Alsulami, A.A.; Samad, S.; Mohd, S.	2021	Expert Systems With Applications	0	0
49	Assessment of the Quality of the Service Perceived in Specific Contexts of Management of a Family Business	Igreja, C.M.; Sousa, B.B.; Silva, T.; Veloso, C.M.	2021	Journal of Family Business Management	0	NA
50	Quality-certified Hotels: The Role of Certification Bodies on the Formation of Customer Behavioral Intentions	Agudo, J.C.; De Leaniz, P.M.G.; Crespo, A.H.; Gomez-Lopez, R.	2021	Sustainability	0	0
51	A Customer-centric Five Actor Model for Sustainability and Service Innovation	Van Riel, A.C.R.; Andreassen, T.W.; Lervik-Olsen, L.; Zhang, L.; Mithas, S.; Heinonen, K.	2021	Journal of Business Research	0	0
52	Customer Experience and Satisfaction of Disneyland Hotel Through Big Data Analysis of Online Customer Reviews	Zhang, X.B.; Kim, H.S.	2021	Sustainability	0	0
53	Do IMC and Ecological Knowledge Drive Value Co-creation? The New Way to Loyalty in Hospitality	Bordian, M.; Gil-Saura, I.	2021	Sustainability	0	0
54	Impact of Substantive Staging and Communicative Staging of Sustainable Servicescape on Behavioral Intentions of Hotel Customers through Overall Perceived Image: A Case of Boutique Hotels	Khalil-Ur-Rehman; Adnan, M.; Ahmad, N.; Scholz, M.; Khaliq, M.; Naveed, R.T.; Han, H.	2021	International Journal of Environmental Research and Public Health	0	0
55	Configuration of an Integrated Quality-social Responsibility-performance Management System in	Petcu, M.A.; Sobolevschi-David, M.I.; Curea, S.C.	2021	Sustainability	0	0

Nº of the Article	Article	Author	Year	Journal	Total Citations	TC per Year
	the Hospitality Industry. Case Studies: Balneary tourism Romania					
56	Rookie Tourism Destinations: The Effects of Attractiveness Factors on Destination Image and Revisit Intention with the Satisfaction Mediation Effect	Culic, M.; Vujicic, M.D.; Kalinic, C.; Dunjic, M.; Stankov, U.; Kovacic, S.; Vasiljevic, D.A.; Andelkovic, Z.	2021	Sustainability	0	0
57	The Effect of Food Sustainability and the Food Safety Climate on the Job Stress, Job Satisfaction and Job Commitment of Kitchen Staff	Min, K.; Hong, W.	2021	Sustainability	0	0
58	Proactive Environmental Strategies in the Hotel Industry: Eco-innovation, Green Competitive Advantage, and Green Core Competence	Kuo, F.I.; Fang, W.T.; Lepage, B.	2021	Journal of Sustainable Tourism	0	NA
59	Providing of Tourism Organizations Sustainability through Triple Bottom Line Approach	Csikosova, A.; Janoskova, M.; Culkova, K.	2020	Entrepreneurship and Sustainability Issues	0	0

Source: Biblioshiny app based on Web of Science data.

Table 25 presents the citation structure in satisfaction on the tourism sector with an emphasis on sustainability. Through this table, it is observable that, for the Web of Science database, most articles have less than 10 citations (64,4%) and 12 of them have no citations at all (20,3%). In contrast, only 2 articles received at least 70 citations (3,4%) and 9 articles had received at least 20 citations (15,3%). A reason for the number of articles without citations lies on the fact that some of these articles are very recent (11 are from 2021 and 1 from 2020) in literature. Furthermore, older articles with a reduced number of citations may reveal that those articles do not present a significant academic interest to be cited in literature.

Table 25 - Citation structure in satisfaction on the tourism sector with an emphasis on sustainability.

Nº of Total Citations	Nº of Articles	Accumulated Nº of Articles	% of Articles	% of Accumulated Articles
≥ 70	2	2	3,4%	3,4%
≥ 50	2	4	3,4%	6,8%
≥ 20	9	13	15,3%	22,0%
≥ 10	8	21	13,6%	35,6%
1 to 9	26	47	44,1%	79,7%
0	12	59	20,3%	100,0%
Total	59		100,0%	

Source: Biblioshiny app based on Web of Science data.

5.2.2 Keywords Analysis

The investigation of the most frequent keywords and their distribution was performed through the keywords co-occurrence technique. The keywords co-occurrence examines the keywords that appear together in the same article, and intends to highlight the most relevant research topics in a certain area. Keyword co-occurrence analysis produces a network of themes and their connections, representing the conceptual space of a research field (Mulet-Forteza *et al.*, 2018). For this study, the keywords co-occurrence focused the Keywords Plus. The Author's keywords technique enables the counting of the number of articles in which two keywords, highlighted by the authors in each article, appear simultaneously. Keywords Plus are words or phrases that frequently appear in the titles of an article's references and not necessarily in the title of the article or as Author's keywords. Keywords Plus is as effective as Author's keywords in terms of bibliometric analysis investigating the knowledge structure of scientific fields, but it is less comprehensive in representing an article's content (Zhang *et al.*, 2016). The Biblioshiny app identified the existence of 252 Author's keywords and 248 Keywords Plus over the 59 collected articles.

Table 26 presents the top-10 most frequent Keywords Plus, revealing that the analysed articles for satisfaction in the tourism sector in a sustainability approach are mainly focused on "Satisfaction" (26 occurrences), "Tourism" (22 occurrences) and "Hospitality" (13 occurrences).

Table 26 - The top-10 most frequent Keywords Plus on satisfaction on the tourism sector with an emphasis on sustainability.

Words	Occurrences
satisfaction	26
tourism	22
hospitality	13
impact	9
management	9
model	9
corporate social-responsibility	8
loyalty	8
quality	8
attitudes	7

Source: Biblioshiny app based on Web of Science data.

Figure 8 presents the co-occurrence network of Keywords Plus of satisfaction on the tourism sector with an emphasis on sustainability. In the figure, the main keywords of the study's subject and the size of the nodes are illustrated. Before analysing the figure, it is important to notice that the larger the node and the keyword, the greater the weight of the concept is for the subject (measured by the number of articles a Keyword Plus appears in). Also, the smaller the distance between the nodes, the stronger the relationship is between them (revealed by the number of articles in which two Keywords Plus appear together). Nodes and keywords with the same colour mean that they belong to the same cluster. A cluster is a group of related keywords. The Biblioshiny app created 5 clusters, indicated by the 5 different colours of the network nodes. As presented in Figure 8, the most frequent Keywords Plus for each cluster, revealed by the largest node of each colour are: "satisfaction" (in red), "tourism" (in blue), "hospitality" (in green), "sustainability" (in purple) and "perceptions" (in orange).

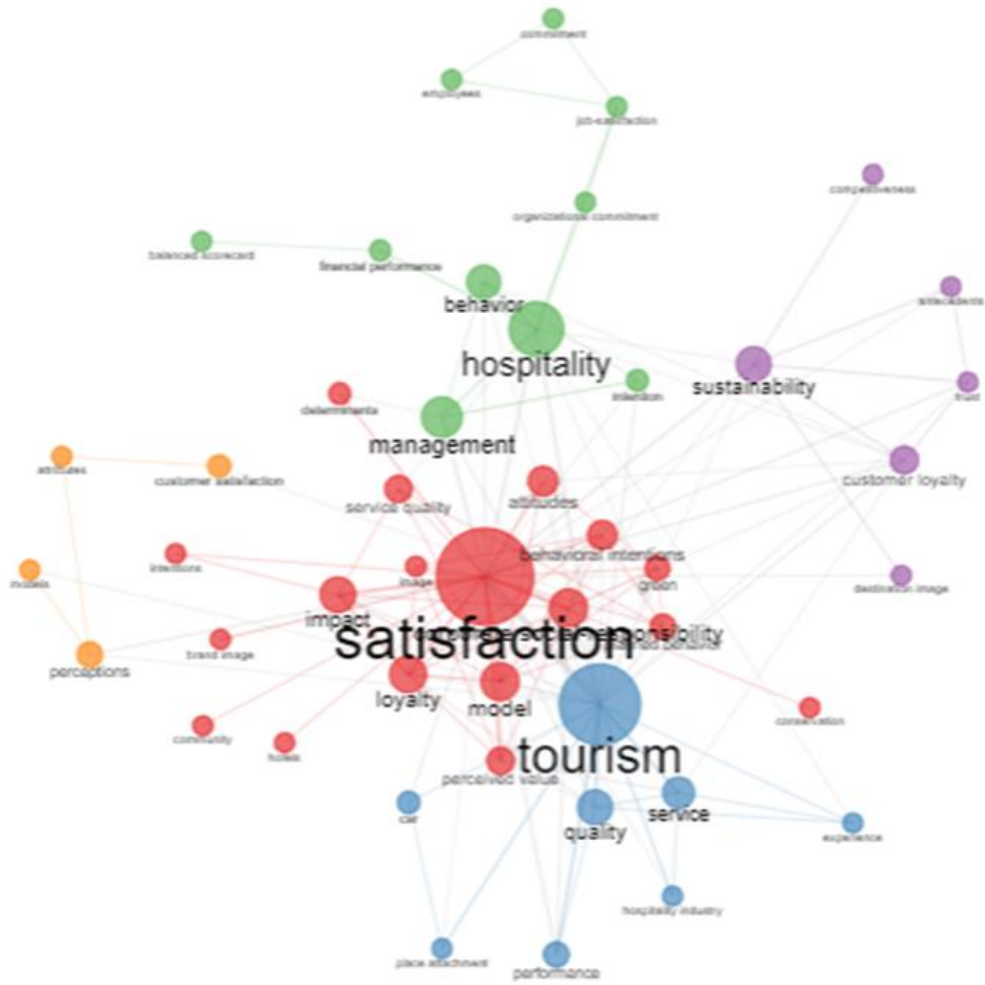


Figure 8 - Co-occurrence network of Keywords Plus of satisfaction on the tourism sector with an emphasis on sustainability. Source: Biblioshiny app based on Web of Science data.

6 Conclusions and Future Work

The present chapter highlights the main conclusions of the dissertation work and outlines the limitations of this study, as well as future work to be developed.

The tourism sector has been increasing in a large scale over the last decades (specifically before the Covid-19 pandemics), with increasing and significant numbers regarding the number of tourists and revenues for the related sectors of society involved. Due to the specificness of this sector, its features, numbers and impacts for the different sectors of society (economic, social, environmental) are becoming increasingly relevant for the development of countries. Numerous governments have been trying to explore this valuable source of interest, income and recognition, sometimes not in the rightest and more balanced way possible, with negative impacts on touristic destinations. Issues related to overpopulation during the vacations period, the degradation of the environment and the increase in the consumption of natural resources are rising increasingly, due to the quest to potentialize the tourism industry, and representing a threat to the way of life we know to date. A sustainability-oriented perspective was added to the study, addressing the increasing awareness for green practices.

The hospitality sector represents a significant share of the tourism industry. Its main objective is to achieve customer satisfaction by the development of constant efforts regarding customers' preferences and demands. Customer satisfaction is another topic that has been targeted with extensive recent research, since companies try their best to achieve and even exceed customers' expectations. The surpassing of customers' expectations can lead to important consequences regarding the relationship between customers and companies, namely the reaching of a loyalty feeling by the customer, evidenced by repeated purchases.

In order to state the context of the study carried out, a literature review was performed with respect to relevant definitions, tools and drivers it addresses: the definition of the satisfaction concept and its ways of measurement, the sustainability sector and its relationship with both Hospitality and Restaurant sectors. Considering that the main purpose of the dissertation was to perform a bibliometric analysis to the topic of satisfaction on the tourism sector, applied to the hospitality sector with an emphasis on sustainability, the adequacy and existence of bibliometric studies in tourism were also highlighted.

In the scope of this study, a bibliometric analysis on satisfaction on the tourism sector, applied to the hospitality sector with an emphasis on sustainability, was carried out. Considering that the collection of articles for the study was developed by the Scopus and Web of Science databases, the analysis was performed in two parts: first, the bibliometric analysis was performed for the 43 collected articles in the Scopus database; then, the bibliometric analysis was performed for the 59 collected articles in the Web of Science database (the Web of Science Core Collection).

Regarding the performed bibliometric analyses for both databases, different conclusions were reached. The bibliometric analysis of the 102 collected articles through both Scopus (43 articles) and Web of Science (59 articles) databases concluded that the increasing relevance verified for the topic of this study is shown by the increasing number of articles published in literature related to the study's topic

(the most prolific period was 2018-2019). The most productive journal in the topic of the study was Sustainability. In what concerns the most productive authors, institutions and countries, different results were revealed. For the bibliometric analysis through the Scopus database, the most productive institution and country were the Tomas Bata University in Zlín and China, respectively. The most productive authors were T. Avci and B. B. Sousa, but the most cited article was from Martínez (2015). For the bibliometric analysis through the Web of Science database, the most productive institutions were the Sejong University, the University of Cantabria and the University of Johannesburg, and the most productive country was Spain, with China right behind. B. B. Sousa was also one of the most productive authors alongside other authors, and the most cited article was again the one by Martínez (2015). The relatively recent awareness towards sustainable practices on the tourism and hospitality sectors is highlighted by the collected results of this study. The most productive authors for the bibliometric analyses performed through both databases have only published 2 articles each, and the most productive institutions were linked to a maximum of 3 articles each. This fact clearly portrays that the inclusion of the sustainability topic into satisfaction on the tourism and hospitality sectors is recent, with a high potential growth.

Limitations of the present study were identified, namely regarding the selection of articles and journals to be collected for the research. The sample of selected articles only considered articles published during the 2000-2021 period and in the English language, as well as with the keywords “Satisfaction” AND “Tourism” AND (“Hospitality” OR “Hotel”) AND (“Sustainable” OR “Sustainability”). Also, only certain journals were considered for the articles’ search, namely those with a SCImago Journal Rank Indicator associated with a Q1 or Q2 evaluation category for the 2000-2021 period considered. Given this, a large number of studies that did not accomplish the previously enunciated criteria were excluded and therefore not considered for the bibliometric analysis. Another limitation lies on a software or data failure that did not consider some articles or journals in the tables related to journal productivity, as mentioned before.

For future research, it is expected that this study represents a valuable tool guiding scholars and researchers in their studies. Responding to the increasing awareness regarding sustainability, future similar analysis will include a higher number of collected articles for analysis, and researchers will deepen out the relationship between sustainability and satisfaction on the tourism and hospitality sectors, finding effective ways to include sustainability into satisfaction measurement. The satisfaction measuring process in a sustainability context presents itself as a future direction of research, focusing on the different available practices and their impacts on the satisfaction level and on the decision-making process of the stakeholders involved.

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