Perceived Sustainability of European Green Capital: a Tourist Perspective

Stefania Conti

Erasmus Mundus Master in Tourism Development & Culture

Supervisor
Prof. Álvaro Dias,
Auxiliary invited professor
Department of Marketing, Operations and General Management,
ISCTE Business School

Co-supervisor
Prof. Andrew Jones,
Associate Professor
Institute of Tourism, Travel & Culture,
University of Malta

June, 2022

Perceived Sustainability of European Green Capital: a Tourist Perspective

Stefania Conti

Erasmus Mundus Master in Tourism Development & Culture

Supervisor
Prof. Álvaro Dias,
Auxiliary invited professor
Department of Marketing, Operations and General Management,
ISCTE Business School

Co-supervisor
Prof. Andrew Jones,
Associate Professor
Institute of Tourism, Travel & Culture,
University of Malta

June, 2022

Acknowledgements

As I come to the end of this thesis and my masters' degree, I would like to thank all the people who have helped me reach this goal. First and foremost, I would like to thank my supervisor Álvaro Dias for his help in the realization of my project and his ability to make complex concepts easy to understand. In addition, the research could not have taken place without the help of all the people who completed the survey and gave their time and effort to fill it in and share it in their networks: thank you for your kindness.

As always, my parents deserve the biggest acknowledgement. Even though this master's degree would have taken me far away from them, they never stopped supporting me in my willingness to face this new adventure. Their strength over the last two years has motivated me to be a better person and to give more and more in my university career as in my future professional career, and I cannot wait to be able to repay them back for all the sacrifices they have made to get me here.

My lifelong friends deserve thanks for continuing to be there even when distance did not allow it. Leading different kinds of lives can sometimes be an obstacle, but it has never been like that for us. Francesca, Greta, Gaia, Anita: thank you for meeting me halfway, for visiting and discovering my new reality and my new friends. Thanks to Roberto, for being my home, in Italy and abroad. In these two years you have been a necessary support in my lowest moments, but also in the happiest ones for your constant presence and commitment to making things work, despite the distance and the different schedules.

My experience would not have been the same without the people I met along the way. Danish, Wienda, Alice, Emil, Catherine, Rex, Daniela, Marina, Aimée, you have been the best friends and classmates I could wish for. The trips, the dinners, the films, the parties, the moments of intensive study spent together and those when distraction prevailed, were the ones I will always carry with me. Being with you, people of such different and distant backgrounds, has taught me more than anything else. When people saw us around, they were always amazed at the diversity of the countries we come from, and we have always laughed at that. I hope that life will lead us to laugh about this again, on another journey together, in other destinations, in other countries.

Finally, an endless thank you goes to this Master, to the Erasmus Mundus Program for making me understand the meaning of tolerance and respect for diversity. When I left, I thought I would find a similar environment to the one I had experienced during my previous Erasmus. But what I found was so much more than that. I found different people, cultures, experiences, points of view, foods, traditions, religions, and I have never felt more enriched. Thank you for giving me the opportunity to live this experience.

Table of Contents

Index

Abstract

The concept of perceived sustainability has been scarcely investigated, and the factors influencing its formation even less so. This study proposes a conceptual framework exploring the influence of travel behaviour on sustainability perceptions, in order to understand its potential use in future segmentation studies. Moreover, the construct relates to the variables of perceived value, overall satisfaction, intention to recommend and intention to revisit to analyse their potential in generating a competitive advantage for destinations. A quantitative analysis of 203 international tourists in Lisbon, the capital city of Portugal, validated the model and expanded the research to the context of European Green Capitals. Findings show a direct relationship between travel behaviour and perceived sustainability, but also between travel behaviour and perceived value, corroborating previous research on green tourists. More and more tourism destinations worldwide are starting to include sustainability in their strategies, and advocate for stakeholder engagement in the process of planning and monitoring. To this aim, the study also proved that perceived sustainability evaluation can help managers and marketers to enhance their sustainability strategies on the basis of tourists' feedback, and to market the destination to more specific targets via tailored communication. Sustainability perceptions were also found to be a key driver of satisfaction and to have indirect consequences on behavioural intentions of loyalty, representing the ultimate goal for a destination.

Keywords: perceived sustainability, travel behaviour, monitoring, value, satisfaction, loyalty

JEL Classification:
Z320 Tourism and Development
Z330 Tourism: Marketing and Finance

Resumo

O conceito de sustentabilidade percebida tem sido pouco investigado, e os fatores que influenciam a sua formação ainda menos. Este estudo propõe um quadro conceptual que explora a influência do comportamento das viagens na perceção de sustentabilidade a fim de compreender a sua potencial utilização em futuros estudos. Além disso, esta perceção relaciona-se com as variáveis de valor percebido, satisfação geral, intenção de recomendar e intenção de revisitar, sendo determinante na geração de uma vantagem competitiva dos destinos. Um estudo quantitativo de 203 turistas internacionais em Lisboa, a capital de Portugal, foi usado para validar o modelo e ampliar a investigação ao contexto das Capitais Verdes Europeias. Os resultados mostram uma relação direta entre o comportamento de viagem e a perceção de sustentabilidade, mas também entre o comportamento de viagem e a perceção de valor, corroborando as pesquisas anteriores sobre turistas verdes. Cada vez mais destinos turísticos em todo o mundo começam a incluir a sustentabilidade nas suas estratégias, e advogam o envolvimento dos interessados no processo de planeamento e monitorização. Para este objetivo, o estudo também provou que a avaliação da sustentabilidade percebida pode ajudar os gestores e marketeers a melhorar as suas estratégias de sustentabilidade com base no feedback dos turistas, e a comercializar o destino para alvos mais específicos através de comunicação personalizada. As perceções de sustentabilidade foram também consideradas como um fator-chave de satisfação e com consequências indiretas nas intenções comportamentais de lealdade, representando o objetivo final para um destino.

Palavras-chave: percepção de sustentabilidade, comportamento de viagem, monitorização, valor, satisfação, lealdade

Classificação JEL:
Z320 Turismo e Desenvolvimento
Z330 Turismo: Marketing e Finanças

1. Introduction

The conceptualisation of sustainability started in the early nineties from the urge of international organisations such as the United Nations (UN), the Organization for Economic Cooperation and Development (OECD) and the World Conservation Union (IUCN) to raise attention about the uncontrolled use of natural resources by human activities and the need for environmental conservation. The discourse was delimited to the forestry field, as pro-tourism views characterised the post-World War II discussion: tourism was mainly seen as a financial contributor to the general economic recovery bringing in foreign currencies with the aim of restoring countries' built cultural heritage. However, as economies were recovering, mass tourism's negative impact began to show at the respective destinations, where significant sociocultural damages added to the already existing environmental problems (Nilnoppakun & Ampavat, 2016).

Alternatives to the existing tourism model were created, and most importantly, international organisations started to highlight the links between sustainability, development and tourism. The document that paved the way for the definition of sustainable tourism is the Brundtland Report, drafted by the World Commission on Environment and Development (1987). The report defined sustainable development for the first time as the "development that meets the needs of the present without compromising the ability of future generations to meet their own needs". As a consequence, the concept of sustainable tourism development was formulated in 1992 during the Rio de Janeiro United Nations Conference on The Environment and Development (CNUMAD) and found consolidation in the following year through the creation of the Commission on Sustainable Development (CSD) (Nilnoppakun & Ampavat, 2016; Torres-Delgado & Palomeque, 2012).

From this moment, many institutional policies and initiatives have contributed to the development of a holistic meaning for sustainable tourism to be applied in different countries and territorial levels. During the first years, environmental and economic issues were the focus of the institutional discourse. The concept then started to include references to poverty alleviation, social justice, equity, and community empowerment. As the 8th principle of The Berlin Declaration (1997) states: "Tourism should be developed in a way so that it benefits the local communities, strengthens the local economy, employs the local workforce, and wherever ecologically sustainable, uses local materials, local agricultural products, and traditional skills".

Torres-Delgado and Palomeque (2012) published an excursus of the key moments in sustainable tourism history. The 1st World Conference for Sustainable Tourism was held in 1995. It was the genesis for the Charter for Sustainable Tourism, an initial set of objectives on the three dimensions of sustainability: the environmental, the social and the economic. The second significant event was the creation of the first action plan. Drafted by the Earth Council

and the World Travel and Tourism Council (WTTC), it laid out directives to link environmental concerns with tourism development. It also served as a basis for several countries' declarations in the following year (Telfer & Sharpley, 2008). The declarations of the public sector, international organisations, non-government organisations (NGOs) and governmental institutions were also followed by the first initiatives from the private sector. In particular, the Tour Operators Initiative (TOI) contributed to the field by creating awareness and promoting sustainable practices, drawing the initial path for stakeholders willing to make a difference (Torres-Delgado & Palomeque, 2012).

Some general considerations can be drawn from the analysis of these documents. Researchers extensively discussed sustainable tourism development in theory: by 1999, the bibliography on sustainable tourism already counted two dedicated journals, 280 articles and 96 books (Telfer & Sharpley, 2008). However, Torres-Delgado and Palomeque (2012) found that 49% of the works published from 1987 to 2009 considered sustainable tourism only as part of general tourism management. As previously mentioned, the definition evolved with time, and the literature review brought up some ambiguities during the process: the triple bottom line approach balancing environment, society and economy was considered the most favoured in theory, but it was not the only one. Moreover, in practical applications, this balance has been upset by the prevalence of the social and environmental dimensions over the economic one.

Thus, the vagueness of the definition and the excessive and sometimes utopian theories resulted in limitations in translating into practice the guidelines for sustainable tourism development. Several researchers even argued the possibility of measuring sustainability in tourism and considered its difficulties. Cocklin (1989), for example, identified four main issues in sustainability assessments: the conceptual boundaries, the resources included, the indicators scoring and measurement system, and the final goal.

Several international organisations tried to put the theory into practice by creating sustainability indicators. The United Nations Commission on Sustainable Development (CSD) carried out the first attempt by making a list of 11 indicators for sustainability assessment. The exact number of indicators was also collected by The World Tourism Organisation (UNWTO), which divided them into four dimensions: ecological, social, economic and planning. Nevertheless, both failed to be holistic and based on stakeholder participation, and did not have a vision for the future (Cottrell, Vaske, & Roemer, 2013).

Ko (2005) found that by 2000 practical measures for sustainability in tourism were not mature yet. Basing his study on the idea that sustainable development can and needs to be measured objectively, Ko (2005) analysed twelve case studies of sustainability assessment in tourism. Along the same lines as Cocklin (1989), results brought to light several issues. Firstly, the indicators used in the evaluation were different from one destination to the other and

present in a small number. Secondly, no stakeholder is involved in the measurement, resulting in a subjective influence of the researcher. Finally, the assessments showed a lack of transparency in data-gathering and procedures and the absence of future perspectives.

Having established the absence of satisfactory assessment models, Ko (2005) developed a model based on two systems and eight dimensions related to fundamental indicators and methods. This study offered a base for tourist destinations to create their assessment procedure, confirming the possibility and necessity of objectively monitoring sustainable development. To facilitate the translation into practice of sustainability guidelines, further research collected various assessment tools used to measure sustainability at different territorial levels. Schianetz, Kavanagh and Lockington (2007) found Sustainability Indicators (SI) to be particularly flexible tools. Also acknowledged by the WTO in 2004, they can include current national indicators of the industry's state (e.g. the number of residents working in the tourism industry), social and environmental impact indicators (e.g. levels of noise pollution in peak season), or early warning indicators (e.g. decline in tourist arrivals). The content of the sets needs to be defined through a participatory approach to ensure the selection and ordering of priorities (Schianetz et al., 2007). The research also found the environmental impact assessment (EIA) to be an effective measurement tool for any site-specific environmental fallout. In particular, Schianetz et al. (2007) analysed how some indicators could compensate for each other's faults. For instance, the EIA could be valid for pre-project approvals to complement sustainability indicators (SI) in assessing environmental implications.

Torres-Delgado and Saarinen (2014) also collected multiple indicators developed from 1998 to 2010 in tourism research. Only Blancas, González, Lozano-Oyola and Pérez (2010) divided the thirty-two measures into three dimensions (social, economic, environmental) and applied them to the planning of Spanish coastal destinations. On the other hand, Choi and Sirakaya (2006) identified three additional dimensions, namely the cultural, political, and technological. Many of them were specifically designed for small areas and municipalities with particular characteristics, such as the Italian mountain area of Alpi Lepontine, or Spanish autonomous communities. Indeed, considering approaches at the state level is more complicated as every destination is in fact an ensemble of minor identities that constantly interact. Therefore, the bigger the reality under consideration, the more complex the assessment (Torres-Delgado & Saarinen, 2014).

In another attempt to find worldwide commonalities in sustainable tourism development assessment tools, the Global Sustainable Tourism Council (GSTC) was created in 2010 through the merger of the Partnership for Global Sustainable Tourism Criteria and the Sustainable Tourism Stewardship Council (STSC). The GSTC is an international organisation that creates knowledge and awareness of sustainable tourism practices while promoting the adoption of sustainability principles and criteria through accreditation and training. The first set

of thirty-seven criteria was developed in 2013 as a first step toward creating “a world’s baseline standards for tourism destination management and as a framework for national or regional sustainability standards” (GSTC, 2022). The criteria include four main dimensions (sustainable management plus socioeconomic, cultural and environmental impacts), ranging from measures of resident engagement to climate change adaptation (GSTC, 2019). The TOI also joined the council, and in 2016 the GSTC Industry Criteria was released as a set of indicators for the private sector (e.g. tour operators, accommodation providers). Moreover, in 2015 the UN published an ambitious 15-year plan called the 2030 Agenda for Sustainable Development, where the 17 Sustainable Development Goals (SDGs) were set. The document aimed at stimulating action and covered five main areas: people, planet, prosperity, peace, and partnership. “People” consists of reducing hunger and poverty, and represents a commitment to equality and universal dignity. “Planet” and “Prosperity” refer to sustainable development in the harmonious relationship between natural heritage and socio-economic progress. Finally, “Peace” and “Partnership” target peace and global solidarity (UN, 2015). As the GSTC criteria are strongly linked to the targets set in these documents, they also serve as a measurement system for countries' contribution toward the 2030 Agenda. Particularly since 2019, when the council completed the target criteria with the addition of performance indicators (GSTC, 2022), finally becoming an international benchmark for sustainability assessment (Bricker & Schultz, 2011).

The GSTC places a lot of importance on monitoring and reporting, this being one of their fundamental requirements for a destination management strategy. One of their criteria clearly states, “The destination is implementing a system to monitor and respond to socio-economic, cultural and environmental issues and impacts arising from tourism. Actions and outcomes must be regularly monitored, evaluated and publicly reported” (GSTC, 2019). Indeed, sustainability actions should not be implemented on a one-off basis but should be continuously monitored to ensure effectiveness and stakeholder satisfaction with the projects in question. Sánchez-Fernández, Iniesta-Bonillo and Cervera-Taulet (2019) looked at perceived sustainability as a tool for both market segmentation and strategic feedback. Firstly, they clustered tourists according to their perceptions of sustainability initiatives at the destination level to draw more precise marketing and communication strategies. Secondly, they provided a conceptual framework that explains the cyclical process of perceived sustainability from implementing sustainable policies to the tourists’ feedback, arguing that stakeholders’ perceptions have enormous potential in evaluating and controlling sustainability strategies.

Nevertheless, the literature on perceived sustainability is still scarce and incoherent for several reasons. First, its definition depends on the school of thought of the authors and what they consider to be the definition of sustainability. Second, most of the measurement scales

used in previous literature are context-specific, limiting further investigation on a universal instrument. Third, most studies focus on analysing the influences of perceptions on other variables instead of understanding the factors influencing perceptions. Moreover, although perceived sustainability has been proven to be a variable for tourist segmentation, previous literature solely characterised tourists by sociodemographic and trip-related information (Sánchez-Fernández et al., 2016), not allowing to draw specific clusters of tourists.

Therefore, this article wants to move beyond the characterisation used in previous research in order to evaluate the perceptions of sustainability more accurately, as well as its resulting impacts on the market. The research objectives are two. First, the study aims at testing the relationship between travel behaviour and perceived sustainability to understand the possibility of using this construct in future segmentation studies. Indeed, perceptions are created by both outside and inside influences, including attitudes and behaviours. Second, it extends the present literature on perceived sustainability by creating a conceptual model which relates it to perceived value, satisfaction and loyalty. By analysing key drivers of destination competitiveness, the research can be helpful for researchers, managers and marketers in the tourism field, improving their knowledge of sustainability perceptions' evaluation. These results would enable the private and public sectors to measure their sustainable initiatives' performance and direct specific marketing efforts according to tourists' feedback and attitudes. Findings apply to the context of Lisbon and, more generally, to European Green Capitals, where European standards have positively evaluated sustainability levels.

The study is structured as follows. The literature review examines the importance of perceptions, their formation, and their application in sustainable tourism. An overview of the definition of sustainable tourists is also given to investigate its use for market segmentation studies. Then, the conceptual framework and the hypothesis are proposed, together with the previous research on perceived value, satisfaction and loyalty. The following section is the methodology, in which the research context, data collection, sample and assessment procedure are illustrated. Results are then analysed and compared with previous findings, including their implications for the tourism field in the research context and contribution to the literature. In conclusion, limitations and proposals for future research are suggested.

2. Literature Review

The recent literature review reveals the importance of perceptions in research. Several authors dedicated their work to understanding consumers' perceptions, particularly on topics related to sustainability. Herbes and Ramme (2018) and He and Hu (2018) contributed to the literature linking perception to purchase behaviour and intentions. The first analysed how the perceptions of environmental friendliness of a product package may lead to consumers' diverse purchasing. Their cross-cultural study showed how countries value reusability, recyclability and biodegradability differently and on which product life cycle phase their attention focuses the most. He and Hu (2018), on the contrary, studied how personality traits (personal innovativeness and environmental concerns) and perception (positive or negative) of electric vehicles influence their adoption rates in China, showing a remarkable correlation between the three variables. Much discussion was also raised on how sustainability communication influences brand image. Lee and Lin (2022) found that advertisements containing a sustainability message directly influence the corporate social responsibility image, creating an immediate identification between the consumer and the brand and raising perceived brand innovativeness.

Researchers also investigated perceptions in the tourism industry. Sharma and Rickly (2019) focused on travellers' perception of dark tourism sites. In particular, the research examined how the experience of Hindu cremation grounds in Varanasi, India, pushes tourists to deeply change their attitude towards life while searching for an existential authenticity. Causevic and MarkNeal (2019), on the contrary, looked at governmental control of tourism narratives, where, in the case of Oman, for example, historical facts are not fully presented in heritage sites to hide the country's actual socio-political situation from the foreign eye. This manipulation, called orientalisation, results in an enchanting, exotic image characterising tourist perceptions. In contrast, post-pandemic literature focused vastly on travel risk and management perceptions. Rahman, Gazi, Bhuiyan and Rahaman (2021) found the effect of Covid-19 to impact "risk management, service delivery, transportation patterns, distribution channels, avoidance of overpopulated destinations, and hygiene and safety", contributing to the knowledge on crisis management in the field.

The literature on sustainability perceptions in tourism, on the contrary, is still scarce and problematic. Indeed, perceived sustainability was defined only recently and reflected the conceptual complexity of sustainability itself. For example, several studies investigated it as a unidimensional construct, identifying sustainability solely as environmental, social, or economic. Sánchez-Fernández, Iniesta-Bonillo and Cervera-Taulet (2016) conducted a market segmentation study on tourists' perception of environmental sustainability in five Mediterranean cities. Results showed the existence of three different tourist clusters with low,

medium, and high perceptions of environmental sustainability of the destination, confirming the possible use of the findings for marketing and managerial initiatives. Bernini, Emili and Vici (2021) also based their study on tourists' perceptions of environmental sustainability of the District of Rimini, an Italian mass tourist destination. Findings showed that, in this case, sustainability is less important than other factors in ensuring satisfaction with the trip since the city did not reach environmental sustainability expectations.

More common approaches to the concept are the multidimensional ones. Cottrell et al. (2013) used the prism of sustainability as a framework for the creation of a 22-items scale that included four dimensions of sustainability (environmental, economic, socio-cultural, institutional). Mathew and Sreejesh (2017) also defined perceived sustainability through four main areas (economic, cultural, social, environmental) to understand the impact of perceived responsible tourism on residents' quality of life. Guizzardi, Stacchini and Costa (2021) also used a multidimensional construct. The latter research is particularly interesting since it adopted a tailor-made scale to the context of Adriatic rural areas made of four dimensions (environment protection, culture, welfare, safety and security) as they found other commonly used multidimensional models irrelevant for their specific case.

Nevertheless, the triple bottom line approach to perceived sustainability is the most commonly used in the literature. Its main components are the environmental, the socio-cultural and the economic dimensions (Cottrell, Duim, Ankersmid, & Kelder, 2009; Iniesta-Bonillo, Sánchez-Fernández, & Jiménez-Castillo, 2016; Kim, Thapa, & Kim, 2017; Penagos-Londono, Rodriguez–Sanchez, Ruiz-Moreno, & Torres, 2021; Sánchez-Fernández et al., 2019; Solís-Radilla, Hernández-Lobato, Callarisa-Fiol, & Pastor-Durán, 2019; Nukhu & Singh, 2020). The environmental dimension refers to natural resources (renewable and non-renewable), their conservation and protection (Cottrell et al., 2013). As tourism activities are based on the specific environment they are created, they can cause incredible damage to the surroundings, such as land degradation, biodiversity loss and increasing pollution levels (including noise and light pollution) (Simo-Kengne, 2021). However, good management can stop destructive mechanisms and turn them into benefits by protecting sensitive environments, training and educational opportunities for tourists and guides, and low emission options for transportation. The sociocultural dimension considers human capital and includes aspects like community empowerment and participation in decision-making, fair distribution of benefits and poverty alleviation, and cultural preservation in its authenticity and integrity (GSTC, 2019). Therefore, sustainable tourism supports stakeholder participation and collaboration, avoids the marginalisation of minority groups, promotes traditions and values and fosters cross-cultural encounters and understanding. Finally, economic sustainability focuses on the prosperity resulting from tourism activities which must consider the population's financial benefits and

the resulting standard of living. This aspect includes improving infrastructure assets and increasing employment opportunities and income (Penagos-Londono et al., 2021).

The present research employed the triple bottom line approach to the definition given by Sánchez-Fernández et al. (2019). They started from the definition by Solomon, Bamossy, Askegaard and Hogg (2016) of consumers' perceptions as "the process of selecting, organising, and interpreting information and stimuli by cognitive-affective evaluative judgement, to create a meaningful picture of the product, service or brand". Sánchez-Fernández et al. (2019) then translated this to the tourism context, defining perceived sustainability as "the tourist's cognitive-affective evaluation of sustainability policies implemented at a particular destination by managers and destination marketing organisations".

This definition represents another layer of complexity to the understanding and measuring of perceived sustainability. Perceptions are explained through a cognitive-affective evaluation, where beliefs and knowledge represent the cognitive component, and the affective one involves the emotional sphere and the feelings a tourist has of a destination's sustainability attributes (Martín & Bosque, 2008). As previously mentioned, perceptions were studied in various contexts. The vast majority of these studies analysed how they influence other variables such as consumer behaviour, intentions and destination image (Causevic & MarkNeal, 2019; Herbes & Ramme, 2018; He & Hu, 2018) while neglecting the analysis of factors that influence their formation. According to research in psychology, much of the perceptual process is bottom-up, as the perceptual system automatically and passively receives stimuli via sense organs. However, the process is also responsive to top-down influences of the perceiver's cognitive state, such as context (cultural, social, situational), memory, behaviour, and intention (Balcetis & Dunning, 2006). For this reason, perceptions are "subjective, selective and temporal", and "each tourist's interpretation and perception of a particular destination or sustainable action is different" (Sánchez-Fernández et al., 2019).

The literature review showed various attempts to use perceived sustainability as a variable for tourist segmentation, characterising tourists by sociodemographic and trip-related information. Sánchez-Fernández et al. (2016) studied the unobserved heterogeneity among tourists visiting five Mediterranean Sea Basin cities regarding their perceptions of environmental sustainability. Findings showed three clusters with different perceptions (low, medium, high) as well as three different demographic characterisations mainly in terms of education and nights spent at the destination. Tourists with high perceptions of environmental sustainability spent the longest time (more than six nights) visiting, and more than 50% had completed tertiary education. Sánchez-Fernández et al. (2019) then expanded the study to sustainability as a multidimensional concept, using the following three dimensions: environmental, sociocultural, and economic. Bernini et al. (2021) investigated perceptions of

environmental sustainability in the District of Rimini and clustered tourists according to their level of importance and satisfaction with tourism services' sustainability (hotels, urban environment, commerce, information, beaches) at the destination. The study identified four clusters ranging from satisfied, that considered sustainability important and were highly satisfied with each area of investigation, to critics, who were the most unsatisfied with sustainability levels. Both clusters were deemed sensitive to environmental issues, but their age range was different: the first one included people over 44, and the second was mainly composed of young people. Other variables were added in the segmentation study of Penagos-Londono et al. (2021), where perceived sustainability and trustworthiness of a destination are based on tourists' perceptions of tourism impacts.

However, fewer researchers characterised tourists differently in their market segmentation studies. Cottrell et al. (2009) clustered tourists according to their perceptions of sustainability in Manuel Antonio (Costa Rica) and Texel (The Netherlands) based on the differences between tourist types. In addition to demographics and trip-related information (average length of stay, reason for visit), the study identified five categories of travellers: (1) Change: escape in nature; (2) Dedication: authentic/cultural; (3) Interest: information seeking; (4) Amusement: fun-seeking and (5) Rapture: active participant in nature types. The study did not find any significant differences between tourist types and their perceptions of sustainability. For this reason, further research could test other variables to obtain a deeper understanding of which factors influence perceived sustainability, such as sustainable travel behaviour.

A number of theories have been put forward to explain the characteristics of the green traveller according to numerous aspects such as basic demographics, knowledge of the environment, activity preferences, environmental concern and motivation. Indeed, targeting this specific tourist segment became important for destinations willing to change their approach and impact. Holmes et al. (2021) identified the green tourist as the most likely to "fulfil all triple bottom line measures". Tourists engaging in more responsible behaviours usually have higher environmental values and contribute more to the local economy through respect and community support. Sustainable tourists benefit tourism development and create virtuous circles involving residents and business owners at the destination level. Indeed, attracting more sustainable tourists requires businesses to adapt to the new needs and values. As the Booking.com Sustainability Report (2021) showed, 53% of travellers get annoyed if the accommodation provider they choose limits them from being sustainable (e.g. not recycling waste).

Moreover, growing numbers of responsible tourists increase opportunities for mass tourism alternatives such as community-based tourism, ecotourism, and voluntourism. When residents are more involved in the tourism industry, both in decision-making and implementation, their quality of life is enhanced through greater economic opportunities,

cultural pride and environmental preservation. Research also found green travellers to have higher spending power as they are willing to spend more money to have a more responsible stay (Holmes et al., 2021).

Most of the research on the topic included socioeconomic profiling techniques, where green tourists usually had higher incomes and education levels (Ramchurjee & Suresha, 2015). Buffa (2015) also identified that the younger generation has stronger environmental values and is, therefore, the most sensitive to these issues. However, some studies did not find demographics meaningful when examining travellers' eco-friendly behaviour. For example, gender differences in different contexts were more or less relevant: Laroche, Bergeron and Barbaro-Forleo (2001) identified women as greener consumers, while Fennell and Smale (1992) found men to be more conscious about the environment.

Moving forward in the definition of the green traveller, Perkins and Brown (2012) studied how core values can predict interest in ecotourism experiences. As core values are vital to the formation of ethical and moral codes, they are used as principles directing people's behaviours. Using Schwartz's values theory as a basis, the study focused on the self-transcendent and the self-enhancement value clusters. In particular, they analysed the two most important value subtypes for environmental issues, *biospheric* and *egoistic* values. Biospheric values characterise people's concern for the environment for its own sake. Therefore, they result in environmentally conscious behaviour and choices such as ecotourism activities. Egoistic values, on the contrary, are concerned with personal well-being and tend to orientate choices based on self-interest and hedonistic purposes rather than pro-environmental beliefs and behaviours.

Passafaro et al. (2015) also investigated the influence of personal values on the preference for sustainable experiences, including the analysis of attitudes and personality traits in the equation. Environmental psychology places much importance on individual rather than collective ecological responsibility as a predictor of responsible behaviour: travellers feel more likely to engage when they are actively involved in the problem and its resolution. The study also found the affinity toward diversity (ATD) to predict pro-ecological tourist behaviour: people who appreciate biodiversity and socio-cultural diversity show higher acceptance levels of multicultural encounters and are likely to prefer sustainable holidays. Moreover, results showed the influence of agreeableness as a personality trait in tourists' preferences since it identifies empathetic and altruistic traits often associated with an effort to compromise in view of a greater reason or good.

Nevertheless, research on tourists' behaviour based on preferences and intentions clashes with the research on cognitive dissonance and the attitude-behaviour gap. Several studies found that tourists struggle to turn their values into concrete actions regardless of their pro-environmental attitudes. Ramchurjee and Suresha (2015) researched this behavioural

mismatch in 335 tourists to Hassan, Karnataka, India. In this case, people who engaged in sustainable activities at home (e.g. by recycling, conserving energy and resources), showing responsibility towards their immediate surrounding area and community, weighed the same aspects differently when considering their future holidays. Similar outcomes resulted from Juvan and Dolnicar (2014). Their sample solely consisted of environmental activists, whose beliefs and behaviours are known to be in line with pro-environmental attitudes, to test the validity of the attitude-behaviour gap when considering travel behaviour. After proving their awareness of the tourism industry's negative impacts on the environment, most of them, in various measures, felt a gap between their attitude and their behaviour, resulting in sensations of tension and guilt, i.e. they experienced significant cognitive dissonance.

The above analysis of the literature has highlighted inaccuracies when determining the profile of the sustainable tourist from the relationship between attitudes and intentions, thereby calling for a deeper understanding or analysis of tourists' behaviour. To compare people's behaviours at home and on holidays, Holmes et al., (2021) analysed sustainable behaviour's key pillars, namely altruism and pro-ecological behaviour. In particular, altruism involved actions aimed to "benefit other human beings", and pro-ecological behaviour included "conscious actions performed by an individual so as to lessen the negative impact of human activities on the environment and to enhance the quality of the environment" (Holmes et al., 2021). The results found that the more frequently people engaged in altruism and pro-ecological behaviour at home, the more sustainable actions they would take on holiday, confirming the possibility of directly using behaviour to define the green traveller.

Several studies analysed the validity of perceived sustainability as a variable for segmentation. Segments have been characterised by demographics, trip-related variables, and only in Cottrell et al. (2009) by holiday type. As behaviour is one of the top-down influences affecting perceptions, the present study explores whether travel behaviour influences perceived sustainability and, therefore, can be used as a variable to describe tourists' perceptions further.

H1. Travel behaviour positively relates to perceived sustainability.

However, perceived sustainability is not enough for a tourist destination to thrive. If tourists do not perceive a responsibly managed heritage as an added value, sustainability will not bring any competitive advantage (Guizzardi et al., 2021). Tourist motivations are numerous and diverse, and some visitors might perceive regulations as a limit to their enjoyment and satisfaction with the experience instead of conservation and protection measures. In particular, for consumers who are more sensitive to social and environmental issues, the levels of company sustainability were found to elevate or reduce the perceived value of its products. In

Mohr, Webb and Harris (2005), results showed that high corporate social responsibility levels positively impacted the company's perceptions and purchase behaviour. Choi and Ng (2011) extended the previous findings to economic and environmental sustainability. They found that poor sustainability commitments and communication damaged their overall evaluation, with stronger negative impacts concerning environmental sustainability. Therefore, the relationship between travel behaviour and perceived value and the mediating power of perceived sustainability in this relationship are tested.

H1a. Travel behaviour positively relates to perceived value.
H5. Perceived sustainability mediates the positive relationship between travel behaviour and perceived value.

In the early literature, the perceived value was mainly monetary in nature and its measurement resulted from the relationship between perceived quality and monetary sacrifice. Zeithaml (1988) then proposed a universal definition that served as a basis for the several context-specific ones created afterwards. Perceived value was described as "the overall assessment of the utility of a product based on the perceptions of what is received and what is given". The latter implied the necessity of accounting for multiple dimensions when considering perceived value, going beyond the single-item definition. Peña and Molina (2014) and Guizzardi et al. (2021) investigated the perceived value of rural tourism as a multidimensional construct, including functional and affective dimensions that would capture both the tourists' rational and emotional evaluations. However, the value created in rural tourism experiences is characterised by the unique features of the place, which are not available in other contexts. Therefore, Iniesta-Bonillo et al. (2016) investigated visitors' perceived value of Cullera (Spain) and Oristano (Italy), two Mediterranean seaside destinations. The analysis included both monetary and non-monetary costs (effort and time), creating a measurement scale which is more adaptable to diverse settings. The previously mentioned literature on perceived value also tried to analyse the contribution of perceived sustainability to the creation of value, and findings showed a positive relationship between the two variables in rural and seaside destinations (Peña & Molina, 2014; Iniesta-Bonillo et al., 2016; Guizzardi et al., 2021). Thus, the following hypothesis is investigated to strengthen these results and extend them to another context:

H2. Perceived sustainability positively relates to perceived value.

Both perceived sustainability and value of the destination were identified as drivers of competitiveness due to their influence on satisfaction and loyalty. Satisfaction can be defined

as “a post-consumption behaviour that emanates from cognitive and emotional assessments of an experience” (Prayag, Suntikul, & Agyeiwaah, 2018). Researchers widely studied it in tourism due to its essential role in the success of a destination. In particular, a lot of attention was placed on the factors influencing satisfaction: more satisfied customers are more likely to become repeat visitors and recommend the destination to their close connections. Iniesta-Bonillo et al. (2016) found that tourists’ satisfaction with their trips to Cullera (Spain) and Oristano (Italy) were influenced by their sustainability perceptions of the environmental, socio-cultural and economic dimensions. In contrast, Guizzardi et al. (2021) did not find any direct influence of perceived sustainability on satisfaction. However, the relationship proved significant thanks to the mediating role of perceived value, whose effect on satisfaction has been widely demonstrated (Chi, Lee, Ahn, & Kiatkawsin, 2020; Iniesta-Bonillo et al., 2016; Peña & Molina, 2014; Sun, Chi, & Xu, 2013; Wang, Yang, Han, & Shi, 2017). Therefore, to further investigate and confirm these relationships, the present study aims to test the following hypotheses:

H2a. Perceived sustainability positively relates to overall satisfaction.
H3b. Perceived value positively relates to overall satisfaction.

Loyalty, in general terms, can be described as “a deeply held commitment to rebuy or repatronise a preferred product/service consistently in the future” (Oliver, 1997). This definition can be translated into three main dimensions in the tourism industry: the intention to revisit, recommend and generate positive word of mouth reactions about a destination. As far as perceived sustainability is concerned, Guizzardi et al. (2021) investigated for the first time its influence on satisfaction and did not find any direct relation. Thus, the following hypotheses are tested to enrich the study field with other data:

H2b. Perceived sustainability positively relates to the intention to recommend.
H2c. Perceived sustainability positively relates to the intention to revisit.

The relation between perceived value and loyalty, on the contrary, has been widely investigated *(*Wang et al., 2017; Sun et al., 2013) and proved valid. Wang et al. (2017) researched this relationship on a sample of tourists travelling by car in the Xinjiang region in China and demonstrated that perceived value strongly influenced intention to recommend and word of mouth and intention to revisit. Another significant relation, both direct and indirect**,** that has been tested by a large body of research in the literature is the one between satisfaction and loyalty (Chi et al., 2020; Peña & Molina, 2014; Sun et al., 2013; Wang et al., 2017). As

Wang et al. (2017) state, satisfaction is a “mediator between quality evaluations and customers’ post-consumption behaviours.” Therefore, the following hypotheses are proposed:

H3. Perceived value positively relates to the intention to recommend.

H3a. Perceived value positively relates to the intention to revisit.

H4. Overall satisfaction positively relates to the intention to recommend.

H4a. Overall satisfaction positively relates to the intention to revisit.

H6. Overall satisfaction mediates the positive relationship between perceived sustainability and intention to recommend.

H6a. Overall satisfaction mediates the positive relationship between perceived sustainability and intention to revisit.

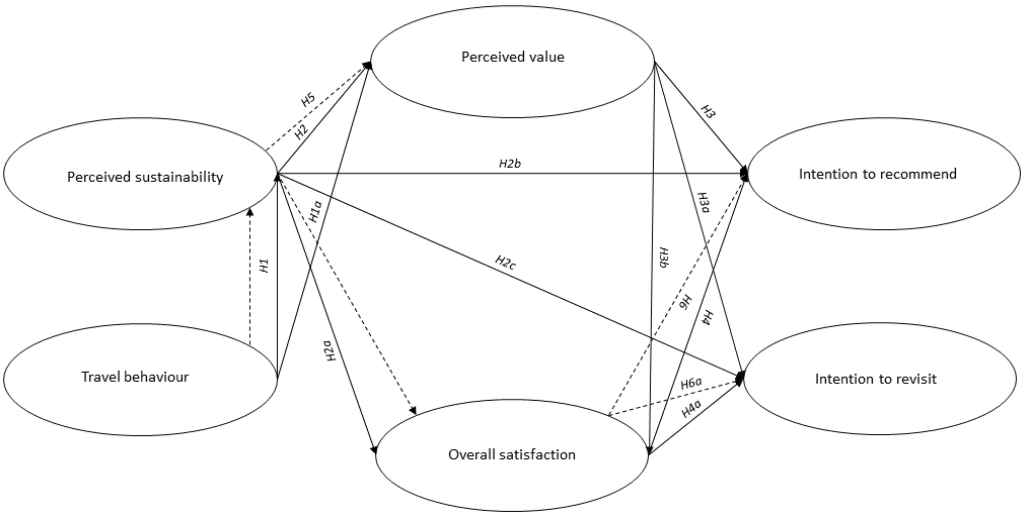

Figure 1. Conceptual Model; Connected lines: direct relationships among constructs; Dashed lines: indirect relationships among constructs.

In conclusion, the final conceptual model tested several new and known relationships between the variables investigated. On one hand, the relations between travel behaviour and perceived sustainability, and travel behaviour and perceived value represented the research novelty. On the other hand, the other relationships were tested as a confirmation or further investigation on the topic. The influence of perceived sustainability on perceived value has been proven valid in diverse setting, as well as the relation between perceived value and satisfaction, and perceived value and loyalty. The importance of satisfaction as a mediating variable and its influence on loyalty also proved positive. On the contrary, negative results were found in previous research on the relations between perceived sustainability and satisfaction, and between perceived sustainability and intention to revisit and recommend.

3. Methodology

As perceived sustainability has proven to be a valuable construct for market segmentation, the present study sought to characterise tourists' perceptions further to develop more detailed tourism segments. To this end, the relationship between general travel behaviour and perceived sustainability was explored, aiming at a deeper understanding of the results and their practical implementations. Moreover, this study investigated tourists' perceptions of Lisbon to evaluate the sustainability policies implemented in the city until the present moment and understand the impact of this variable on the overall tourist experience. Therefore, the model analysed the relationship between perceived sustainability, perceived value, satisfaction, and loyalty (intention to recommend and intention to revisit). The analysis employed a quantitative approach by creating a survey for data collection.

The survey was based on the existing literature concerning travel behaviour, perceived sustainability, value and satisfaction of tourist experiences, and loyalty (Holmes et al., 2021; Iniesta-Bonillo et al., 2016; Prayag et al., 2018; Sánchez-Fernández et al., 2019; Solís-Radilla et al., 2019). The twenty-three-item measure of travel behaviour was conceived by Holmes et al. (2021) in its three dimensions (economic, sociocultural, environmental). The survey requested information on choices and preferences, such as "Purchase locally grown food and/or drink," and "Bring and use a refillable water bottle." Perceived sustainability was also considered in its multidimensionality, drawing on the fourteen-item scale developed by Sánchez-Fernández et al., 2019). Regarding perceived value, the four items were taken from Iniesta-Bonillo et al., 2016), and the measurement consisted of questions like "Considering the time I spent, it is worth visiting this destination." The satisfaction four-item scale was taken by Prayag et al. (2018). Finally, loyalty was analysed through the four-item scales of intention to recommend and intention to revisit. The construct was created by Solís-Radilla et al. (2019) with questions such as "I would choose to holiday in this tourist destination again," and "I would recommend my family and friends visit this tourist destination". All the items mentioned above were adapted to the research context of Lisbon and measured using five-point Likert-type scales. Seven pilot tests validated the clarity of the survey's meaning and layout.

3.1 Research Context

Thanks to its rich cultural and natural heritage, diverse landscapes and regional peculiarities, Portugal is increasingly making its way onto the European map of must-see destinations. The tourism industry is undoubtedly the main driver of the national economy contributing to 17,1% of the total GDP and 20,7% of employment in 2019 (WTTC, 2021). The number of international tourist arrivals increased steadily until 2019, when 16 million international tourists from mainly

Spain, the United Kingdom and France visited the country (López, 2021). Their visitor spending counted for 23.6% of the country's exports and amounted to 22.5 billion euros. Not surprisingly, the Covid-19 pandemic seriously impacted the following year's statistics, reducing the numbers by half. The travel sector's contribution to the total GDP fell to 8,1%, with a reduction of around 3% in the employment rate (WTTC, 2021).

Despite this fallout, the sector was already preparing for recovery. The new Tourism Strategy 2027 came into action in 2021, defining a long-term vision to be implemented for the future of Portuguese tourism. The strategy was developed through stakeholder consultation and its monitoring and management will be carried out by three institutions, namely Turismo de Portugal, the National Tourism Forum and several Strategic Tourism Laboratories (STL), which consist of consultation platforms for each of the regions. The new Strategic Plan aims to position the country as a competitive, sustainable destination of cohesive territories. Portugal wants to become more inclusive and connected while attracting investors, workers and students to live in a destination that values talents and innovation. The foundation of the strategy coincides with the three sustainability dimensions: economic sustainability aims at reaching higher demand and revenue rates, social sustainability tackles seasonality and residents' satisfaction with the tourism activity, and environmental sustainability involves measures for water, energy and waste management (Turismo de Portugal, 2021).

To reach these objectives, a Sustainable Tourism Plan 20-23 was developed to identify practical actions to be implemented. The plan constitutes four main lines of action. First, a more sustainable offer has to be structured through efficient public land-use planning policies, reducing regional asymmetries, and implementing solutions toward a circular economy. Second, educational projects need to be carried out to train future tourism professionals on sustainability-related topics. Third, promotional efforts will be essential both to reinforce the image of Portugal as a sustainable destination and raise tourists' awareness of their behaviour. Finally, monitoring tourism and sustainability data will ensure the efficient implementation of the plan.

The present study concentrated on Lisbon, as it is the capital city of Portugal and one of its main attractions. Indeed, one of the main problems identified in the national tourism performance are the regional asymmetries. In 2015, 73% of overnight stays were concentrated in three regions, namely the Algarve (34%), Lisbon (25,1%) and Madeira (13,6%), where the Lisbon region has the highest revenue per available room (RevPAR) (Turismo de Portugal, 2021). However, Lisbon already paved the way to sustainability in 2016, when the city signed the New Covenant of Mayors for Climate and Energy due to the 42% reduction in CO_2 emissions. The result was impressive, as Lisbon exceeded the 2030 target 16 years earlier. Moreover, the city developed its local Sustainable Energy and Climate Action Plan (SECAP), which fostered the creation of climate adaptation and mitigation policies and an urban planning

transformation that increased green urban spaces and car use alternatives. The municipality took additional actions to reduce water leakage and waste. For these reasons, Lisbon was assessed on twelve environmental criteria, such as Energy Performance, Sustainable Urban Mobility and Air Quality, and won the European Green Capital Award in 2020, a European Commission program that rewards cities committed to sustainability (EC, 2020).

3.2 Data Collection and Sample

The study is exploratory, thus, non-probability sampling was used. Due to time and availability constraints, convenience sampling was employed to understand the relationship between tourists' travel behaviour and their sustainability perception. The chosen target population consisted of international tourists over the age of 18 who visited Lisbon between 2018 and 2022. The time frame should have been shorter to get an actual picture of the city's perceptions of sustainability. Yet, due to the Covid-19 pandemic, fewer people could visit the city in the last two years, so the period was prolonged.

The data was gathered between February 2022 and March 2022, both online and on-site. The researcher shared an internet-based survey on social media and among international connections. The on-site recruitment took place at two of Lisbon's vital landmarks the Tram 28 stop and the Elevador de Santa Justa. Both sites are located in the city centre, and tourists usually queue to get in. The survey was administered to 226 travellers. However, respondents who did not visit Lisbon between 2018 and 2022 could not proceed with the questions as they did not fit the inclusion criteria for participation. Therefore, the final sample consisted of 203 tourists.

In this study, most tourists sampled were female (67%), with the majority of the respondents being young, as 36.8% were aged between 18 and 24 and 44.1% were between 25 and 34. More than half of them had a high degree of education: 61.3% have completed a graduate degree. Regarding income, most participants were shown to have an average income (31.4%). When travelling, a relatively equal distribution of the interviewees was found to travel during all seasons or mostly in summer, with lower percentages in the other seasons alone. 44,6% travel with friends, and 91% most frequently leave for short breaks and stay at home sharing types of accommodation such as Airbnb (34,3%).

4. Results

4.1 Conceptual Model Assessment

The model was assessed through partial least squares structural equation modelling (PLS-SEM), a popular research method in the Social Sciences, to test the previously stated relationships between variables (Figure 2). Its popularity is due to its predictive approach to evaluating complex models and its flexibility. Moreover, the software used for the research is accessible and user-friendly (Sarstedt, Ringle, & Hair, 2021). This study was completed via SmartPLS 3 software. The analysis consisted of a two-step procedure (Dias, Silva, Patuleia, & González-Rodríguez, 2020). Firstly, the researcher rolled out the construct reliability and validity measurement to ensure the items' quality. After a careful examination, the assessment resulted in the removal of nineteen travel behaviour and fourteen perceived sustainability items (Appendix A – Measurement). Despite the consistent elimination of items, content validity was maintained as the measures represented all the dimensions of the given constructs.

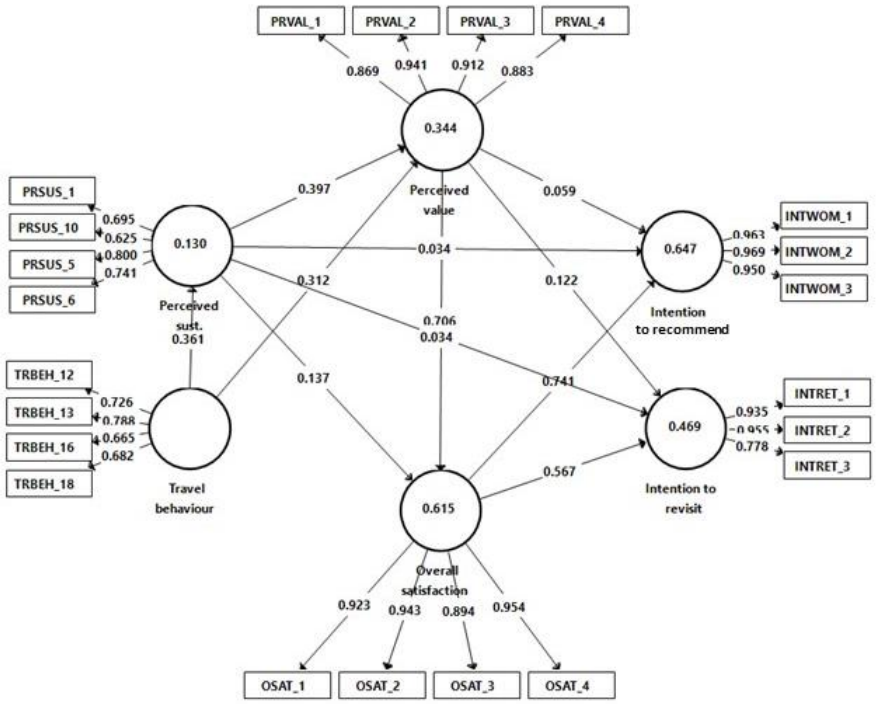

Figure 2. Conceptual Model assessment through SEM.

Therefore, the remaining items showed correct indicators of reliability, internal consistency reliability, convergent and discriminant validity (Dias et al., 2020). Two factors

confirmed the individual indicator reliability: first, all the items' standardised factor loadings exceeded 0.7, with the lowest value being 0.79, and second, they were all significant at $p < 0.001$. Internal consistency reliability was also proved positive as all the measures for Chronbach alphas and composite reliability (CR) were higher than 0.7, showing adequate reliability for the study (Garson, 2016).

Convergent validity was also confirmed by the average variance extracted (AVE), as the values were all above 0.5 (Garson, 2016). Finally, discriminant validity was tested using two criteria. Firstly, the Fornell and Larcker criterion requires the square roots of AVE to be higher than the strongest correlation among constructs. Secondly, the heterotrait-monotrait ratio (HTMT) criterion demands values to be below 0.85 (Dias et al., 2020). Table N shows the square roots of AVE in bold values, the correlations among constructs below them and all HTMT ratios above them.

Latent variables	α	CR	AVE	1	2	3	4	5	6
1) Perceived sustainability	0.700	0.808	0.516	**0.723**	0.552	0.528	0.370	0.238	0.299
2) Travel behaviour	0.700	0.808	0.514	0.893	**0.720**	0.639	0.827	0.626	0.689
3) Perceived value	0.923	0.945	0.813	0.679	0.929	**0.902**	0.615	0.487	0.529
4) Overall satisfaction	0.947	0.962	0.862	0.377	0.496	0.720	**0.936**	0.734	0.842
5) Intention to recommend	0.958	0.973	0.923	0.579	0.775	0.511	0.902	**0.960**	0.775
6) Intention to revisit	0.872	0.921	0.797	0.171	0.304	0.361	0.455	0.717	**0.928**

Table 1. α Cronbach Alpha; CR Composite reliability; AVE Average variance extracted; Bolded numbers: the square roots of AVE; Below the bolded values are the correlations among constructs. Above the bolded values are the HTMT ratios.

Garson (2016) noted that "a well-fitting formative measurement model should not display excessive multicollinearity of indicator variables". Therefore, collinearity was tested, and the results showed VIF values under 3 (with a maximum value of 2.642), which is the minimum to indicate collinearity among constructs. After determining the absence of collinearity, the structural model was assessed in the relevance and significance of its relationships. Firstly, the coefficient of determination (R^2) was measured to study the model's explanatory power (Garson, 2016). Each endogenous construct had different R^2 values: intention to recommend and overall satisfaction had the highest values with 64.7% and 61.5%, respectively. Intention to revisit and perceived value scored medium values with 46.9% and 34.4%. Lower values resulted from perceived sustainability with an R^2 value of 13%. However, all the constructs exceeded the minimum required value of 10% (Dias et al., 2020). Finally, the research investigated the Stone-Gleisser Q^2 value through blindfolding to verify cross-validated redundancy and for each construct, values surpassed the threshold of 0 (Sarstedt

et al., 2021). Intention to recommend and overall satisfaction showed again the highest results with 0.58 and 0.51, followed by intention to revisit and perceived value (0.39; 0.26), and perceived sustainability with 0.06.

Path	Path coefficient	Standard errors	t statistics	p values
Travel behaviour → Perceived sustainability	0.361	0.066	5.436	0.000
Travel behaviour → Perceived value	0.312	0.073	4.192	0.000
Perceived sustainability → Perceived value	0.396	0.072	5.383	0.000
Perceived sustainability → Overall satisfaction	0.137	0.047	2.790	0.005
Perceived sustainability → Intention to recommend	0.034	0.061	0.557	0.578
Perceived sustainability → Intention to revisit	0.034	0.067	0.493	0.622
Perceived value → Intention to recommend	0.059	0.066	0.908	0.364
Perceived value → Intention to revisit	0.122	0.093	1.420	0.156
Perceived value → Overall satisfaction	0.705	0.065	11.249	0.000
Overall satisfaction → Intention to recommend	0.741	0.066	11.439	0.000
Overall satisfaction → Intention to revisit	0.678	0.095	6.654	0.000

Table 2. Structural Model Assessment

Indirect effect	Estimate	Standard errors	t statistics	p values
Travel behaviour → Perceived sustainability → Perceived value	0.143	0.042	3.443	0.001
Perceived sustainability → Overall satisfaction → Intention to recommend	0.101	0.038	2.624	0.009
Perceived sustainability → Overall satisfaction → Intention to revisit	0.078	0.030	2.592	0.010

Table 3. Bootstrapping results for specific indirect effects

Importance-performance map analysis (IPMA) was also run to extend the results of PLS-SEM to the performance of each construct. Thus, information on importance and performance can be considered together in managerial decisions to prioritise one action or the other (Ringle, Wende, & Becker, 2015). In this study, the target construct is perceived sustainability, and it is linked to 5 variables (travel behaviour, perceived value, overall satisfaction, intention to recommend, and intention to revisit).

Latent Variables	Importance	Performance
1) Travel behaviour	0.361	75.280
2) Perceived value	0.396	86.806
3) Overall satisfaction	0.137	88.726
4) Intention to recommend	0.034	86.375
5) Intention to revisit	0.034	76.146

Table 4. Importance-performance map analysis for perceived sustainability.

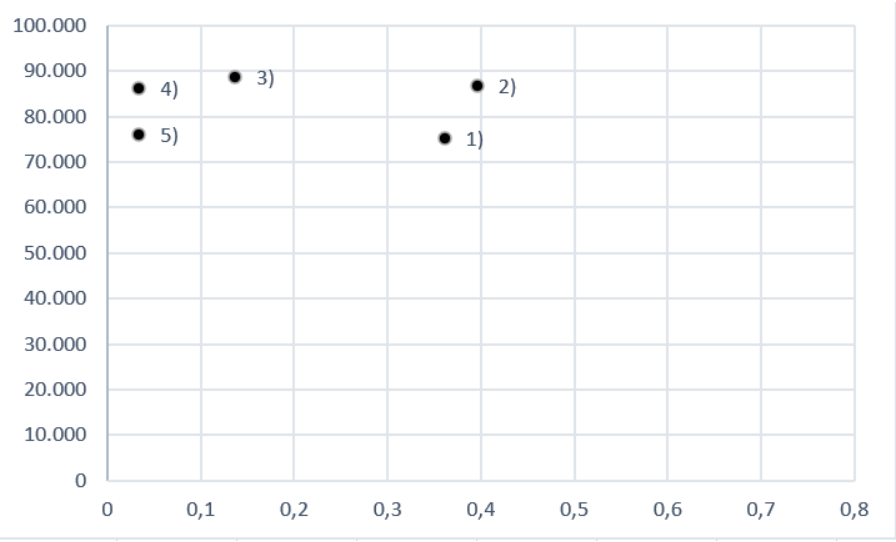

Figure 3. Importance-performance map analysis for perceived sustainability.

4.2 Hypotheses testing

The results in Table 2 support H1 and H1a. Travel behaviour significantly influences both perceived sustainability (β = 0.361, $p < 0.001$), and perceived value (β = 0.312, $p < 0.001$). The relation between perceived sustainability and perceived value also proved positive (β = 0.396, $p < 0.001$), providing support to H2. In addition, hypothesis H2a, which tested the link between perceived sustainability and overall satisfaction, showed positive results (β = 0.137, $p < 0.05$). However, H2b and H2c were not supported by the results showing $p > 0.005$: perceived sustainability engages negatively with intention to recommend and intention to revisit.

Links between perceived value and the two dimensions of loyalty, the intention to recommend and the intention to revisit, showed negative results with $p > 0.005$. H3 and H3a were therefore not supported. On the contrary, perceived value has a significantly positive relation with the overall satisfaction (β = 0.705, $p < 0.001$), providing support to H3b. Results also show that tourists' overall satisfaction with the trip has a positive result on their intention to recommend (β = 0.741, $p < 0.001$) and intention to revisit (β = 0.678, $p < 0.001$), providing support for H4 and H4a.

Specific indirect effects were tested through bootstrapping. Results are shown in Table 3. The indirect effects of travel behaviour on perceived sustainability and perceived value have been proved significant (β = 0.143, $p < 0.001$), positively supporting H5. In the same way, the mediation hypothesis H6 and H6a were supported. The indirect effect of perceived sustainability on intention to recommend (β = 0.101, $p < 0.001$) and intention to revisit (β = 0.078, $p < 0.001$) proved positive via the mediation of overall satisfaction on the relation.

Looking at the IPMA results in Figure 1, it is visible that all the variables have high-performance values. Both intention to recommend and intention to revisit show very low importance, as they are not significant ($\alpha > 0.10$). Yet, they both score high in performance, with values of 86.375 and 76.146, respectively. Also, the overall satisfaction, which has relatively low importance ($\alpha = 0.137$), has the highest number in performance (88.726). All the results are shown in Table 4.

5. Discussion

5.1 Tourists' perceived sustainability of Lisbon

The literature on perceived sustainability is still scarce, particularly in the tourism field, where various definitions have been formulated. The conceptual frameworks assigned to sustainability differed in the dimensions involved, as some authors considered it a unidimensional construct, namely the environmental or the socio-cultural, and others considered it a multidimensional construct, including two or more dimensions according to the research. Therefore, this study contributes to the literature on perceived sustainability in line with previous research supporting its multidimensional character, particularly the triple bottom line approach. Indeed, it reveals that the economic, environmental, and socio-cultural dimensions are representatives of the general construct. These dimensions are also reflected in the Lisbon Sustainable Tourism Plan 20-23, where three economic, two social, and three environmental goals constitute the city's strategic sustainability propositions (Turismo de Portugal, 2021).

Moreover, this study contributes to the literature on market segmentation as research suggested that the multidimensional concept of perceived sustainability can be used as a segmentation criterion (Sánchez-Fernández et al., 2019). Segmentation studies are vital for creating sustainability strategies and can be used as both marketing and destination management tools. As reported in the literature, it is possible to integrate sustainability into marketing techniques to attract tourists who are already interested in protecting the environment and the destination they are visiting and consequently adopt responsible travel behaviour. This method is called selective marketing, as promotional efforts focus on targeting tourists before they arrive at the destination and can be used as a complement to sustainability strategies (Penagos-Londono et al., 2021). As one of the action lines of Portugal's 2027 strategy is to promote itself as a sustainable destination, the national DMO is strongly oriented towards channels and collaborations useful for this purpose. In fact, Turismo de Portugal has recently started collaborating with Switzerland Tourism and the Slovenian Tourist Board, considered leaders of sustainability in Europe. Not to mention the collaboration with the GSTC certification body Green Destinations during ITB Berlin, with whom they are working to monitor and certify more and more sustainable destinations in the country. However, targeting sustainable travellers could mean receiving guests who are more aware of environmental, socio-cultural and economic sustainability issues and, therefore, more demanding in terms of the offer.

The relationship between travel behaviour and perceived sustainability of a destination has not yet been investigated. Indeed, many studies have focused on understanding how

perceived sustainability influences the travel experience, satisfaction with it, loyalty to the destination and behavioural intentions following travel. Few studies, however, have focused on investigating more deeply what influences perceived sustainability and how these change from one traveller to the other. Segmentation studies of perceived sustainability to date have characterised tourists by socio-demographic or travel-related information. Only one has attempted to divide the sample of tourists according to holiday types, not finding any significant correlation between the variables (Cotrell et al., 2009; Sánchez-Fernández et al.,2016). The novelty of this study lies in exploring the relationship between travel behaviour and perceived sustainability in order to understand the feasibility of using this characterisation in future segmentation studies.

The results show a significant relationship between travel behaviour and perceived sustainability. A descriptive analysis of the results showed that 96.1% of the respondents had more sustainable travel habits than average. These results can be explained by the sample's young age and high level of education. Buffa (2015) studied this phenomenon on 1156 members of the largest Italian association of student and youth tourism, finding that younger generations have a greater environmental sensitivity and that this characteristic influences their travel motivations and behaviour. Ramchurjee and Suresha (2015) similarly demonstrated the influence of education on stronger ecological attitudes. Moreover, the research found good results regarding perceived sustainability: 98.6% of the items for perceived sustainability scored values above average. In fact, on a five-point Likert-type scale, the lowest average grade was related to odours, i.e. "I think the odours in Lisbon are acceptable." with a score of 3.7. Thus, in the research context, tourists engaging in sustainable travel behaviour had a high perception of the city's sustainability levels.

The study also creates a first understanding of how this knowledge can be used as a competitive advantage for Lisbon and other tourism destinations in their marketing and managerial operations. As the city has already adopted consistent measures to tackle sustainability challenges, understanding how tourists perceive its sustainability levels has become crucial to analysing these strategies' success to drive market-oriented improvements (Penagos-Londono et al., 2021). The conceptual framework for sustainability strategies of Sánchez-Fernández et al. (2019) can be applied to the research context in all its phases. The initial phase consists of tourists' assessment of their perceptions of the destination's sustainability, followed by a second phase in which the perceptions of other stakeholders are investigated to gain a complete understanding of the context. This market research process also involves an ongoing mechanism of evaluation and control, which results in a comparison with the actual situation. The third stage is the implementation of innovative strategies that tackle sustainability issues at the destination level. In this way, sustainability becomes an

inclusive and creative process, based on the feedback of stakeholders' perceptions and the active participation of all the stakeholders in the field (Figure 4).

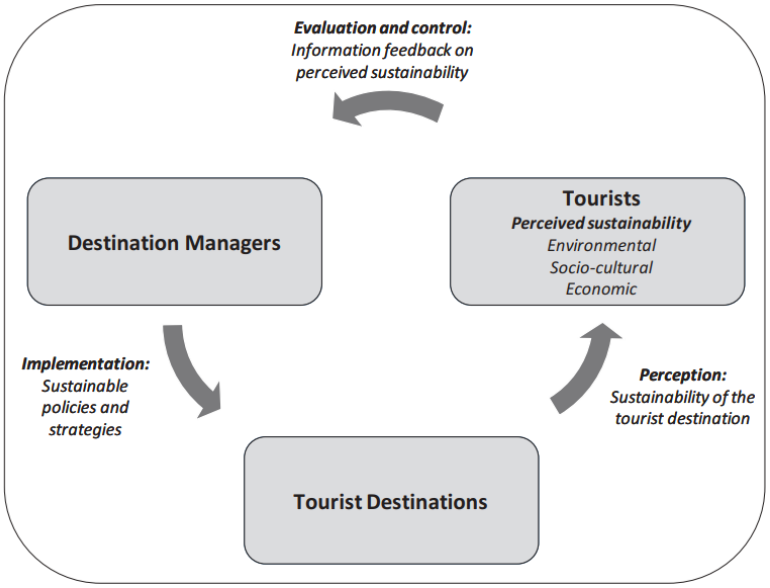

Figure 4. Sánchez-Fernández et al. (2019) conceptual framework for sustainability strategies.

In particular, the study's findings showed lower values for odours, which consequently present a problem compared to the rest of the characteristics assessed in the survey. Odours can originate from different sources, one being waste. In 2013, the Municipal Chamber of Lisbon developed a plan for waste management with a long-term vision to be carried out by 2020. Waste was considered a resource in the strategy, and one of the fundamental pillars for the city's sustainable development was to enhance the recovery of value through circular economy. On the one hand, the aim was to ensure economic and social development, and on the other, to safeguard the quality of the urban environment and human health. In order to reach these goals, the municipality set three strategic objectives, namely the expansion of the network of waste reception centres, the enhancement of recycling through a door-to-door waste collection system and organic waste reception points, and the general reduction of waste production (Câmara Municipal de Lisboa, 2016).

At that time, the city was facing problems with waste management, particularly during peaks of waste production and in the historic neighbourhoods, where the small buildings did not allow for indoor bins, and the door-to-door collection resulted in being unhygienic. Therefore, in 2018, the city implemented a new approach where fixed bins were set in public spaces and connected to underground recycling stations. Circular economy was also considered an essential strategic asset and found practical realisation in domestic and

community composting projects, where free composter bins and stations were distributed around the city and citizens were supported in their adaptation with free training (EC, 2020).

In 2020, the nomination of Lisbon as a European Green Capital served as an opportunity for reporting the actual waste management situation. As the Report states (2020), only 2.5% of household waste ended up in landfills, 71,4% was incinerated to produce energy, and 26,1% was recycled. Incineration is critical in waste management because it usually stops countries from increasing their recycling rates. Indeed, Portugal's percentage of recycled waste is much lower when compared to other European countries such as Italy (79%) or Belgium (77%) (European Commission, 2021).

Overall, the new system led to a higher level of residents' satisfaction and street cleanliness (EC, 2020), yet tourists still perceived it as an issue, as can be seen in the survey's results. These results strengthen the necessity for tourism destinations and national and local governments to include every stakeholder in the definition and monitoring of sustainable initiatives, because their issues and perspectives differ consistently. Residents' opinions and needs have been taken into account by the Lisbon municipality, and their views are also considered in one of the strategic objectives of the Sustainable Tourism Plan 20-23. The goal clearly states that actions aim to ensure that "tourism activity generates a positive impact on resident populations" (Turismo de Portugal, 2021). Businesses are also central to the strategy, as the established actions address their sustainability performance both environmentally and economically. Therefore, this study emphasises the need for destinations to include tourists' perceptions in their tourism plans, as they can be used both as feedback for sustainable actions and in marketing strategies for more effective communications. Since visitors tend to make decisions based on their perceptions rather than tangible facts, it is not enough for a destination to be sustainable if tourists do not perceive it (Sánchez-Fernández et al.,2019).

As far as marketing operations are concerned, one of the main action lines of Portugal's Sustainable Tourism Plan 20-23 is to promote the country as a sustainable destination internationally. In this context, the study could help marketers target specific tourist clusters with tailored communications via selective marketing actions. If a component of sustainability is positively perceived, marketing efforts should highlight this asset and position the destination through its good practices of sustainability. For instance, the results of this study have shown the highest average value for the item "I think the heritage resources (monuments. etc.) in Lisbon are valued", allowing for opportunities to promote this strength. The communication could also include the narration of what the country is doing to enhance the national cultural heritage with the REVIVE Programme, a project started in 2018 and aimed at recovering heritage sites for new tourism uses. Marketing operations are also essential to reinforce the perceived sustainability of destinations in case some elements need improvement. In the case of Lisbon, waste management is still part of the national Tourism

Strategy 2027, which aims at developing efficient management actions in more than 90% of tourism companies. One of the protagonists of this project is the Associação da Hotelaria de Portugal (AHP), which is in charge of developing a platform to monitor and disseminate good practices of green solutions. Therefore, the more actions are implemented, the more improvements the DMO can communicate to specific tourist clusters. Since people are constantly bombarded with information, targeted advertising is usually best when promoting a tourist destination online. Therefore, the relationship between travel behaviour and perceived sustainability contributes to a deeper understanding of the target audience, their attitude towards sustainability and their interests.

5.2 The influence of perceived sustainability on the tourism experience

The present study presents a theoretical model which tests the relationship between perceived sustainability and perceived value, overall satisfaction with the trip, and the two dimensions of loyalty, namely the intentions to recommend and revisit. This research is based on and broadens previous literature on the connection between sustainability and value. Meise and Phillips (2014) analysed how sustainability information contributes to product differentiation in terms of price and value. Communication efforts are vital to a sustainability strategy, yet many companies fail to be transparent on product provenance and supply chains, resulting in consumers' mistrust. This analysis showed that the presence of sustainability-related information corresponds to the attribution of value, resulting in the consumers' willingness to pay more.

In the tourism field, the relationship between perceived sustainability and perceived value also proved significant (Peña & Molina, 2014; Iniesta-Bonillo et al., 2016; Guizzardi et al., 2021). This research extends these findings to the context of European Green Capitals, confirming that the value perceived by tourists determines the extent to which perceived sustainability is a competitive advantage for destinations. Moreover, this is the first study to explore the link between travel behaviour and perceived value. In the analysed data sample, high scores of perceived value corresponded to above-average sustainable travel behaviour. The mediating role of perceived sustainability was also significant in this relationship, showing that the most sustainable travellers perceive a high value of the destination when they also perceive high levels of sustainability. In the research context, these findings can guide the implementation of selective marketing strategies.

Perceived value is also considered a key driver of competitiveness due to its direct influence on tourists' satisfaction (Chi, Lee, Ahn, & Kiatkawsin, 2020; Iniesta-Bonillo et al., 2016; Peña & Molina, 2014; Sun, Chi, & Xu, 2013; Wang, Yang, Han, & Shi, 2017). Strengthening previous research on the topic, the results of this study showed a positive

correlation between the two variables. In contrast, the literature review on the link between perceived sustainability and satisfaction showed mixed results, as Guizzardi et al. (2021) found no significant correlation and Iniesta-Bonillo et al. (2016) did. Therefore, the present study confirms the findings of Iniesta-Bonillo et al. (2016), as a correlation exists between perceived sustainability and satisfaction.

The perception of high sustainability standards in a tourist destination is not sufficient to guarantee loyalty. Based on Guizzardi et al. (2021), this study confirms the absence of a significant direct link between perceived sustainability, intention to recommend and intention to revisit. According to previous research (Wang et al., 2017; Sun et al., 2013), a direct relationship between perceived value and the two dimensions of loyalty have been postulated. However, both proved to be non-significant: Lisbon's high perceived value as a tourist destination does not directly translate into behavioural loyalty intentions. In the research context, the only driver of loyalty was satisfaction, as the direct links between overall satisfaction and intention to recommend and revisit tested significantly. Moreover, satisfaction also plays an essential role as a mediating variable. Perceived sustainability can lead to the intention to recommend and revisit only if tourists are satisfied with their holidays. Results are summarised in Table 5.

Results	
Travel behaviour → Perceived sustainability	Accepted
Travel behaviour → Perceived value	Accepted
Travel behaviour → Perceived sustainability → Perceived value	Accepted
Perceived sustainability → Perceived value	Accepted
Perceived sustainability → Overall satisfaction	Accepted
Perceived sustainability → Intention to recommend	Not Accepted
Perceived sustainability → Intention to revisit	Not Accepted
Perceived sustainability → Overall satisfaction → Intention to recommend	Accepted
Perceived sustainability → Overall satisfaction → Intention to revisit	Accepted
Perceived value → Intention to recommend	Not Accepted
Perceived value → Intention to revisit	Not Accepted
Perceived value → Overall satisfaction	Accepted
Overall satisfaction → Intention to recommend	Accepted
Overall satisfaction → Intention to revisit	Accepted

Table 5. Results

Therefore, several practical implications can be drawn from these results. The evaluation of perceived sustainability offers destinations an opportunity to develop competitive assets that will allow them to become more resilient over time. In recent years, a growing number of people have realised the unsustainability of their leisure activities, including leisure travel. Booking.com's Sustainable Travel Report (2022) showed how this awareness is increasingly spreading among global travellers. The insights collected from over 30.000

respondents across 32 countries confirmed that 50% of them were prompted by recent news on the climate crisis to make more sustainable travel choices. Regarding accommodation, 78% of tourists would like to stay at least once in a sustainable residence in the coming year for both environmental and social reasons: 41% are concerned about the impact on the environment and 31% believe that sustainable accommodations tend to support community development. The preferences of global travellers in terms of choice of location have also changed, with 27% of respondents prioritising less popular destinations during off-peak seasons. Furthermore, once a destination is chosen, 66% of travellers want to experience the local culture, have authentic connections with the traditions and values of the host community and ensure the positive impact of their trip (Booking.com, 2022). As a consequence, service providers and destinations should understand how tourists perceive them in terms of sustainability, so as to be able to adjust their offer to the needs of a different target.

Second, as the climate emergency has been an imminent threat to the planet for a long time, destinations should consider creating a long-term sustainability strategy for future survival. Tourism and climate change cause joint damage to each other. On the one hand, the physical displacement implied by transport, which is essential for tourism, results in 75% of the total greenhouse gas emissions caused by tourism activities (Cavallaro, Galati, & Nocera, 2020). On the other hand, by affecting a destination's climate and environmental assets, climate change can radically transform its tourism offer and impact the tourism system as a whole. Jones & Phillips (2011) argued that coastal tourist destinations owe both their development and their threat to the pleasantness of their climate: in the 1990s, tourism grew dramatically in so-called 'sun, sea and sand' destinations, so much so that the current consequences of this development have made them even more vulnerable to rising sea levels, droughts and heatwaves. These extreme weather events can become the norm in endangered destinations, causing changes in tourism demand: several studies argued that tourism flows would shift to the Mediterranean regions in the milder shoulder seasons, while the northern regions would become more suitable during the summer season (Moreno, 2010). Therefore, municipalities and tourism destinations should plan a strategy that includes sustainability pillars, while evaluating tourists' perceptions as an index to predict travellers' preferences and behavioural patterns.

Including sustainability in tourism development strategies has proven its worth not only to protect the destination itself, its natural and cultural heritage, but also for its influence on the key elements of destination competitiveness. As was found in the results, the perception of a sustainably managed destination influences tourists' satisfaction with the trip and satisfaction is a key driver to loyalty. Achieving consumers' loyalty is one of the most coveted goals of any company due to its high profitability. Serving familiar consumers requires lower costs and lower efforts. Moreover, the brand awareness is higher, consumers become

ambassadors of that brand and the values it represents through positive word of mouth. Therefore, this study could motivate management organisations to justify the costs of changing their way of doing things.

This advantage for companies has already been demonstrated in by the TUI Group's 2017 analysis of 330 hotels holding sustainability certifications. Results showed that certified sustainable hotels deliver higher customer satisfaction as well as better environmental, social and economic performance for the businesses themselves: the data found a consistent reduction in emissions and waste, with a consequent decrease in energy expenditure. Moreover, the percentage of green energy increased, as did the number of local employees (TUI Group, 2018). On the other hand, Bernini et al. (2021) found that sustainability provided less satisfaction than other aspects of the holiday, showing that focusing on this aspect to develop a new strategy might not work if tourists do not prioritise it when choosing a destination. In this case, the study focused on Rimini, a mature destination in Italy characterised by mass tourism where a transition to sustainable tourism management could help to "regenerate and rejuvenate stagnant or declining tourism flows" through new tourism products. Therefore, the study also highlighted the importance of communication in sustaining best practices, as tourists need to be aware of the sustainability initiatives to consider them in their evaluation.

In conclusion, as sustainable tourism is not a niche market anymore, destinations and companies should adapt to the new scenario. To this aim, DMOs should turn to the tourists and investigate their perceptions as a tool for continuous feedback and planning of marketing activities. Being sustainable is not enough to be perceived as such, therefore, it is essential to communicate the destination in different ways to diverse targets in order to generate greater awareness and understanding of the place's value as a sustainable destination.

6. Conclusions

The definition of sustainable tourism underwent several theoretical conceptualisations since the 1990s, culminating in the current widespread understanding of a harmonious coexistence between three subjects: people, planet and profit. However, the world climate crisis and its threat for the environment underlined the urgency of action in tourism, from both the business and the consumer's perspective. Several international organisations tried to create a global sustainability assessment with their model, standards and criteria but the process has been complex due to the diversity characterising destinations worldwide and their different stages of tourism and sustainable development. The GSTC was created in 2010, and became a benchmark for sustainability measurement, including more and more countries willing to make a change in their management operations.

Today, sustainability has become a trend that conceals the danger of greenwashing, a practice in which misleading information is provided to create a false sustainable image of a company or destination. Therefore, sustainable destinations need to go beyond communication to further prove to tourists the importance of their sustainable initiatives in order to gain a real competitive advantage. As travellers base their decisions on perceptions rather than tangible facts, it is necessary for destinations to evaluate their perceptions of sustainability and to understand what factors influence the final feedback. For this reason, the present study investigated the relationship between travel behaviour and perceived sustainability to explore the possibility of using it as a variable for market segmentation. Moreover, the study aimed at reinforcing the importance of perceived sustainability in the overall tourism experience by testing its relationship with perceived value, satisfaction, and loyalty.

The quantitative analysis was carried out in Lisbon, the capital city of Portugal. Lisbon was nominated a European Green Capital in 2020 and has been carrying out sustainability initiatives for the past ten years, starting from its impressive reduction in CO_2 emissions and its following improvements in green energy, waste management and alternative transportation. The survey was distributed to 203 international tourists, and the relationships between constructs were tested through partial least squares structural equation modelling (PLS-SEM). Findings showed a correlation between travel behaviour and perceived sustainability, paving the way to further market segmentation studies where tourists are clustered according to their travel behaviour. Perceived sustainability also positively influenced perceived value and satisfaction, while it did not influence behavioural intention to recommend and revisit. In addition, the perceived value was investigated, and results show a significant relationship with satisfaction. Satisfaction proved to be the only driver of loyalty,

also when considered as a mediating variable between perceived sustainability and intentions to recommend and revisit.

The study builds on past literature on perceived sustainability for a number of reasons. First, it extends the line of work that supports the multidimensionality of the construct of perceived sustainability using the environmental, socio-cultural and economic dimensions. Second, it expands the research on market segmentation by confirming a relationship between travel behaviour and perceived sustainability, and between travel behaviour and perceived value which have never been investigated before. Third, the analysis broadens the scope of the research to the context of European Green Capitals, which presents completely different characteristics from the other destinations studied in the previous literature.

Three further practical implications can be drawn from this study. Understanding tourists' perceptions is essential to analyse sustainability strategies, promoting market-oriented improvements or including new projects based on the feedback received. Marketing efforts can also target specific groups of tourists based on their perceptions, e.g. by promoting the destination's best-perceived assets. Furthermore, as travellers' perceptions vary greatly from one tourist to another, selective marketing strategies could ensure more accurate communications and better rates of return on investment. In conclusion, a high perception of sustainability is a competitive advantage for destinations not only because it influences value perception, satisfaction and indirectly loyalty intentions, but also because travellers are becoming increasingly aware of and demanding sustainability. In a world scarred by the climate crisis, tourism companies must become more sustainable, if not for the good of the planet, then for the good of their business.

7. Limitations and Future Research

This study has several limitations which should be deepened in future research. It is essential to underline that the research has an exploratory nature, and is aimed at finding a link between travel behaviour and perceived sustainability as a preliminary stage to characterise market segmentation studies further. As of now, studies using perceived sustainability as a market segmentation criterion mostly used sociodemographic and trip-related information, and only one study characterised tourists according to their type. Therefore, investigating how travel behaviour influences perceptions of a destination's sustainability would offer an unexplored perspective to the literature on the subject.

Moreover, the findings must be cautiously interpreted for three main reasons. First of all, results are based on perceptual data, which is "highly subjective, situational and dependent on people's needs, values and expectations" (Sánchez-Fernández et al., 2019). Second, the analysis used convenience sampling, given the need to have a reasonable number of

responses within a limited time frame. Further studies should use probability sampling procedures, as they allow to statistically estimate the target population from the research sample (Saunders, Lewis, & Thornhill, 2019). Thirdly, the time frame used in the inclusion criteria did not allow for an accurate representation of the actual situation in the city but only for a general image of the last five years. In order to use data as feedback for sustainability initiatives, future research should refer to the present time and use on-site data collection to get a clearer picture of a specific moment. In this way, tourists would have a fresh memory of their perceptions that can be recalled immediately.

Another limitation is represented by the perceived sustainability scale used in the measurement, which should be refined in future studies. The scale was taken from Sánchez-Fernández et al. (2019), where it was used as a preliminary stage scale that could not yet be generalised to every type of destination. For instance, Guizzardi et al., (2021) proved how rural areas require adopting a scale consistent with the specific research context, as some items of the universal model are not relevant everywhere. Different types of destinations have different assets to evaluate and are in various stages of sustainable development. Therefore, the scale of perceived sustainability should be adapted to each of them accordingly.

Finally, as the respondents were asked to indicate their sustainable behaviour, the answers could be influenced by social desirability biases. Juvan and Dolnicar (2016) analysis' of the measurement of environmentally friendly tourist behaviour found that the only optimal measure is the actual behaviour. Indeed, the use of prompted closed questions increases the risk of contamination of responses by social desirability bias, leading to less accurate results on the real tourist behaviour. Thus, future studies should prefer behavioural observation or unprompted open-ended questions together with items measuring the respondents' tendency to feel social desirability when referring to environmental topics.

As the present study was exploratory, future research should further investigate these variables to understand how tourists can be segmented according to their different sustainability perceptions and how their travel behaviour influences them. Therefore, a latent class analysis should be conducted to use the results as guidelines for management and marketing activities. In order to fully adopt the conceptual framework for sustainability strategies of Sánchez-Fernández et al. (2019), studies should collect data on the sustainability perceptions of residents and service providers in order to compare the different perspectives and get a comprehensive view of the overall situation. This process would also be useful for the DMOs and the municipality, which would receive inclusive feedback on their sustainable operations.

In the context of Lisbon, future research could obtain a more in-depth picture of its sustainability levels by dividing the analysis into neighbourhoods. This approach would allow a deeper understanding of the differences between areas, their specific problems and possible

improvements. Furthermore, it would be interesting to extend the study to other regions of Portugal and investigate, for example, the differences between the capital and smaller cities, but also between coastal and inland areas. Tourism activities in Portugal are mainly concentrated on the coast, so this approach would specifically highlight the influence of the tourism industry on the perceived sustainability of the studied sites. Since one of Portugal's main strategic action lines is to promote the country as a sustainable destination, future studies could also focus on perceived digital sustainability. Firstly, research would require the creation of a conceptual framework for this construct to be used on an international scale. Secondly, a comparison between perceived digital and actual sustainability would offer useful implications for marketers to understand whether digital perceptions have a direct link to the intention to visit the destination.

Finally, future research could contribute to the creation of a comparative study among other European Green Capitals, to expand the analysis outside the national context and create a benchmark that can guide future sustainability strategies.

References

Balcetis, E., & Dunning, D. (2006). See What You Want to See: Motivational Influences on Visual Perception. *Journal of Personality and Social Psychology*, *91*(4), 612-625.

Bernini, C., Emili, S., & Vici, L. (2021). Are mass tourists sensitive to sustainability? *Tourism Economics*, *27*(7), 1375-1397.

Blancas, F. J., González, M., Lozano-Oyola, M., & Pérez, F. (2010). The assessment of sustainable tourism: Application to Spanish coastal destinations. *Ecological Indicators*, *10*(2), 484-492.

Booking.com. (2021). *Sustainable Travel Report.* Amsterdam, The Netherlands: Booking.com.

Bricker, K. S., & Schultz, J. (2011). Sustainable Tourism in the USA: A Comparative Look at the Global Sustainable Tourism Criteria. *Tourism Recreation Research*, *36*(3), 215-229.

Buffa, F. (2015). Young Tourists and Sustainability. Profiles, Attitudes, and Implications for Destination Strategies. *Sustainability*, *7*(10), 14042-14062.

Causevic, S., & MarkNeal. (2019). The exotic veil: Managing tourist perceptions of national history and statehood in Oman. *Tourism Management*, *71*, 504-517.

Cavallaro, F., Galati, O. I., & Nocera, S. (2020). Climate change impacts and tourism mobility: A destination-based approach for coastal areas. *International Journal of Sustainable Transportation*, *15*(6), 456-473.

Chi, X., Lee, S. K., Ahn, Y.-j., & Kiatkawsin, K. (2020). Tourist-Perceived Quality and Loyalty Intentions towards Rural Tourism in China. *Sustainability*, *12*(9), 1-18.

Choi, H. C., & Sirakaya, E. (2006). Sustainability indicators for managing community tourism. *Tourism Management*, *27*(6), 1274-1289.

Choi, S., & Ng, A. (2011). Environmental and Economic Dimensions of Sustainability and Price Effects on Consumer Responses. *Journal of Business Ethics*, *104*, 269-282.

Cocklin, C. R. (1989). Methodological Problems in Evaluating Sustainability. *Environmental Conservation*, *16*(4), 343-351.

Commission, E. (2021). *Cohesion in Europe towards 2050: Eighth report on economic, social and territorial cohesion.* Luxemburg: Publications Office of the European Union.

Cottrell, S. P., Vaske, J. J., & Roemer, J. M. (2013). Resident satisfaction with sustainable tourism: The case of Frankenwald Nature Park, Germany. *Tourism Management Perspectives*, *8*, 42-48.

Cottrell, S., Duim, R. v., Ankersmid, P., & Kelder, L. (2009). Measuring the Sustainability of Tourism in Manuel Antonio and Texel: A Tourist Perspective. *Journal of Sustainable Tourism, 12(5),* 409-431.

Development, W. C. (1987). *Our Common Future.* United Nations.

Dias, Á., Silva, G. M., Patuleia, M., & González-Rodríguez, M. R. (2020). Developing sustainable business models: local knowledge acquisition and tourism lifestyle entrepreneurship. *Journal of Sustainable Tourism*, 1-20.

EC. (2020). *LISBON – European Green Capital 2020.* Luxembourg: Publications Office of the European Union.

Fennell, D. A., & Smale, B. J. (1992). Ecotourism and Natural Resource Protection: Implications of An Alternative Form of Tourism for Host Nations. *Tourism Recreation Research*, *17*(1), 21-32.

Garson, G. D. (2016). *Partial Least Squares: Regression & Structural Equation Models.* Asheboro, USA: Statistical Associates Publishing.

Group, T. (2018). *2018 Sustainability Report.* TUI Group.

GSTC. (2019). *GSTC Destination Criteria 2.0.* Washington, DC: The Global Sustainable Tourism Council.

GSTC. (2022, April 04). *History of GSTC*. Retrieved from GSTC: https://www.gstcouncil.org/about/gstc-history/

Guizzardi, A., Stacchini, A., & Costa, M. (2021). Can sustainability drive tourism development in small rural areas? Evidences from the Adriatic. *Journal of Sustainable Tourism, 30*(6), 1280-1300.

Hair, J. F., Hult, G. T., Ringle, C. M., Sarstedt, M., Danks, N. P., & Ray, S. (2021). Evaluation of Reflective Measurement Models. In J. F. Jr., G. T. Hult, C. M. Ringle, M. Sarstedt,

N. P. Danks, & S. Ray, *Partial Least Squares Structural Equation Modeling (PLS-SEM) Using R* (pp. 75-90). Springer.

He, X., & Hu, Y. (2018). Consumer purchase intention of electric vehicles in China: The roles of perception and personality. *Journal of Cleaner Production*, *204*, 1060-1069.

Herbes, C., & Ramme, I. (2018). Consumer attitudes towards biobased packaging - A cross-cultural comparative study. *Journal of Cleaner Production*, *194*(1), 203-218.

Holmes, M. R., Dodds, R., & Frochot, I. (2021). At Home or Abroad, Does Our Behavior Change? Examining How Everyday Behavior Influences Sustainable Travel Behavior and Tourist Clusters. *Journal of Travel Research*, *60*(1), 102-116.

Iniesta-Bonillo, M. A., Sánchez-Fernández, R., & Jiménez-Castillo, D. (2016). Sustainability, value, and satisfaction: Model testing and cross-validation in tourist destinations. *David Jiménez-Castillo*, *69*(11), 5002-5007.

Jones, A., & Phillips, M. (2011). Introduction - Disappearing Destinations: Current Challenges and Polemics. In A. Jones, & M. Phillips, *Disappearing Destinations: Climate Change and Future Challenges for Coastal Tourism* (pp. 1-9). UK: CABI.

Juvan, E., & Dolnicar, S. (2014). The attitude–behaviour gap in sustainable tourism. *Annals of Tourism Research*, *48*, 76-95.

Juvan, E., & Dolnicar, S. (2016). Measuring environmentally sustainable tourist behaviour. *Annals of Tourism Research*, *59*, 30-44.

Kim, M.-S., Thapa, B., & Kim, H. (2017). International Tourists' Perceived Sustainability of Jeju Island, South Korea. *Sustainability, 10*(73), 1-13.

Ko, T. G. (2005). Development of a tourism sustainability assessment procedure: a conceptual approach. *Tourism Management*, *26*(3), 431-445.

Laroche, M., Bergeron, J., & Barbaro-Forleo, G. (2001). Targeting consumers who are willing to pay more for environmentally friendly products. *Journal of Consumer Marketing*, *18*(6), 503-520.

Lee, Y., & Lin, C. A. (2022). The effects of a sustainable vs conventional apparel advertisement on consumer perception of CSR image and attitude toward the brand. *Corporate Communications: An International Journal*, *27*(2), 388-403.

Lisboa, C. M. (2016). *Plano Municipal de Gestão de Resíduos do Município de Lisboa | 2015-2020.* Lisbon.

López, A. M. (2021, October 6). *Inbound overnight tourism volume in Portugal 2015-2020*. Retrieved from Statista: https://www.statista.com/statistics/398360/number-of-international-visitors-and-overnight-stays-in-portugal/

Martín, H. S., & Bosque, I. A. (2008). Exploring the cognitive–affective nature of destination image and the role of psychological factors in its formation. *Tourism Management*, *29*(2), 263-277.

Mathew, P. V., & Sreejesh, S. (2017). Impact of responsible tourism on destination sustainability and quality of life of community in tourism destinations. *Journal of Hospitality and Tourism Management*, *31*, 83-89.

Meise, J. N., & Phillips, D. M. (2014). Feed them facts: Value perceptions and consumer use of sustainability-related product information. *Journal of Retailing and Consumer Services*, *21*(4), 510-519.

Milanesi, M., Kyrdoda, Y., & Runfola, A. (2020). How do you depict sustainability? An analysis of images posted on Instagram by sustainable fashion companies. *Journal of Global Fashion Marketing*, *13*(2), 101-115.

Mohr, L. A., Webb, D. J., & Harris, K. E. (2005). Do Consumers Expect Companies to be Socially Responsible? The Impact of Corporate Social Responsibility on Buying Behavior. *Journal of Consumers Affairs*, *35*(1), 45-72.

Moreno, A. (2010). Mediterranean Tourism and Climate (Change): A Survey-Based Study. *Tourism and Hospitality Planning & Development*, *7*(3), 253-265.

Nilnoppakun, A., & Ampavat, K. (2016). Is Pai a Sustainable Tourism Destination? *3rd Global Conference on Business, Economics, Management and Tourism* (pp. 262-269). Rome, Italy: Elsevier.

Nukhu, R., & Singh, S. (2020). Perceived Sustainability of Seasonal Employees on Destination and Work - A Study in the Tourism Industry. In S. Vanka, M. B. Rao, S. Singh, & M. R. Pulaparthi, *Sustainable Human Resource Management: Transforming Organizations, Societies and Environment* (pp. 213-225). Springer Nature Singapore Pte Ltd.

Oliver, R. L. (1997). *Satisfaction: A behavioral perspective on the consumer.* New York: McGraw-Hill Irwin.

Passafaro, P., Cini, F., Boi, L., D'Angelo, M., Heering, M. S., Luchetti, L., . . . Triolo, M. (2015). The ''sustainable tourist'': Values, attitudes, and personality traits. *Tourism and Hospitality Research*, *15*(4), 1-15.

Peña, A. I., & Molina, D. M. (2014). The perceived value of the rural tourism stay and its effect on rural tourist behaviour. *Journal of Sustainable Tourism*, *20*(8), 1045-1065.

Penagos-Londono, G. I., Rodriguez–Sanchez, C., Ruiz-Moreno, F., & Torres, E. (2021). A machine learning approach to segmentation of tourists based on perceived destination sustainability and trustworthiness. *Journal of Destination Marketing & Management, 19*, 1-9.

Portugal, T. d. (2021). *Tourism Strategy 2027.* Retrieved from Turismo de Portugal: https://www.turismodeportugal.pt/en/Turismo_Portugal/Estrategia/Estrategia_2027/Pages/default.aspx

Prayaga, G., Suntikul, W., & Agyeiwaah, E. (2018). Domestic tourists to Elmina Castle, Ghana: motivation, tourism impacts, place attachment, and satisfaction. *Journal of Sustainable Tourism, 28*(12), 2053-2070.

Rahman, M. K., Gazi, M. A., Bhuiyan, M. A., & Rahaman, M. A. (2021). Effect of Covid-19 pandemic on tourist travel risk and management perceptions. *PLOS ONE, 16*(9), 1-18.

Ramchurjee, N. A., & Suresha, S. (2015). Are Tourists' Environmental Behavior Affected by Their Environmental Perceptions and Beliefs? *Journal of Environmental and Tourism Analyses*, *3*(1), 26-44.

Ringle, C. M., Wende, S., & Becker, J.-M. (2015). *https://www.smartpls.com.* Boenningstedt: SmartPLS 3.

Sánchez-Fernández, R., Iniesta-Bonillo, M. Á., & Cervera-Taulet, A. (2019). Exploring the concept of perceived sustainability at tourist destinations: a market segmentation approach. *Journal of Travel & Tourism Marketing*, *36*(2), 176-190.

Sánchez-Fernández, R., Iniesta-Bonillo, M.-A., & Cervera-Taulet, A. (2016). Environmental Sustainability in the Mediterranean Destinations: a latent class segmentation analysis. *Environmental Engineering and Management Journal* , *15*(7), 1501-1510.

Sarstedt, M., Ringle, C. M., & Hair, J. F. (2021). Partial Least Squares Structural Equation Modeling. In C. Homburg, M. Klarmann, & A. Vomberg, *Handbook of Market Research.* Springer.

Saunders, M. N., Lewis, P., & Thornhill, A. (2019). *Research Methods for Business Students - Eight Edition.* London: Pearson.

Schianetz, K., Kavanagh, L., & Lockington, D. (2007). Concepts and Tools for Comprehensive Sustainability Assessments for Tourism Destinations: A Comparative Review. *Journal of Sustainable Tourism*, *15*(4), 369-389.

Sharma, N., & Rickly, J. (2019). 'The smell of death and the smell of life': authenticity, anxiety and perceptions of death at Varanasi's cremation grounds. *Journal of Heritage Tourism*, *14*(5-6), 466-477.

Simo-Kengne, B. D. (2021). Tourism growth and environmental sustainability: trade-off or convergence?. *Environment, Development and Sustainability, 24,* 8115–8144.

Solís-Radilla, M. M., Hernández-Lobato, L., Callarisa-Fiol, L. J., & Pastor-Durán, H. T. (2019). The Importance of Sustainability in the Loyalty to a Tourist Destination through the Management of Expectations and Experiences. *Sustainability, 11*(15), 1-23.

Solomon, M. R., Bamossy, G. J., Askegaard, S. T., & Hogg, M. K. (2016). *Consumer behaviour : a European perspective.* Harlow: Pearson Education Limited.

Sun, X., Chi, C. G.-Q., & Xu, H. (2013). Developing destination loyalty: the case of Hainan island. *Annals of Tourism Research*, *43*, 547-577.

Telfer, D. J., & Sharpley, R. (2008). Tourism and sustainable development. In R. S. David J. Telfer, *Tourism and Development in the Developing World* (pp. 30-55). London: Routledge.

The Berlin Declaration, o. B. (1997). International Conference of Environment Ministers on Biodiversity and Tourism. Berlin.

Tölkes, C. (2018). Sustainability communication in tourism – A literature review. *Tourism Management Perspectives*, *27*, 10-21.

Torres-Delgado, A., & Palomeque, F. L. (2012). The growth and spread of the concept of sustainable tourism: The contribution of institutional initiatives to tourism policy. *Tourism Management Perspectives*, *4*, 1-10.

Torres-Delgado, A., & Saarinen, J. (2014). Using indicators to assess sustainable tourism development: a review. *Tourism Geographies*, *16*(1), 31-47.

UN. (2015). *Transforming our world: the 2030 Agenda for Sustainable Development.* Retrieved from United Nations: https://sdgs.un.org/2030agenda

Wang, B., Yang, Z., Han, F., & Shi, H. (2017). Car Tourism in Xinjiang: The Mediation Effect of Perceived Value and Tourist Satisfaction on the Relationship between Destination Image and Loyalty. *Sustainability, 9*(22), 1-16.

WTTC. (2021). *Portugal: 2021 Annual Research: Key Highlights.* Retrieved from Economic Impact Reports: https://wttc.org/Research/Economic-Impact

Zeithaml, V. A. (1988). Consumer Perceptions of Price, Quality, and Value: A Means-End Model and Synthesis of Evidence. *Journal of Marketing, 53*(2), 2-22.

Appendix A – Measurements

Travel Behaviour

TRBEH_12	Go to places mostly locals go to (or very few tourists).
TRBEH_13	Eat local foods and specialties in locally owned restaurant (instead of international food in known branded places).
TRBEH_16	Intentionally interact with locals.
TRBEH_18	Turn off the lights when you leave your accommodation.

Perceived Sustainability

PRSUS_1	I have observed that the municipal area is investing to attract tourists.
PRSUS_5	I think the heritage resources (monuments. etc.) in the municipal area are valued.
PRSUS_6	I think the cultural resources (festivities. traditions etc.) in the municipal area are valued.
PRSUS_10	I think odors in the municipal area is acceptable.

Perceived Value

PRVAL_1	Considering the money I spent, it is worth visiting this destination.
PRVAL_2	Considering the time I spent, it is worth visiting this destination.
PRVAL_3	Considering the effort I made, it is worth visiting this destination.
PRVAL_4	Overall, it is worth visiting this destination.

Overall Satisfaction

OSAT_1	I am sure it was the right thing to visit this destination.
OSAT_2	I am satisfied with the decision to visit this destination.
OSAT_3	I truly enjoyed the experience provided by this destination.

OSAT_4 I feel good about the decision to visit this destination.

Intention to Revisit

INTRET_1 I would return to this tourist destination in my holidays/in the future.

INTRET_2 I would choose to holiday in this tourist destination again.

INTRET_3 I am loyal to this tourist destination.

Intention to Recommend

INTWOM_1 I would encourage others to visit this tourist destination.

INTWOM_2 I would recommend my family and friends visit this tourist destination.

INTWOM_3 I will say positive things about this tourist destination to other people.