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Guest Editors
Tonino Pencarelli, Umberto Martini and Alfonso Vargas Sanchez

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Aphorisms

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1. *You can't go back and change the beginning, but you can start where you are and change the ending*
   (C.S. Lewis)

2. *Do not quench your inspiration and your imagination; do not become the slave of your model*
   (Vincent van Gogh)

3. *Our lives begin to end the day we become silent about things that matter*
   (Martin Luther King, Jr.)

4. *If life is a train, enthusiasm is the locomotive*
   (Anonymous)

5. *Worry about what others think and you will always be their prisoner*
   (Lao Tzu)

In ricordo del prof. Renato Mele

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Paola Adinolfi - Antonio Botti - Daniele Cerrato
Maria Ciasullo - Antonio Coviello - Rosalba Filosa
Salvatore Esposito De Falco - Roberto Papa - Roberto Parente
Marco Pellicano - Gabriella Piscopo - Paolo Popoli
Luigi Maria Sicca - Alessandra Storlazzi - Orlando Troisi
Francescopaolo Ventriglia - Massimiliano Vesci

Professore ordinario di Economia e Gestione delle Imprese presso la Facoltà di Economia dell'Università degli Studi di Salerno. A questa Università ha dedicato la gran parte del suo impegno accademico, che lo ha portato a divenire prima Direttore del Dipartimento di Studi e Ricerche Aziendali e poi Preside della Facoltà di Economia. Ha profuso impegno ed entusiasmo per l'organizzazione della didattica, presiedendo l'Area Didattica e coordinando in diverse occasioni la riformulazione dell'offerta formativa. In tale difficile attività ha sempre posto al centro l'interesse degli studenti.

Nella sua lunga carriera ha coltivato e seguito un gruppo numeroso di allievi, incoraggiandoli a studiare le Amministrazioni e le Aziende Pubbliche. Questo è stato il suo campo di ricerca preferito, che ha promosso sul piano scientifico nazionale ed internazionale animando una comunità di colleghi. È stato condirettore della rivista Azienda Pubblica, membro del comitato scientifico di Azienditalia e Presidente di Svimap (Network Universitario per lo Sviluppo del Management nell'Area Pubblica). Presso l'Università degli Studi di Salerno ha istituito e diretto prima la Scuola di Specializzazione in Economia e Diritto della Pubblica Amministrazione e poi il Dottorato di ricerca in Economia e Direzione delle Aziende Pubbliche, divenendone il primo coordinatore. Successivamente, con passione e attingendo ad una vasta rete di relazioni, ha avviato e diretto il Master in General Management della Pubblica Amministrazione. Tutti questi sforzi sono culminati nell'istituzione del Centro Interdipartimentale per la Ricerca e l'alta formazione nella Pubblica Amministrazione (CIRPA), del quale ha assunto la direzione.

L'impegno nel campo della ricerca sulle aziende ed amministrazioni pubbliche è stato quindi totale e contraddistinto da uno spiccato interesse per le ricadute pratiche della stessa, con l'intento di valorizzarne la capacità d'incidere significativamente nella vita sociale.

Non a caso il suo impegno lo ha portato a dirigere per oltre dieci anni anche l'ISMEZ (Istituto di Studi e Ricerche sul Settore Terziario) di Salerno.

Per stimolare quello che oggi definiremmo "public engagement", ha diretto per lungo tempo la Collana di Studi sulle Imprese di Pubblici Servizi edita dalla Cedam di Padova.

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La sua attività scientifica è stata appassionata durante tutta la carriera. Scorrendo le sue pubblicazioni scientifiche, si riscontra in maniera chiara la volontà di sviluppare le sue idee in sintonia con i suoi allievi, che ha sempre coinvolto nei suoi lavori.

Ha molto amato l'Ateneo di Salerno, che ha contributo a sviluppare. Si è preoccupato di far crescere tutte le aree e non ha mai pensato nemmeno una volta di cercare una vita più semplice in una sede più vicina.

Il legame con un gruppo di allievi è anche un legame personale, che inevitabilmente porta a condividere le gioie, i successi accademici e a volte qualche delusione. Il sacrifico, la tenacia, la passione sono i valori di cui era portatore, che oggi rappresentano una grande eredità per i suoi allievi. Lascia il ricordo del maestro e dell'uomo che ha amato circondarsi di giovani e che ha voluto festeggiare con tutti noi i suoi 80 anni. È questo il ricordo più vicino del professore Renato Mele, il ricordo di un sorriso lieto e soddisfatto in un momento di festa e di celebrazione dei tanti affetti coltivati durante la sua carriera.

In questi casi dire "grazie" può sembrare banale, ma "grazie" probabilmente è la parola più giusta per esprimere il sentimento in questo momento che ci vede sicuramente più soli nell'affrontare le sfide quotidiane. Grazie per aver pensato ai tuoi allievi, soprattutto quelli più giovani, come fa un buon padre: fino alla fine!

Paola Adinolfi - Antonio Botti - Daniele Cerrato - Maria Ciasullo
Antonio Coviello - Rosalba Filosa - Salvatore Esposito De Falco
Roberto Papa - Roberto Parente - Marco Pellicano - Gabriella Piscopo
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Guest editorial: Management, social responsibility and sustainability in tourism: issues and practices

Tonino Pencarelli - Umberto Martini - Alfonso Vargas-Sánchez

The idea of launching a call to create a special issue on the subjects of sustainability and social responsibility in tourism was born during a meeting with the thematic group "Tourism and Culture Management" of the Italian Management Society (SIMA) on the occasion of the conference of Rome La Sapienza organized by SIMA and Sinergie, Italian Journal of Management, on 20-21 June 2019.

The theme of the special issue was initially also inspired by the topics covered during that Conference, the title of which was "Management and sustainability: creating shared value in the digital era". In reality, the theme of sustainability in tourism has long been common to scholars of tourism management and fascinates us as curators of this special issue too. Indeed, we are aware that the problems of global pollution, climatic upheavals, population health and, more generally, all the challenges placed at the center of the 2030 agenda of the United Nations Organization (UN) are fundamental for orienting economic activities towards the paradigm of sustainability. A paradigm that suggests the managerial conduct of companies aimed at respecting the three dimensions of sustainability, that are the environmental, social and economic sustainability and at pursuing therefore strategies of corporate social responsibility. In tourism, the issue of sustainability is sometimes considered an oxymoron, as it is inevitable that the movement of enormous flows of people from their places of residence to tourist destinations will not always have positive impacts on the environment, on the social communities and on the creation of economic value for the players of the sector.

In the field of tourism, in fact, the challenge of sustainability and the need to develop a management for sustainability are of extreme relevance, due to the various impacts of mass tourism on cities, territories, landscapes and, more in general, on eco-systems. In many cases, tourism affects social stability and the vision of the local residents about its role, given the problems and the damages due to the uncontrolled mass-tourism impacts on the local community and on the environment. As a consequence, the matter of sustainability concerns both firms and territories, many of which are testing new organizations based on public/private partnerships with the aim to include the consideration of the social and environmental impacts in the evaluation of their economic decisions. Only a deep and integrated consideration of the impacts of tourism as a whole in a multi-disciplinary approach, appears to guarantee the sustainability of tourism, both in cities and in territorial destinations based on natural resources and landscape.

Given the evolution of tourism and the rise of new sensibilities in the current society, this special issue is aimed at collecting papers concerning theoretical frameworks, applications and/or good practices in order to build up an agenda dedicated to the *management for sustainability*. The domain of sustainability, in fact, is having a huge attention both in the scientific and in the managerial debate, looking for approaches, models and techniques able to drive business decisions towards a wider consideration of the social and the environmental responsibility of the firms.

In the last two decades, the most authoritative international literature on sustainable tourism has underlined the undisputable link between the sustainability of tourism and the presence of an adequate strategy, capable of defining limits, rules and good practices both for tourists, and for tourist firms. Concepts such as "limit", "regulation", "overtourism", "flow control", "green strategies & behaviours", have acquired a new centrality in the field of both the destination and the firm's management. The future of tourism, and, above all, the preservation and valorisation of territories, landscapes, cultures and tourist attractions, depends always more often on the capacity to develop coherent and appropriate strategies, able to combine the three vertices of the sustainability triangle: economy, society and environment are not in competition, but must be interconnected in a wide approach to the management of tourism.

The special issue received various contributions, of which 7 were deemed eligible for publication in the Sinergie Journal, after a double-blind referee procedure.

The contributions proposed by the authors can be framed in two macro-thematic strands, which reflect distinct perspectives of investigation. Most of the papers take the perspective of the tourist destination, providing useful food for thought and study on the role of environmental resources (Franch *et al.*, and Goffi *et al.*), of the local community (Basile *et al.*), and of events (d'Angella *et al.*) for the competitiveness of the territories with a tourist vocation. A territorial perspective is also adopted in the study by Cerquetti and Montella, who seek to link the sustainability needs of the Italian museum system with the objectives set by the UN 2030 agenda.

Only in one paper the research focuses its attention on social responsibility strategies pursued by hotel companies, trying to understand the link between the orientation towards sustainability and the ability to attract customers. The paper to which we refer follows next.

Stefano Franco, Matteo Caroli and Giacomo Del Chiappa, in their paper "*The impact of hotel sustainability practices on tourist intentions to book hotel rooms*", aim to understand whether the hotels' commitment to social sustainability practices is a factor that influences the tourists' intentions to book a hotel room. The empirical analysis was based on a between-subjects experimental approach, applied to a sample of 451 Italians. A t-test and a multiple regression analysis were then adopted to measure whether social responsibility affects the customers' intentions to book. Findings show that customers are more willing to book rooms at hotels committed to social responsibility activities than at those that are not, and suggest to hotel marketers to undertake social responsibility practices to elicit consumers' intentions to make hotel reservations, thus sustaining hotel performance and local community wellbeing.

The theme of sustainability of tourist destinations is what unites the subsequent research contributions.

Mariangela Franch, Paola Masotti, Federica Buffa and Francesca Meo, in their research paper "*The role of the cable car in sustainable mobility: management choices and an assessment of environmental sustainability. The Trento-Monte Bondone project*", analyse the best context and practices for the design of a sustainable cable car mobility, taking two benchmarks in the alpine area. As a result, a number of key dimensions and best practices for the implementation of this kind of projects were identified, with regard to their sustainability. A particularly innovative feature of this research is the application of the LCA (Life Cycle Assessment) methodology for the calculation of the environmental impact of Trento's project.

Gianluca Goffi, Linda Osti and Oswin Mauer, in their paper "*Quality and preservation of local resources in coastal destinations from a tourists' perspective. The case of Hua Hin*", investigate whether the quality and preservation of natural and cultural resources meet tourists' expectations and if they have an influence on their satisfaction and re-visiting intentions. To discuss this topic, a quantitative questionnaire was administered to European tourists in Hua Hin, one of the most visited coastal destinations in Thailand. To identify and analyse possible effects, the importance-performance analysis, principal component analysis and structural equation modelling have been employed. Results show that the visitors' expectations in terms of quality and preservation of local resources are not adequately met, thus should be improved. Findings also show that they affect the tourists' satisfaction and intention to return. In this sense, the study suggests that the quality and preservation of local resources are issues on which coastal destinations in developing countries should concentrate and invest in order to meet a growing tourists' demand for sustainability.

Gianpaolo Basile, Mario Tani, Mauro Sciarelli and Maria Antonella Ferri, in "*Community participation as a driver of sustainable tourism. The case of an Italian village: Marettimo Island*", investigate an often-overlooked aspect in the debate on the sustainability and competitiveness of tourist destinations: the role of the local community, using the case study of the Island of Marettimo, a small village in the south of Italy. In line with the literature, the research highlights that community participation in a destination is crucial for the creation of an enjoyable tourism offer for both tourists and residents, fostering experiential value creation processes linked to the enjoyment of authentic and valuable experiences for tourists, economic and social for the residents of the destination, which will benefit from the positive word of mouth of visitors. The original character of the work is found in highlighting the strategic nature of the role of community participation particularly in those areas with environmental and anthropological resources that can create tourist place attachment but, at the same time, are characterized by depopulation and limited welfare conditions as well. These localities are often qualified as marginal, while thanks to their capacity for social innovation based on the widespread involvement of stakeholders, they can become one of the main factors of differentiation and competitiveness of regional and national tourist destinations.

Francesca d'Angella, Martha Friel, Angelo Miglietta, and Ruggero Sainaghi, in their work "*Cultural events for a sustainable tourism development in urban destination: the case of the Milan's week*", highlight the role of the small cultural events for the sustainable development of destinations, helping to provide a more complete vision of the role of events in cities, where the focus is often exclusively on large events, neglecting micro-events. The research indicates the impact generated by a series of micro-medium cultural events in an urban destination (Milan) both on the performance of the hotels and on the seasonal structure in order to promote sustainable tourism development. The empirical survey used a mixed method, combining a quantitative analysis of the daily trend of a destination with a desk analysis of press interviews with local stakeholders. The paper shows that small cultural events in the city of Milan play a positive role not only in terms of their ability to attract large flows of overnight visitors, but rather in terms of the attractiveness of the offer for specific segments of high-value tourists. Furthermore, the study reveals that the events also play an important role on sustainable urban development in terms of inclusiveness and the promotion of cognitive capital, two central aspects for positioning Milan as a lively and attractive city in the international cultural tourism segment.

Mara Cerquetti and Marta Maria Montella, through their paper "*Meeting Sustainable Development Goals. The case of the National Museum System (Italy)*", start from the observation that the literature on sustainable management processes of museums and cultural heritage is still scarce, and focus their attention on the issue by investigating whether and how museum evaluation systems currently take sustainability into account. The research, through a conceptual approach, compares the Sustainable Development Goals of the UN 2030 agenda with the uniform minimum quality levels for museums, established by the Italian government to activate the Italian National Museum System. The study shows that sustainability is an integral component of measuring quality and performance in museums, highlighting the need for a holistic managerial approach that engages external stakeholders and integrates other measurement tools. In particular, seven of the 17 objectives set by the 2030 Agenda are confirmed in the Italian legislation, which includes sustainability principles and objectives, especially in the area that analyzes communication and relations with the public, the region and the stakeholders. The standards and objectives set out in this area are consistent with the goals for social and economic inclusion, which are a crucial component of sustainable development and the museum mission alike. The paper highlights that the Italian museum evaluation system only incorporates the social and economic dimensions of sustainability but is not yet aware of the importance of the environmental challenges.

Finally, Giulia Cambruzzi, Umberto Martini, Massimo Morellato and Federica Buffa, in their manuscript titled "*The challenge of sustainable ski area management: the New Zealand club fields model between experience and sense of place*", pose an interesting exercise of learning and knowledge transfer for ski areas management, taken from the management model of the Club Fields, in New Zealand, and its potential application in some Alpine ski areas in Europe. This possible synergy, as a source of innovation, deals with critical aspects such as climate change and sustainability (considering its triple bottom line), together with its compatibility with the authenticity of tourists' experiences. As a result, it provides some recommendations for improving the management of the ski destinations that potentially could be beneficiaries of the findings of this piece of research.

From a transversal reading of the various studies, it emerges that the paradigm of sustainability represents a fundamental vision and guides the strategies of tourist destinations and businesses. The proposed studies have in fact further highlighted the importance of making the economic aims of tourist actors converge with the ecosystemic and social constraints of the territories. In fact, the competitiveness of tourist destinations and hotel companies too is based on the full satisfaction of tourists, which depends on the quality of social relations with residents and on the positive evaluation of environmental sustainability practices incorporated in tourist offers.

At the end of this short presentation of the special issue, as guest editors we warmly thank all the authors who have contributed to feed the monographic issue of Sinergie Journal, enriching the debate on tourism and sustainability. The debate is still very fluid and open, also in light of the health emergency due to the Covid 19 pandemic, whose impact on the economic and social sustainability of tourism at the moment is dramatically negative. For this reason, all the players in the tourism value system are called upon to innovate the traditional business models, taking into account the new trends in demand and above all the importance of behaviors attentive to the ecosystem balance on which people's health is based, a prerequisite important for the rebirth of tourism worldwide.

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Special Issue accepted papers

The impact of hotel sustainability practices on tourist intentions to book hotel rooms

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Stefano Franco - Matteo Caroli - Giacomo Del Chiappa

Abstract

Purpose of the paper: *This paper aims to understand whether a hotel's commitment to sustainability practices is a factor that influences a tourist's intention to book a hotel room.*

Methodology*: For the purposes of the study a between-subjects experimental approach was applied to a sample of 451 Italians. A t-test and a multiple regression analysis were then adopted to measure whether sustainability affects customers' intentions to book.*

Findings*: Findings show that, ceteris paribus, customers are more willing to book rooms at hotels committed to sustainability practices than at those that are not.*

Research limits: *The research is framed to capture how consumers react to sustainability-driven practices at hotels and specifically in the upscale hotel market. Consequently, it should be replicated across other hotel categories.*

Practical implications*: Findings suggest that hotel marketers should undertake sustainability practices to inspire consumer intentions to make hotel reservations, thus sustaining hotel performance and local community wellbeing.*

Originality of the paper: *This study contributes to deepening the scientific debate on consumer interest in making reservations that favor hotels that undertake sustainable actions and practices. This research strand has thus far attracted limited attention in the existing literature if compared to similar studies primarily devoted to analyzing the environmental dimension of hotel sustainability and its impact on tourist choices.*

Key words: sustainability practices; intention to book; hotel firms

1. Introduction

Over the last decade the issue of sustainability has attracted increasing attention in tourism and hospitality businesses, mostly due to the pressure exerted by regulators (Meier and Cassar, 2018), stakeholders (Franco *et al.*, 2020; Guix *et al.*, 2019; Martini and Buffa, 2015) and consumers (Del Chiappa *et al.*, 2016), but also thanks to the sense of responsibility of business managers (Ciasullo *et al.*, 2019; Theodoulidis *et al.*, 2017). The tourism industry, indeed, is among the most significant when it comes to producing negative economic, environmental, and socio-cultural externalities (Font and McCabe, 2017; Legrand *et al.*, 2016), and tourism companies are increasingly challenged by sustainability issues (Del Vecchio *et al.*, 2018; Warren *et al.*, 2018).

Sustainability in tourism has been extensively studied from different perspectives (Font and Lynes, 2018). Management studies have focused on the ways tourism companies implement sustainability practices (Buffa *et al.*, 2019) as well as when they create value for firms (Presenza *et al.*, 2019), how such firms account for it (Guix *et al.*,, 2017), and how individuals (consumers, residents, and visitors) perceive the impacts generated by tourism activities (Del Chiappa *et al.*, 2019; Del Chiappa *et al.*, 2018; Malone *et al.*, 2014). Compared to other sectors, tourism is probably the one where the debate around sustainability issues has attracted the most attention (Del Chiappa and Lorenzo-Romero, 2014; Goffi *et al.*, 2019; Goffi *et al.*, 2018; Gössling and Peeters, 2015; Guix *et al.*, 2019; Presenza *et al.*, 2019; Warren *et al.*, 2018). Several papers have analyzed the relationship between a hotel's commitment to sustainability practices and tourist perceptions (e.g., Berezan *et al.*, 2013; Chen, 2015; Prud'homme and Raymond, 2013), in addition to their degree of satisfaction and loyalty (e.g., Moise *et al.*, 2018). This research has argued that customers are increasingly sensitive to sustainability and are willing to attribute value to hotel sustainability and pay a premium price for it (e.g., Chang *et al.*, 2015; Eslaminosratabadi, 2014). However, existing studies have mainly analyzed the role of environmental sustainability, with less attention given to the social and economic dimensions. This has been the case despite the fact that, in more recent years, tourism and hospitality marketers have also started to put more effort into undertaking activities that make their businesses more sustainable from a socio-cultural point of view (dos Santos *et al.*, 2017). As a matter of fact, several initiatives have been carried out to support local communities and contribute to their social growth and wellbeing by adopting actions that seek, for example, to guarantee fair working conditions, spread gender equality principles, adopt HR policies that support work-family balance, reduce poverty and hunger, sustain the quality of education, use local and sustainable products, provide opportunities for guests or the business itself to donate to or volunteer with the local community, and contribute to preserving local heritage, identity and authenticity traits (UNTWO, 2013). Nonetheless, there is still limited research seeking to investigate whether hotel commitment to sustainability practices actually helps intercept consumers preferences by making them more likely to book; there is consequently considerable need for further theoretical and empirical studies in this area (Dempsey *et al.*, 2011; Pakdil and Kurtulmuşoğlu, 2017; Vallance *et al.*, 2011). This need is particularly relevant in the specific context of Italy where, to the best of our knowledge, no academic studies have been carried out so far on this research topic. Furthermore, most of the existing studies in current national and international literature tend to adopt a traditional "survey-based" approach with less attention given to experiments. This study was therefore conducted to contribute to filling this gap by answering the following research question: does a hotel's commitment to sustainability practices shape the intentions of tourists to book a hotel room?

To achieve this aim, a between-subjects experiment was conducted online on a heterogenous sample of 451 Italians. Subsequently, a *t-test* and a regression analysis were run for the purposes of this study. The paper is structured as follows: in the next section it provides a theoretical background explaining the importance of the issue of sustainability in the tourism industry and tourist reactions to it; then we explain the methodology used and its relevance for the purpose of the paper; we present our findings; and finally we provide a discussion and conclusion, highlighting the relevance of our findings both for theory and practice.

2. Theoretical background

2.1 Sustainability in the hotel sector

Sustainability is an increasingly widespread concern in management environments, and its relevance is increasing, both from a theoretical perspective and in practice (Annunziata *et al.*,, 2019; Eccles *et al.*, 2014; Eccles and Klimenko, 2019). It can be thought of as a firm strategy triggered by a voluntary demonstration of inclusion in a social context (Van Marrewijk and Werre, 2003) or by norms and regulations that push firms to implement sustainable activities (Lubin and Esty, 2012; Meier and Cassar, 2018). In both cases sustainability constitutes an approach for companies to create fruitful relationships with their stakeholders and, simultaneously, create wealth for the company itself (Barnett and Salomon, 2012; Eccles *et al.*, 2014; Freeman *et al.*, 2004; McWilliams and Siegel, 2001). Among other factors, it may be highly beneficial if it aims to satisfy customers who are sensitive to sustainability practices and intentions (Sheth *et al.*, 2011). This is particularly true in the tourism and hospitality sector, an industry highly affected by sustainability (UNWTO, 2018), where tourists are greatly influenced by a hotel's commitment to sustainability practices (Chen, 2015) that aim to achieve so-called sustainable tourism. The World Tourism Organization (WTO) defines sustainable tourism as "tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities". In order to achieve this goal, all players within the industry need to implement policies and practices in favor of sustainability. In particular, the hotel industry is among the most sensitive sectors that should incorporate sustainability goals, given how common they are all over the world. This argumentation has a practical impact on a hotel's day-to-day implementation of sustainability activities, both at independent hotels and at hotels belonging to international chains (Buffa *et al.*, 2019; Franco *et al.*, 2020; Garay and Font, 2012). There are several forms of sustainability initiatives that hotels can implement. General sustainability activities regard, for example, the promotion of fair trade, respect for biodiversity, environmental protection, local heritage preservation, the use of green products, support for local communities, working conditions, diversity management, and philanthropy (Line *et al.*, 2016). However, it is important to remember that sustainability may take different forms depending on whether it refers to the economic, environmental or social dimension (Cappa *et al.*, 2016; Papa *et al.*, 2017). Previous studies have mostly focused their attention on environmental concerns, while the social and economic dimensions have received less attention. In the tourism industry, the embeddedness of sustainability practices in a business relates to the human capital within the organization, the cultural capital within and outside the organization, and the involvement of the local community (Mihalič *et al.*, 2012). Although previous studies recognized the relevance of these practices for the industry, the literature has rarely investigated whether the involvement of a hotel in sustainability practices, particularly the social kind, is also rewarded by the market.

2.2 Hotel sustainability and tourist behavior

Sustainability practices can improve a company's reputation and its relationship with stakeholders (Franco *et al.*, 2020), particularly customers (Lii and Lee, 2012). Indeed, sustainability programs allow companies to display their value systems to customers, showing true commitment by positively influencing the society to which they belong. In turn, this effect also generates positive attitudes among customer behaviors. As a matter of fact, sustainability programs can be used as a tool to stimulate affective evaluations of a firm (Bhattacharya *et al.*, 1995). In other words, customers' positive attitudes towards the company can be a potential benefit for the firm if they trigger customer willingness to buy and pay a premium price. Previous research found that sustainability may positively impact customers' willingness to pay (Vecchio and Annunziata, 2015). In addition, the implementation of sustainability practices may improve intentions to purchase by differentiating products and motivating customers (Schäufele and Hamm, 2017; Silva *et al.*, 2017).

In the hotel context, sustainability has been found to influence customer satisfaction, even though customer responses to sustainability stimuli may be different with respect to hotel characteristics (Prud'homme and Raymond, 2013). A recent study (Ponnapureddy *et al.*, 2017) found that German tourists are willing to book rooms at hotels implementing sustainability activities if such activities are communicated in a trust inspiring-way. Moreover, in their research conducted in Mexico, Berezan, Raab, Yoo and Love (2013) found that hotels' commitment to sustainability also influences guest intentions to return.

The aforementioned considerations help scholars recognize that hotel sustainability is a factor that can trigger positive consumer responses and contribute to creating and sustaining a hotel's positioning and competitive advantage. Currently, existing hotel-related studies have concentrated mainly on investigating the influence of corporate environmental sustainability (e.g., Baratta *et al.*, 2016; Baratta *et al.*, 2018; Buffa *et al.*, 2019; Font and Lynes, 2018). However, there is still limited research into understanding whether hotel sustainability may be a determinant of a tourist's intention to book a hotel room; there are even fewer studies dealing with this research strand in the specific context of Italy. This research gap calls for further studies seeking to understand whether - ceteris paribus - sustainability practices at hotels, particularly those related to the social dimension, may positively shape consumer intentions to reserve at that specific hotel. This study intends to answer this research question by introducing and empirically testing the following hypothesis:

Hypothesis 1: Tourists are more willing to make room reservations at a hotel committed to sustainability practices than at a hotel that is not.

Existing studies show that gender and age differences usually exist in consumer ethics, with female (Bateman and Valentine, 2010) and young consumers normally observed to exhibit higher levels of ethical orientations (Krause and Battenfeld, 2019) in many industries and cultures (Sidani *et al.*, 2009). Despite this, there are also studies that found no or insignificant ethical differences based on age and gender (Sidani *et al.*, 2009). These contradictory findings - and more generally the limited number of studies investigating whether age and gender can exert a significant influence on consumer interest in booking with hotel businesses engaged in sustainability practices - have led us to explore whether these sociodemographic variables are sufficient to differentiate consumer intentions to book with such hotels.

3. Data and methods

For the purposes of this study, a between-subjects design experiment was run. This method has been used in previous studies and represents the best methodology for our analysis since it makes it possible to assign the subjects to different conditions (Loftus and Masson, 1994). Each subject is assigned to only one condition, namely, in our case, *scenario A* or *scenario B*.

An online survey was sent via e-mail to a heterogenous sample of 700 Italians provided by an Italian Tourism Association.

Both *scenario A* and *scenario B* included the description of a hotel. Hence, each scenario was assigned to half of the sample (i.e., half of the sample was given *scenario A* and the other half *scenario B*). The hotel presented had a 4-star ranking and was located in the city center of an urban destination. Respondents were asked about the likelihood of booking a standard double room. Each group was first asked to read the assigned *scenario* and then to answer the same questions. Qualtrics - the software used to distribute the surveys - was set to randomize the scenarios provided. In this way we could not decide who was sent one scenario or another.

In order to isolate the effect of sustainability, the two scenarios were identical except for the part describing the sustainability commitment of the hotel. More specifically, *scenario B* provided individuals with the story of a hotel and its main characteristics in terms of price, stars, position and quality - which are considered the main determinants in a room purchase (Kim and Kim, 2004; Kim *et al.*, 2006). *Scenario A* presented the same story, enriched by a couple of sentences describing three different examples of the hotel's commitment to sustainability practices, specifically related to the promotion and preservation of local heritage and traditions, donations and volunteering, and the supply of local and sustainable products (UNWTO, 2017). According to existing studies, the first two practices are socially-related sustainability practices, while the third is socially rooted while being to some extent also related to economic and environmental sustainability practices (Jones *et al.*, 2014). Once individuals had read the "hotel story" they were invited to report their intention to book the hotel room. For this purpose a list of three items was used to ensure a higher level of reliability in measuring the construct (Bland and Altman, 1997). Respondents provided their answers using a 5-point Likert scale (1= not likely at all, 5= very likely). Data collection was carried out in from January to February 2019 and in total 451 complete questionnaires were obtained (225 for *scenario A* and 226 for *scenario B*), thus producing a response rate of 64.42%. Cronbach's Alpha was calculated on the three items used to measure intention to book so as to check for factor reliability. The figure for Cronbach's Alpha was reported as 0.902, thus confirming that the factor (i.e. intention to book) was reliable (Cronbach and Furby, 1970). Then the final variable was calculated measuring the arithmetic mean of the three items (Cortina, 1993). In order to assess whether tourist choices differ when the two different scenarios are considered, a *t-test* analysis was calculated. To furtherly validate our analysis, we also ran a robustness check and a *t-test* to assess whether there were statistical differences between the two subsamples in our analysis that might have influenced our findings. Results are presented and discussed in the following section.

4. Findings

Table 1 illustrates the profile of our respondents. Our sample was highly heterogeneous in terms of age, with individuals ranging from 18 to 78 years old and with a mean age of 36.90 years. The majority of respondents were reported to be female (59.7%) and resident in the Center of Italy (61.2%), while 15.3% of respondents resided in the North of Italy and 23.5% in the South.

Tab. 1: Descriptive statistics for the whole sample

Variable	Mean	Minimum value	Maximum value
Age	36.90	18	78
Variable		Percentage	
Gender	Female	59.7%	
	Male	40.3%	
Origin	North	15.3%	
	Center	61.2%	
	South	23.5%	

Source: our calculations

Before running an analysis of the intention to book, we performed two *t-test* analyses to assess whether the two subsamples were statistically different in terms of age and gender. Indeed, differences between the two subsamples can influence the final result of the analysis. Our findings are reported below. Table 2 and Table 3 show that there are no differences between the subsamples in terms of age and gender. In particular, although the test showed differences in means between *scenario A* and *B*, the *p-values* are high enough to show that such differences were not significant (age *p-value* = 0.732; gender *p-value* = 0.609). Thus, we can conclude that the two subsamples do not show differences as regards the age and gender of the respondents.

Tab. 2: t-test on the age of respondents

Group	Number of respondents	Age	Std. Deviation
Scenario A (Sustainable hotel)	225	37.14	0.980
Scenario B (Non-sustainable hotel)	226	36.65	1.032
t	p-value		Mean difference
-0.343	0.732		-0.488

Source: our calculations

Tab. 3: t-test on the gender of respondents

Group	Number of respondents	Gender	Std. Deviation
Scenario A (Sustainable hotel)	225	0.60	0.491
Scenario B (Non-sustainable hotel)	226	0.62	0.485
t	p-value		Mean difference
-0.511	0.609		-0.024

Source: our calculations

Table 4 shows the results of our statistical analysis. The number of respondents for each group is almost identical. This aspect is in line with our expectations and with the 50% randomization of the two different scenarios sent to the respondents. Notably, the mean value of intention to book is higher in *scenario A*, i.e. the description of the sustainable hotel, than in *scenario B*. However, the fact that the two mean values differ with respect to each other is not enough to conclude that respondents in *scenario A* are more willing to book a hotel room compared to those in *scenario B*. To test whether the two subsamples significantly differed in terms of intention to book, a *t-test* was run. Results show that respondents belonging to the two subgroups differed significantly regarding intention to book (p-value= 0.000), thus confirming our HP: the intention of consumers to make hotel reservations was significantly higher for hotels that had implemented sustainability practices.

Tab. 4: Number of respondents per scenario And t-test analysis

Group	Number of respondents	Intention to book	Std. Deviation
Scenario A (Sustainable hotel)	225	5.13	1.325
Scenario B (Non-sustainable hotel)	226	4.71	1.402
t	p-value		Mean difference
3.300	0.001		0.425

Source: our calculations

Although the *t-test* analysis evidence is in line with our hypothesis, we decided to conduct a robustness check in order to validate our findings. To do that we ran a multiple regression analysis to assess the effect that belonging to *scenario A* or *scenario B* has on the intention to book.

Moreover, we included the age and gender of the respondents as control variables, since they may influence the intention to book. We operationalized the scenario predictor by building a dummy variable that takes a value of 0 for *scenario B* and 1 for *scenario A*. The impact of gender was also measured through a dummy variable (0 for males, 1 for females). We ran the multiple regression using the software Stata (release 15). Results of the analysis of the 451 observations are reported in table 5.

*Tab. 5:- Robustness check. Multiple regression analysis with 'intention to book' as the dependent variable. *** denotes significance at 1% level. t-values are in parentheses*

Variable	Coefficient
Scenario (0 = non-sustainable hotel; 1= sustainable hotel)	0.441*** (3.31)
Age	0.006 (1.36)
Gender	-0.071 (-0.51)
Number of obs.	451
Prob > F	0.006
R-squared	0.029

Source: our calculations

Results confirm the *t-test* results. Indeed, the dummy variable that indicates the hotel's commitment to sustainability practices shows that there is a positive shift in the intention to book when the scenario shifts from B (non-sustainable) to A (sustainable), with a significant coefficient (β = 0.441; *p-value* = 0.001). Results also show that age and gender are not significantly influencing consumer intentions to book, meaning that responses depend only on the scenario presented, and therefore on the stated characteristics of the hotel.

5. Discussion and conclusions

The aim of this study was to understand whether a hotel's commitment to sustainability practices has an impact on tourist intentions to reserve a room at that specific hotel rather than at a hotel with a weak commitment to sustainability practices. We tested our hypothesis on a sample of 451 respondents, comparing the intention to book a room at two hotels that were only different from each other in terms of the implementation of sustainability practices. The results of our *t-test* and multiple regression analyses showed that customers are more willing to book a room at a hotel committed to sustainability than at one not committed to such practices. This result confirms our hypothesis for the sample analyzed, and contributes to the debate on consumer behavior and sustainability in the hotel industry. Previous research demonstrated that tourists are sensitive to a hotel's commitment to sustainability practices (Berezan *et al.*, 2013; Ponnapureddy *et al.*, 2017; Prud'homme and Raymond, 2013). This aspect is extremely important in a world where customer experience is increasingly central to the decision-making processes of companies (Calza *et al.*, 2019; De Nisco *et al.*, 2015; Forlani and Pencarelli, 2019).

However, other studies mainly focused their attention on the environmental side of sustainability. This paper, in contrast, is among the few attempts to empirically test the effect of involvement on the social side of sustainability as well. In terms of theory, this paper advances understanding of sustainability in the hotel industry by showing that tourists are sensitive to the issue and more likely to make hotel reservations favoring accommodation facilities that invest in sustainability measures. Hence, the study suggests that the involvement of hotels in sustainability practices can be considered a factor driving customer choices (Yavas and Babakus, 2005). This evidence appears to be in in line with new market trends that show increasing tourist interest in transformative experiences that go beyond material aspects and help to build and sustain their self-growth (Pung *et al.*, 2020; Reisinger, 2013; Sánchez-Fernández *et al.*, 2020).

These results also present a number of practical implications that provide useful suggestions for tourism companies, whose contribution to sustainability practices is increasingly important when tackling sustainability goals (Del Chiappa and Fotiadis, 2019). Hotel managers who decide to improve the sustainability impact of their companies should be aware of the fact that the market is willing to reward this behavior with a stronger intention to reserve at their hotel. Consequently, our findings suggest hotel managers should invest in activities that, for example, involve the local community, promote and preserve local heritage and traditions, and rely on local and sustainable supply chains, as ways to attract consumer preferences. Once these activities have been implemented, significant efforts should be made to effectively communicate these investments to the market through optimal promotional operations.

Although this study helps to fill a gap in the existing literature and proposes some implications for practitioners, limitations still remain. First, despite the fact the sample included respondents residing in every region of Italy, it is geographically biased due to the high concentration of respondents in central Italy. Moreover, data was collected in one country (Italy) rather than multiple countries. Second, even though the sample is quite heterogenous in terms of age and gender, the empirical analysis does not provide strong external validity. In fact, we cannot guarantee that the demographic characteristics of the sample are consistent with those of people who want to book a 4-star hotel in the city center (such information is not publicly available, to the best of the authors' knowledge). This calls for future studies to be carried out to repeat the experiment in other geographical contexts both within and outside Italy in order to make cross-comparisons that can ascertain whether cultural background might exert a moderating effect on hotel sustainability and consumer intentions to book. Third, although we controlled for age and gender, the study did not test the moderating effect of any sociodemographic, travel-related variables (travel party, country of origin, etc.) or psychographic variables (personality traits, lifestyle, etc.). The moderating role of these variables could be considered and tested in future research. Finally, our study used a scenario-based experiment approach. Although this methodological approach has proven to be important and useful in management and marketing research, a question remains to be answered: to what extent can results from this scenario-based experiment accurately predict a real-world intention or behavior in the field? (e.g. Kim and Jang, 2014). Future studies might consider adopting a field experiment approach.

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The role of the cable car in sustainable mobility: management choices and an assessment of environmental sustainability. The Trento-Monte Bondone project

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Abstract

Purpose of the paper: *The aim is twofold: a) to analyse the contexts best suited to, and to identify the best practices for, designing sustainable cable car mobility; b) to evaluate and compare the environmental impact of the management of cable car systems by defining two possible scenarios.*

Methodology*: In the first phase, two examples of excellent cable car systems and intermodality in the alpine area (Innsbruck and Alpe di Siusi) were examined in order to identify good practices as applicable to the evaluation of the (T-MB) project. Seven key dimensions were identified to evaluate the origins and implementation of the two completed cableway projects. In the second phase, a Life Cycle Assessment (LCA) was carried out to evaluate the environmental sustainability of the project.*

Findings*: From a managerial point of view, the T-MB project was initiated by public actors and adopts the instruments of participatory strategic planning widely used by the municipality of Trento over the last twenty years. The evaluation of environmental sustainability highlights the cable car as a valuable alternative transport mode because it reduces CO_2 emissions and pollution and it can be constructed with minimal impact on the territory.*

Research limits: *The T-MB project is still in the evaluation phase. It was not possible to access all the data necessary for either a detailed evaluation of the managerial implications or for the LCA analysis.*

Practical implications: *Identification of key dimensions and best practices for the implementation of sustainable cable car mobility projects.*

Originality of the paper: *The use of LCA analysis for the calculation of the environmental impact of cable care structures is innovative and it is one of the first studies in the field.*

Key words: cable car; sustainable mobility; participatory development projects, life cycle assessment; environmental sustainability; best practices

1. Introduction

The transport sector plays a strategic role in economic development, both in urban and rural areas (Genovese, 2018). Transport is, however, one of the most environmentally damaging sectors, largely because of the atmospheric pollution caused by the use of carbon intensive energy sources. According to the International Energy Agency (2019), transport systems are responsible for 24% of the global CO_2 emissions. The issue of air pollution is particularly acute in the areas near huge urban conurbations. Europe's energy system is dependent on fossil fuels, and the EU imports about 95% of its needs (Eurostat, 2018). Another issue is the negative impact of land consumption for transport systems on biodiversity (EEA, 2019), their expansion accounts for about 8% of annual new land use - it is estimated that, in Europe, 10 hectares a day are paved over. ISPRA (2014) reveals that between 2006 and 2014 42% of the newly paved land (an annual average of c. 200 km2) was destined for transport infrastructure.

The strategic role of the transport sector, on the one hand, and the problems which accompany its development, on the other, have initiated the research for solutions that allow a transition to sustainable development models at the centre of an international discussion between policy makers, businesses, organisations and the scientific community (Capolongo, 2017; Pastore and Ugolini, 2020). The specialists' attention being devoted to these questions is accompanied by a general awakening to, and growing consumer awareness of, environmental problems (Barr and Prillwitz, 2012; Tencati and Pogutz, 2015). Notable progress is being made in the search for effective solutions and the development of mobility plans that focus on improved environmental performance, largely thanks to national and international financial support and stimulus (May, 2015; World Bank, 2017). Alongside the choice made by some administrations to develop soft transport, various innovative means - and uses - of transport are being tried out. The "sharing economy" is a popular new trend (Santos, 2018), and electric transportation modes - which have a low environmental impact, especially when the electricity comes from a renewable source - are being rapidly developed and rolled out (Maiolini *et al.*, 2018; Vargas-Sánchez *et al.* 2019).

This paper contributes to the discussion on the mobility solutions which can best improve a territory's transport network, reducing emissions and improving the residents' quality of life. Our results are based on a study conducted in Trento, a small provincial capital (pop. c. 100,000), located in the Italian Alps. The research is based on a proposal made by the autonomous Province of Trento to construct a cable car between the city centre and Monte Bondone (known as "Trento's Alp" because it abuts the city and has long been a vacation area for residents).

The research objectives are: *a)* to analyse key dimensions and best practices in the designing of sustainable mobility systems; *b)* to measure and compare the environmental impacts of a future T-MB cableway with those of *(i)* 100% private vehicle use, and *(ii)* combined private vehicle/traditional public transport use. In pursuit of the first objective, the good practices that emerge from a literature review and from the detailed analysis of two examples of excellence in the Alpine area (Innsbruck in Austria and the Alpe di Siusi area in South Tyrol) were considered. The literature review highlights best practices of sustainable mobility that have been adopted in Alpine areas to contribute both to the quality of life of residents and to the sustainable tourism local development. The second objective was achieved through the *Life Cycle Assessment* (LCA) applied to the T-MB cableway.

The paper is divided into four sections. The second includes a concise review of the main contributions to the literature on sustainable mobility, noting some relevant examples of the introduction of cable cars to urban transport systems in a variety of countries. In the third section, the research methods are discussed: the analysis of examples of excellence in Alpine areas and the LCA. Our main findings are set out in the fourth section. In the conclusion, the most significant findings are discussed, and the contribution, originality - and limitations - of the study are explained.

2. Literature Review

2.1 Sustainable mobility: promoting territorial development and increasing accessibility

Since the 1990s, the urban transport sector has grown rapidly, due to both an increase in trips made and to growing urban populations. In the future, these journeys are expected to increase: by 2030 it is estimated that urban passenger traffic will have grown by 50% (World Bank, 2017)[1]. Urban population growth, too, makes the need to find solutions for mobility and accessibility in urban areas particularly pressing, especially as the world population growth is projected to continue for the foreseeable future (Sodiq *et al.*, 2019). Moreover, the areas around the biggest population centres, and areas of low population density, also need to have quick, efficient transport links with the major cities. Accessibility - "the opportunity of an individual in a particular place to participate in an activity or set of activities" (Hansen, 1959, p. 73.) - has become fundamental to transport planning.

Nowadays, a concept of mobility which is no longer linked simply to vehicular traffic, but is part of a multimodal perspective, is gaining valence (Banister, 2008). Transport planning goals are no longer focused entirely on efficient traffic flows, but are concerned with people and the social dimension (of accessibility and inclusivity), prioritising pedestrian traffic, cycling and public transport use and proposing alternatives to the car, increasingly promoting choices with the smallest possible environmental impacts. City planners and policy makers are therefore now looking for integrating transport, tourism and territorial development, aiming for energy efficiency, zonal redevelopment, pollution reduction and more social inclusion (UNWTO, 2001).

[1] Covid-19 brought the evolution of the sector grinding to a halt, leading - in an extraordinarily short time - to a global crisis. According to ISTAT (2020), in just five weeks passenger dropped by over 85%, severely impacting the airline industry, which saw a drop of 66% from March 2019 (almost 2 flights in 3 have been cancelled). The public health emergency led to the rapid acceleration of digitalization in most economic sectors. According to UNECE and ILO (2020) it will never be possible to return to (pre-pandemic) "business as usual", and this impossibility could stimulate endeavors to achieve the Agenda 2030 SDGs and to incentivize the structural transformation of transport systems, favouring public transport and electrification, while generating jobs.

In the last forty years, more and more sustainable transport measures have been adopted, particularly in the urban environments where populations are in constant growth (Sodiq *et al.*, 2019). The biggest challenge for urban transport planners is to find a balance between people's growing personal mobility requirements and the transport of goods (both functions of economic growth) and the need to protect the environment and provide a satisfactory quality of life, including reasonable access to services, for all citizens (Lindenau and Bohler-Baedeker, 2014). Copenhagen has made huge progress in this direction and is generally seen as a *green economy* policy leader. The city has been able to achieve consistent progress towards carbon neutrality. Not only, in fact, have a number of changes been made to the transport infrastructure in order to improve connections between the main residential and commercial areas, but the "Station Proximity Principle" has also been successfully realised. This principle requires large offices to be sited no further than 600 metres from a subway station (LSE Cities, 2014). Among the greatest strengths of Copenhagen's transport system is the widescale promotion of cycling and other forms of soft mobility, which reduce urban congestion, emissions and land consumption. Copenhagen has taken more comprehensive action than almost anywhere else, in terms of encouraging perceptions of public spaces as available for community use, improving people's health and increasing the city's livability (Sick Nielsen *et al.*, 2013). There is positive feedback, too, for the city's sustainable tourism approach, which has been shown to provide a form of environmental education for tourists who may, when back at home, reproduce the eco-friendly behaviours they have experimented with while on holiday (Gillis *et al.*, 2016).

Copenhagen's experience is not the only example of virtuous choices in relation to sustainable mobility planning. Numerous other cities around the world have shown that it is possible to implement sustainable transport policies even in very complex urban environments. In these contexts, the construction of cable car systems is revealed as a real opportunity within sustainable mobility planning, as the following sections will demonstrate.

2.2 Sustainable mobility and cable car systems: the managerial implications considered with reference to some international examples

In recent decades, cable car systems have made remarkable technological advances, as evidenced in their widespread use in winter sports infrastructure. Due to the many ways in which their environmental credentials, safety, comfort and capacity have all increased in these years, cableways are also gaining popularity within urban contexts (Težak and Sever, 2016). Their main environmental benefits are (Papa, 2010): no CO_2 or exhaust emissions; the infrastructure, since it is removable, has minimal environmental impact; reduced noise pollution. Cable cars have proven to be eco-friendly, profitable tourist attractions, by their very nature ideal for hard to access locations, and representing an original travel experience (Brida *et al.*, 2014).

Cableways are also used for public transport, not only to decrease city traffic but also to solve problems linked to geographical/topographical obstacles. They can cope with all kinds of terrain and represent an ideal solution for cities built on and at the foot of hills or mountains, reaching areas which no conventional public transport system could feasibly access (Pojani and Stead, 2015). The integration of a cableway (often using the gondola system) into the existing transport network also has economic benefits (Carlet, 2016). In recent years, many cities in the developing world have implemented mobility schemes intended to enable low-income citizens to access services (Bocarejo and Oviedo, 2012).

The trend was undoubtedly set by the "Metrocable" in Medellín. The city decided to focus on upgrading its public transport system, a bus fleet with a very limited route network. By the first decade of this century, spatial inequality had become a serious problem because it was very difficult for the inhabitants of the periphery to reach the city centre, where health and education services, and most jobs, were located (Bocarejo *et al.*, 2014). In 2004 the Metrocable was built. It is an innovative cable car system, which now has 3 lines and is integrated within a broader and more ambitious city plan: today, all the peripheral zones, including those on the mountainsides where the city's poorest inhabitants live, enjoy much improved accessibility. The principal goal of this intervention - along with a set of related policies, such as building controls, limits on private car use, incentives to use public transport - was to enable the cableway to serve as a feeder for the subway system, which had previously been hard to reach (Bocarejo *et al.*, 2014).

Other cities in Latin America have been following suit, driven by the same desire to improve their public transport services: like Medellín, Caracas, Rio de Janeiro and La Paz are situated in valleys, surrounded by settlements on steep hills, whose residents cannot easily access the city centres (Olszyna *et al.*, 2015). Caracas, the capital of Venezuela now has the world's most advanced cable car system, which has made it easier for the millions of people who live in the furthest reaches of the periphery to reach their destinations (Lopez, 2010; Spinosa, 2017). Policy and strategic choices to focus on intermodality and sustainability when planning transport systems are often the products of innovative, participatory decision-making processes. In the case of Caracas, this process took 3 years and was supported by an "Urban Think Tank" which included residents in the decision-making process. The Metro Cable has become not just a public transport system, but also a key part of the area's social fabric (Golinger, 2010). La Paz (Bolivia) has built a cableway which links the El Alto area with the rest of the city. With its highest point at 3,600 msl, this is the highest urban cable car system in the world (Spinosa, 2017).

A number of European cities have included cable cars within their transport systems. The "Emirates Air Line" gondola system in London, for instance, was inaugurated for the 2012 Olympics and is still both a public transport link and a tourist attraction (Alshalalfah *et al.*, 2014; Olszyna *et al.*, 2015). In Germany, a cableway linking two areas of former East Berlin was opened in 2017 as part of the city's "Gärten der Welt" Exhibition, and now functions as an element of the local transport system. In Spain, two striking examples are Barcelona's cable car system and Madrid's "Teleferico" (Papa, 2010).

While, to date, Italy has not built many urban cableways, the "Minimetrò" in Perugia is an excellent example of a small funicular system, which is now considered the backbone of the city's transport service. The cable propelled automated people mover has proved to be an extremely environmentally friendly addition to the existing transport network: its capacity equals that of a bus or tram, its footprint is minimal and it is the most efficient way of transporting people up and down the hillside (Leitner Ropeways, 2019). In 2009, Bolzano (the provincial capital of South Tyrol) opened a cableway which links the city centre with the plateau of Renon, an area which offers magnificent views of the city and surrounding mountains. Approximately one million visitors a year use the cable car, thus leading to a considerable reduction in road traffic (Leitner Ropeways, 2019).

Although of course each city has its own particular profile, it is very evident that all their decisions to build cable car systems have been prompted by the need to provide people with a more efficient and environmentally friendly way to move around the city. Analysing the literature, it becomes evident that certain features emerge as key to the actual realisation, and subsequent management, of such transport systems. The most notable of these features are: securing the necessary finance, general agreement on the importance of decreasing journey times (including from areas separated from the centre by natural or manmade obstacles), and the feasibility of integrating the cable car within the existing transport system (Papa, 2010).

The problems connected with mobility can be exacerbated when tourist destinations whose attraction lies in their unique natural resources become increasingly popular. Mountain territories epitomize this dilemma, since their transport networks connect the most remote areas with the main valleys and urban centres (Scuttari *et al.*, 2013; Tischler and Mailer, 2014), and this may have negative effects on the former (Orsi, 2015), which are increasingly turning to nature-based tourism, now an extremely popular leisure activity which presents a number of challenges in regard to establishing an equilibrium between a territory's valorisation and its conservation (Luo and Deng, 2008; Weber *et al.*, 2019).

3. Research method

In order to achieve the study's two objectives, the research was divided into two phases. The *first step* involved analysing two (intermodal) cable car systems in the Alps. These systems are considered examples of excellence and enable us to identify the best practices that then inform our evaluation of Trento's sustainable mobility development plan. The two exemplars are Innsbruck (in Austria) and the Alpe di Siusi area (in South Tyrol, Italy):

- Through a public private partnership, Innsbruck has rebranded itself; part of the scheme involved the construction of an all-season cableway which links the city to the Nordkette mountain behind it (see section 4.1).
- Alpe di Siusi has tackled the problem of traffic congestion by building a cableway which allows the plateau to be accessed in a more sustainable manner (see section 4.2).

The two cases were analysed taking seven dimensions into account (identified in the literature review) which are considered key to the realisation of the projects:

1. *How the project originated:* the presence of one or more types of actors (public or private) in the initial phase of the plan.
2. *Involvement of the local community in planning the project:* the range and type of stakeholders involved.
3. *The main aim of the project:* the final goal of each project and the objectives achieved.
4. *Existence of a local strategic development plan:* construction of the cableway as part of the local development plan/revalorisation of the area.
5. *Specific characteristics of the project:* identification of the main features of the cable car systems concerned.
6. *Efficacy of the project/achievement of goals:* assessment of whether declared objectives were met.
7. *Environmental performance:* analysis of the environmental sustainability of the project, and of any measurement techniques and/or indicators adopted.

Consideration of the two cases allowed us to analyse and evaluate the opportunities presented to policy makers by the initial phase of the project of upgrading and extending the T-MB cable car link (see section 4.3).

The *second stage* consisted of a *Life Cycle Assessment* (LCA) to assess the environmental sustainability of a new cable car system between the city of Trento and Monte Bondone. The LCA took as its starting point the most recent plan, *Trentino Sviluppo*'s 2011 "Masterplan" (http://trentinosviluppo.etour.tn.it) which envisions a cableway that replaces the existing Trento-Sardagna connection and then continues up to Vason, via Vaneze (a total of 4 stations), allowing passengers to reach the highest station (about 1560m sl) in 20 minutes.

An LCA is a method, standardized by an ISO (International Organization for Standardization), which evaluates the impacts associated with a product, process or activity, throughout its life cycle (ISO, 2006a, 2006b). An LCA study involves four stages: (i) goal and scope definition; (ii) a life cycle inventory (LCI), aimed at gathering input and output data throughout the life span of the good or service; (iii) a life cycle impact assessment (LCIA) for the quantitative evaluation of the type and extent of environmental impacts, based on data collected in the LCI and, finally, (iv) an interpretation, including recommendations to the commissioner of the study.

The LCA method was chosen because of its comparative nature and multi-indicator approach, and because it has established itself as a useful tool for assessing the environmental aspects of new strategies being devised to inform urban planners in their decision making (Petit-Boix *et al.*, 2017; Guerin-Schneider *et al.*, 2018; Ipsen *et al.*, 2019) and sustainable mobility initiatives (Al-Thawadi *et al.*, 2019; Severis *et al.*, 2019; Del Pero *et al.*, 2015), although the literature to date includes only one example of its use to calculate the environmental impact of a cable car system (Biberos-Bendezù and Vazquez-Rowe, 2020).

In line with the ISO 14040 (2006a; 2006b) regulation, the parameters of the system were determined in order to establish the processes and materials to be included in the LCA. In the present study, the following are included: the infrastructure; the structure and its operation, excluding their end of life (i.e., dismantling and removal of the structures, disposal of the materials and the restoration of all affected areas). The functional unit for all the data is one year of cableway operation, estimating 600,000 trips (300,000 passengers). The working life of the system is estimated to be 35 years.

Data on the system were taken from the *Trentino Sviluppo* Trento-Bondone plan mentioned above. The data on materials and energy consumption were supplied by Leitner Ropeways, or found in the literature, or in the Ecoinvent 3.3 database, included in the SimaPro 8.3 software used for calculating the different forms of environmental impact involved.

The system's impact was subdivided according to the three main stages of its life cycle (transport of materials included):

1. *The infrastructure:* i.e. the four stations and the cable itself. The total quantity of materials necessary for the construction of the stations and the transport of the former, plus the materials used in the cableway's support pillars, cables and rollers, and the lorry and helicopter transport of the same, must be factored in.
2. *The structure:* i.e. the cabins, taking into account the construction materials and their lorry transport (by the supplier/producer) to the assembly site.
3. *Operation:* the energy consumption of the three electric motors that power the system is taken into account.

The consideration of electricity consumption takes into account the energy mix (100% renewable, mainly hydroelectric) of Trentino's main supplier. The principal findings from the LCA are illustrated in section 4.4.

4. Results

4.1 Cable car systems and intermodality in mountain areas: the case of Innsbruck

Innsbruck is one of the biggest "mountain cities", with more than 100,000 inhabitants and a total urban region population of > 300,000. For years, the city's image as a tourist site was closely linked to the Winter Olympics, and it became known as the "capital of the Alps". Since the 1970s, the city has grown extremely rapidly, becoming more and more cosmopolitan and popular with tourists (Haller *et al.*, 2020). Innsbruck's cableway - designed by the architect Franz Baumann and opened to the public in 1928 - has always been an important element of the city's image. In 1950, its capacity was increased and at the beginning of the twentieth century a complete upgrade of the system began. The centre of the city has now a cable car running up to the Nordkette mountain range, which is part of one of Austria's biggest natural parks, the Karwendel Alpine park (Haller *et al.*, 2020). The cableway upgrade is part of a wider re-branding project, which took a "Brand Driven Identity Development" approach (Botschen and Promberger, 2017). The introduction of the cable car is thus just one element of a project aimed at revitalizing the tourism sector, combined with the rebranding strategy of Innsbruck's identity as an Alpine city destination.

The project began in 2009 when a group of stakeholders from the hospitality sector proposed to rebrand the city, suggesting that success would depend on a participatory process. Key players were (Botschen and Promberger, 2017):

- the core group: the mayor, members of the Tourism Association, city marketing and three facilitators;
- the "microcosm": 120 participants from various areas (education, politics, sport, mobility, gastronomy, crafts, commerce);
- the support team: researchers and consultants who moderated and guided the process at all times.

The work was carried out in three phases, as shown in Table 1.

Tab. 1: Main phases of Innsbruck's rebranding

Phase 1 Establishing the city's brand identity	- Identifying the resonance of the city's historical identity. - Microcosm participation and in-depth interviews. - Identification of socio-cultural characteristics through an iterative process. - 7 pillars upon which to base the future brand identity.
Phase 2 Translating the brand identity into touchpoint experiences	- Wide-ranging workshops for the creation of brand teams. - Defining the scope of action (public services, retailers, gastronomy, the mountain areas, transport, cultural events). - Translating the brand identity into points of contact with the visitor (visitor experiences).
Phase 3 Turning the touchpoint experiences into new ways of valorising the destination.	- Adapting structures, services and processes. - Forming the brand teams. - One brand team was in charge of the activities on Nordkette (extreme sports, family entertainment, scenic walks/hikes, sign-posting).

Source: authors' elaboration, adapted from Botschen and Promberger (2017).

The initiative focused on the establishing of a new brand for the city, summed up in the slogan "Alpine city life", based on seven pillars: the appeal of the Alpine environment; sports skills; a vibrant urban space; an avant-garde Alpine aesthetic; a young, intelligent, cosmopolitan population; a healthy lifestyle; and environmental excellence.

The work of the second and third phase - carried out by the ad hoc "brand teams" - involved translating the city's new slogans into visitor experiences and adapting existing structures and services to meet the new requirements. It was quickly recognised that being able to spend time in natural mountain areas was a key attraction for visitors: this they were able to do by taking the cable car to the Nordkette Park. One of the brand teams was tasked with setting up and managing activities in the Park (such as family entertainment, scenic hikes/walks, sports activities and events). The Karwendel Park is only twenty minutes from the city centre by cable car, following the route of the old cableway which runs along the Nordkette range and into this enormous national park; a station along the way gives access to the town of Hungerburg and the Alpenzoo.

The park received 600,000 visitors in 2015, 250,000 of whom were from Tyrol. Just 10% of the visitors had come to ski, confirming that the success of the project was by no means solely due to winter skiing: the vast majority of visitors chose instead to participate in one of the many activities available on the mountain (O'Faircheallaigh, 2010). The image of the "urban Alpine" city was encapsulated by the cableway, and it, in turn, was not only an attraction in itself, but also imminently functional in enabling the valorisation of the upland areas of the Karwendel Park. The system is a key element of the city's public transport service: it runs regularly throughout the year and allows people to travel rapidly between the city and the mountain, using a regular, safe, environmentally friendly service.

Innsbruck's environmental performance is further improved by the fact that residents are increasingly choosing to cycle as they go about their daily business, and private car use is decreasing. City policy is to facilitate these changes (Pospischil and Mailer, 2014).

No formal environmental assessment of Innsbruck's mobility has been completed to date, and so the environmental impact of the cableway's use cannot be evaluated. This is a lack which policy makers could fruitfully address: they could thus assess the latter's environmental sustainability - cableways are, anyway, perfectly coherent with the brand of an urban Alpine destination - and thereby undoubtedly strengthen the city's green mobility image.

4.2 Cable car systems and intermodality in mountain areas: The Alpe di Siusi

The Alpe di Siusi, situated near the Val Gardena and the Valle Isarco (South Tyrol), is one of the most extensive (50 km2) plateaux in Europe, and home to one of the most important ski areas in the Dolomites. It began to be developed for tourism in the early 1900s and is now a well-known (winter and summer) tourist destination (in 2019, according to ASTAT, about 1,823,000 people visited the area).

The plan to build a cable car connecting Siusi with the Alpe di Siusi grew out of the realisation that the congestion on the only road up to the plateau caused by private cars (especially during high season) was causing serious environmental damage. The initial input for the construction of the cable car was made by local ski-lift and cable car operators, but the project was carried forward as part of the bigger ALP.IN.SKI (Alpine Innovation Ski) project led by Arge Alp. Six partners belonging to Arge Alp collaborated on ALP.IN.SKI with the objective of promoting virtuous mobility practices in the ski stations. The overall goal was to promote an alternative mode of transport, in order to make access to the plateau more sustainable, mitigating the negative environmental impact of private car journeys. The construction of the cableway was completed in 2003, after a ten-year gestation. The main phases of its conception and construction are summarized in Table 2.

The decision-making process was long drawn out and, despite initial enthusiasm, it took almost ten years of debate and adaptation before the cableway was finally finished - and the support of the provincial government was undoubtedly essential. Most of the resistance came from local residents, unhappy about having - for the first time - to pay for access to the plateau, and from the hospitality sector, concerned that the change would put tourists off coming to the area. To persuade people to accept the plan, the provincial government subsidised a discounted pricing system for the local community and undertook to ensure effective intermodality between the cable car and the local bus service (Scuttari et al, 2016).

Tab. 2: Main phases of the Siusi-Alpe di Siusi cableway project

Phase 1 An unsustainable situation	- Traffic congestion on the access road (up to 20,000 visitors a day) (Scuttari *et al.*, 2016). - Local operators recognise the problem. - The idea of a cable car connection is born.
Phase 2 A solution (i.e. the cableway) is promoted	- Ten years of debate and adaptations. - Resistance from local residents to the proposed cost of access to the plateau - resolved by proposing discounted ticket prices for residents. - Carrot and stick approach adopted. - Integration with the local bus service
Phase 3 The current situation and future prospects	- 1.4 million passengers between 2013 and 2014 (Arge Alp, 2015). - Stabilization of vehicular access. - Economic returns. - A reduction in traffic (and consequently also in air and noise pollution).

Source: authors' elaboration.

Another factor which changed people's minds was the inclusion of carrot and stick measures such as allowing only residents and overnight visitors to access the plateau between 9 am and 5 pm (Scuttari *et al.*, 2016). The two-line system (with 16 passenger capacity cars) connects the village of Siusi to the plateau 850m above and can carry 4,000 people/hour. The public transport system now includes a shuttle bus service (with a seasonally adjusted timetable) to serve the municipality area. Currently, the cable car, planned and constructed also with provincial government funds, is managed by a private company, "Funivia Siusi-Alpe di Siusi S.p.A.", which has become an important player in the area's tourism development.

The declared aims of the project include a range of issues, including (Arge Alp, 2015): reduced road traffic (and thus air pollution), reduced parking footprint in the Alpe di Siusi area, reduced noise pollution and reduced individual journeys from the centres of habitation to the departure station of the new cable car.

The results achieved are in line with the overall objective: traffic stabilized between 2005 and 2015; the parking areas on the plateau have been significantly downsized; the operators' fears have been confounded by a 25% increase in overnight stays, with almost 1.5 million cableway trips registered annually and increased profits for the small and medium sized operators of ski-lifts, hotels and other receptive structures, and restaurants.

As for the environmental benefits: a decrease of 25,000 km of car/bus journeys has been calculated, which translates into a reduction in CO_2 emissions of 2.13 tonnes per year (Arge Alp, 2015).

Analysing the two cases, we find that in both Innsbruck and the Alpe di Siusi the projects are part of two distinct sets of diverse initiatives. The Nordkette cable car is part of an intervention designed to revitalize tourism and rebrand Innsbruck. The overall project that includes the Siusi cable car upgrade (ALP.IN.SKI) seeks to solve environmental problems, with a focus on environmentally sustainable transport and other areas of sustainable planning. In both destinations the building projects were grounded in a participatory process, which was more inclusive in Innsbruck, probably because the rebranding plan had such a wide scope. Table 3 provides a summary of the main findings from the two case studies, and the key variables for the achievement of the objectives of the projects concerned.

Tab. 3: Main findings on the experiences of Innsbruck and the Alpe di Siusi

Key factors	Innsbruck	Alpe di Siusi
Who were the decision makers? And were they public or private actors?	The mayor, the local Tourist Association, stakeholders in the hospitality sector.	Arge Alp, Province of Bolzano, local operators (ski-lift, cable car, hotel, restaurant).
Community involvement/ participation in planning the project	Core group, microcosm, support team	Community involvement, discounted tickets for residents.
Primary objective	Tourism development, building the city's image/ identity	Traffic reduction, alternative mobility.
The project as part of an overall strategic development plan	Brand Driven Identity Development	ALP.IN.SKI
How the plan was realised	Upgrading of an existing cable car system.	A two-cable system, integrated within the local public transport network.
Efficacy of the project/ objectives met	Tourism development, improved public transport, deseasonalization, compatible with an Alpine identity.	Enhanced tourist attractivity, economic benefits, environmental sustainability, energy saving, pollution reduction, traffic/parking reduction,
Environmental performance measurement	None	Collection of data on traffic and CO_2 emissions, calculation of energy savings

Source: authors' elaboration

4.3 *The case of Trento: analysis and evaluation of the key factors for the launch of the sustainable mobility plan*

The two transport systems within the municipality of Trento are very different, both in terms of their geography and their function: in the valley the rural-urban system is tightly interconnected and well developed, whereas Monte Bondone is a natural park, rising steeply above the city. Historically and in terms of identity, the two zones are inextricably linked, but nowadays their actual transport links are weak. The current mobility system guarantees a network of urban and rural routes (Danielis *et al.*, 2014), but there is still a shortage of connections between Trento and the villages on Monte Bondone where public transport provision has not improved since 2015. Currently, Trento and Sardagna (a village on Monte Bondone) are connected by a cable car with a very small capacity and the (bus) routes to the other villages on the mountain are slow and winding.

Although they are promoted together to tourists, the data that we have gathered reveals that, on the ground, the two destinations are still disconnected. On the one hand, cultural and event-led tourism is allowing Trento to provide an ever richer and more focused tourist offer, on the other, Monte Bondone - despite a series of attempts, and plans to upgrade the ski offer - has not been able to keep up.

The possibility of a cable car connection between the city and its mountain was first raised in the early 1900s, and a number of different feasibility studies have been carried out in the intervening years. The project that this study examines is the most recent and envisions the construction of a Trento-Bondone cableway by 2030, under the auspices of a public partnership between Trentino Sviluppo, the autonomous Province of Trento and the municipality of Trento. The authors' project considers that it needs to form part of a broader tourism development plan for the two destinations which, through the building of the cableway, can redesign the relationship between Trento and its mountain, which are currently so poorly integrated, both in terms of tourism and mobility (for all concerned).

The cableway, according to the project proposal, would facilitate the offer of services - for tourists, locals and students alike - on the mountain, while simultaneously providing a mode of alternative mobility. The plan includes a number of elements which suggest good reason to expect that the initiative would prove successful:

- the strong growth of tourism in the city of Trento (presences have tripled in the last 18 years) and the consequent increase in consumer demand for a cableway;
- the fact that cableway construction methods have evolved considerably over the years, and the new technologies offer improved safety, increased capacity and are, above all, very environmentally sustainable;
- the immediate enhancement of the tourist experience (just traveling in a cable car is in itself a sought-after tourist experience);
- tourists' growing environmental awareness and knowledge of environmental issues (i.e. the demand segment is increasingly sensitive).

The plan proposes a cable car system that replaces the current Trento-Sardagna section, with four stations. The structure would involve a 5.8 km cableway, with an increase in elevation of 1,460 metres. A detachable gondola mono-cable system is envisioned, with 10 person cars, Wifi, an induced air system, digital information devices, a capacity of 1,500 persons/hr.

The benefits - most of which are primarily long term - are expected to be:

- extended seasons, particularly summer and mid-season, when the receptive structures are usually less busy;
- an increase in services: the newly constructed cableway would encourage new initiatives drawing on the widest possible range of

expertise (city planners, rural experts, local businesses);
- increased hotel occupancy, since the current tourist offer offers substantial room for improvement;
- synergies between mountain and urban tourism;
- positive outcomes for the territory due to the upgrading and valorization of existing structures, the improvement of services on the mountain, a decrease in road traffic, and increased employment opportunities.

Our analysis of the cableway's potential environmental performance is very promising, since the cable car system has a simple life cycle, is quickly constructed, and - because it can be dismantled and removed - has a low impact on the territory (in the long term). Table 4 sets out the most salient facts about the plan, applying the same key factors used in the Innsbruck and Alpe di Siusi case studies.

Another environmental benefit would be a reduction in traffic flow: according to an estimate[2] from "Trentino Sviluppo", this could amount to an annual saving of 7.2 million kilometres (corresponding to 1.7 million kg of CO_2).

Tab. 4: Main findings on the Trento-Bondone cableway project

Key factors	Trento - Monte Bondone Project
Who were the decision makers? And were they public or private actors?	PAT and the municipality of Trento
Community involvement/ participation in planning the project	The local population was consulted, through the gathering of 5,000 signatures (in 2019) supporting the project.
Primary objective	To provide a mode of alternative mobility, synergetic tourism development, experientiality.
Project is part of a broader strategic development plan	Premised on joint tourism development
How the plan would be manifested / be realised	A new cableway
Efficacy of the project/objectives	Deseasonalisation, tourism development, upgrading of services and structures on the mountain, increased employment and hotel occupancy, reduced traffic, environmental sustainability.
Environmental performance evaluation	Energy saving, reduced CO_2 emissions.

Source: authors' elaboration

4.4 Trento Cableway: LCA and evaluation of environmental impacts

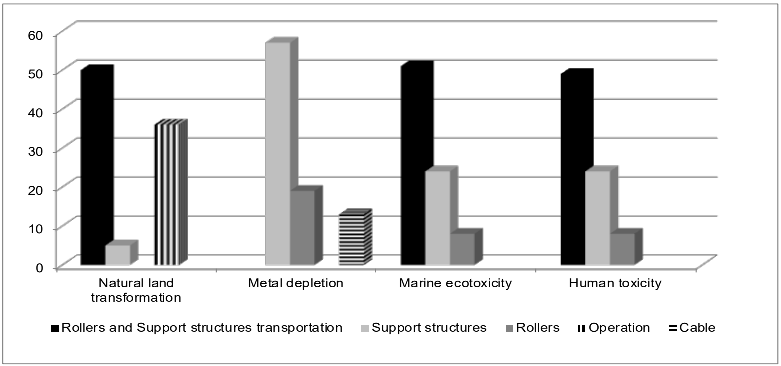
The LCA evidences the fact that the cable car system impacts particularly on 4 of the 16 impact categories considered (see Figure 1):
- *natural land transformation (NLT):* this covers all the eventual anthropogenic changes to the local ecosystem would undergo, such as the infrastructure for the road transportation of materials (50%) and the hydroelectric dams and reservoirs (36%). This category reports the damage caused to an ecosystem, factoring in the time needed to restore

[2] Based on an estimate of 600,000 trips a year, equal to 822 vehicles travelling 16 km with an estimated 237g of CO2 emitted per vehicle.

the land to its original state.

- *metal depletion (MD):* includes the extraction of the metal ores and the costs of prospecting and mining. The cableway infrastructure itself is clearly the most metal intensive: the support structures (57%) and the rollers (19%), and the cable's components all use a large quantity of steel.
- *marine ecotoxicity (ME):* the effects of toxic substances released into the water, air and soils of marine ecosystems. The largest effects are those of the transport of the support structures and rollers (57%) and of the manufacture of the support structures (24%).
- *human toxicity (HT):* the potential damage to human health from chemicals released into the environment by a particular process. Here, the biggest impact would be that of the transport of the rollers and support structures (49%), and of the manufacture of the latter (24%).

Fig. 1: Contributions of the required processes and materials to 4 impact categories (in %).



Source: authors' elaboration

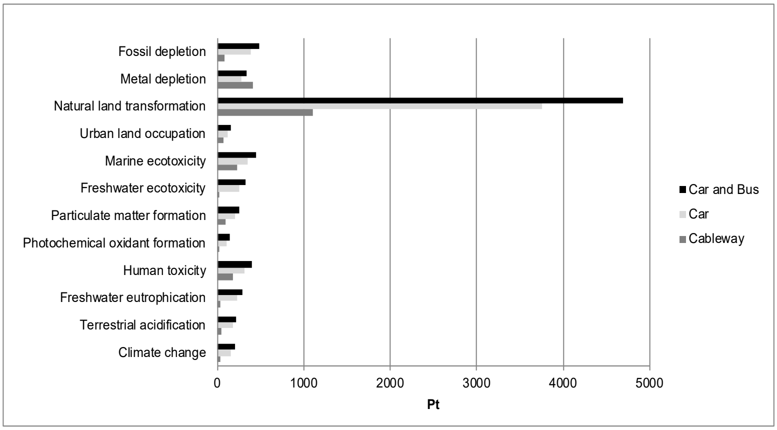
The transport of the heavy materials used for the cableway (rollers and support structures) impacts on all 16 of the categories considered and is, in some categories, noticeably more damaging than the other processes/materials. In the Ozone Depletion category, for example, it accounts for 73% of the total impact, in the Fossil Depletion category, 60%, and in the Climate Change category, 48%; the system operation significantly impacts only on the Water Depletion category (99%). The use of electric motors results in the most important environmental benefit: when no fossil fuels are burnt, GHG emissions diminish considerably, as confirmed by the fact that, when operating, the cableway does not make a significant contribution to the Climate Change category. Two problems, however, emerge. The first concerns the use of hydroelectric energy which, although considered to have a low environmental impact, involves the depletion of water resources and changes natural habitats, home to a number of indigenous plant and animal species (evidenced in the Water Depletion and NLT categories). The second problem is caused by the transport of materials, which involves both heavy goods vehicle movement and - for the last stages of the cableway construction - helicopter flights.

In order to provide further evidence of the environmental benefits of the cableway, a final LCA was carried out. The environmental impacts of the cableway were compared with those of two scenarios which, although hypothetical, more closely approximate the current traffic flows:

- *Scenario 1:* 300,000 passengers travel in private vehicles on the road Trento-Vason. This scenario was evaluated taking into account the characteristics of the Province of Trento's (private) vehicle fleet in terms of fuel (60% diesel, 40% petrol) and engine size (70% medium, 30% big) and the kilometres travelled by each vehicle type were calculated on the basis of an average of two occupants per vehicle.
- *Scenario 2:* 300,000 passengers of whom 80% travel in private vehicles (see scenario 1) and 20% use the public transport currently available (buses with diesel engines) operating with an average 70% of capacity (equivalent to 42 passengers in a vehicle with a maximum capacity of 60).

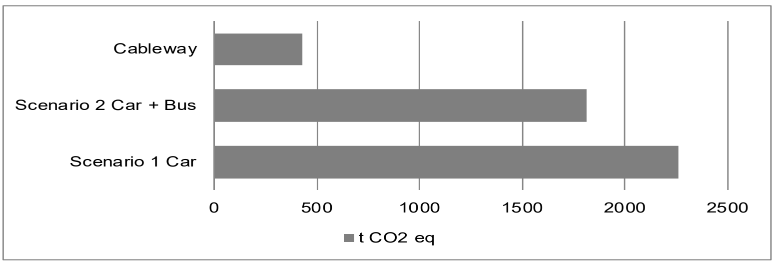
Figure 2 illustrates the contribution of the three transport systems to the 16 different impact categories.

Fig. 2: Contributions of the three transport systems to the analysed impact categories



Source: our elaboration

Fig. 3 Annual CO_2 emissions for the three scenarios, calculating for 300,000 passengers/year



Source: authors' elaboration

In terms of NLT, the difference between the contributions of the different scenarios is striking. The contribution of the cableway represents a sharp reduction of that in scenarios 1 and 2: the negative effects of scenario 1, in particular, would be almost four times greater than if the same number of people were using the cableway. It is evident that when the three scenarios are compared, the environmental performance and sustainability of the cableway is consistently higher than the other two, both of which, of course, are much more similar to the situation on the ground today. The addition of a cableway to the mix would clearly offer a beneficial alternative for passengers.

With regard to Climate Change, moreover, the impact of the cableway is significantly smaller: as Figure 3 demonstrates, the cableway, if it were carrying 300,000 passengers a year, would emit c. 75% less CO_2 than that calculated for scenario 2 and 80% less than scenario 1.

5. Discussion and conclusions

The present study contributes to the current urgent debate on the strategic role that the transport sector can play in reducing *a)* the consumption of primary materials, *b)* the atmospheric pollution caused by carbon intensive energy sources and *c)* land consumption. Choices about mobility are a complex challenge for public managers, because although transport is one of the biggest drivers of environmental change, it is also often a crucial factor in an area's socio-economic development.

The present study took the (2011 Trentino Sviluppo) plan for a cableway between Trento city centre and Monte Bondone as its starting point. The city lies right at the foot of the mountain and the latter has long been a popular destination, for locals and tourists alike. Our analysis had two objectives: the first was to identify the local circumstances and best practices that, might persuade policy makers to redesign mobility with a focus on sustainable solutions. The second objective was to measure and compare the environmental impacts of the proposed cableway with those of a) private vehicle use and b) a mix of private and public road transport.

To achieve the first objective, two examples of excellence in the Alps were examined. This enabled us to identify a) the characteristics of the decision-making processes that lead to the choice of an alternative mobility system, b) the involvement of local community and c) the position of the new mobility projects with respect to the respective area's planning instruments.

Our findings show that the decision-making process that led to the choices in both case studies involved a public-private partnership between the municipality or the province, local stakeholders and the hospitality sector. With regard to community involvement, Innsbruck adopted a limited form of participation (by a "core group"), while in the Alpe di Siusi, the participatory process was broad. The construction of the Alpe di Siusi cableway was part of an extra-regional plan, in the hands of Arge Alp and part of the ALP.IN SKI project. In Innsbruck, the decision to develop the cableway was part of a Brand Driven Identity Development tourism strategy. The T-MB cableway plan was initiated by public decision makers at the municipal and provincial level and elaborated in line with the municipality of Trento's well established (over twenty years) participatory planning strategy. The objective of all three projects is to reduce traffic and minimise the environmental impacts of mobility; it is hoped that the Trento proposal would, as in Innsbruck, enhance the city's infrastructure while also becoming a tourist attraction per se, thus contributing to the revitalization of tourism on Monte Bondone.

The success enjoyed by the Innsbruck and Alpe di Siusi cableways provide useful pointers for policy makers in this field, both in Trento and elsewhere. In particular, it is evident that the realisation of the T-MB cableway could help to strengthen Trento's identity as an Alpine city, by emphasising its proximity to, and identification with, the mountains, and working with a formula which has already proved successful in Innsbruck.

Our analysis of the examples of excellence confirmed the crucial role of public stakeholders in initiating mobility plans and coordinating the local actors involved. The positive reception given to the T-MB cableway when a petition in support of the plan was circulated suggests that the local community and its businesses will want to become actively involved in the various phases of the project. This involvement proved vital both in Siusi (the participation of local operators was crucial) and in Innsbruck, where stakeholders from various fields participated in the project.

As the literature review indicates (Papa, 2010; Scuttari *et al.*, 2016), and as evidenced by the examples of excellence, the T-MB project would benefit from an approach combining the integration of the cableway into the local transport system, traffic reduction measures and a discount ticket pricing for residents.

Turning to the second objective, the evaluation of environmental impacts focuses on the T-MB cableway project and was carried out through an LCA. It was considered the plan to replace the existing cableway and build a new one, with four stations and an end-to-end journey time of twenty minutes. To demonstrate the environmental benefits of using the cableway as a means of transport, the LCA of the new plan was compared with LCAs of two other scenarios, both of which are relatively close to the current mobility pattern.

The *first scenario* envisions the environmental impact of private vehicle use, hypothesising 300,000 passengers on the road between Trento and Vason and taking into account the profile of the province's (private) vehicle fleet in terms of fuel (60% diesel, 40% petrol), and engine size (70% medium, 30% big). The kilometres driven were calculated on the basis of the proportions of vehicle types and an average vehicle occupancy of 2 was factored in. The *second scenario* envisioned a mixture of private and public transport; of the 300,000 passengers, 80% would travel in private vehicles (fuel/engine size as in scenario 1) and 20% in public (diesel powered) vehicles. Average bus occupancy was put at 70% (42 passengers in a vehicle with a maximum capacity of 60).

The results demonstrate that, although the impact on NTL of the cableway would be significant, when compared to that of either private vehicles only or the mixed transport scenario, we have a new perspective:

the negative environmental impact of scenario 1 (private vehicles only) would be almost four times bigger than the scenario in which the same number of people used the cableway.

The mixed road transport hypothesis does not, considering all the environmental factors, perform very much worse than the cableway option; nevertheless, the latter undoubtedly does still perform better. When compared with the other two scenarios, therefore, the cableway consistently demonstrates superior environmental performance, and can thus be proposed as a more sustainable transport alternative. With regard to the *Climate Change* category, when the CO_2 emissions of the three scenarios are calculated (tonnes/year), the cableway is shown to emit 75% less than scenario 2 (the mixed system) and 80% less than scenario 1 (private vehicles only).

The findings of this study substantiate the claim that the cableway represents a viable alternative mobility system, powered by a renewable energy source and thus contributing to a reduction in greenhouse gasses emissions. Furthermore, its construction, if carried out with appropriate care in terms of the provision of materials and their transport, would have a minimal impact on the area considering its minor land consumption (and potentially temporary).

A high frequency service would also dramatically improve the connection with the villages on the mountainside which currently have only one road link. It would also prove to be a tourist attraction in its own right. In the long term, the construction of the cableway could be a starting point for the sustainable tourism development of Monte Bondone: benefitting from the city's tourist flows, the cableway could open a door for the place-appropriate, eco-friendly enjoyment of the mountains.

The fact that the T-MB project is still in the evaluation phase means that it has not been possible to access all the data necessary for either a detailed evaluation of the project's managerial implications or for the LCA analysis. This gap is the main limitation of the present study but is also the starting point for our next research project. An investigation of the proposed cableway's social and economic impact would strengthen the current analysis and provide a more comprehensive evaluation of the project, placing it squarely upon the three pillars of the sustainable approach.

In line with previous studies (Scuttari *et al.* 2013 and 2016), our research investigates sustainable mobility as an element of integrated territorial planning. Our methodology, however, is original: other than in the contribution of Biberos-Bendezú and Vázquez-Rowe (2020), there are no examples in the literature of an LCA being used to calculate the environmental impact of a cable car system.

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Quality and preservation of local resources in coastal destinations from the tourists' perspective. The case of Hua Hin

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Abstract

Purpose of the paper: *This paper investigates whether the quality and preservation of natural and cultural resources meet tourist expectations and whether they have an influence on their satisfaction and re-visiting intentions.*

Methodology*: A quantitative questionnaire was developed and administered to European tourists in Hua Hin, one of the most visited coastal destinations in Thailand. To identify and analyse possible effects, importance-performance analysis, principal component analysis and structural equation modelling have been employed.*

Results*: Results show that the visitors' expectations in terms of quality and preservation of local resources are not adequately met, thus should be improved. Findings also show that they affect tourist satisfaction and intention to return.*

Limits*: The main limitations of this paper are the characteristics of the sample, which do not allow a complete generalization of the results, and the limited number of variables considered in the analysis.*

Implications*: The study suggests that the quality and preservation of local resources are issues on which coastal destinations in developing countries should concentrate and invest in, in order to meet a growing tourists' demand for sustainability.*

Originality of the paper: *This paper is one of the few contributions examining if quality and preservation of tourism resources affect tourist loyalty in coastal destinations in developing countries.*

Key words: Quality and preservation of local resources; Sustainable tourism development; Tourist satisfaction and loyalty; Coastal destinations; Developing countries; Hua Hin, Thailand.

1. Introduction

Coastal destinations provide some unique characteristics for being attractive places preferred by tourists. Tourism growth is coupled with emerging concerns about potentially environmental and socioeconomic negative impacts on local development, especially in large-scale coastal destinations (Shaalan 2005). In the past decades, a rich number of studies has focused on sustainability, which has been identified as a key determinant of the competitiveness of seaside destinations, both in developed and developing countries (Cucculelli and Goffi, 2016; Goffi *et al.*, 2019b). Sustainable tourism is defined by the "United Nation Environmental Programme" and the "World Tourism Organization" (UNEP and WTO

2005, p. 11-12) as the "Tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment, and host communities". Natural and cultural resources are the key reasons that affect tourists' decision - making when choosing destinations (Crouch and Ritchie, 1999). The centrality of the tourists' perspective within the sustainability discourse has also been echoed by the UNEP and the WTO who recognized the preservation of natural and cultural resources in a destination to be two of the main pillars of the sustainability concept.

Despite the rich number of studies focusing on the different aspects of sustainability, the tourism literature is still exhibiting open questions and issues. In fact, there exists a lack in studies examining the linkage between the preservation of local resources and the quality of tourism resources, providing a theoretical or empirical perspective on the relationships between preservation and quality of natural and cultural resources, and tourist loyalty. Indeed, most of the previous studies focusing on either environmental or cultural preservation are mainly applied to protected areas and heritage sites. Furthermore, most of these studies focus on the supply-side perspective (e.g., hotels, tour operators). Nevertheless, and as already stated by Andrades-Caldito *et al.* (2014), a demand-side perspective is needed when it comes to assessing attributes of destination attractiveness. This paper aims to provide a novel approach to the study of tourism sustainability, analysing its role from the tourists' perspective.

This study intends to fill this research gap by investigating whether quality and preservation of local tourism resources meet tourist expectations, and whether tourist loyalty is influenced by the quality and preservation of local tourism resources. To answer the first research question, an Importance-Performance Analysis (IPA) was performed. To answer the second research question, as in Goffi *et al.* (2019a), a structural equation model (SEM) is employed to estimate the causal links between sustainability items (using the principal component analysis -PCA- to reduce factors) and the intention to return, which is mediated by tourist satisfaction. The survey was submitted to European tourists in Hua Hin, a leading seaside destination in Thailand.

Asian tourism destinations provide excellent case studies, as Asia has recorded the highest growth in international tourists' arrivals worldwide in the last decade (UNWTO, 2020; Table 1).

Tab. 1: International Tourist Arrivals in World Regions

	Change (%)				Average per year
	2016	2017	2018	2019	2009-2019
World	3.8	7.2	5.6	3.8	5.1
Europe	2.5	8.8	5.8	3.7	4.6
Asia and the Pacific	*7.7*	*5.7*	*7.3*	*4.6*	*7.1*
Americas	3.7	4.7	2.4	2	4.6
Africa	7.8	8.5	8.5	4.2	4.4
Middle East	-4.7	4.1	3	7.6	2.7

Source: World Tourism Organization (UNWTO 2020)

Therefore, studies analysing tourism destinations in Asia have multiplied in the last few years (Hall and Page, 2016; Cooper and Hall, 2019), in parallel with the growth of tourism flows and massive investments in tourism education in the region (King, 2015).

Thailand was chosen as an exemplary case, as it is one of the most visited destinations worldwide, now facing severe sustainability problems. Thailand is among the top ten ranked countries worldwide for international tourist arrivals (UNWTO, 2019). In 2018, more than 38 million international tourists visited the country, while their number did not exceed 7 million in 1995 (The World Bank Data, 2020). Despite some limitation due to its non-academic nature (Crouch, 2007), the "Travel & Tourism Competitiveness Report" of the World Economic Forum (WEF) is considered to be a useful tool for identifying strengths and weaknesses of countries in tourism development. It placed Thailand in the highest ranks worldwide for its natural resources (10th), its cultural resources (35th), and in contrary, in one of the lowest positions (130th out of 140 countries) concerning environmental sustainability (WEF, 2019). Such contradictions make Thailand an interesting case for investigations into the preservation of local resources.

Hua Hin, a small coastal town of 63,000 inhabitants, is situated less than a 3-hour drive South-West of Bangkok. It was chosen as an applied case, as it is one of the fastest growing coastal destinations in Thailand and hence with an urgent need to address sustainability challenges. In 2017, Hua Hin attracted more than 3.5 million tourists (Horwath HTL, 2019), with a tremendous growth of tourism flows in the last few years (compared to 1.5 million tourists in 2005). "The continued growth in the number of visitors has turned Hua Hin into a chaotic beach town and has generated various negative impacts" (Yaiyong, 2018, p. 144).

Unlike Pattaya, which has attracted major attention from tourism research (Franz, 1985; Wahnschafft, 1982; Lertputtarak, 2012; Longjit and Pearce, 2013), the lack of applied studies about tourism in Hua Hin is rather surprising. To the best of our knowledge, this is the first applied case focusing on this leading Thai and South East Asian coastal destination.

2. Theoretical Underpinning and Research Hypotheses

Sustainability is a multifaceted concept encompassing various elements concerning characteristics, resources, facilities, and services of a tourism destination. The notion of sustainability has been extended to tourism from the concept of sustainable development after the publication of the Brundtland Report (WCED, 1987). The report has been criticized over the years (Adams, 1990, Lélé, 1991; Sneddon *et al.*, 2006); however, it represented an initial step towards the adoption of a different vision of sustainable development, and after more than three decades, it needs to be adapted to today's reality. There has been a broad consensus in literature that sustainability is composed by three interrelated elements: ecological, socio-cultural, and economical (Swarbrooke, 1999). The preservation of natural and cultural resources has been widely recognised as the main pillar within the sustainability debate (Mihalic, 2016). Indeed, the concept of sustainability stems from the study of the negative effects of tourism, among which, the exploitation and degradation of environmental and cultural resources have been identified as some of the most damaging effects (Archer *et al.*, 2005).

The WTO has committed itself to help tourism destinations in the conservation and preservation of their natural and sociocultural capital, especially in developing countries. Specifically, it has focused on developing indicators to help destinations to move to more sustainable configurations. In 2004, the WTO published a guidebook (WTO, 2004), which provides a comprehensive analysis of the environmental, sociocultural, and economic tourism impacts, as well as a broad range of indicators for each concern. Together with UNEP, the WTO also published a comprehensive guide for policy makers about "making tourism more sustainable", presenting instruments, strategies, and structures for a sustainable tourism development (UNEP and WTO, 2005). The European Commission (2013, p. 7) has implemented the "European Tourism Indicator System" for "monitoring, managing, and enhancing the sustainability of a tourism destination".

As noticed by Baldwin (2020), coastal areas are particularly prone to experience the detrimental impacts of large-scale tourism, also due to large-scale tour operating activities (Goffi *et al.*, 2018). In fact, one of the main factors causing the degradation of marine and coastal ecosystems lays in the excessive number of tourists. Rejuvenation policies were adopted by coastal tourism destinations in developed countries in order to increase their competitiveness (Brau *et al.*, 2009). Mature coastal destinations provide an interesting case study (Presenza *et al.*, 2013). In particular, sustainable rejuvenation was identified as a key issue for mature Italian tourism destinations (Simeoni *et al.*, 2019). There are several examples, especially in developed countries, of mature coastal tourism destinations having been rejuvenated through the implementation of sustainable practices aimed at preserving environmental and cultural heritage (Blancas *et al.*, 2010; Ivars i Baidal *et al.*, 2013; Pulido and Lopez, 2013; Oreja Rodríguez *et al.*, 2008). As an example, the Balearic Islands, reacted to the decline in tourism flows by adopting sustainable initiatives (Dodds, 2007; Bardolet and Sheldon, 2008). Environmental assessment policies were also implemented by seaside Italian destinations in order to achieve higher standards of environmental quality (Bruzzi *et al.*, 2011).

Considering these arguments, two research questions are posed:

- RQ1. Do quality and preservation of local resources meet tourist expectations?
- RQ2. Do quality and preservation of local resources affect tourist loyalty?

Within the second research question, three research hypotheses are tested.

Natural and cultural resources are "the primary elements of the destination appeal. These factors are the key motivators for visitation to a destination" (Crouch and Ritchie, 1999, p. 146). Applying a model of destination competitiveness (Goffi and Cucculelli, 2014, 2018) that extends the theoretical model of Crouch and Ritchie (1999), it has been demonstrated that the preservation of natural and sociocultural resources exerts an effect on the competitiveness of destinations, ranging from small and medium Italian coastal destinations (Cucculelli and Goffi, 2016) to large coastal destinations in developing countries (Goffi *et al.*, 2019b). The green practices adopted positively influenced tourist satisfaction and loyalty to an ecolabel-awarded Italian beach resort (Merli *et al.*, 2019). Two studies focused on coastal destinations in developing countries, such as Acapulco (Solís-Radilla *et al.*, 2019) and Punta Cana (Goffi *et al.*, 2020), also showed that tourist satisfaction and the intention to revisit the same destination are influenced by environmental and sociocultural preservation. Landscape, artwork, and architecture were found to positively and significantly affect tourist satisfaction when visiting Thailand (Tokarchuk and Maurer, 2017).

Thus, it can be hypothesized as follows,

- H1: The quality and preservation of the destination's resources affect tourist satisfaction.

The quality of the tourism services and its relationship with tourist satisfaction is a long-debated topic in tourism literature. Several research studies demonstrated that the perceived value of tourism services affects tourist satisfaction, which in turn affects their intention to return to the destination (Chen and Tsai, 2007; Zabkar *et al.*, 2010; Ranjbarian and Pool, 2015). Tokarchuk and Maurer (2017) posited that the quality of tourism facilities and of food and drink affects tourist satisfaction in Thailand.

Hence, a second hypothesis is developed,

- H2: The quality of tourism services affects tourist satisfaction.

A positive and significant relationship between tourist satisfaction and intention to return has been demonstrated in several research studies. Chi and Qu (2008) showed that destination loyalty is strictly linked to overall satisfaction and the satisfaction with different attributes of the destination. Similarly, Alegre and Cladera (2006, 2009) demonstrated that satisfaction has a positive effect on revisiting intentions. These studies have been further confirmed by Assaker, Vinzi, O'Connor (2011), who showed a direct effect of satisfaction on immediate intention to return. In Merli *et al.* (2019), tourists' satisfaction has also been identified as a significant antecedent of loyalty.

Following these considerations, a third hypothesis can be derived,

- H3: Tourist satisfaction affects return intentions.

3. Methodology

A quantitative questionnaire was employed to survey European tourists in Hua Hin, between March and April 2019.

The questionnaire was composed of the following sections: the socio-demographic profile of the respondent, previous visits to the destination, importance of factors for vacations in general, evaluation of quality attributes of the destination visited, agreement with the preservation of resources at the destination, satisfaction with the destination, and intention to revisit the destination. All the variables encompassing agreement, importance, evaluations were based on a Likert scale from 1 to 5, where 1 was "not important" at "totally disagree" and 5 was "very important/completely agree". Data were collected on the basis of convenience, and participants were approached at three different open night food markets in Hua Hin. Only those visitors who stated to be towards the end of their vacation were interviewed. A total of 226 tourists answered to the survey. As shown in Table 2, 65% of the respondents were male and 35% female. Most of the respondents were in the age groups of 30-40 years old (35%) and 41-55 years old (33%); 38% spent one week or less in Hua Hin, 21% between one and two weeks and 41% more than two weeks. The sample is almost equally distributed between education levels (university/non-university degree) and between first time and repeat visitors. 19% of the respondents were travelling alone, 20% with friends, 32% with a partner, 12% with a partner and children, 17% with family and friends.

Tab. 2: Sample descriptive statistics

Gender		Whom are you travelling with?	
Female	79	Alone	43
Male	147	With friends	45
Age		With my partner	72
Under 30	32	With my partner and children	26
30-40	76	With family and friends	37
41-55	72	Other	1
Over 55	38	How long are you staying in Hua Hin?	
Level of Education		1-2 nights	20
Elementary/middle school	22	3-4 nights	31
Non-university higher education	81	5/7 nights	33
University education	122	8/15 nights	48
What is your employment status?		16/30 nights	38
Student	8	31 or more	54
Not studying not working	12	How many times have you visited Hua Hin?	
Working	175	It is the first time	106
Retired	30	Second time	33
How many people are travelling with you?		Third time	18
Nobody	43	More than three times	68
One	83		
Two	29		
Three or more	70		

Source: Elaboration on survey data

Tourists were requested to rate the perceived importance and the destination's performance along different attributes measuring the quality and the preservation of local resources and tourism services on a 5-point Likert scale. Visitors were also requested to rate their overall satisfaction with the vacation and their return intentions on a 5-point Likert scale.

To answer the first research question, an Importance-Performance Analysis (IPA) was carried out. As an alternative of the classic "four quadrants" methodology, a diagonal "iso-rating line" was used, being "a more suitable method for identifying areas of concern, compared to the subjective thresholds-selection method, as it directly focuses on differences in satisfaction and importance ratings" (Sever, 2015, p. 45). A gap analysis was used to calculate the difference between perceived importance and performance of each attribute. The gap analysis was performed following Randall and Rollins (2009) and Tonge and Moore (2007). Therefore, importance mean scores were subtracted from those of performance. Employing paired t-tests, the attributes with significantly different mean importance and performance scores were highlighted. Positive values represent attributes in which tourists' expectations are not met. In this case, dissatisfaction increases with the increase size of discordance between the two values. The distance of the points from the iso-rating line indicates that there are large gaps between the importance and the performance scores.

The second research question was explored in two different steps. Firstly, a PCA was performed to reduce the number of variables related to sustainability assessment. Then, the obtained components were included in a SEM, estimating the causal links between preservation, quality, satisfaction, and intention to return. As indicated in Figure 1, an indirect causal link is considered between the two obtained components of the PCA and intention to return, mediated by the overall satisfaction. AMOS 25 was used to create and calculate the model.

4. The case study

The Asian region is the fastest-growing tourism area worldwide, recording a 7.1% average annual growth from 2009 to 2019, compared to around 4.5% in Europe, Americas and Africa, and 2.7% in the Middle East (UNWTO, 2020) (see Table 1).

In response to the increasing interest and research on tourism in Asian countries, Cooper and Hall (2019) published the book "Current Issues in Asian Tourism", a collection of papers published in the journal "Current Issues in Tourism" in 2018 on tourism development in Asian destinations. They also announced the publication of a new companion Journal focusing on tourism in the Asian region: "As editors of Current Issues in Tourism, we have seen a steady growth in both, submissions about tourism in Asia, and Asian authors of papers. We therefore decided to launch the journal companion Current Issues in Asian Tourism (CIAT) to focus research material on this region" (Cooper and Hall, 2019, p. 1). Furthermore, Hall and Page (2016) published the book "The Routledge Handbook of Tourism in Asia", divided in sections dedicated to each Asian region with 28 chapters and a strong list of authors who offered their perspectives on the dynamics of tourism in Asia. Yang and Ong (2020) pointed at the need to redefine Asian tourism considering an indigenous point of view.

Thailand is the main tourist country in South-East Asia and the second in Asia after China (62.9 million). In 2018, 38.178 million international tourists visited the country. In the last decade international tourist arrivals have grown by 161% compared to the 14.5 million in 2008; in 2018, international tourist arrivals grew by 7.2% compared to 2017 (35.6 million) (UNWTO, 2019).

According to the "International Tourism Highlights 2019" of the UN Word Tourism Organization, in 2018 Thailand accounted for 30% (38.2 million) of all tourist arrivals in South East Asia (total 128.7 million) and is ranked by far the first country in terms of tourist arrivals, followed by Malaysia (25.8 million), Vietnam (15.5 million), Singapore (14.6 million), and Indonesia (13.4 million) (UNWTO, 2019). South-Est Asia has been the second fastest growing region worldwide (average annual growth of 7.8% between 2010 and 2018) and hence represents 9.2% of the total international tourist arrivals worldwide.

Thailand, with 69.799 million inhabitants, is the fourth largest nation in South-East Asia, after Indonesia (273.5 million), the Philippines (109.6 million) and Vietnam (97.3 million), followed by Myanmar (54.409 million), and Malaysia (32.3 million) (Worldometers, 2020).

The tourism sector has provided a great support to the economic development of the country. It was considered by the Thai government as one of the most important sectors for income and employment generation (Chulaphan and Barahona, 2018). Thailand is the 9th most visited country worldwide by international tourists, with 63 million US$ tourism receipts (compared to the 20.1 million US$ tourism receipts in 2010) (UNWTO, 2019). According to the World Travel & Tourism Council, in 2018, the total contribution of tourism to GDP was 95 billion dollars in Thailand, accounting for 21.2% of GDP. The direct contribution of tourism to GDP was 42.2 billion dollars (9.4% of GDP). In 2018, with 5.8 million jobs, the tourism industry represented 15.5% of total employment, and visitor exports generated 19.2% of total exports (WTTC, 2018).

When compared to other countries in the region, Thailand benefits from the competitive pricing of its accommodations, the abundance of natural resources, and the overall development of the infrastructures (Lunkam, 2017, p. 1), and it has advantages in terms of geographical location, tourism services and cultural background (Liu *et al.,* 2018). During the late Nineties, Thailand concentrated on domestic and European tourist markets, rather than on its neighbouring countries (Ramos *et al.*, 2017). Thailand is frequently perceived in western imagination of Thailand as an exotic sex tourist destination (Garrik, 2005). This is common to the whole Asian area, as "the Orient is a geographically dislocated place of sexual plenitude where tourists can lasciviously flirt" (Tan, 2014, p. 147). The perceived risk of diseases (such as bird flu, or SARS), much more than terrorism, have negatively impacted the tourism sector in Thailand and particularly on its Southern Provinces (Rittichainuwat and Chakraborty, 2009).

Hua Hin, the applied case of this study, is situated in the Prachuap Khiri Khan Province, an area promoted by the government as the "Thai Riviera", 199 kilometres south-west of Bangkok. It has a population of 63,000 inhabitants. According to the leading travel guide publisher "Lonely Planet", "Hua Hin is where the city meets the sea": "Hua Hin (หัวหิน) is a refreshing mix of city and sea with lively markets, good golf courses and water parks, excellent accommodation, and an ambience that just keeps getting hipper and more cosmopolitan. In fact, many visitors never even set foot on the sand." (Lonely Planet, 2020).

Hua Hin municipality was established in 1937 and it has turned from a small fishing village to an important resort town for Bangkok's upper-middle class. According to the historical reconstruction of the town by Yaiyong (2018), the rise of Hua Hin as a leading tourism destination in Thailand has started in the 1920's, with the construction of the seaside palace of King Rama VI in Cha-Am, the building and expansion of the world class Railway Hotel and the Royal Golf Course, as well as with the linkage of the southern railway line (which passed through Hua Hin) with the British Malay railway. It was the same King Rama VI who aspired Hua Hin to be the leading coastal destination in Thailand.

In 2017, more than 3.5 million tourists visited Hua Hin, compared to 2.5 million in 2013, and domestic tourists accounted for 73% of total arrivals (Horwath HTL, 2019). The hotel occupancy rate ranges from 70 to 80% from December to April, and from 50% to 70% during the other months of the year. Hua Hin is a weekend destination for locals, resulting in an inability to fill in hotel rooms during the week; the United Kingdom, Germany, Denmark, Finland, and Sweden are the top five international incoming markets (C9 Hotelworks, 2015).

5. Findings

Regarding the first research question, the quality of cultural resources is perceived by the respondents to be the most important characteristic when visiting a destination (4.61 on a 5 Likert scale), followed by the quality of food (4.29), environmental preservation (4.24), the quality of natural resources, and cultural preservation (4.12), whereas quality of accommodation is rated as the least important among the six variables (3.9) (Table 3).

Tab. 3: Importance and performance source gap and t test

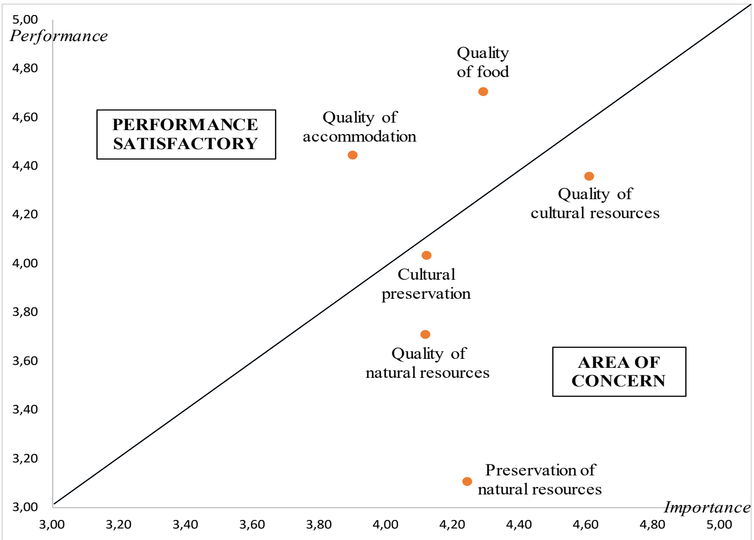
	Importance		Performance		Gap analysis	
	Mean	St.dev.	Mean	St.dev.	Gap value (I-P)	Significance
Quality of natural resources	4,12	0,86	3,71	0,79	0,40	0.000
Quality of cultural resources	4,61	0,97	4,36	0,87	0,24	0.000
Quality of accommodation	3,90	0,91	4,45	0,79	-0,55	0.000
Quality of food	4,29	0,76	4,71	0,72	-0,42	0.000
Environmental preservation	4,24	0,76	3,11	0,88	1,13	0.000
Cultural preservation	4,12	0,88	4,04	0,76	0,08	0.000

Source: Elaboration on survey data

As Figure 1 shows, the respondents evaluate the performance of Hua Hin concerning environmental and cultural preservation and the quality of natural and cultural resources as "not satisfactory". Their rated performance is lower than their rated importance. The four items mentioned above are positioned below the iso-rating line in the "area of concern", indicating that they are key issues that need to be improved to meet tourist expectations.

In particular, "environmental preservation" scores the lowest, and, with a value of 1.13, represents the destination's major weakness (Table 3). On the contrary, Hua Hin is perceived to perform fairly well concerning the quality of food and accommodation, since their performance level is higher than the importance counterparts. All features are statistically significantly different (p = 0.000).

Fig. 1: IPA results



Source: Elaboration on survey data

Concerning the second research question, the PCA generated two components that account for 60.7% of the total variance. Results of Barlett's test of sphericity (Chi-Square 256.309 Significance 0.000) and Kaiser-Meyer-Olkin (KMO= 0.750) statistics confirm that the PCA is an appropriate analytical tool in the context of this study. The attributes encompassed by each component are displayed in Table 4. The first component, "quality and preservation of local resources", includes the items "cultural and environmental preservation" and "quality of natural and cultural resources", and it accounts for 35.7% of the total variance. The second component is associated with the "quality of tourism services", including quality of accommodation and food, and it accounts for 25% of the total variance.

Tab. 4. PCA Results

Components	Loadings	Variance (%)
C1. Quality & preservation of local resources		*35.678*
Quality of natural resources	0.796	
Quality of cultural resources	0.775	
Cultural preservation	0.660	
Environmental preservation	0.649	
C2. Quality of tourism services		*25.050*
Quality of food	0.846	
Quality of accommodation	0.759	
KMO 0.750		
Bartlett's test of sphericity Chi-Square 256.309 Significance 0.000		

Source: Elaboration on survey data

SEM results in Table 5 confirm the second hypothesis, as the path from the latent construct "quality and preservation of local resources" to tourist satisfaction is significant and positive. There is also a positively significant relationship between "quality of tourism services" and tourist satisfaction, corroborating our second hypothesis. The results also reveal a positive and significant relationship between tourist satisfaction and return intentions, thus confirming the third hypothesis. The estimated standardized path coefficients of the structural model are displayed in Figure 2.

Tab. 5: Estimates of the model

			Estimate	S.E.	C.R.	P
Tourist satisfaction	<---	Quality & preservation of local resources	.467	.145	3.220	.001
Tourist satisfaction	<---	Quality of tourism services	.508	.220	2.309	.021
Quality of natural resources	<---	Quality & preservation of local resources	1.000			
Quality of cultural resources	<---	Quality & preservation of local resources	1.168	.144	8.100	***
Quality of food	<---	Quality of tourism services	1.000			
Quality of accommodation		Quality of tourism services	1.202	.268	4.489	***
Cultural preservation	<---	Quality & preservation of local resources	.955	.123	7.781	***
Environmental preservation	<---	Quality & preservation of local resources	.737	.131	5.611	***
Intention to return	<---	Tourist satisfaction	.863	.071	12.079	***

Source: Elaboration on survey data

Fig. 2: SEM results

Source: Elaboration on survey data

Tab. 6: Goodness-of-fit indices for the SEM

Indices	Goodness-of-Fit Statistics	Recommended value
Absolute Fit Indices		
Chi-square (χ 2) of the estimated model	41.982	
degrees of freedom df=18 p= 0.001		
Minimum discrepancy per degree of freedom CMIN/DF	2.332	<3
Goodness-of-fit index GFI	0.957	>0.90
Root mean square error of approximation RMSEA	0.077	<0.08
Incremental Fit Indices		
Adjusted goodness-of-fit index AGFI	0.913	>0.90
Normed fit index NFI	0.907	>0.90
Parsimonious Fit Indices		
Incremental fit index IFI	0.945	>0.90
Comparative fit index CFI	0.943	>0.90
Parsimony normed fit index PNFI	0.583	>0.50

Source: Elaboration on survey data

The goodness of fit indexes of the measurement model (Table 6) indicate that the measurement model exhibits an acceptable fit compared to thresholds commonly considered in the literature (GFI = 0.957; RMSEA = 0.077; AGFI = 0.913; NFI = 0.907; IFI = 0.945; CFI = 0.943; PNFI = 0.583). The Chi-square test is statistically significant. "For models with about 75 to 200 cases, the chi square test is generally a reasonable measure of fit. But for models with more cases (400 or more), the chi square is almost always statistically significant" (Kenny, 2020). For this reason, CMIN/DF (Chi square/degrees of freedom) was computed with a value of 2.332. "Chi-square (χ 2) to degrees of freedom ratios in the range of 2 to 1 or 3 to 1 are indicative of an acceptable fit between the hypothetical model and the sample data" (Carmines and McIver, 1981, p. 80).

6. Conclusion and discussion

The present study aims to advance the existing body of knowledge on tourism sustainability in coastal destinations by offering a new perspective onto the positive effects of preservation and quality of local resources on visitor loyalty. The study shows that the quality and preservation of local resources are issues on which Hua Hin should focus and invest. The importance of the quality of natural and cultural resources and cultural and environmental preservation emerge strongly from the analysis. IPA results indicate that the environmental preservation is the destination's main weakness, and hence the critical feature to be addressed and enhanced. Moreover, the findings support the hypothesized positive linkages between quality and preservation of local resources and tourist satisfaction, as well as between tourist satisfaction and intention to return. As also identified by Goffi *et al.* (2020b) in a study on an Italian Lake destination, the quality and preservation of local resources are not disconnected constructs in the view of tourists. These results help us to corroborate the evidence of a linkage between quality and preservation of local resources and tourist loyalty and provide a new lens for interpreting such connection.

The results of this study may stimulate local destination managers and policymakers to focus their investments on attributes identified in the "area of concern", such as the implementation of effective actions to preserve the natural and sociocultural capital, and the improvement of the quality of natural and cultural assets. The challenge for local destination managers is to recognise the preservation of the local environment and culture as absolute priorities, providing them with a sustainable platform for connecting tourists to the history and culture of the place. Findings of a survey among international tourists in Thailand revealed that the unique cultural heritage and the environmental friendliness of the destination were rated as the most important attributes (Choovanichchannon, 2015). Tourists in Southern Thailand are increasingly looking for authentic and high-quality experiences (Kontogeorgopoulos, 2003). The key role of the quality and preservation of local resources in determining tourist loyalty requires to develop developing appropriate destination marketing strategies, whereby particularly the variables included in the marketing mix need to be reconsidered.

The appeal of Hua Hin is due to its unique characteristics. These include the proximity to the capital Bangkok, long white sandy beaches which are ideal for swimming and water sports, affordable prices, cultural attractions, a rich typical gastronomy, and a variety of experiences offered. Hua Hin has historically been the summertime retreat of the royal family, "people therefore trust it to be safe and calm, and have a good atmosphere for tourists" (Kityuttachai *et al.*, 2013, p. 1481). Even if there are no published studies about tourism in Hua Hin in international Journals, some useful insights can be drawn from the results of the "Searching for Paradise" project aimed at analysing the international retirement migration to Hua Hin, which "is touted as the new 'retirement heaven' of Thailand" (Husa *et al.*, 2014, p. 140). According to the study, the increasing popularity of Hua Hin as one of the top destinations in Thailand is due to the warm climate, the high quality of life, and the comparatively low cost of living. Hua Hin's beachfront has been gradually crowded by sky-high condominiums, hotels, restaurants and private properties, with traffic congestions and overcrowding during weekends and holidays (Yaiyong, 2018). Since tourists are loyal to Hua Hin for the reasons mentioned above, there is a potential risk that the destination managers and planners are not motivated to focus on the preservation and quality of its resources, resulting in negative effects on tourist satisfaction.

The model developed in this paper might be suitable for analysing the relationships between preservation and quality of resources, satisfaction, and loyalty also in other destinations. Specifically, it could be applied to other coastal destinations affected by socioeconomic and environmental problems. As pointed out by Franch *et al.* (2008), the growth of a market segment interested in landscape and natural resources, as well as in discovering local culture and traditions, may provide to mature destinations an opportunity to innovate their products in a sustainable way. To this end, the authors argued that on one side, the public sector should define the normative framework, on the other side the private sector should develop product and services accordingly. In this sense, appropriate legislation can help to establish an effective agenda for tourism businesses in Thailand, also by enforcing voluntary initiatives and environmental awareness (Azam *et al.*, 2018). Stakeholders' involvement appears as the key factor for achieving a successful implementation of such initiatives in coastal destinations in order to produce socially and environmentally positive impacts (Vellecco and Mancino, 2010).

This study offers significant managerial implications, as it provides public agencies and private operators with insights on the role of preservation and quality of local resources on tourist satisfaction and loyalty. It encourages destination planners and managers to adopt strategies that are respecting the local environment and communities. It is of utmost importance to create and devise a new planning and management model that places environmental outcomes at destination level at the top of the agenda. As pointed out by Aguiló, *et al.* (2005, p. 219), sustainability is a key issue and condition for the survival of sun-and-sand tourism destinations and for the hospitality industry, which are now required to adjust to a changing demand. The implementation of initiatives of environmental management, such as environmental certification, may represent an effective way of improving sustainability in such destinations (Pencarelli *et al.*, 2016). Moreover, they can affect future tourists' decisions to visit a destination (Capacci *et al.*, 2015) and play a significant role in generating added value for coastal tourism destinations (Cerqua, 2017). From the perspective of the private businesses, this study can support in the development of managerial and marketing strategies. It encourages the private sector to adopt at least strategies that are not harmful to the local community and the environment.

Although this paper offered an initial contribution to the relationship between quality and preservation of tourism resources and tourist loyalty, it has limitations which future research studies are encouraged to overcome. One limitation concerns the sample size, which for the type of analysis employed can be considered relatively small. Thus, to confirm the relationships found in this work and to further advance it to a generalised model, future studies are encouraged to utilize larger samples. Nevertheless, despite the relatively small sample, the findings of this study should be considered as an initial step to improve the understanding of the importance of quality and preservation of local resources in coastal destinations from a demand point of view. A further issue that may attract critique is the limited number of variables considered in the analysis. Future studies will certainly be able to employ more factors, identifying further features of environmental and cultural preservation. Extending this type of analysis would result in an improved understanding of the dimensions contributing to the concept of preservation of local resources. Yet another limitation may be the visitors' ability to appraise the preservation of local resources. Sustainability discourses so far have focused on the supply side, hence not sufficiently taking into account the demand perspective (Curtin and Busby, 1999).

Therefore, this research can be considered as a first attempt to investigate the quality and preservation of local resources in coastal destination from the tourists' point of view, and hence the frequently called for demand perspective. To enhance the generalisability of the model and its findings, replications of this study to other seaside destinations in and outside Asia are encouraged. Thus, to confirm the relationships found in this work and to further advance it to a generalised model, future studies are encouraged to utilize a larger sample.

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Community participation as a driver of sustainable tourism. The case of an Italian village: Marettimo Island

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Abstract

Purpose of the paper: *The paper aims to study the role of community participation in an Italian marginal area in contributing to the social innovation phenomenon in which residents focus their economic efforts on tourism development. It aims to verify if community participation may enhance the tourists' perception of authenticity and the safeguarding of local resources.*

Methodology*: The authors present a theoretical framework and a case study of Marettimo, an Italian village. The paper analyses the interrelationships between authenticity and community participation and the community role in safeguarding local resources within the tourist's "living like a local" experience.*

Findings*: Community participation is seen as a relevant and significant factor in facilitating the interaction between the tourist and the place, and as a meaningful drive to strengthen both tourist perception of authenticity and its attachment to the place.*

Practical implications: *The paper highlights how local communities and tourism actors, may coordinate to create "authentic" tourist experiences. In this context, the paper presents and prescribes the role of community participation and authenticity to make stakeholders feel the importance of not only becoming place ambassadors but also place resources safeguards.*

Limitations of the research: *As for all case studies, the findings highlighted in this paper may be difficult to generalize to other rural and fishing areas without a further process of adaptation.*

Originality of the paper: *The proposed framework fills the gap in the role of community participation particularly in those areas with environmental and anthropological resources that can create tourist place attachment but, at the same time, are characterized by depopulation and limited welfare conditions as well.*

Key words: community participation; sustainable tourism; authenticity; place attachment

1. Introduction

Several rural, and fishing, Italian villages have endured an ongoing decline of traditional industries in the last decades exposing them to depopulation, poverty growth and hydro-geological instability. This condition, present in all European countries, has driven several changes that may be seen as a social innovation towards the exploration of alternative means to strengthen the places' economic resources and to foster social and economic community development (Lepp, 2007; Basile and Cavallo, 2020). Among these new development paths, community-based tourism has been proven as a viable option in traditional rural-fishing areas as it may:

- provide economic benefits to local residents (Bramwell and Lane, 1993; Mehmetoglu, 2001),
- promote host destinations (Boo and Busser, 2006; Mehmetoglu and Ellingsen, 2005),
- provide visitors with high-quality experiences and greater environmental awareness (Lee, 2009; Lepp, 2007; Shrestha *et al.*, 2007), and
- safeguard natural and cultural resources (Hiwasaki, 2006; Okazaki, 2008).

Community participation has become common in ecotourism (Snyder and Sulle, 2011), and according to the United Nations World Tourism Organization (UNWTO, 2001) it was one of the most promising niches in cultural tourism.

The main strength of community participation, especially in cultural tourism, lies in its potential to empower communities and to make substantial contributions to their development and to eradicate poverty, depopulation, hydro-geological instability and the degradation of cultural and landscape heritage (Manyara and Jones, 2007).

In fact, community participation activities are designed and implemented through community consensus without top-down processes and they may enhance the opportunity for spontaneous encounters between destination communities and tourists. In fact, for many people, the development of a sustainable approach to cultural tourism is the same as local community participation (Salazar, 2012).

Several scholars have studied the factors influencing sustainable tourism supported by the local community such as attitudes (Lai and Nepal, 2006), perceived effects (Dyer *et al.*, 2007), community attachment (Nicholas *et al.*, 2009), and perceived benefits (Nunkoo and Ramkissoon, 2011). Other (Fallon and Kriwoken, 2003; Gursoy and Rutherford, 2004; Nicholas *et al.*, 2009) have shown that it is difficult to have sustainable tourism initiatives without the support and participation of the locals.

Other studies highlighted that community participation is a condition for tourism planning, aimed at the creation of an enjoyable tourism offer for both tourists and residents (Simmons, 1994).

A positive attitude from local residents can not only help in boosting tourists' tourist satisfaction level but it can also contribute to reaching experiential value co-creation based on the relationships between tourists and the local community that, furthermore, could stimulate a "word-of-mouth" phenomenon of the destination by the satisfied tourists (Presenza *et al.*, 2013).

On this basis, the authors develop a conceptual framework and use a case study, to argue that:

- community participation in tourism (community-based tourism, CBT) may be seen as a social innovation process in which the local community adapts its habits and practices to external stimuli using community attachment as a source of value;
- the relations between community host and tourists affect their authenticity perception fostering a real and virtual place attachment condition;
- there is a direct link between community attachment and environmental safeguard, making the tourism phenomenon sustainable.

This paper is organized as follows. First, there is the theoretical framework on Social Innovation (Section 2), on the role of authenticity in the tourist experience (Section 3), in Section 4 we focus on the role of community participation in the sustainable tourism field; then we present the methodology (Section 5), the research findings (Section 6), and, finally, there is the discussion of the case with conclusions, implications, limitations and further research directions (Section 7).

2. Social innovation and community based tourism

Social innovation is part of the debate about the nature and role of innovation in modern society; it is a conceptual extension of the innovative character of socio-economic development (Hillier, Moullaert, and Nussbaumer, 2004).

Regarding that, Mumford (2002) argued that social innovation can be defined as the emergence and implementation of new ideas about how people should organize interpersonal activities, social interactions, to create new networks for production, new training processes and new tools for neighborhood governance in order to meet one or more common goals (Dredge, 2006).

Howaldt and Schwarz (2010) defined social innovation as those new configurations of social action practices, prompted by the community, or one of its parts, with the ultimate goal of coping better with needs and problems than what is possible using existing practices.

Furthermore, Crozier and Friedberg, (1993) interpreted social innovation as a process of collective creation in which the members of a certain collective unit learn, invent and lay out new rules for the social game of collaboration and of conflict or, in a word, a new social practice, and, in this process, they acquire the necessary cognitive, rational and organizational skills.

This trend combines commitment to both "difference" and "unity" in the same community effort. It builds upon familiar steps in the participation process but practices them in multicultural ways (Checkoway and Richards-Schuster, 2003).

In the present work the authors will consider community-based tourism (CBT) as a social innovation approach in which host residents, community members, support and/or participate in tourism development with their different habits, behaviors and social organization, and, sometimes, even in a passive way as the locals not directly involved in tourism activities may still be considered as living repository of the local culture and the local traditions. Therefore, the hospitality industry has evolved from viewing experiences as passive activities (e.g., guided tour around historical buildings) towards co-created experiential consumption leveraging relationships with the local community (Ellis *et al.*, 2018).

CBT was considered a way for individuals to participate and integrate in community life, creating an affectional bond, or emotional link, with a specific community (McCool and Martin, 1994). Community attachment highlights the individual's relationship with, and belonging to, a community (Kasarda and Janowitz, 1974). Therefore, community participation, a result of the local area "social capital", plays a significant role in CBT related sustainable development, as it creates a synergy between community members and between them and other stakeholders, and it helps increasing the community value by enhancing the positive effects of tourism and reducing its negative ones (Franch, 2010; Beritelli *et al.*, 2016).

The community-based approach is characterized by an active involvement of locals in development issues; in this approach, local residents are seen as a key resource in sustaining the product of tourism destinations particularly in rural and fishing areas in which are present social and environmental needs (Hardy *et al.*, 2002). Moreover, this approach provides incomes for villagers, while empowering them to exert control over community developments, and to prevent environmental degradation (Tolkach and King, 2015).

In this regard, various academics and practitioners acknowledge that community participation can be viewed from at least two different perspectives: (1) participation in the decision-making process and (2) participation in sharing tourism benefits (Höckert, 2009; Michael, 2009). On the other hand, CBT helps in sharing the various positive effects related to spreading the benefits of tourism development projects such as higher incomes, better employment, and education of locals (Brohman, 1996).

The role of community participation in the tourism development process have been studied in tourism literature. Cole (2006) clarified that tourism as a service-based industry is extremely dependent on the support and co-operation of host communities. Dogra and Gupta (2012) hold that community participation acts like the backbone of a destination. D'Amore (1983) and Murphy (2012) described the service as the key to the hospitality atmosphere and that community participation can increase the social carrying capacity. Wearing and McDonald (2002) saw the community-based as a place management process leveraging on creating a symbolic, mutual, relationship between the place and the tourist, that even when not focused on the tourist, consider it as a part of the system. At the same time community participation is a fundamental key to experiential economy and in creating a perception of authenticity (Pookhao Sonjai, *et al.*, 2018; Mannon and Glass-Coffin, 2020).

Accordingly, in rural and fishing areas, this is a social innovation according to Mumford (2002) as it asks local communities to change the drivers of local development and it may be seen as a social innovation according to Howaldt and Schwarz (2010) as it is designed to address depopulation, i.e. the movement of young people out of the area in search for jobs. Finally, it meets the Crozier and Friedberd (1993) criteria as it requires local residents to change the rules of social game as they have to learn how to deal systematically with external stakeholders.

3. The role of authenticity in tourist place attachment

Tourism is highly dependent on the goodwill and cooperation of host communities, the service is considered central in creating a hospitable atmosphere and the local community is an integral part of tourist experiences (Murphy, 2012). Therefore, tourists have an active role in looking for meaningful and memorable experiences (Ritchie and Hudson, 2009), and, as Vargo and Lusch, (2004) argued, tourism value should be seen as 'value-in-use' emerging when tourists use, experience the tourism services in their creation context. For tourists, the value of tourism resides in, and derives from, their experiences, hence it is 'value-in-the-experience' (Helkkula *et al.*, 2012), or 'experience value' (Prebensen *et al.*, 2012). In this view, the residents and those involved will have to interact to stimulate a reciprocal value creation, fostering "value co-creation" (Grönroos, 2008; Vargo and Lusch, 2004).Several authors agree that the essence of CBT is in the interactions between tourists and residents; tourists actively collaborate with residents in the product/service creation that tourists will later assess in order to determine the travel value on their usage experiences (Pencarelli and Forlani, 2002; Sharpley, 2014; Ranjan and Read, 2016).

Pine and Gilmore (2011) argued that experience is about creating a memorable and unique event, a vision commonly shared in the tourism industry (Prebensen *et al.*, 2018). In tourism studies, there is an ongoing discussion on the shift from tourist to traveler, as the latter is more interested in experiences, he/she demands authentic, experiential-oriented opportunities, and more meaningful interactions with locals (Pine and Gilmore, 2011; Pencarelli and Forlani, 2016; Tussyadiah, 2016). In this context, CBT is seen as a source of authentic and memorable experiences, while travelling internationally, regionally or even locally (Williams *et al.*, 2014).

Community participation represents a clear shift from the services economy to an experiential one (Pine and Gilmore, 2011), and Scarpato (2002) argued that local culture is often a meaningful driving force behind the "cultural revival" of a place.

Accordingly, CBT is a way to transfer historical, social and naturalistic local characteristics (ideographic and organizational) in a set of dyadic relationships between the host community and tourists. CBT helps to give tourists a "living like a local" experience that may stimulate a place attachment that, usually, is represented by the residents' community sense of belonging, individuals' emotional bindings, tourists' perception of environmental and social conditions encountered on tour, as it is showed in figure 1 (Paulauskaite *et al.*, 2017; Russo and Richards, 2016; Shams, 2018).

Regarding that, using a co-creation-oriented perspective, these new resident roles of the host community help to define them as "makers and

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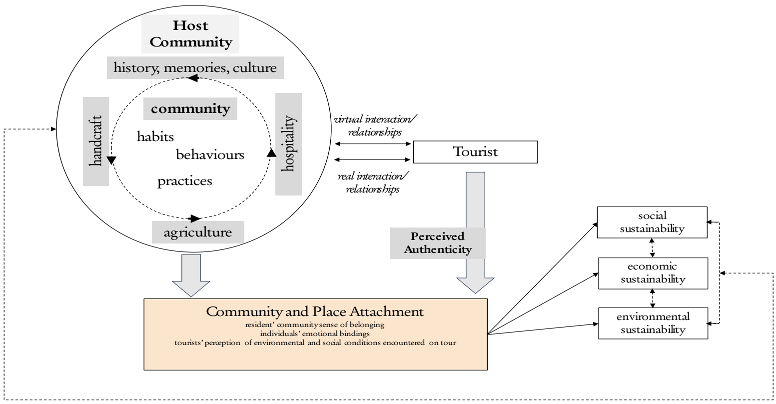
shapers rather than as users and choosers of involvements" (Simpson, 2008). The villagers' support in local area tourism development is especially important in rural or fishing villages, where 'meeting the local people' is often the real experience the tourists are searching for.

Pine and Gilmore (2008) hold that authenticity is an essential asset of firms that provide services for consumers, which are not only satisfied with low costs and high quality, but also seek to participate to the creation of genuine experiences.

In this view, co-production involves tourists in the experience design process, performing either a facilitation or active role through the sharing of knowledge or information with the community members (Palladino, 2020; Pizzichini *et al.*, 2020).

This interaction creates place *attachment* in both residents and tourists and contributes to drive tourists in supporting the place drive towards *social, environmental and economic sustainability* (see fig. 1) (Vrontis *et al.*, 2020).

Fig. 1: Relations between place and tourist



Source: our elaboration

Regarding that, Zenker and Braun (2010) defined the results of place-community and stakeholder-tourist relationships as a network of associations in the consumer's mind based on the visual, verbal and behavioral expression of a place, which is embodied through the aims, communication, values and the general culture of the place's stakeholders and the overall place design.

Several scholars (Kolar and Zabkar, 2010; Rickly Boyd, 2012; Kirillova *et al.*, 2017; Basile and Cavallo, 2020) discussed the link between authenticity and experience, defining it as the relationship between enjoyment of tourists and their perception of "how genuine are their experiences". Costa and Bamossy (2001), in their work on the role of authenticity and its perception, noted how consumers suspend disbelief in their assessment of authenticity in some situations.

Arguably, visitors are approached with a cognitive perspective, leveraging both the authenticity perception and the emotional bindings to create "place attachment" to the visited place (Lee and Shen, 2013; Conti *et al.*, 2020; Basile, 2020). Authenticity is associated with terms such as "genuine", "real", "to trust", "original" and other synonyms (Kolar and Zabkar, 2010).

Wang (1999) saw authenticity as a constructed phenomenon, as an experience or a perception. In territorial management and marketing, authenticity becomes a functional characteristic, especially when it stimulates the tourism sector (Apostolakis, 2003); it helps identifying "social" tourists - i.e. those more inclined to learn and live experiences - and "aesthetic" ones - i.e. tourists interested in perceiving artistic and cultural elements in local craft objects (Kolar and Zabkar, 2010).

In the last decade tourists are more and more demanding experientially oriented opportunities involving more meaningful interactions with the local community to develop local attachment (Paulauskaite *et al.*, 2017).

In tourism, this attachment perception is showed as: (a) a tourist identification with a certain symbolic value, (b) meeting of the tourists' needs, (c) the perception of a functional component, and (d) a social bond (Tsai and Wang, 2017; Yuksel *et al.*, 2010; Ram *et al.*, 2016). This emotional tourist-place link is known in psychology as 'place attachment' (Gross and Brown, 2006, 2008). It produces "the sense of physically being and feeling 'in place', 'at home' and 'living like a local'" (Yuksel *et al.*, 2010, p. 275; Paulauskaite *et al.*, 2017).

Kianicka *et al.*, (2006) argued that the main factors in building a tourists' place authenticity perception, are landscape, social relationships, culture, leisure activities, and local economy. Therefore, it could be predicted that place attachment and authenticity are tightly linked (Ram *et al.*, 2016; Belhassen *et al.*, 2008), and Wildish *et al.* (2016) argued that visitors establish deep connections to a place through experiences centered on a sense of freedom, relaxation, and proximity to nature.

Place attachment is also seen as a positive emotional tie or an affectional bond between an individual and a particular place setting (Debenedetti *et al.*, 2014). Emotional ties are the socially driven roots of place attachment (Tonge *et al.*, 2015; Tumanan and Lansangan, 2012) as the place social bonding is the result of interpersonal relationships in the place enhancing the sense of belonging to a group and to a specific setting (Buchmann *et al.*, 2010; Hammitt *et al.*, 2009).

Buchmann *et al.* (2010) argued that, when a visitor engages in sincere interpersonal interactions based on the true self, they are more likely to establish meaningful social relations thereby developing social bonding to a place.

There is a clear dialectical interaction between place offer and the consumer experiential demand. So, place and tourists co-produce the experience and the perception of authenticity as the outcome of the experience itself (Jiang *et al.*, 2017).

Of course, a strong place attachment is able to increase tourist loyalty - i.e. to maintain over time the relationship between tourist and place - when the level of coherence between lived experience and expectations plays a predominant role (Gross and Brown, 2008; Basile *et al.*, 2016; Kolar and Zabkar, 2010).

So, we can argue that authenticity perceived by tourists mediates the relationship between place characteristics perception and different level of place attachment.

4. Community participation and sustainable tourism

Since the WCED Brundtland report (1987) tourism was considered as a social and economic variable interconnected with environmental sustainability.

According to numerous researchers such as Rozemeijer, (2001:13) and Salazar (2012), CBT can create sustainable development in rural areas for three main reasons:

1. Community participation generates new jobs and contributes to local development - a benefit that applies especially in marginal areas.
2. Community participation adds value to the territorial tourism product through diversification of tourism, increasing volume and economies of scale.
3. The benefits of using natural resources in tourism will prompt the community to use these valuable resources in a sustainable way.

Local community participation is an essential step to ensure sustainable tourism development (Salazar, 2012; Fan *et al.*, 2020), it is needed to obtain community support and acceptance of tourism development projects and to link the social, economic and environmental benefits to the local community needs (Cole, 2006).

Moreover, Tosun and Timothy (2003) argued that the local community is more likely to know what will work in local conditions; and that community participation can add to the democratization process and has the potential to increase awareness, interest and safeguard in territorial issues and resources.

As Kalisch and Cleverdon (2000) suggested, when the community as a whole works for social and economic empowerment, it will be more difficult to suffer from worker's displacement or to subtract from local actors the local valuable resources.

Jurowski, Uysal, and Williams (1997) predicted the residents' perceived social, economic, and environmental impacts using community attachment, economic gain, utilization of tourism resource base, and environmental attitudes.

Nilsson (2003) defined the local involvement in environmental safeguard as a social innovation model considering it a significant, creative and sustainable shift in the way a given society deals with several profound and previously intractable social issues such as poverty, disease, violence or environmental deterioration.

Murphy (2012) argued that the community participation in tourism is based on the place assets including not only local people but also the natural environment, infrastructure, facilities and special events. The community-oriented approach is a widely accepted sustainable development theory based on distributing the control on development processes, on creating a consensus-based decision-making, and on ensuring benefits for all the stakeholders (Inskeep, 1994; Tosun, 2006).

According to the participatory process, the system tries to improve residents' quality of life, to create positive relationships between residents and tourists, and also to support resident long-term well-being influencing policies development and place management decisions (European Commission, 2013). Finally, the authors argue that community participation may predict sustainable tourism initiatives.

Therefore, community participation and conservation activities through sustainable development and planning create appropriate development frameworks and enable strategies to ensure favorable local attitudes, to protect local resources and, more importantly, to protect and improve the community's quality of life via tourism development (Faulkner and Tideswell, 1997; Tosun, 2006; Yoon *et al.*, 2001).

5. Research hypotheses, and research design

The research has been designed and implemented on a tripod of methodological approaches; its theoretical foundation is based on an extensive review of extant works pertaining to the subject. The resulting theoretical framework was tested with a case study, using qualitative means (interviews).

The results of the latter were further substantiated and enhanced through secondary (online) data collection and analysis.

Contextually, the awareness of being different from other places renders the territory a semantic space in which both social and economic actors create and/or maintain sustainable relationships with their relevant stakeholders (Shams, 2018).

Some researchers (Goodson; 2003; Scheyvens, 2003) argued that there are a several factors hindering active community participation in tourism development, such as a lack of ownership, capital, skills, knowledge and resources. In remote areas of less developed countries, as featured in this case study, a number of further barriers exist: the concept is new; decisions are taken by bureaucrats in a highly centralized system; planners believe that local people are uneducated and too ignorant to be involved; and importantly the local people do not have the knowledge to participate.

Social empowerment results from increased community cohesion when members of a community are brought together through a tourism initiative. The enhancement of community cohesion is discussed by Sanger (1988) in relation to Bali, by Cole (2003) in relation to Ngadha, by Mc Gettigan *et al.* (2005) in relation to Ireland, and by Ashley *et al.* (2001).

In light of these considerations, the present paper has been design to test three main propositions: (a) community based tourism, in marginal areas, can be seen as a source of social innovation; (b) relations between community and stakeholders create authentic experiences increasing place attachment; (c) community "cohesive" participation is a territorial component contributing to create authentic relationships between the stakeholders and the place, achieving also sustainable development of the territory safeguarding local resources.

In order to test these propositions, we decided to study the role of CBT as a way to create a shared platform where community members and tourists may interact to co-create their perceptions and help in making the tourism-related activities authentic and sustainable. We used a case study approach, as it allows us to analyze the items identified in our literature review in a real-life context (Saunders and Lewis, 2012). This approach is considered functional for an explorative purpose, following a "constructivist", a "qualitative" and an "inductive" logic. Qualitative methods help to look at the experiences of local residents, tourists, and travelers, to investigate their meaning and how they were translated by individuals in social media.

The case was studied in three phases as summarized in the following table 1.

In the first phase we studied the local actors' web communication (looking at their websites, blogs and Facebook page) to comprehend the induced image (Michaelidou *et al.*, 2013) "presented" to tourists and travelers. We focused this phase on the main tourism-oriented actors such as a local promotion Organization (Associazione CSRT "Marettimo"), and three websites promoting tourism on the island (Marettimo Web; Marettimo Isole Egadi; Turismo Trapani). We looked for the main resources they were promoting and how they were described to see if they leveraged the community and/or the authenticity. In this phase, we looked to the induced image projected by local tourism players as well, studying the websites of the only Booking.com listed Hotel (Marettimo Residence) and five more apartment renters or B&Bs.

Tab. 1: Phases of case study development

Phase	Method	Period	Stakeholder "involved"
1: Induced Image	Text analysis (Websites, blogs, Facebook Pages)	10/2019 to 12/2019	Local Promotion Organization (1) - Local Tourism Websites (3) - Hotels (1) - Apartments, and B&B (5)
2: Modified-Induced Image	Interviews	12/2019 to 03/2020	Local Promotion Organization (1) - Apartments, and B&B (4) - Fishermen (involved in tourism services) (3) - Residents (5)
3: Organic Image	Online Platforms text analysis	03/2020 to 04/2020	Facebook (messages on 4 pages/groups in 2019) - Instagram (500 most recent posts tagged "marettimo") - Tripadvisor (10 highest ranked attractions – 145 reviews)

Source: our elaboration

In the second phase, we interviewed 13 residents both involved and not involved in tourism-related activities. In particular, we interviewed the president of the local promotion organization, four B&B owners, and three fishermen operating in the tourism sector as well (in sea-tours or diving tours).

We investigated their motivations, the local community engagement and, in particular, the role of authenticity and natural resources preservation in tourism products. Then, we interviewed 5 local residents not directly involved in tourism to get their view on tourism-related place development. The interviews were used to identify the main factors to investigate on how authenticity, relationships and natural resources preservation helped in co-creating the tourists' modified-induced image (Echtner and Ritchie, 1991).

In the third phase we studied the reviews of the various local area attractions, and tourism services on three online platforms (Instagram, Facebook, and TripAdvisor) in order to verify the organic image of the destination - i.e. the place brand consumers are projecting - and the roles of authenticity and culinary resources in shaping it.

On Instagram, we looked at the 500 most recent photos tagging the island to check if there were shots of local products and local traditions (we carried out this research before the "summer" season, in the months of March and April, so the shots were mostly posted by locals or by tourists acting as place ambassadors).

On Facebook we looked into all the 2019 content in the public groups promoting the local area to locals (Noi dell'Isola di Marettimo; Marettimo Di Qua e di Là del Mare) and in the pages of local tourist services (Marettimo Giro dell'Isola con PIPPO; Beb Sulmare Marettimo). On Tripadvisor we looked into the tourists' reviews for the ten highest ranked local attractions (145 reviews in the 2019). In both Facebook posts and TripAdvisor reviews, we looked for explicit passages, or photos, dealing with the local traditions and with authenticity, with the relationship with the local community and the local culture, and with the preservation of local resources, both natural and cultural ones.

6. Case study: The Island of Marettimo

Our case study is the Island of Marettimo, one of the Aegadian Islands in the Mediterranean Sea, West of Sicily, Italy. It is part of the Favignana municipality in the Province of Trapani. The ancient name of the island was Hiera ("Sacred Island" in Greek) and Pliny referred to it as "Sacra" (Sacred). The name of Marettimo comes out of the combination of two words: mar (sea) and timo (thyme), probably for the widespread diffusion of thyme on the island. According to some the name is just the local pronunciation of the word "maritimo" (sea-related).

In the Roman age, the island was used to monitor the sea routes to North Africa. As a consequence, on the island there is a complex called Case Romane (Roman houses). Later, in the Norman period (1100-1150 A.D.) a castle was built on the island, and during the Kingdom of the Two Sicilies (1734-1861 A.D.) it was used as a jail. Today, the island is populated by almost 2000 inhabitants in summer and about 100 in winter. In recent decades, the fishing village has opened up its economy by adding to the historic work of fisherman, tourist activities, creating a spontaneous community-led hospitality. Therefore, Marettimo's tourism offer is based on private houses, some bed-and-breakfasts and other structures that are not aimed at tourists (in particular, 3 restaurants, 4 bars, 3 grocery stores).

Phase 1: induced image

The general tourism websites present Marettimo as a fisherman island with several traditions and a wonderful sea. It is described as a genuine place mostly untouched by tourism, as a real hideaway, a quiet, sleepy place. It is promoted as a place to visit for the crystalline waters to explore swimming, snorkelling, and diving, but, above all, it is famous for its sea-caves both above the water, such as the Grotta del Cammello (Camel's sea cave) or underwater, such as the Cattedrale (Cathedral's Cave).

The Island is seen as the most pristine of the Aegadian Islands as it still preserves a rich, almost unique, endowment of natural resources (more than 200 local plants). The island is part of the biggest Protected Sea Area in Europe. It is famous for many trekking paths linked to both natural and cultural resources (such as Old Castle of Punta Troja, and Case Romane); this helps in creating a heterogeneous, and slow-paced tourism offer mostly defined around local traditions as dances and local recipes.

Marettimo is seen as a place for cultured, long-stay regulars rather than hit-and-run day-trippers. It is an unspoilt island mostly attractive to walkers and scuba-divers. On the island there is a single human settlement, the "modern" town. This is an ageless place, with most of the houses white with blue shutters, and a smattering of small fishing boats tied up at a small ramshackle port.

The vision of Marettimo that the local actors present reflects this rich endowment. The place is promoted for trips on the boats of local fishermen, for the natural and the cultural resources that travelers may visit with, or without, the help of locals in order to interact with them. In particular, the local promotion organization, the Associazione CSRT "Marettimo" presents the tourists with several local attractions in part related to the sea and the heritage, and in part related to living the place with the locals. The association organizes several "slow tourism" events during the summer as the Poetry readings, music shows near the Case Romane, and visits to the local "Museo del Mare" (Sea Museum) where tourists can get information on the history of the Island, its traditions, and the local habits. For example, tourists may get all the information on the Festa di San Giuseppe (March, from 10th to 19th). The website uses the local dialect as a way to create a more authentic image and it explains all the phases of the celebration in order to help tourists be prepared to get the most out of it.

In this first phase we have found that both authenticity and community participation are factors in the tourism-related place development, and the local tourism players leverage the local community in the tourist experience. For example, a local B&B, il "Corallo", presents several services provided by third parties such as "Franco the Boat-man" for the boat-tour of the island or "Nino" for the excursion with the donkeys. Another B&B, the "Scalo Vecchio", advise tourists to try the fishing experience with "Ignazio and Gaspare, two local sea-dogs" that "after teaching you several fishing techniques, will cook and serve you the fish on the Azzurra", or the traditional recipes by the "passionate Enza".

Phase 2: modified-induced image

In the second phase of our case study, we have interviewed thirteen local residents. They told us that the change from fishery to tourism has been slow and more and more participative over the last 35 years. At the beginning only a few locals were embracing the idea to substitute the traditional fish-based economy with a new one based on tourism and that "over time tourism has evolved without a precise guidance" with the community that has been engaged in order to preserve the traditions. For example, the traditional Blue Fish Festival has been moved from August to July in order to preserve it for the locals even if that meant losing an attraction.

But the importance of tourism has not superseded the relationships among locals. For example, the owner of a B&B, when prompted on how he planned to make his business grow, told us: "In the family we already have two jobs… We have the boats and houses… we could open a restaurant, but we won't do it! It is a matter of respecting the others!". Another local resident, not involved in tourism services, told us "everyone tries to integrate his own services with those provided by the other in order to propose a more enjoyable experience".

The local promotion organization (Associazione CSRT "Marettimo") has several times highlighted that tourism has developed spontaneously and that the local community has always safe-guarded the local traditions. In several interviews we have heard that safeguarding the place is a meaningful thing, for example a fisherman told us that "There is not a strong coordination in the local area, several persons promote the island on their terms… the other residents just actively participate to warrant that the place is promoted fairly and that the new initiatives are not able to endanger the place", on the same topic another one told us that "over the years, before it was protected as a Natural Park, several entrepreneurs have tried to build hotels and campsites on the Island, but they failed, in part as they were not able to build up the needed scale, and in part as the community was not happy with these abrupt changes".

Tourism development is based on perceived authenticity. For example, one of the local actors told us that "we hosted tourists in the fishermen's houses, so they got the real deal", while another explained to us that "RAI5 (An Italian television) broadcasted a 30-minute documentary on Marettimo's winter life… Now tourists come here to get that experience, to live the local traditions, not just the seaside".

At the same time, authenticity is meaningful for Marettimo tourists. A local actor told us "Our tourism is not the same as Rimini and such, we are like a family, tourism is an experience that we share with the tourists", and another added "Tourists stay here for several days in a row. This helps them to have the right pace, and enables them to taste, and appreciate, the local slow life-style".

Moreover, the local residents are convinced that CBT is a meaningful factor in the tourism economy as highlighted by a local house renter telling us that "it may happen that my mother helps the tourists in the kitchen. She goes to them and prepares several local recipes. This is not a service we sell… it is just to show them how we cook our fish". Another one explained to us that in Marettimo "Everyone lives off tourism. They may have a job during winter but tourism is needed to enhance their living".

Phase 3: organic image

In the third phase we looked at how Marettimo is perceived by the tourists analyzing their behavior in the social media. In particular, on Instagram we found more than 59 thousand images tagging Marettimo and we focused on the 500 most recent. Most photos, obviously, were showing the local sea and the related caves, but many of them focused on different attractions such as the town (boats, wharf, alleys), or the local food (mostly fish, and traditional pastries such as those stuffed with ricotta cheese). Another common topic is the photo of the locals both in the case of special events (festivals and fairs) and as street-photography (impromptu shots of locals).

We have got similar results on Facebook about the island, as several messages speak about the local history (such as the case of several old photos of the area's events) or of the tourists' experiences (in one extreme case a tourist from Genova has written a poem on Marettimo Islands and its colors). At the same time the analysis of this social media highlights the desire of locals to promote their island. Locals share photographs of the place (mostly sea sights) or their memories of older editions of the Blue Fish Festival. They use it to spread online versions of documentaries and old videos (for example a recent one on the life in Marettimo during the recent pandemic).

More precise information on the tourist perceptions can be drawn from the tourists review on Tripadvisor. In the last years the ten highest ranked attractions of Marettimo reflect the same variety of resources the Island has. Tourists prefer the Old Castle of Punta Troja and the local Sea-Caves, they highlight the relevance of Cultural resources (the Byzantine Church or the Case Romane) but even the diving experiences (4 attractions are diving centers) and the Boat Trips ("Marettimo con Pippo").

Among the 145 reviews that tourists have left in the 2019, 49 of them speak of the interactions with the locals, both referring to tourism-related experiences ("We have visited it with Francesco" or a more explicit "I was lucky to meet Giuseppe T. He has made me, and my friend on his boat, fall in love with this island and its traditions") and to more general ones ("What a pleasure to meet with Pippo at the door of his house every morning").

42 reviews spoke of authentic experiences ("You visit a still wild place, too much comfort would make it less attractive", "In the evening, when the moon lights the wharf, you see the town as a traditional village", "All the various votive offerings shown out of the local church are amazing! They are peculiar and really artsy!", and "This is a special town. It seems that time has been stopped in another age").

Tourists are able to grasp that the local residents' main desire is not to taint their life as we can get from several comments ("This is a special town. It seems that time has been stopped in another age", "they protect their own island to leave it as it has been created", "Marettimo is an untainted island, clean, silent, you have to visit it!") and this drives them to become active promoters of sustainability ("If you will ever want to visit it, please, respect the island, its nature, and its traditions" or a way more explicit (emphasis in the original) "A REQUEST TO THOSE WHO ARE READING ME, if you have a snorkeling mask and see some "HUMAN" wastes in the sea… PLEASE HELP TO PRESERVE THIS AMAZING PLACE").

As a consequence, the tourist gets attached to the place (107 reviews on 149 hints at being attached to the place or its services) and in 37 cases the reviewers classify themselves as loyal visitors ("See you soon Mario", or the more explicit "It is nice to be back and meet all the old friends. To meet them while snorkeling in Cala Martina… see you next year").

7. Conclusions and limits

Our analysis shows that Marettimo's community has had to overcome both the effects of young depopulation and those coming out of the new fishing regulations leading to high unemployment rates, mostly among young residents.

In Marettimo, local residents have been slowly responding to these stimuli by changing their social and economic practices from fishing to a community tourism destination. Moreover, this new drive is helping in creating a new perception of authenticity in the relationship between locals and travelers based on memories, culture and natural resources. As a consequence, the place has become attractive for those travelers looking for authentic interactions with the community as it lets them get involved in the "living like a local" experience; and, at the same time, these interactions drive locals to care for the local natural and cultural resources providing evidence to support our second proposition. Moreover, some residents have started to make this social innovation their own, so they are offering ancillary services based on local traditions, such as the boat trips by local fishermen. In these new activities they try to keep an eye to the preservation of local traditions that are seen as a valuable resource that should not be "exploited" in order not to lose the local culture.

At the same time, the social media analysis in the third phase suggests that many tourists get attracted by the slow pace of the local life in the Sicilian island as shown by several photos of residents and local alleys, and by the various posts and reviews speaking of the local traditions.

Regarding the framework propositions, we can conclude that, in the Marettimo case, tourism may be framed as a social innovation in the perspective defined by Mumford (2002) as locals are slowly accepting that they had to change from being an isolated fishing village to be a tourism destination (Crozier and Friedberg, 1993) without losing sight of their roots (Kasarda and Janowitz, 1974). Marettimo has demonstrated that social innovations can be seen as actions that spread through society as a result of imitation, bringing about social change: a 'process of change in the social structure of a society in its constitutive institutions, cultural patterns, associated social actions and conscious awareness' (Zapf, 2003, p. 427). Tourism has become one of the main sources of jobs supporting the visions of Howaldt and Schwarz (2010) but without creating a homogenous approach in support of the multicultural approach (Checkoway *et al.*, 2003). These findings support the first proposition.

We have found support for our second proposition as well, as in Marettimo residents interact with tourists to create a holistic travel experience based on authentic experiences and to help tourists get a glimpse on the community life, creating an emotional bond with the local community supporting McCool and Martin (1994). For example, the locals create "tourism packages" suggesting tourists to satisfy their needs interacting with residents to get the authentic service; they may buy fish from local fishermen, they can travel the inner island on mules, and they can visit the town center to interact with the elders. The need to interact with the locals is strengthened by local laws on marine protected areas, requiring tourists to get access to several locations.

Moreover, our research process has highlighted that the interaction between locals and tourists helps in creating a stable relationship with tourists leveraging on their perception of authenticity and making them loyal to the destination (Gross and Brown, 2008; Basile *et al.*, 2016). This trend is both the effect and, through feedback loops, the cause of a reciprocal involvement that is shown also in social media confirming previous studies (Buchmann, *et al.*, 2010; Hammitt, *et al.*, 2009) as shown by the several contents in social media highlighting that the place attachment is based on the tourist's memories driving him/her to create eWOM (Tsai, 2016).

Furthermore, we have found that CBT not only drives residents to highlight the importance of safeguarding the local natural and cultural resources, but it is also able to attract tourists that are actively promoting their protection (Faulkner and Tideswell, 1997; Tosun, 2006; Yoon *et al.*, 2001). The topic of preserving the local "untainted" environment and its specific characteristics has been found in all the three phases, giving us further support for the third proposition.

The findings of this paper highlight the role of recognition of territorial identity and authenticity as part of the policy action. Place-based policies should be aimed at the production of collective goods to contribute to the solution of the main issues that characterize marginal areas: the depopulation and the ageing population.

In Italy, the National Inner Areas Strategy (SNAI) introduced important territorial management innovations in the same direction of highlighting the importance of engaging the community to restore places without endangering them.

At the same time the excerpts highlight that these marginal areas become more attractive, and more resilient, when the local area is able to integrate the new tourism activities with the existing ones linked to local area traditions that can help them to create a unique offer without betraying their cultural and natural resources. So, the local actors, policy makers or just tourism entrepreneurs, could try to engage the local community in order to attract a specific niche of tourists that may become more loyal to the place as their experience create a link between them and the local further enhancing the value of coming back in the future. In terms of limitations, as all single case studies, the present research requires additional studies of a wider spectrum in order to generalize its findings. Therefore, it may not be possible to standardize DMO community-based approaches to tourism development because processes and results in any particular case are contingent on factors unique to that situation alone: differences in background conditions will probably result in different outcomes.

Furthermore, focusing on the technological context of the subject, the research has concentrated on social media, thus considering only a limited subset of the place stakeholders.

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Cultural events for a sustainable tourism development in urban destinations: the case of Milan's week

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Abstract

Purpose of the paper: *The aim of this paper is to explore the effects generated by a suite of cultural micro-medium events in an urban destination on both hotels' performance and the seasonality structure in order to promote sustainable tourism development.*

Methodology: *The empirical analysis uses a mixed method that combines a quantitative analysis of the daily performance of a destination with a desk analysis of press interviews to local stakeholders.*

Findings: *The results highlight a positive contribution of cultural micro-medium events to tourism at the destination. This evidence contributes to the academic debate on strategic event management by shedding light on the potential role of minor cultural events as a driver for sustainable tourism development.*

Practical implications: *This study suggests guidelines to destination managers on how to benefit from micro-medium cultural events: a strong connection with the destination's vocations, the importance of public-private collaboration and the establishment of a portfolio of recurrent events.*

Limitations of the research: *This explorative study presents two main limitations: the authors cannot exclude that other small events were taking place in the city at the same time as the micro-medium cultural events analysed. Secondly, several of the events studied are recent and therefore their impact on the destination could be underestimated.*

Originality of the paper: *During the last decades, the managerial literature has been devoting considerable attention to the role and the benefits generated by events. However, the main focus of these studies has been on large and mega events while little consideration has been dedicated to smaller events which are widespread, recurrent and relatively easier to manage.*

Key words: sustainability; micro-medium cultural events; seasonality; tourism destination

1. Introduction

Sustainability is an essential characteristic of the successful tourism destinations of the future, a key principle in the management and competitiveness of tourism destinations over the long term (Crouch, 2011;

d'Angella and De Carlo, 2016). The broad thrust of studies on strategic management clearly states that the creation of sustainable competitive advantages depends on both investment and product development and intangible assets like brand, image and reputation (Crouch, 2011; Dwyer and Kim, 2003; Mazanec *et al.*, 2007).

For an urban tourism destination to be sustainable means attracting the right amount as well as the right mix of visitors (Kastenholz and Almeida, 2008), limiting seasonality peaks (Martin *et al.*, 2014), assuring an appropriate quality of living for both temporary and permanent visitors (Eslami *et al.*, 2019; Yu *et al.*, 2016), generating a valuable economic contribution for the territory without compromising it (Souza *et al.*, 2018). Barcelona (Russo and Scarnato, 2018), Dubrovnik (Panayiotopoulos and Pisano, 2019) and Venice (Seraphin *et al.*, 2018; Bertocchi *et al.*, 2020) are three examples of top destinations in terms of number of visitors (before Covid-19) which have been facing a critical sustainability-linked issue: over-tourism. Other cities, like Milan, are facing other critical sustainability-linked concerns: seasonality and an unbalanced visitor mix (Sainaghi *et al.*, 2019).

Events play a pivotal role among the strategies that destinations are putting in place both to reduce some of the critical issues generated by unsustainable tourism development and to assure continuous growth, (Getz and Page, 2016; Stokes, 2008). In particular, the relevance of the events for tourism can be found on the one hand in their ability to intercept additional tourist flows and new segments of visitors (Connell at al. 2015), and on the other hand in their ability to extend the tourists' average length of stay and expenditure (Gibson *et al.*, 2003; Tang and Turco, 2001), mitigate the seasonality factor (Connell at al. 2015), act on the spatial distribution of tourists in the territory and possibly generate a "recentralization" or "recommodification" of the urban space (Zukin, 2004; Mommaas, 2004; Sharp *et al.*, 2005). Today these redistribution and recommodification effects, applied in overtourism situations, could also prove particularly useful when rethinking what destinations can offer in the post-pandemic recovery phase. Moreover the potential positive effects generated by shrewd management of the events portfolio are even broader. In addition to the effects on the image, brand and destination awareness among specific target travellers (Richards and Wilson, 2004; De Carlo and d'Angella, 2011), events also produce a significant impact on the entire destination's production ecosystem (Negrusa *et al.*, 2016; Bracalente *et al.*, 2011). Finally, even from a political-organizational point of view, events can facilitate the convergence of national and local objectives and the alignment of stakeholders' agendas, while strengthening collaboration and building cooperation networks that probably would not have been activated in the absence of a common goal (Mariani and Giorgio, 2017).

Cultural events constitute an important category within the events' portfolio of an urban destination. As cultural products, they are considered one of the key determinants of a destination's competitiveness (Crouch and Ritchie, 2000). For this reason, cultural events play a crucial role in the strategic repositioning processes undertaken by various cities (Miles and Paddison, 2005), called to compete in a now crowded market. In fact, by investing in infrastructures and cultural attractions, destinations seek to conquer market niches in the international competitive context in which they operate, thus developing activities that are capable of activating synergies with other strategic sectors of the local economy (Russo and van der Borg, 2002).

During recent decades, the managerial literature has been devoting a considerable attention to the role and the benefits generated by events. However, the main focus of these studies has been on the top of the pyramid proposed by Getz (2014) - mega and hallmark events - while little attention has been paid to smaller events, which are widespread, recurrent and relatively easier to manage. To contribute to filling this gap, this paper aims to explore the effects generated by a set of cultural micro-medium events in an urban destination on both the performance of businesses and the seasonality structure of the destination. In particular, using an empirical analysis focused on the city of Milan, this study attempts to measure how innovative ways of using micro-medium cultural events programmed throughout the year and targeting both business and leisure audiences, can promote the sustainable tourism development of an urban destination.

The paper is structured as follows. The literature review in section two presents the theoretical background of this study, highlighting the hypotheses that will be tested in the empirical analysis. The methodology used to carry out the quantitative analysis is described, while the results are presented in section 4. Finally, the theoretical and managerial implications are discussed in the last paragraph as are the limitations of this study[1].

2. Literature review

2.1 Cultural events as a driver for sustainable destination development

The literature has dealt extensively with the role of events in territorial development (Getz, 2006; Getz and Page, 2016) and wide attention has been given in particular to specific types of events, such as mega events and hallmark ones (Jafari, 1988), because of their important impacts on tourism. This vast literature has adopted very different perspectives and has focused, case by case, on the various benefits - and also drawbacks (Barclay, 2009) - that destinations can derive from hosting events. The results of these studies, of course, depend very much on the size of the events taken into consideration, on their durations, on the focus and on the ability of the event to attract public and private investments in infrastructure and services.

Generally, a distinction is made between primary and secondary effects (Clark, 2008) at least as regards mega and hallmark events: the primary benefits include public-private investment partnerships, image and place identity impacts, environmental impacts on the built environment, and the structural expansion of the visitor economy; the secondary benefits then

[1] This paper is the result of a joint research work of the authors. However, Francesca d'Angella wrote sections 3 and 4; Martha Friel sections 2.1 and 5; Ruggero Sainaghi sections 2.2 and 2.3; Angelo Miglietta section 1.

include connectivity and infrastructure legacies, labour market impacts, secondary impacts on the property market, post-event usage of improved land and buildings, and various others (Clark, 2008).

One of the most interesting aspects of events is their use as a tool for launching or consolidating wider urban regeneration actions (Smith, 2012), for strategic repositioning in terms of place branding (Richard and Wilson, 2004 *et al.*), or for transition from industrial economies to service economies, as in the case of cities such as Linz (OECD, 2014), Turin (Ferrari and Guala, 2017) and many others (Richards, 2007). Furthermore, from a tourism perspective, event-based strategies have the function of supporting, on the one hand, precise positioning strategies on specific products and markets (Hall, 1992; Evans, 2015), and on the other hand, the development of particular product clubs.

Among the different types of events - sporting events, trade fair events, summits and international political conferences etc. - cultural events have played a particularly important role in pursuing these strategic goals; this is demonstrated by the extensive literature that has been developed on the issue, ranging from the analysis of small events for the cultural and tourism promotion of minor destinations (Simeon and Buonincontri, 2011) to that on the role of larger events such as the European Capitals of Culture or other special events, for urban regeneration, strategic repositioning, and tourism promotion (Richards, 2007; Liu, 2014).

With specific regard to cultural events-based strategies, some authors have introduced the concept of "eventful cities" (Richard and Palmer, 2012) emphasizing that "as events have become increasingly integrated into the daily life of cities, so the planning of events and their integration with civic goals have become even closer. The contemporary city is likely to see eventfulness as one more source of creativity that can be developed to stimulate the creative industries, enhance the attractiveness of the city and promote social cohesion" (Richard and Palmer, 2012, p. 37). This literature often intersects with that on creative cities and, in fact, a number of recent studies have focused on complementary aspects such as the interaction between events, promotion of the local creative economy and tourism development (Ziakas, 2014; OECD, 2014), and on the use of events for the development of the so-called "night economy" (Evans, 2014; Sound Diplomacy and Andreina Seijas, 2019) in connection with the issue of "vibrant cities". These studies have highlighted how cultural events can not only help positioning the city on the tourism market, but also generate positive effects on the cognitive heritage of local communities and contribute to an improvement in urban liveability and security - with positive effects, again, on the attractiveness of the destination.

Clearly, in many of these studies, the issue of sustainability is present even when not explicitly addressed: the question of the effectiveness of events-based development and promotion strategies for a destination is, in fact, closely intertwined with that of socio-cultural (Ziakas, 2015; Richards, 2015), environmental and economic sustainability, and with the ability to generate positive structural effects on both local economies, the labour market and the cultural system (Musgrave and Raj, 2009). However, in recent years a specific literature has been developed on the connection between events and sustainability, aimed on the one hand at identifying the conditions for events, and especially mega events (Hall, 2012), to take place in a sustainable way (Getz, 2009; Dredge and Whitford, 2010; Jones, 2014), and on the other hand at analysing how events themselves can become important tools for promoting a more sustainable tourism, better integrated in local development strategies (Haven-Tang and Jones, 2009; Raj and Musgrave, 2009).

Moreover, studies have focused on how events should be integrated into urban sustainable development policies (Getz and Page, 2016) to favour processes for diversifying the local tourist offer, support the creation of culturally lively, socially inclusive and therefore more attractive urban systems (Sacco *et al.*, 2017), and contribute to counter tourism seasonality. The latter aspect has been specifically addressed by *Tourism Management* and events management literature. Already in the mid-70s, some authors had started analysing the use of hallmark events as a response to seasonality (Ritchie and Beliveau, 1974). An extensive literature was then consolidated around these first studies, deepening the relationship between events and seasonality both on the demand side and in terms of effects on the supply structure of the destination (Connell *et al.*, 2015), and looking both at small/rural destinations and cities (Sainaghi and Mauri, 2018).

However, much of this literature focuses mainly on large events or events of a certain duration while literature on tourism promotion strategies based on micro and small events is still very limited. With specific regard to small events, mainly cultural and sporting, studies have dealt with analyzing through surveys their role in attracting and retaining tourists in destinations (McKercher, 2006; Malchrowicz-Mośko and Poczta, 2018) or assessing their economic impact, especially with regard to events in rural areas (Alves *et al.*, 2010).

Instead, it is interesting to analyze how a model based on micro-medium cultural events can be adopted by urban destinations as in the case of Milan.

In urban destinations, these events are sometimes also constructed as "off" events of larger business events. It is now particularly interesting to study this type of model due to the effects that can be generated on the sustainability and seasonality of tourism by acting on the destination's mix of offerings and on the mix of tourists.

2.2 Seasonality and events in the Milanese experience

As we have seen, events are able to generate many positive effects such as growth in the local economy, the development of new products, and the creation of a strong brand and image (Getz and Page, 2016; Lyu and Han, 2017; Sainaghi and Baggio, 2019). Events can also produce negative effects, especially for residents and the environment (Moisescu *et al.*, 2019). One of the special goals of events is surely the reduction of seasonality (Connell *et al.*, 2015), defined by Butler (1994) as a temporal imbalance in terms of number of visitors, overnights, tourists' expenditure, and any other metric that captures the demand fluctuation. This phenomenon has basically two origins: natural and institutional. The first is weather-related while the second is the result of human activities and decisions. In the last twenty years, scholars have been studying seasonality to reduce its institutional component, still deeply affecting destinations all over the world. In particular, with regard to cultural destinations, studies show how promoting cultural tourism policies to overcome seasonality requires a reduction in the horizontal fragmentation of the decision-making process (Cuccia and Rizzo, 2010). This is the central topic of this paper and therefore the focus of this section is on demand fluctuations, with a specific focus on Milan, a city that scholars have studied with particular interest in recent years because of its rapid tourism development and sound promotion strategies.

Milan's seasonal patterns have been analysed over the years by various international studies (De Carlo *et al.*, 2009; Sainaghi and Baggio, 2019; Sainaghi and Canali, 2009a, 2011; Sainaghi and Mauri, 2018a; Sainaghi *et al.*, 2019; Sainaghi *et al.*, 2019) as well as national ones (Sainaghi and Canali, 2009b; Mauri and Sainaghi, 2017; Sainaghi and Mauri, 2018b). Despite the precise goal, methodology and approach of each single paper, these studies agree that Milan's seasonal patterns are mainly triggered by the market segments attracted. There are essentially three of these: business, trade-fair and leisure guests.

Business people come to Milan to visit firms, clients, suppliers and public institutions. Milan is Italy's economic capital. Furthermore, the Lombardy region produces roughly 20% of the national GDP. This first target group is mainly present in mid-week and in particular during work days (though not all days in mid-week are work days as civil and religious festivities can also occur). Therefore, the business target generates significant variations in demand during the week.

Trade-fair guests are attracted by a whole range of events. The city's exhibition centre - Fiera Milano - is very active in this sector and Milan is ranked as the second largest trade-fair destination in Europe. The seasonal patterns generated by this segment are more complex because they are triggered by the specific events. These take place both during weekdays and at weekends, but mainly influence work days. The trade-fair portfolio is huge and diversified. However, previous studies agree that only a few events are able to significantly impact local hotels. The most important trade-fairs are usually international and business-to-business events.

Finally, *leisure* clients constitute a growing segment, especially since the Milan Expo. Though these visitors can come to Milan any day of the week, previous studies have revealed a strong focus on weekends and non-working days more generally. This is not surprising given the high rates charged by many hotels on business days.

Therefore, based on this three-part breakdown, there is a significant and articulated fluctuation in demand at week level. A second important factor in tourism evolution in Milan is the Expo and more generally its legacy. During 2015 the revenue per available room (RevPAR) increased by 59% (Sainaghi and Mauri, 2018). Furthermore, the Milan Expo has produced an important rise in all the hotel metrics. Therefore, the post-Expo period (2016-2019) is characterized by higher performance than the pre-Expo one (before 2015).

2.3 Research questions

Considering the two streams of literature described above, it seems clear that events matter and constitute a crucial determinant of hotel performance. If well managed, they can be a powerful tool for achieving sustainable tourism development as they could be used to manage seasonality by attracting the right segments of visitors in the right period of time. Moreover, managing events often requires strong public-private collaboration, and this is clearly a source of sustainable competitive advantage for tourism destinations (Dickson *et al.*, 2017). Moving on to cultural events, these are an important component of the event portfolio of any destination. In addition to the benefits just stated, cultural events are even a tool for improving the quality of living of residents.

However, much of the evidence for this comes from studies focused mainly on large events - mega and hallmark events - or events of a certain duration. As far as we know, micro-medium cultural events have not been investigated as much by scholars even if they take place in a multitude of destinations on a regular basis and are both cheaper and easier to manage than big ones. Therefore, the aim of this paper is to measure the impact of cultural micro-events on hotel performance and destination seasonality by answering the following research questions:

Hp1: Does the performance of an urban destination improve (occupancy, ADR, and RevPAR) during micro-medium cultural events?

Hp2: Do cultural micro-medium events reduce the seasonality of an urban destination at week level?

3. Methodology

3.1 Milan as a tourism destination

The city of Milan is an interesting example of a destination that has experienced rapid tourism development and is working now both to consolidate this successful trend and to manage tourism flows in a sustainable way. Until 2000, Milan was an industrial city, tourists were almost exclusively business ones, and generally speaking tourism was driven by trade fair activity without any deliberate tourism development strategy (De Carlo and d'Angella, 2011). From 2006, following its selection as an Expo venue, the city started a deliberate process to manage tourism as part of its economy. Over the ten years that followed, the city worked to improve its international reputation through: the establishment of new governance bodies, a series of communication initiatives, permanent collaboration with local stakeholders, and a vibrant calendar of events. In 2020, Milan has become the second Italian destination for international visitors, it has started a DMO (Destination Management Organization) to enhance the city's attractiveness and branding, it has activated permanent forms of public-private collaboration and it has started to combat seasonality and the unbalanced visitor mix. The City will host the winter Olympic Game in 2026.

Cultural investments in Milan have often acted as a driving force for wider urban redevelopment processes in depressed city areas, as has been the case in some former manufacturing districts. One of these, for example, is the Vigentino district, at the centre of a project of radical urban transformation after the area was revitalized thanks to the opening of the Milanese headquarters of the Prada Foundation.

Events were and still are a fundamental component of this tourism development strategy. The city's events portfolio is a compendium of different kinds of events that cover all the typologies highlighted by Getz (2014): from occasional mega-events to local activities.

In recent years Milan has successfully experimented an innovative formula of thematic festivals, categorized into "*City*" and "*Week*" events, dedicated to music, literature, environment and innovation, with initiatives scattered throughout the city and the metropolitan area.

The "*City*" is a format of cultural initiatives which lasts 3 days, from Friday to Sunday, involving all the Milanese cultural entities that operate on a specific topic (i.e. The Piano, Books, Museums etc.). The "*Week*" format focuses on an event or sector fair of international relevance around which a program of events develops with the collaboration of public and private parties from specific sectors (i.e. Fashion, Design, Music, etc.).

Conceived on the model of the *Design Week* and *Fashion Week*, the *Weeks* format has been applied to other cultural sectors such as contemporary art (ArtWeek in April), photography (PhotoWeek, June), movies (MovieWeek, September) and so on. Both kinds of events are capable of involving an audience of hundreds or thousands people in just a few days (Table 1).

Tab. 1: Key-figures of some of the most well-known thematic festivals in Milan

2018	Period	Visitors	# events	Av. Daily visitors	Av. Visitors per event
Book city	15-18 Nov	175,000	1,452	43,750	121
Green city	22-24 Sept	60,000	500	20,000	120
Digital week	15-18 Mar	70,000	400	17,500	175
Design week	17-22 Apr	500,000	1,367	83,333	366

Source: Milan, Monza and Brianza, Lodi Chamber of Commerce

The reference model, in this case, is that of the Fuorisalone, conceived in 1991 on the initiative of "Interni magazine" as a container for the off-site events of the "Salone del Mobile" (the design week) and now risen in the list of the most popular events at international level, with around 500 thousand attendances during the international exhibition (2019 data).

"*The model of the first week [Fuorisalone] was very precise. There was a very important moment at the beginning of the Pisapia [former Milan mayor] mandate with the experimentation of Book City, while the systematization of the calendar took place during the Sala administration. In 2016, the arrangement of "weeks" and "cities" was a constitutive element in the "Fare Milano" government program. There is no inventor of the brand but it is the product of a city that knows how to get involved in a collective way and promotes and produces strong innovation*". (Cit. Filippo Del Corno, Deputy Mayor for Culture of the city of Milan).

3.2 Data, variables and analyses

The empirical analysis is based on a mixed method that adopts and integrates both quantitative and qualitative research techniques (Johnson *et al.*, 2007). The quantitative analysis is based on the Smith Travel Research (STR) data. This source offers daily data on a large sample of Milan hotels (approximately 80 per cent of the total), representing more than 30,000 rooms. The empirical data relate to a period of 13 years (2007-2019), mapping out the performance of the hotels both for the periods when each cultural Week was held in the city and for the five years beforehand. The availability of daily data makes it possible to compare hotel performance for specific days during the five years before a "*week*" was taking place, and during the three most recent ones (of course the dataset reported only performances for two and one year for the events that started in 2018 and 2019).

The year of the first editions of the events is shown in Table 2, together with both the week and the month seasonality in which each of them was scheduled. The week seasonality categorizes the events according to the days in which they take place. So we have events occurring during the week-end (WE) and events taking place throughout the entire week (W). The month seasonality variable divides the months in which each event takes place into high and low season according to the value of the presences in Milan recorded in 2016 in that specific month. In particular, the low season months are those in which the presences recorded do not exceed the threshold of 900,000, while all the others are categorised as high season.

Tab. 2: "Week" and "City" portfolio

Events	Year of the first edition	Length (# of days)	Week seasonality*	Milan's month seasonality 2016
Arch week	2017	6	W	High
Art week	2019	4	WE	High
Bike city	2018	12	W	High
Book city	2012	4	WE	High
Calcio city	2019	4	WE	High
Design week	1961	6	W	High
Digital week	2018	5	W	Low
Fashion week	1958	7	W	High
Food city	2017	7	W	High
Foto week	2017	7	W	High
Green week	2018	4	WE	High
Montagna week	2019	7	W	High
Movie week	2018	8	W	High
Museo city	2017	3	WE	Low
Music week	2017	7	W	High
Pet week	2019	8	W	High
Piano city	2012	3	WE	High

* Weekend days = WE; Entire week = W

Source: Authors on yesmilano.it and Milan's municipality data

2016 was chosen as reference year for the seasonality identification because most of the events started in 2017 and therefore 2016 is the most recent year that does not contemplate the effect caused by the events on flows and, accordingly, on the performance of the hotels. From the list reported in Table 2 the authors decided not to include The Design Week and the Fashion Week in the analysis these two events differ from the others for several reasons. First of all, they are old, well-established events, with an international reputation and appeal, which already are *per se* a reason to come to Milan for both business and leisure tourists. Secondly, in our analyses we compare the tourism performance of the city for the days on which the event takes place and for the same days of the year before the one in which the events were established. As these two events have been in place since the Fifties, it is not possible to perform the same analysis that we can do for the others.

The database prepared for carrying out the analyses includes 658 records (daily data) and 13 variables. The variables embrace date information (day number, month number, year, comprehensive date and day of the week), "*Week/City*" name and edition number and performance data (Occupancy, Average Daily Rate (ADR), Revenue per Available Room (Revpar), number of rooms available (Supply), number of rooms occupied (Demand), and revenue. Starting from this dataset, a second one was created that synthesised the performance indicators for each edition of the event. This dataset includes 115 records and 12 variables, the same as the first dataset except for the "day number" - eliminated as the unit of analysis shifted from daily data to average event data. The data reported in the second dataset has been analysed using a variance analysis to see if and to what extent the city's performance changed before and after the week/city implementation.

To eliminate possible external effects, we checked for the presence of other important events in the city during the "*Week/City*" analysed. This check shows that some exhibitions (disconnected from the theme of the events analysed) indeed did take place during the same days but as the majority of these were in existence before the week/city and are periodical, they do not interfere that much with our analysis. However, we eliminated from our dataset the KPI relating to 3 periods in which other events took place on days on which a "*week/city*" event was on or on which one would have been on in the years before the first edition. These four periods refer to two events only: the Art Week, because the Design Week was taking place in the city on the same days of the year in 5, 4 and 2 of the years before its first edition.

Moreover, we highlight that in 2019 there is an overlap between: The Green Week and Calcio City, as well as Bike City and Montagna Week. We expect this to reinforce the "event effect" on Milan's performance.

Furthermore, in order to really appreciate the enhancement of the destination's performance we took the overall increase in Milan's KPI due to the so called "Expo effect" into consideration. Table 3 summarizes the city's performance before, during and after Expo 2015 and the variation between the years before and after it.

Tab. 3: Milan's KPIs before, during and after Expo 2015

	Occupancy	AdR	RevPAR
Pre- Expo period (2010-2014)	62%	€ 122.10	€ 78.96
During Expo	69%	€ 147.24	€ 106.27
Post-Expo (2016-2019)	70%	€ 137.09	€ 99.27
Var. % pre-post Expo	13%	12%	26%
Var. pre-post Expo	8,18	€ 14.99	€ 20.30

Source: Authors on STR data

In the analyses that follow, in order not to be misled by the "expo effect", we only consider a variation of a KPI that is higher than the "Expo effect" to be a significant effect.

To add further information to the quantitative analysis of the Week/City events analysed, we carried out a desk analysis of the interviews given to the press in the last three years by the following stakeholders: municipality councillors and the mayor, Milan's tourism agency and members of the hotel association. In total 20 interviews were analysed, and a number of municipal resolutions and documents were also examined.

4. Findings

Tables 4a, 4b and 4c summarize the performance during the three most recent editions (if available) of each *Week event/City event* and on the same days in the previous 5 years (indicated by the "minus" sign.

So edition -1 reports performance on the days when the event took place in the year before the first edition, and edition -2 refers to the days when the event took place two years before the first edition and so on). In almost all the cases the trend over the period shows improvements in the performance of the destination during the days on which events take place. However, we only consider to be relevant event effects (in *italic*, in a fringed cel), the increases in occupancy, ADR and RevPAR that are higher than the "Expo effect", an element that has only been affecting the city since 2016.

Tab. 4a: Milan's Occupancy before and during the Weeks/Cities analysed

		Performance in the years before the first edition					Most recent editions			Comparing performance before and after Expo 2015		
Occupancy	**Days**	**-5**	**-4**	**-3**	**-2**	**-1**	**1**	**2**	**3**	**Av. Perf. Before**	**Av. Perf. After**	**Var. %pt**
Arch week	**W**	70%	72%	75%	71%	73%	81%	74%	79%	72%	78%	6
Art week	**WE**	~~83%~~	~~84%~~	71%	~~87%~~	71%	83%			71%	83%	12
Bike city	**W**	75%	77%	76%	87%	90%	85%	86%		81%	85%	4
Book city	**WE**	50%	49%	43%	57%	48%	70%	68%	75%	49%	71%	*22*
Calcio city	**WE**	69%	74%	75%	77%	74%	78%			74%	78%	4
Digital week	**W**	61%	58%	60%	64%	62%	67%	80%		61%	73%	12
Food city	**W**	69%	70%	70%	77%	68%	84%	81%	81%	71%	82%	11
Foto week	**W**	77%	61%	66%	74%	68%	69%	74%	80%	69%	74%	5
Green week	**WE**	74%	72%	75%	75%	79%	76%	79%		75%	78%	3
Montagna week	**W**	76%	67%	75%	89%	87%	91%			79%	91%	13
Movie week	**W**	76%	79%	77%	86%	89%	88%	85%		81%	86%	5
Museo city	**WE**	50%	62%	47%	46%	45%	52%	55%	56%	50%	55%	5
Music week	**W**	61%	59%	63%	66%	72%	75%	75%	81%	64%	77%	13
Pet week	**W**	72%	76%	78%	83%	79%	85%			78%	85%	7
Piano city	**WE**	54%	51%	44%	57%	62%	74%	71%	71%	54%	72%	*18*
												(Expo effect = +13%)

(strikethrough data has been excluded from the analysis)

Source: Authors on STR data

Tab. 4b: Milan's ADR before and during the Weeks/Cities analysed

		Performance in the years before the first edition					Most recent editions			Comparing performance before and after Expo 2015		
ADR	**Days**	**-5**	**-4**	**-3**	**-2**	**-1**	**1**	**2**	**3**	**Av. Perf. Before**	**Av. Perf. After**	**Variation**
Arch week	**W**	€ 134.8	€ 129.8	€ 150.6	€ 138.7	€ 135.5	€ 149.0	€ 130.4	€ 149.2	€ 137.9	€ 142.9	4%
Art week	**WE**	~~€ 262.1~~	~~€ 274.2~~	€ 127.5	~~€ 292.5~~	€ 128.1	€ 148.5			€ 127.8	€ 148.5	*16%*
Bike city	**W**	€ 143.1	€ 145.8	€ 145.2	€ 180.3	€ 188.3	€ 182.8	€ 215.6		€ 160.5	€ 182.8	*14%*
Book city	**WE**	€ 128.6	€ 118.0	€ 110.0	€ 103.0	€ 102.5	€ 120.6	€ 121.5	€ 131.6	€ 112.4	€ 124.6	11%
Calcio city	**WE**	€ 119.3	€ 128.0	€ 148.0	€ 138.0	€ 134.4	€ 144.7			€ 133.5	€ 144.7	8%
Digital week	**W**	€ 117.1	€ 108.5	€ 128.1	€ 132.2	€ 116.5	€ 138.0	€ 136.8		€ 120.5	€ 137.4	*14%*
Food city	**W**	€ 114.6	€ 119.6	€ 115.9	€ 134.1	€ 126.7	€ 139.8	€ 144.6	€ 148.1	€ 122.2	€ 144.2	*18%*
Foto week	**W**	€ 151.6	€ 119.3	€ 132.5	€ 161.2	€ 124.6	€ 127.5	€ 126.6	€ 144.6	€ 137.8	€ 132.9	-4%
Green week	**WE**	€ 123.1	€ 122.8	€ 129.4	€ 148.6	€ 139.5	€ 143.8	€ 147.6		€ 132.7	€ 145.7	10%
Montagna week	**W**	€ 123.1	€ 115.7	€ 124.4	€ 155.7	€ 151.4	€ 172.8			€ 134.1	€ 172.8	*29%*
Movie week	**W**	€ 149.7	€ 155.0	€ 152.1	€ 175.7	€ 182.5	€ 182.6	€ 205.3		€ 163.0	€ 193.9	*19%*
Museo city	**WE**	€ 106.6	€ 136.8	€ 113.7	€ 119.0	€ 114.4	€ 109.6	€ 120.1	€ 116.8	€ 118.1	€ 115.5	-2%
Music week	**W**	€ 111.4	€ 109.8	€ 109.0	€ 110.3	€ 118.4	€ 121.3	€ 121.8	€ 134.1	€ 111.8	€ 125.7	12%
Pet week	**W**	€ 121.8	€ 135.8	€ 145.8	€ 150.9	€ 136.3	€ 162.8			€ 138.1	€ 162.8	*18%*
Piano city	**WE**	€ 140.4	€ 122.0	€ 105.9	€ 100.4	€ 102.4	€ 130.3	€ 124.8	€ 128.4	€ 114.2	€ 127.9	12%
												(Expo effect = +12%)

(strikethrough data has been excluded from the analysis)

Source: Authors on STR data

Tab. 4c: Milan's RevPAR before and during the Weeks/Cities analysed

		Performance in the years before the first edition					Most recent editions			Comparing performance before and after Expo 2015		
RevPAR	Days	-5	-4	-3	-2	-1	1	2	3	Av. Perf. Before	Av. Perf. After	Variation
Arch week	**W**	€ 93.8	€ 92.9	€ 113.3	€ 98.5	€ 99.1	€ 120.6	€ 97.0	€ 117.2	€ 99.5	€ 111.6	12%
Art week	**WE**	~~€ 217.2~~	~~€ 229.4~~	€ 91.1	~~€ 253.9~~	€ 91.1	€ 123.6			€ 91.1	€ 123.6	*36%*
Bike city	**W**	€ 107.2	€ 112.6	€ 110.5	€ 156.4	€ 169.1	€ 155.8	€ 185.8		€ 131.2	€ 155.8	19%
Book city	**WE**	€ 64.1	€ 57.3	€ 47.1	€ 58.6	€ 49.2	€ 84.8	€ 82.5	€ 98.9	€ 55.3	€ 88.7	*61%*
Calcio city	**WE**	€ 82.1	€ 94.7	€ 110.4	€ 106.6	€ 99.9	€ 112.3			€ 98.7	€ 112.3	14%
Digital week	**W**	€ 71.4	€ 62.9	€ 77.3	€ 84.4	€ 72.7	€ 92.0	€ 108.8		€ 73.7	€ 100.4	*36%*
Food city	**W**	€ 79.1	€ 84.0	€ 81.2	€ 103.5	€ 86.6	€ 117.7	€ 117.8	€ 120.3	€ 86.9	€ 118.6	*37%*
Foto week	**W**	€ 116.9	€ 72.5	€ 87.7	€ 119.3	€ 84.9	€ 88.0	€ 93.1	€ 115.3	€ 96.3	€ 98.8	3%
Green week	**WE**	€ 91.3	€ 88.6	€ 97.0	€ 111.2	€ 110.0	€ 109.1	€ 116.8		€ 99.6	€ 113.0	13%
Montagna week	**W**	€ 93.1	€ 77.3	€ 93.4	€ 139.2	€ 132.1	€ 158.0			€ 107.0	€ 158.0	*48%*
Movie week	**W**	€ 113.5	€ 122.2	€ 117.1	€ 151.5	€ 162.0	€ 160.3	€ 174.9		€ 133.3	€ 167.6	26%
Museo city	**WE**	€ 53.0	€ 85.0	€ 53.8	€ 54.5	€ 52.0	€ 57.4	€ 66.6	€ 65.9	€ 59.6	€ 63.3	6%
Music week	**W**	€ 67.9	€ 65.2	€ 68.5	€ 72.6	€ 85.8	€ 91.2	€ 91.4	€ 108.2	€ 72.0	€ 96.9	*35%*
Pet week	**W**	€ 87.2	€ 103.8	€ 113.1	€ 125.9	€ 107.6	€ 137.6			€ 107.5	€ 137.6	*28%*
Piano city	**WE**	€ 76.2	€ 62.3	€ 46.3	€ 57.5	€ 63.1	€ 96.5	€ 88.1	€ 90.7	€ 61.1	€ 91.8	*50%*
												(Expo effect = +26%)

(strikethrough data has been excluded from the analysis)

Source: Authors on STR data

An analysis of the "*italic variations*" reveals that the positive impact of the *weeks/cities* on the hotels' occupancy is modest. Only two events have been able to generate an improvement of average hotel occupancy in the post Expo period: Book city and Piano city. It is interesting to note that the two of them are "*City*" events - i.e. short ones - and are relatively old (first edition in 2012) compared to the other "*Week*" and "*City*" initiatives. In other words, they are well-established appointments in the city calendar, with a reputation, and well known to both residents and visitors from outside.

Moving to the second KPI - the average daily rate - a conspicuous number of events positively impact on hotel rates in contrast to what emerges from the analysis of the first KPI. In fact, seven of them are associated with an increased ADR, higher than the Expo effect (+13%). These events have a long duration (on average seven days), are recent (started from 2017 or even later) and they are mainly "*Weeks*" (only two "*Cities*").

The third KPI - The Revenue per available room - is the index that shows the highest number of significant impacts on the destination's performance: eight events are associated with improvements of the RevPAR that are higher than the Expo effect (26%). Two of these events are "*Cities*" (Piano and Book) and six are "*Weeks*". The reason why this indicator shows the higher amount of significant impacts is the relationship that links the three KPI. In fact, RevPAR = occupancy * ADR and therefore these results somehow combine the evidence that emerged from the other two performance indicators.

These first quantitative elements verify the first hypothesis, confirming that the destination's performance - measured by three main hotels' metrics - improved during the events.

The second hypothesis focuses on the events' ability to improve the weekly seasonality in Milan. As reported in Table 2, the portfolio of "*weeks*" and "*cities*" includes both events held during the weekend and events that unfold across the entire week. The first category includes: Museo city, Art Week, Piano City, Green Week, Calcio City and Book City. The other category is more numerous, and mainly includes "*weeks*". Looking at the three KPI again from this standpoint, it emerges that in terms of occupancy, the only events able to improve the destination's performance occur during the weekend. This means that on average the ability of the micro-medium cultural events analysed to boost the occupancy rate is very modest, the only two successful cases occur during the periods when Milan is less crowded and therefore when even a modest impact could be of value for the city: the weekend. Coming to the second and the third indicators - ADR and RevPAR - there is only one event that takes place during the weekend among the good performers (in red): The Art week. This second element underlines the conclusion that the ability of this kind of cultural micro-medium events to improve the week seasonality of Milan by boosting hotel performance during the weekend is very limited. Yet we should highlight once again that the majority of the events analysed are new and therefore these modest results show the potentiality they have for the future. The second hypothesis was rejected on the basis of these findings.

However, it would be limited and partial to consider only the effects of these events on hotel performance and therefore these results were cross-checked with those obtained from analysing interviews and official documents released to the press from 2017 to 2020 by the primary stakeholders.

As stated by the Deputy Mayor for Culture of the city of Milan Filippo Del Corno, "*Events increase the attractiveness index of a place, help to publicise it and to position it on the destination desirability map. [..]. In addition, the events set in motion virtuous economies for the promotion of the artistic, architectural and landscape heritage of the area which lives in strong symbiosis with the planning of the event. Finally, there is also the value that events bring to increase the cognitive heritage of the community*".

Furthermore, another quite interesting successful element that goes beyond the performance indicators relates to the strong and permanent collaboration between local institutions and companies in the organisation of the events themselves. As explained by Luca Martinazzoli, Head of City Marketing, "*We designed the idea of "Week" to give the city a rhythm, and to give different actors from different sectors the opportunity to express themselves using the city's brand - a very strong brand - and using the city's physical and human stage". An important result of this strategy has been that "the municipal administration makes the stage available and most of the content is now provided by private entities*".

Last but not least, those events contribute to reshaping the urban space, moving flows of visitors to areas that are less congested by tourists and residents. "*[…] there are moments that involve the entire urban space and provide knowledge of the city that goes far beyond the more consolidated forms. In other cities abroad [this type of cultural event] is always concentrated in one place; [on the contrary] a characteristic of the Week and City format is that they draw unusual maps of Milan that lead to the discovery of places, neighbourhoods, cultural centres, places of aggregation that have the ability to amaze and challenge the entrenched view of our city every time. The whole city feels deeply involved, called on to participate actively or by proposing initiatives or contents and as a spectator*". (Cit. Filippo Del Corno, Deputy Mayor for Culture of the city of Milan).

The perception of a positive effect in the redistribution of flows throughout the city generated by the Milanese formula is also shared by stakeholders from the hotel industry.

5. Discussion and conclusions

The results that emerge from the empirical analysis confirm the existence of a positive impact generated by the "*Week*" and "*City*" portfolio on the performance of the city, but not big enough to modify its week seasonality. Although modest - especially in terms of room occupancy - this impact highlights a positive contribution of cultural micro-medium events to tourism in the city. This contribution takes shape not only in terms of its ability to attract large flows of overnight visitors, but rather in terms of the attractiveness of the offer for specific segments of high-value tourists. In addition to this, of course, events also play an important role in pursuing the objectives of the city, in terms of inclusiveness and the promotion of cognitive capital, two central aspects for positioning Milan as a "vibrant" city of international importance. This first evidential element constitutes a contribution to the academic debate that has already proved the positive impact of mega and large scale events but focused less attention on smaller initiatives.

The analysis therefore sought to highlight a new model of urban tourism development based on micro-medium events, relating it to hotel performance. This innovative model hinges on a coordinated calendar of "*City*" events, an innovative format of small-scale cultural initiatives distributed throughout the area with great capacity for participation and inclusion, and "*Week*" events that are capable of promoting the integration of the various vocations of the city - production, tourism, culture and services - supporting the collaboration between public and private actors operating in different cultural and creative sectors and scattered throughout the city.

It is therefore a model that, in an attempt to overcome seasonality, tends to combine business tourism and leisure tourism, thus contributing to mitigating seasonality also by means of a new visitor mix and a strategic scheduling of events, in line with what is also suggested by the literature on the sector.

Moreover, three valuable elements that emerged from this study have important managerial implications. The first of these concerns the strong link between the portfolio of cultural events, the economic activity and the vocations of the territory that hosts them. The most important "*Weeks*" that Milan hosts are attributable to its excellences, highlighting a link between tourism development strategies and broader urban development policies, so that the benefits are sustained and the entire set of the territorial resources is optimized. As proof of this, even in the presence of an unprecedented health crisis such as the covid-19 pandemic, the city has quickly organized the first "digital Fashion Week", scheduled for July 2020. It is an effective example of a B2B-B2C event that combines business activities and cultural contents. This formula enhances the value generated for a wide-ranging group of the destinations stakeholders: residents, entrepreneurs/managers and tourists among the others.

The second valuable implication is related to the permanent public-private collaboration put in place in recent years for the organisation of these events. The evidence for this does not come from the quantitative analysis, but emerges from the interviews with the event organisers. It is clear, in line with previous studies, that the rich portfolio of "*Weeks*" and "*Cities*" results in a stronger and closer permanent collaboration between the municipality that organizes the platform and the private bodies that fill it with contents. As demonstrated even by other international cases - Barcelona, Vienna, Northern Ireland among others - events are important drivers for establishing and then institutionalising local collaborative strategies and, in some cases, even for setting up new permanent destination management bodies. Once again, this element highlights the need to manage events as part of a broader destination strategy that goes beyond the tourism field and embraces a multitude of related industries and stakeholders. This is because sustainable tourism development relies on collective decision-making around the transformation of - natural and economic capital resources in particular - and in this specific case cultural ones too (Martini and Buffa, 2015).

Furthermore, an additional implication which is remarkable for both destination managers and businesses is that it takes time to exploit the effect of minor cultural events on a destination's performance. In fact, as emerged from the findings, the most effective events are the oldest ones. Apart from the Fashion and the Design weeks, which are undeniable successful events with a high impact on the city, among the events analysed in this study the most valuable ones are *Book city* and *Piano city* which started in 2012. Book city in particular seems to have a quite important role. This is an interesting event which is very closely connected both to the promotion of an important economic sector for the city, that of publishing, and to local cultural participation policies (promotion of reading). In addition, *Book city* was also a tool for the international promotion of Milan during the process for obtaining recognition as a UNESCO Creative City of Literature (2017).

The other city events - the more recent ones, started in 2017, 2018 or 2019 - are less impactful. It is possible to deduce from this that well established events are better than the new ones as there is greater awareness of them, they have a reputation and a story to tell. This means that a long-term events strategy is required and that maintaining the event portfolio over time can be important for capitalising on the effects of the investments made to start new initiatives.

This explorative study has two main limitations: first of all, even if we check for the presence in the city of important exhibitions during the same days as a *Week* or a *City* event, we still cannot be sure that no significant event was taking place somewhere in a hotel or in another venue in the city because Milan does not have an official destination calendar. Secondly, several of the events analysed are very recent as they only started in 2018 or 2019. The limited number of years available reduces the ability to establish if an event has generated a stable effect, as the awareness of it can be modest in early years, while the collaboration between the actors involved might not yet be consolidated.

In addition, fundamental for assessing the impact of the most recent events will be the evolution of the post Covid-19 recovery process, while the city's ability to innovate the offer in terms of event management, further diversification of the public / target, and reuse of public space will play a key role as well.

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Meeting Sustainable Development Goals (SDGs) in museum evaluation systems. The case of the Italian National Museum System (NMS)

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Abstract

Purpose of the paper: *This paper aims to investigate if, how and to what extent the Italian National Museum System (NMS) currently includes sustainability in its evaluation system.*

Methodology: *After discussing the scientific literature on sustainability in management and museum studies, the research performs a quali-quantitative comparative analysis to verify the degree of inclusion of the Sustainable Development Goals (SDGs) approved by the General Assembly of the United Nations in 2015 in the Uniform Quality Levels for Museums (UQLMs) set up in Italy to implement the NMS.*

Findings: *The research results show that some sustainability dimensions are more relevant in the Italian museum evaluation system than others, highlighting the importance of relationships with external stakeholders and the local context.*

Practical implications: *The research identifies possible areas for improvement so that the principles and objectives of sustainability can be incorporated in the NMS. It also provides policymakers and museum managers with suggestions for implementing them.*

Research limitation: *The research only examines UQLMs. Further investigation should verify the current level of the sustainable approach in museum management by analyzing the best practices and activities of museums participating in the NMS.*

Originality of the paper: *Adding to the scientific literature on museum sustainability, this paper investigates the relationship between culture and sustainability beyond the triple bottom line approach, by considering sustainability to be an integral component of quality and performance measurement in museums. The research also highlights the need for a more holistic approach involving external stakeholders and integrating other measurement tools.*

Key words: sustainability; museum management; quality levels; evaluation system; partnership

1. Introduction

As argued by Adams, "museums are inextricably linked to sustainability principles" (2010, p. 11). On the one hand, the concept of 'permanence' stands out not only in relation to the institution, whose organizational form can change through time, but also with regard to the life of its collections (Sandahl, 2019, p. 6). On the other hand, the practice of maintaining collections in perpetuity highlights the need to serve both current and future generations, by displaying and interpreting museum objects now and passing them and their value on to the future. Thus, the question of cultural heritage conservation for intergenerational equity is raised. Moreover, the meaning of cultural heritage itself evokes sustainability. Given that the cultural items preserved in museums are not fungible - unique and not interchangeable - resources, their preservation for the future contributes to protecting and promoting cultural diversity.

These ideas are consistent with the recent paradigm shift in heritage studies - from preservation *per se* to purposeful preservation, sustainable use and development (Loulanski, 2006). By moving beyond the false dichotomy between protection and enhancement and recognizing a virtuous relationship between these two functions (Golinelli, 2015; Saviano *et al.*, 2018), the current cultural change affirms that enhancement can help protection, not only by attracting more resources for safeguard, but also by increasing awareness of the value of cultural heritage among a wider audience. This, in turn, increases people's wellbeing and boosts local development (Cerquetti *et al.*, 2019). When applied to museum management, this approach goes beyond the distinction between custodial management and marketing management (Gilmore and Rentschler, 2002) and suggests they might cross-fertilize.

Following Worts (2016), nowadays we can agree that sustainability is "a holistic concept that applies to the ability of a larger, living system to change/adapt - even to *flourish* - over the long term" (p. 210). Aware of the need to adapt to complex, contradictory and uneven societal changes, ICOM has recently started to rethink the 2007 museum definition[1]. In implementing this process, ICOM has sought guidance not only from the Universal Declaration of Human Rights (1948) and the UNESCO Universal Declaration on Cultural Diversity (2001), but also from the UNESCO Recommendation concerning the Protection and Promotion of Museums and Collections, their Diversity and their Role in Society (2015). Eventually, in the recommendations adopted in December 2018, the ICOM Executive Board recognized the need to meet present urgent challenges, such as "the crises in nature and the imperative to develop and implement sustainable solutions" and "deep societal inequalities and asymmetries of power and wealth" (Sandahl, 2019, p. 2), and also called for accountability and transparency in the acquisition and use of material, financial, social and intellectual resources. The revision process involved members, committees, partners and other interested stakeholders and collected over 250 proposals[2]. Finally, at its 139th session in Paris on July 21-22, 2019, the Executive Board of ICOM selected a new alternative museum definition for a vote to be included in the ICOM Statutes at ICOM's Extraordinary General Assembly, which took place in Kyoto on September 7, 2019[3].

Although the final proposal is still under discussion, the new approach extends the museum's mission and its relationship with sustainability,

1 https://icom.museum/en/news/watch-the-2nd-episode-of-seeking-change-a-new-museum-definition/.
2 https://icom.museum/en/news/the-museum-definition-the-backbone-of-icom/.
3 See: https://icom.museum/en/news/icom-announces-the-alternative-museum-definition-that-will-be-subject-to-a-vote/.

and explicitly mentions future generations, clearly recognizing the role of participatory processes and partnerships with diverse communities, and, finally, addressing equality and wellbeing at a global level. In this framework, sustainability becomes a management issue that goes beyond displaying and caring for collections (Merriman, 2008).

Starting from this reasoning, the following paper focuses on *museum management for sustainability,* exploring if and how museum evaluation systems currently take into account sustainability, an aspect which, so far, has not been investigated and measured sufficiently in scientific research. We analyzed the level of inclusion of the Sustainable Development Goals (SDGs), approved by the General Assembly of the United Nations in 2015, in the Uniform Minimum Quality Levels for Museums (UQLMs), established by the Ministerial Decree of February 21, 2018 to activate the Italian National Museum System[4] (NMS).

More specifically, after analyzing the scientific approach to sustainability and its importance in museum management research and practice, the paper aims to verify:

1) if, how and to what extent the UQLMs meet the SDGs;
2) how sustainability is understood and addressed by the Italian museum evaluation system;
3) how best to incorporate and implement the principles and objectives of sustainability in the NMS.

In particular, the research results show that the promotion of social and economic inclusion is the most significant sustainability dimension in museum management. To optimize the achievement of this objective, museums are required to strengthen their relationships with the external context and stakeholders by adopting a more holistic and systemic approach.

The paper is structured as follows. Section 2 critically discusses scientific literature on sustainability in management and museum studies, highlighting the importance of sustainability as a component of museum management. Section 3 presents the research methodology and section 4 the research results; section 5 discusses the main findings and their impact on museum management. Conclusions are drawn in section 6, which points out policy and managerial implications, research limitations, and suggests further research.

2. Literature review

2.1 Sustainability in management studies

The notion of sustainability has, for decades, become part of the basic principles that guide the management of organizations, influencing consumer behavior and business models (Barile, Saviano, 2018; Russo *et al.*, 2018). This approach followed the notion of sustainability provided by the Brundtland Commission in 1987 and also adopted by the UN World Commission on Environment and Development (WCED). This

4 http://musei.beniculturali.it/en/notizie/notifies/italys-national-museum-system-has-kicked-off.

means, first and foremost, improving the quality of human life, delivering basic environmental, social and economic services to all residents of a community within the carrying capacity of supporting eco-systems (IUCN *et al.*, 1991; ICLEI, 1994). Therefore, it is first necessary to avoid threatening the viability of natural, built and social systems upon which the delivery of those systems depends (ICLEI, 1994) and, consequently, avoiding the impoverishment of the territory: not endangering the quality of the environment; not changing the social and cultural equilibrium; not generating costs for structures and infrastructures that cannot be recovered through revenues; not consuming (e.g., energy, water, etc.) more than is acceptable. It would be even better if the behaviors of manufacturing organizations, and those of users/consumers, were not only directed at balancing economic effects with social and eco-environmental ones; they should also generate economic benefits for stakeholders (economic effectiveness), to ensure individuals and the entire social body are respected and their needs and expectations are met (social effectiveness). This should be achieved while taking care of the environment, starting with the rational use of resources (environmental effectiveness).

Organizations would thus become decisive for the sustainable development of both local and national systems. In short, the concept of sustainability drives organizations toward a "broad strategy-making perspective that incorporates the needs and demands of multiple stakeholder groups" (Harrison *et al.*, 2010, p. 58). The areas into which the impacts of sustainability fall, therefore, are closely intertwined and finely balanced.

In the last twenty years, numerous contributions on the subject of sustainability have been put forward not only by economics and business management scholars, but also by policymakers, often considering 'sustainability science' to be a distinct field (Kates *et al.*, 2001). However, multiple interpretations of the concept of sustainability rely on a specific temporal and/or geographical context.

Originally limited to the environmental dimension (ecology and the conservation of natural resources), the sustainability paradigm has expanded to encompass the notion of 'economic development', which includes not only economic growth (increase in material wellbeing and distribution of wealth), but also environmental and social outcomes. This expansion led to the concept of 'sustainable development', thus to the publication of the WCED report (1987) and to recognition in Agenda 21 (1992) of the three distinct 'pillars' of sustainable development: economic, environmental and social (Purvis *et al.*, 2019).

In 2001, the idea of sustainability took on an even broader dimension following the new UNESCO Declaration on Cultural Diversity (Articles 1 and 3). Since then, culture has been recognized as a key element of the concept of sustainability, and, in recent years, has become part of the emerging sustainable development model (Throsby, 2005; Stubbs, 2004; Cubeles, Baro, 2006; Roders, van Oers, 2011; Duxbury *et al.*, 2012; Sazonova, 2014; Soini, Dessein, 2016; Nocca, 2017; Saviano *et al.*, 2018).

However, there are still few contributions from scholars and policymakers attempting to bring 'sustainability' and 'culture' together analytically and systematically, with a focus on the different roles of culture in sustainable development. This is mainly because of the difficulty involved in this process, especially given the transdisciplinary approach required. Indeed, the concept of culture is broad and complex and can be considered both a foundation and a result of sustainable development. Furthermore, its inclusion within the field of sustainability would change things in sustainability research and policy, adding values, behaviors, knowledge and the ways of life of human beings to traditional areas of analysis; all this without considering that an analysis of culture's contribution to sustainable development requires different methodologies from those used for the 'three pillars'.

To date, there have been three main interpretations of the relationship between culture and sustainable development in the scientific literature: culture as the fourth pillar of sustainability (Culture *in* Sustainability); culture as a point of convergence, mediating between the three traditional pillars (Culture *for* Sustainability); culture as a center point for the other pillars of sustainability and, therefore, "an overarching dimension of sustainability" (Soini, Dessein, 2016, p. 3) (Culture *as* Sustainability).

2.2 Sustainability in museum studies

If the concept of sustainability is difficult to pin down, it is even harder to conceptualize its relationship with museums. A common and shared framework for investigating how museums and sustainability can interact is still missing. First, the dimensions of sustainability are not yet standardized. Second, few systems and indicators have been put into practice; a few reports have only measured the effects of certain actions started by museums, but not yet the impact of the institution's behavior (Hedges, 2020).

Although three specific sustainability dimensions have been identified for cultural institutions in frameworks - financial, intellectual, and social - (Friedman, 2007), the triple bottom line approach based on economic viability, environmental responsibility and social equity still prevails (Pencarelli *et al.*, 2016). Sometimes, the discussion also includes cultural sustainability (Errichiello, Micera, 2018; Pop *et al.*, 2019), which recognizes the need to protect cultural heritage and strengthen cultural vitality (Loach *et al.*, 2017). However, as argued by Loach *et al.* (2017), "cultural sustainability is rarely considered as a definitive outcome within sustainability research and policy within the sector" (p. 193), but is valued according to its ancillary benefits. Reversing the traditional approach, the authors suggest using sustainability models to consider how social, economic and environmental sustainability can help cultural institutions, and support their cultural contribution.

Therefore, following Pop and Borza (2015) and Pop *et al.* (2019), we can distinguish at least two different instrumental approaches:
1) *museums for sustainability,* that is, how museums can contribute to the achievement of the three pillars of sustainable development by being or becoming culturally sustainable;
2) *sustainability for museums,* that is, how sustainable social, economic

and environmental measures taken by museums can contribute to the fulfillment of their cultural mission, and thus of cultural sustainability.

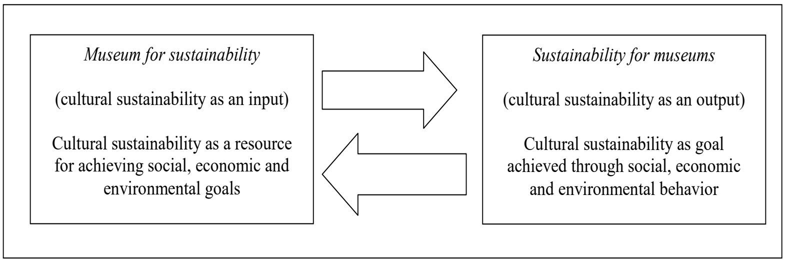
These two approaches can be considered complementary and both are related to a museum's mission. On the one hand, museum management can promote sustainable development; on the other hand, social, economic and environmental sustainability can support museum development.

The former approach (*museums for sustainability*) is linked to the role of cultural heritage and museums in quality of life and economic growth (Logan, Sutter, 2012; Pop, Borza, 2016a; Mendoza *et al.*, 2017) and, as already discussed in the introduction, is one of the main topics in the current debate on museums. In 2018, the OECD and ICOM published the Guide for Local Governments, Communities and Museums, which states that museums and cultural heritage can contribute to local development by inspiring creativity, boosting cultural diversity, helping regenerate local economies and improving social cohesion, civic engagement, health and wellbeing (ICOM, OECD, 2018). Drawing from previous studies on the value and benefits of the arts (McCarthy *et al.*, 2004; Crossick, Kaszynska, 2016), the Guide recognizes that museums play a crucial role in addressing contemporary societal challenges and tackling issues such as globalization, migration, polarization, inequality, populism, gender equality, aging societies, decolonization, and climate change. It investigates five different themes: economic development and innovation; urban design and community development; cultural and educational development; inclusion, health and wellbeing; managing the relationship between local government and museums to maximize the impact on local development. As stated by Brown (2019), "think global, act local" has become an important ability for museums.

The second approach (*sustainability for museums*) focuses on how museums approach sustainability, how they perceive its dimensions and what measures they are implementing, given that "the degree in which museums contribute to the sustainable development depends on their management" (Pop, Borza, 2015, p. 122). Even though some studies have demonstrated that museum managers do not care about sustainability (Chitima, 2015; Swarbrooke, 2015) and that sustainable behaviors need to be improved (Özer Sari, Nazli, 2018), some institutions have become aware that "as long as museums are unable to ensure their own survival and development, they cannot contribute to the sustainable development of their respective communities" (Pop, Borza, 2016a, p. 5). Sustainability is first approached as a way of using limited resources to maximum efficiency, including by exploring the competitive advantages of 'being green', such as better productivity, increased public confidence, new beneficiaries, more financial resources, and brand consolidation (Pop, Borza, 2014; Pop *et al.*, 2018). To appreciate this, we only need to look at the covers of books on museum sustainability displaying an explosion of green leaves and blue water, or windows open onto gardens and aquariums (Brophy, Wylie, 2013; Newell *et al.*, 2016; Rota, 2019). As confirmed by the vast array of practices for going green, climate change and resource depletion are gaining ground in the museum management debate, but green consumption, waste management, energy and water efficiency, and carbon footprint measurement are still an option, rather than a responsibility (Sutton *et al.*, 2017). Even though the 3Rs, that is, *reducing* consumption of natural resources, *re-utilizing* resources and *recycling*, are becoming more important in museum studies, and not just in research on sustainable building design and engineering (Lambert, Henderson, 2011; Brophy, Wylie, 2013; Newell *et al.*, 2016), caring for the environment is not the only focus of the debate on museum management and sustainability. Social issues are becoming urgent as well, such as attracting new clusters of visitors and engaging with stakeholders and different communities (Di Pietro *et al.*, 2014; Stylianou-Lambert, 2014; Sutter *et al.*, 2016; Recuero Virto *et al.*, 2017; Wang, Chiou, 2018; Brown *et al.*, 2019). "Just, verdant and peaceful" can finally be considered the motto for museums in the 21st century (Sutton *et al.*, 2017).

To sum up, cultural sustainability can be considered both an input and an output: a resource for achieving social, economic and environmental goals, and a goal achieved through social, economic and environmental behavior. The two approaches mentioned above are not contradictory, rather they help each other: their cross-fertilization can generate mutual benefits, by helping museums to achieve their mission and by generating positive externalities (fig. 1).

Fig. 1: Cross-fertilization between the "museums for sustainability" and "sustainability for museums" approaches



Source: own elaboration

The two approaches confirm that, as they change their role in societies, museums are called upon to take on new social responsibilities (Janes, Conaty, 2005). While, in the past, value creation was only measured by counting visitors, revenues and employees, today, museums are being asked to make broader social and economic impacts. They are beginning to contribute to Corporate Social Responsibility (CSR) - e.g., through volunteer programs (Edwards, 2007) or technology-based eco-innovation (Chung *et al.*, 2019). However, as argued in a recent study on a blend of museums and art galleries in Victoria, Australia, an explicit CSR policy is still missing (Zutshi *et al.*, 2020). Finally, even though it is not yet incorporated into institutional policies (Hedges, 2020), sustainability is emerging as a component of museum management, encompassing "a range of criteria moving on from a purely environmental perspective of sustainability" (Wickham, Lehman, 2015, p. 6).

In this scenario, UNESCO has recently published Thematic Indicators for Culture in the 2030 Agenda (UNESCO, 2019), a framework covering four different areas: environment and resilience, prosperity and livelihoods, knowledge and skills, and inclusion and participation. UNESCO's set of indicators aims to measure and monitor the progress of the enabling contribution of culture to national and local implementation of the Goals and Targets of the 2030 Agenda for Sustainable Development. When assessing the role of culture as a sector of activity as well as its transversal contribution across different policy areas, the 2030 indicators will help cultural institutions to include SDGs in their organization as some museums have already started to do (MUSE, 2018).

3. Research methodology

In the framework of the 2030 Agenda, the research is based on two premises: on the one hand, the role of public policy in boosting sustainability culture and implementing sustainability programs in cultural organizations (Montella, Dragoni, 2010); on the other hand, the need to consider sustainability dimensions as a component of quality and performance measurement in order to pursue effective sustainable behaviors over the long term (Pop, Borza, 2016b).

For this reason, with the focus on Italy's NMS, the unit of analysis adopted in the study was the national museum evaluation system. We compared the UQLMs with the SDGs in order to understand if, how and to what extent the system incorporates sustainability.

To this end, after critically examining the two original documents, we conducted a quali-quantitative comparative analysis. We compiled a table presenting the two identified data sets, namely the 17 SDGs (further divided in 169 targets) and the 142 entries provided by the UQLMs. Then, we proceeded by recording the cases in which a specific UQLM corresponds to a specific SDG entry, by placing the value 1 or 0 in each cell at the intersection of each row and each column (for verified and unverified presence respectively). Thus, the analysis of the correspondences allowed us to verify, through algebraic calculations (sums) and percentage assessments, whether indeed there was a qualitative-quantitative correspondence between the two documents.

3.1 The 2030 Agenda for Sustainable Development[5]

The 2030 Agenda, adopted by the General Assembly of the United Nations on September 25, 2015, represents a call to change our world for the benefit of all present and future generations (Colglazier, 2018).

It includes 17 SDGs and 169 targets, integrated and indivisible, which balance the three dimensions of sustainable development and concern areas of primary importance for humanity and the planet. Of particular importance is the fact that they aim to balance universal principles and national and regional realities. As underlined in several points, the objectives and targets are universal and global, that is, applicable to all the

[5] https://www.un.org/ga/search/view_doc.asp?symbol=A/RES/70/1&Lang=E.

countries in the world. However, their application within each country and at the regional level will take "into account different national realities, capacities and levels of development and respecting national policies and priorities" (Agenda 2030, p. 7), as each country faces specific challenges in the struggle to achieve sustainable development. The guidelines contained in the Agenda are the result of careful public consultation and contact with civil society and with other subjects in the world, and are based on previously developed documents of fundamental importance. The goals and targets, which came into effect on January 1, 2016, will, until 2030, be the guide for pursuing a wide range of social, economic and environmental objectives and more peaceful and inclusive societies, in addition to already known priorities (such as poverty eradication, health, education, and food security and nutrition).

The Agenda also refers to culture in:

1) point 36: "We acknowledge the natural and cultural diversity of the world and recognize that all cultures and civilizations can contribute to, and are crucial enablers of, sustainable development";
2) goal 4.7: "ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through […] appreciation of cultural diversity and of culture's contribution to sustainable development";
3) goals 8.9 and 12.b: "devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products" and "tools to monitor sustainable development impacts for sustainable tourism";
4) goal 11.4: "strengthen efforts to protect and safeguard the world's cultural and natural heritage".

In short, the 2030 Agenda recognizes the considerable role of culture in the current context (Petti *et al.*, 2020), characterized by a constant blend of globalization and localism. In particular, two main aspects seem to emerge: on the one hand, the need to respect, safeguard and enhance cultural diversity and the multiple forms it expresses at local level (local culture, cultural heritage) for the benefit of current and future generations; on the other hand, the contribution that culture can make to promoting sustainable development, starting with sustainable tourism.

3.2 The UQLMs (Decree of the Italian Ministry of Cultural Heritage, February 21, 2018)[6]

The Decree of the Italian Ministry of Cultural Heritage of February 21, 2018, establishing the "Adoption of Uniform Minimum Quality Levels for Public Museums and Places of Culture and Activation of the National Museum System", implemented Article 114 of the Cultural Heritage and Landscape Code, Legislative Decree no. 42 of January 22, 2004, as amended. This document stemmed from the same Ministry's Decree of May 10, 2001, setting out "Guidelines on technical-scientific criteria and operating standards for museums", which divided the management, conservation,

[6] http://musei.beniculturali.it/wp-content/uploads/2018/04/Allegato_I-Livelli-uniformi-di-qualit%C3%A0-per-i-musei_English.pdf.

and enhancement of museums into eight areas. It also considered the work and the concluding proposals of the "Ministerial committee for defining the minimum quality levels for enhancement", set up on December 1, 2006, and chaired by Massimo Montella, which identified certain minimum requirements for each area, as well as other codes and recommendations (e.g., ICOM and UNESCO).

The document identifies three important areas arranged into multiple sections and entries that include minimum standards (S) and improvement objectives (IO). These reflect the museums' organization and activities and represent a matrix for verifying each institution's equipment and performance.

In particular, Area A (*Organization*) concerns the elements that constitute the fundamental premise of the museum as a cultural institute engaged in public service for the conservation and enhancement of heritage (as established by ICOM and consistent with the Ministerial Decree of December 23, 2014). Area B (*Collections*) refers to the most important task of every museum, which is the management of its collections. It must harmonize the two primary requirements of taking care of the collections' integrity and making them available for public enjoyment, ensuring full physical and intellectual accessibility. Area C (*Communication and relations with the context*) concerns the institutional goal (mission) of a museum, which is to offer the public a cultural service based on the conservation and enhancement of its collections. This area includes, on the one hand, the activities and initiatives aimed at attracting visitors and, on the other, the activities and tools used by a museum to communicate the cultural value of its artifacts and to disseminate knowledge about them effectively, including by relating them to other cultural assets within the local context.

4. Research results

Seven of the 17 SDGs set by the 2030 Agenda are confirmed in the Ministerial Decree of February 21, 2018, addressing minimum standards and improvement objectives (tab. 1).

Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

Specifically, SDG 4.7 (§ 3.1) is confirmed in Area C. Here, museums are required to present elements that link the collections to their historical, cultural and environmental contexts. Also, it is important to put on temporary exhibitions that are directly relevant to the collections and the cultural values of the area and to carry out studies and research on the tangible and intangible heritage of the region in question.

The need to "build and upgrade education facilities that are child, disability and gender sensitive and provide safe, […] inclusive and effective learning environments for all" (SDG 4.a) mirrors, in particular, Areas A and C. Area A concerns the availability in museums of suitable spaces and public services and comfort in exhibition spaces, in terms of environmental conditions (lighting and cleanliness) and safety (for structures, people and objects). Museums are also required to grant disabled access to buildings and identify short routes. Furthermore, they are expected to provide alternative ways for the disabled to enjoy the exhibits in the museum (e.g., virtual visits, dedicated routes). Regarding access, museums are expected to be open at least 24 hours a week and 100 days a year. It is also hoped that e-payment systems, online booking and ticket sales are available, along with guided visits and workshop activities for individuals and groups, discounts, family rates, conventions, integrated tickets, cards, annual subscriptions, and free tickets. Finally, suitable professional figures are required. Area C provides for on-site and online availability of information material (including catalogs and/or short guides) about the museum - its collections, services and activities (also aimed at people with sensory or cognitive disabilities) - and the region. It is hoped that this information is also available in a foreign language and in the form of an audio guide and a multimedia guide. As for the physical tools used to deliver the communication service, captions and information panels or mobile cards are required with clear, legible information, including in foreign languages. It is also preferable for museums to provide multimedia tools, downloadable software and apps for mobile devices about the museum, its collection and temporary exhibitions, and the region, as well as tools for facilitating disabled access to the collections. Also, museums could provide educational activities and workshops for different visitor groups, guided visits and themed routes, possibly in other languages. Furthermore, training sessions for teachers, educational staff or other users, and seminars on specialist content could be organized. Finally, museums could develop offerings for the disabled and establish systematic relationships with the training, artisanal and industrial sectors, whereby they promote the institution as a hub of culture and history in the region (including for the development of creativity, design and know-how).

Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

This orientation is first reflected in Area A; it requires museums to have qualified professional figures performing the main functions in the organization's value chain.

Also, SDG 8.9 (§ 3.1) echoes Area C particularly and Area A episodically. In addition to the points described in SDG 4 about the contribution of museums to proper enhancement of local heritage, including the landscape, museums are also required to indicate how their tasks and functions relate to the regional context in their planning documents. They can also organize events to promote the collections, the museum and the region, integrate cultural services and museum networks and prepare and promote tourist and cultural itineraries.

Goal 10. Reduce inequality within and among countries

In particular, the invitation to "empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status" (SDG 10.2) corresponds to several points in Areas A and C described in SDG 4.a, relating to the role of public museums in ensuring inclusive and equitable quality education.

Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable

Specifically, SDG 11.4 (§ 3.1) is in line with Areas B and C. Here reference is made to periodic monitoring of the state of conservation of the artifacts and to recording, documenting and cataloging the collections. Furthermore, the points described in SDG 4, concerning the contribution of museums to proper enhancement of both their collections and local heritage, including the landscape, must be considered.

The guideline to "support positive economic, social and environmental links between urban, periurban and rural areas by strengthening national and regional development planning" (SDG 11.a) is in keeping with certain points in Area C, already described for SDG 8, and with one point in Area A, previously illustrated in SDG 4.a.

Goal 12. Ensure sustainable consumption and production patterns

This recommendation is first confirmed in Area C and episodically in Area A, with several points mentioned for SDGs 4 and 8.9, about the implementation of policies to support the development of cultural tourism and, therefore, to the museum's contribution to sustainable tourism.

The encouragement to organizations "to integrate sustainability information into their reporting cycle" (SDG 12.6) is reflected in Area A, where museums are invited to adopt social reporting methods for their activities such as annual reports, social budget, impact analyses.

The SDG 12.b (§ 3.1) agrees with area C and episodically with area A. In particular, museums are asked to record the number of visitors, preferably using electronic systems. Also, museums are invited to perform periodic staff audits and satisfaction assessments, to maintain and monitor a register (on paper or online) of visitor observations and suggestions, to carry out a customer satisfaction survey and analysis at least once a year, specifying the tools used, and surveys of non-visitors, including to verify their needs and expectations. Moreover, museums are encouraged to implement accountability procedures and publish reports of the expected results in the annual program and the objectives reached, as well as verifying the effectiveness and impact of activities, including collaborations, concerning cultural, economic and social policies via periodic reports and public sharing initiatives.

Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

Reference to this goal is found in several points of Areas A and C indicated in SDGs 4.a and 10.2, regarding public museums as institutions that must promote inclusive education.

Goal 17. Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development

In particular, the willingness to "encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships" (SDG 17.17) is seen particularly in Area C and episodically in Areas A and B. Museums are invited to participate in network projects, formalize relations with other research bodies and institutions, agree on projects with schools, jointly develop shared educational programs and training offerings with the Ministry responsible for regional education/school offices and schools of various types and levels, enter into cooperation agreements when carrying out common functions, integrate cultural services and museum networks, implement co-produced or co-planned initiatives, devise discount schemes, including with the hospitality sector and transport companies, establish relationships with the training, artisanal and industrial sectors and promote the institution as a hub of culture and history in the region.

Finally, the need "to increase significantly the availability of high-quality, timely and reliable data" (SDG 17.18) is echoed in several points of Areas A and C, described in SDG 12.b.

Tab. 1: Correspondence between 2030 Agenda and UQLMs[7]

		UQLMs			
SDGs		Area	S	IO	S+IO
4	4.7	C	1	2	3
	4.a	A	14	14	28
		C	7	17	24
Tot. SDG 4			22	33	55
8		A	7	1	8
	8.9	A	0	1	1
		C	3	7	10
Tot. SDG 8			10	9	19
10	10.2	A	2	2	4
		C	7	16	23
Tot. SDG 10			9	18	27
11	11.4	B	6	6	12
		C	5	10	15
	11.a	A	0	1	1
		C	0	3	3
Tot. SDG 11			11	20	31
12		A	0	1	1
		C	2	3	5
	12.6	A	0	1	1
	12.b	A	1	2	3
		C	0	6	6
Tot. SDG 12			3	13	16
16		A	2	2	4
		C	7	16	23
Tot. SDG 16			9	18	27
17	17.17	A	0	2	2
		B	0	1	1
		C	0	8	8
	17.18	A	1	2	3
		C	0	5	5
Tot. SDG 17			1	18	19

Source: our elaboration

[7] In the left columns, the list of SDGs for which we found a correspondence with UQLMs; in the center column, the areas of the UQLMs where a correspondence is found; in the right columns, the number of minimum standards and improvement objectives for each area.

5. Discussion

The research results support Hedges' (2020) findings and confirm that sustainability is not yet an institutionalized process in the museum context. Moreover, as argued by Wickham and Lehman (2015), some sustainability issues "are not specifically relevant to the ongoing operations" (p. 11) of museums and should be evaluated through other voluntary tools (e.g., environmental actions). Even though there is still not enough attention on SDGs, some important management issues are emerging.

First of all, the area of the Decree of the Italian Ministry of Cultural Heritage of February 21, 2018 that is most responsive to SDGs is Area C (which meets all 7 SDGs with 125 entries: 32 S and 93 IO), followed by Area A (7 SDGs with 56 entries: 27 S and 29 IO) and Area B (2 SDGs with 13 entries: 6 S and 7 IO) (tab. 2). In all areas, the affected entries mainly relate to improvement objectives.

Tab. 2: Correspondence by area between UQLMs and Agenda 2030 (number of minimum standards and improvement objectives for areas A, B, C)

	UQLMs		
	S	IO	S+IO
2030 SDG	Area A		
SDG 4	14	14	28
SDG 8	7	2	9
SDG 10	2	2	4
SDG 11	0	1	1
SDG 12	1	4	5
SDG 16	2	2	4
SDG 17	1	4	5
7	27	29	56
	Area B		
SDG 11	6	6	12
SDG 17	0	1	1
2	6	7	13
	Area C		
SDG 4	8	19	27
SDG 8	3	7	10
SDG 10	7	16	23
SDG 11	5	13	18
SDG 12	2	9	11
SDG 16	7	16	23
SDG 17	0	13	13
7	32	93	125

Source: our elaboration

The most widely accepted SDG is no. 4 (55 entries out of 194, i.e. 28%) (tab. 3; fig. 2).

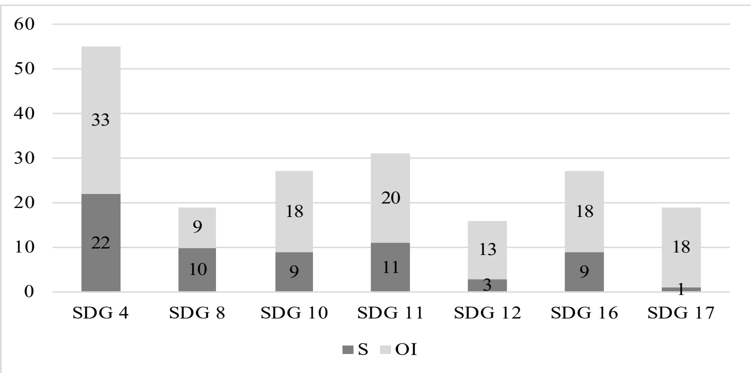
The aspect that is most closely represented in the UQLMs is strengthening and promotion of social and economic inclusion as a key element for sustainable development (to which SDGs 4, 8, 10 and 16 refer). This is justified by the mission of these institutions, which consists in creating social value that is multidimensional and involves multiple stakeholders.

Tab. 3: Correspondence in terms of accepted SDGs, between UQLMs and Agenda 2030

2030 SDG	UQLMs			
	Entries		S	IO
	Absolute value	%		
SDG 4	55	28%	22	33
SDG 8	19	10%	10	9
SDG 10	27	14%	9	18
SDG 11	31	16%	11	20
SDG 12	16	8%	3	13
SDG 16	27	14%	9	18
SDG 17	19	10%	1	18
7	194	100%	65	129

Source: our elaboration

Fig. 2: Correspondence in terms of accepted SDGs, between Decree of the Italian Ministry of Cultural Heritage, February 21, 2018 and Agenda 2030: absolute values



Source: our elaboration

One of the main objectives emerging from the national museum evaluation system is the democratization of culture (Montella, 2012). In line with the SDGs, museum offerings should ensure the rights of citizens to culture (Pinna, 2017), as established in Articles 3 and 9 of the Italian Constitution. According to the multidimensional and multi-stakeholder approach (Cerquetti, 2017), this is the starting point for a virtuous cycle and for creating multiple social and economic benefits for different categories of users.

First, UQLMs confirm the need to create 'presentation value' (Montella, 2009) by providing effective information, communication and educational services. To this end, museums are asked to guarantee full accessibility to all clusters of visitors - including the most vulnerable members of society, such as people with disabilities and children (SDG 4.a). Indeed, accessibility concerns not only physical aspects (such as opening hours and economic and architectural entry barriers), but also intellectual ones, through offerings that meet current cultural demand, its needs, interests and capabilities. Therefore, the approach envisaged by the UQLMs meets the objectives set by SDG 4 for inclusive and equitable quality education. This is achieved by enhancing local culture and expressions, thereby promoting cultural diversity, contributing to sustainable development (SDG 4.7), and leading to further benefits considered in the 2030 Agenda.

The Ministerial Decree also designs the museum offer as a global service, including the core product (i.e., the communication service), its staff, its physical environment and its interaction with users. The communication service should not only show the exhibited objects' artistic characteristics, but above all their connection to their original historical and geographical context. Furthermore, museums should have suitable professional figures, with the proper knowledge and skills, not only in the field of cultural heritage, but also in management and organization. Similarly, the physical environment (including the physical equipment used to deliver the service) should be pleasant, functional and should conform to applicable standards. Finally, the communication content, strategies and tools should be differentiated, with the aim of achieving the widest customer satisfaction.

The Italian museum evaluation system also implicitly meets the benefits related to the promotion of sustained, inclusive and sustainable economic growth (SDG 8), especially "sustainable tourism, that creates jobs and promotes local culture and products" (SDG 8.9). Indeed, the intangible value generated by museum services, which consists in increasing the cultural capital of visitors, can cause multiple socio-economic effects, thereby creating 'production value' (Montella, 2009) and contributing significantly to local development. Among these effects are the strengthening of the community's identity and the contribution these services make to territorial marketing, destination management, local branding - ranging from attracting tourist flows and promoting local products to attracting exogenous investments and new businesses - and, therefore, to sustainable tourism. These benefits are fully material-economic, since they generate an increase in the income for the entire territorial economic-production system. At the same time, other economic impacts generated by museums must be considered (Solima, 2018). First of all is the flow of wealth that museums transfer to the people who work there and the benefits generated for external suppliers of products and services (direct and indirect impacts). In addition, there is the multiplicative impact of the museum's additional remuneration on consumption processes, which triggers the Keynesian multiplier mechanism and has positive repercussions on the entire local economic context. On the other hand, there are the tax effects generated when part of the wealth produced by the cultural institutions returns to the public sector through taxation of workers' incomes and indirect taxes related to consumption (derived impacts). Finally, there is the previously mentioned impact of increased demand for local goods and services generated as a result of a museum's activities, such as on goods with brands reflecting their regional identity, and on companies in the tourist industry (induced impacts).

At the same time, it is important to consider the benefits regarding support for sustainable consumption models (SDG 12), related both to sustainable tourism (SDG 8.9) and the protection and safeguard of cultural heritage (SDG 11.4). The implementation of the aspects emerging from the UQLMs (Area C) and from the SDGs would lead museums to present local cultural resources in an organizationally widespread and culturally holistic perspective, consistent with the systemic-vital approach (Barile *et al.*, 2019). This would favor the space-time distribution of tourist flows, preventing excessive crowds beyond the physical and cultural carrying capacities of places and cultural sites, and the efficiency thresholds of the various services. Furthermore, this would revitalize peripheral areas: the increase in demand for goods and services generated would lead to additional remuneration, would support the mitigation of the demographic landslide, which often consumes peripheral areas, and would contribute to the protection of local heritage (Ruozi *et al.*, 2005; Quattrociocchi, Montella, 2013).

Likewise, Area C of the Ministerial Decree recognizes that museums can be part of an integrated process to promote a place, by acting as the beginning of a story that continues beyond their doors, into the city and the territory; and they can achieve this by arranging activities in collaboration with other local organizations (SDG 11.a) (Stylianou-Lambert, 2014). Rather than limiting themselves to traditional approaches and tools (e.g., public-private partnerships), they would, therefore, contribute to implementing systemic governance of the territory (Hall, 2011) based on cooperation between local actors (public administration, tourism, culture, food and wine, craftsmanship, etc.) and between them and the local community, as well as on decision-making processes based on consultation and stakeholder participation. Strong support for innovation and a significant contribution to the competitiveness of tourist destinations and, ultimately, to sustainable development can arise from this approach (Mazanec *et al.*, 2007).

Finally, the implementation of enhancement activities extending from museum collections to the territory and the landscape is essential for safeguarding local cultural heritage (SDG 11.4). Museums are expected to contribute to this not only through the conservation of their collections. The prerequisite for guaranteeing the self-driven and legally required safeguard of cultural heritage is implementation of social reporting methods and accountability procedures that include sustainability information (SDG 12) and ensure that communities perceive the multiple tangible and intangible benefits (therefore directly and indirectly economic) they can derive from using cultural assets (Quattrociocchi *et al.*, 2012).

6. Conclusions

Aiming to make a theoretical contribution to the debate on museum sustainability, this paper has investigated the relationship between culture and sustainability beyond the triple bottom line approach, by considering sustainability to be an integral component of quality and performance measurement in museums.

From a managerial point of view, the comparative analysis of the SDGs of the 2030 Agenda and the UQLMs of the Ministerial Decree of February 21, 2018 has allowed us to understand if, how and to what extent the current national evaluation system for museums incorporates the theme of sustainability (*RQ1*). The research results show that the UQLMs include sustainability principles and objectives, especially in the area that analyzes communication and relations with the public, the region and stakeholders. As already argued (§ 5), the standards and objectives set out in this area are consistent with the goals for social and economic inclusion (SDGs 4, 8, 10 and 16), which are a key component of sustainable development and the museum mission alike.

In reply to *RQ2*, we can also argue that the Italian museum evaluation system only incorporates the social and economic dimensions of sustainability, but is not yet aware of the importance of environmental challenges. Moreover, as already mentioned (§ 5), sustainability has not been institutionalized as a process, and many references to SDGs are only implicit in the UQLMs.

Given that the NMS was established only two years ago, and its implementation is an ongoing process, some policy and managerial implications can be drawn from the analysis, to ensure better application of the principles and objectives of sustainability in Italian museum management (*RQ3*). The research highlighted the need for a more holistic approach involving external stakeholders and integrating different strategies and measures to promote both *sustainability in museums* and *museums for sustainability*. In order to bring the Italian legislation and managerial practices closer to the principles of sustainability, two routes can be suggested. On the one hand, museum managers should implement UQLMs both as a periodic and a continual activity, and as a component of CSR. If the process becomes part of the museum's ordinary management and responsibility, it can help to trigger the abovementioned virtuous cycle of value creation. Otherwise, the contribution to sustainability remains on a museum's wish list. On the other hand, the research suggests that policymakers should provide other measurement tools to museums to boost environmental sustainability. Specifically, museum managers should be supported in starting social reporting and implementing accountability procedures (e.g., annual reports, strategic plans, etc.), and including external stakeholders in the process.

The research only examined the UQLMs. Further investigation should verify the current level of the sustainable approach in museum management by analyzing the initiatives and activities of museums participating in the NMS. For example, it would be interesting to investigate how the NMS is implementing the MuSST project (Museums and development of territorial systems), which facilitates partnerships between public and private museums and organizations in the cultural, educational and private sectors for planning good practices addressing cultural development and tourism. From a theoretical and practical perspective, best practices should be analyzed, and the actual implementation of sustainability measures in museums should be investigated through qualitative research. Finally, future studies on this topic could report comparisons between different national evaluation systems at international level.

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The challenge of sustainable ski area management: the New Zealand club fields model between experience and sense of place

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Abstract

Purpose of the paper: *This study explores how a small ski area in New Zealand is experienced and managed. Small ski areas around the world are facing the challenges of sustainability and climate change. The ski area in question is not only economically, socially and environmentally sustainable, but also seems to meet the growing demand for authenticity and immersive experiences. The findings have interesting implications for dealing with competition and climate change that are also potentially useful for major ski-resorts.*

Methodology*: Field research was conducted during the 2019 NZ winter season, by means of face-to-face interviews (15) with managers, employees and skiers and through a questionnaire (258) which collected the perceptions of skiers in order to better understand the day-to-day reality of the object of the case study.*

Findings*: The results reveal some distinguishing features of a club field in New Zealand and present considerations for how it might be usefully adopted in certain European mountain areas.*

Research limitations: *The study is based on a single case study and although the ski field under investigation (in the Selwyn region of New Zealand) is an important destination, the limitations of having one only case study need to be considered.*

Practical implications: *The study enriches the on-going academic discussion on boutique destinations and community-based models and highlights strategic and managerial aspects that could be useful to destination and ski area managers.*

Originality of the paper: *As yet, there is no literature on club fields, and no European ski area has adopted this model. The study, moreover, introduces a micro-segmentation analysis.*

Key words: club fields; ski area management; boutique destinations; sustainability; sense of place

1. Introduction

Ski resorts resemble business organisations, battling for competitive advantage and open to the application of strategic management theories (Flagestad and Hope, 2001). These resorts are dedicated to winter sports and, while presenting different degrees of specialisation, all face stagnant markets and new challenges linked to climate change, on the one hand, and growing sensitivity towards the impact of mass skiing on both natural and social environments, on the resident community, on the other hand. The present study is part of the academic debate on the strategic-managerial choices that tourism destinations can make when they recognise and combine the dimensions of competitiveness and sustainability (Crouch and Ritchie, 2000); moreover, it aims to fill the gap in this debate with regard to small ski areas. It may be positioned among the studies dedicated to boutique destinations and their relationship with sustainability (Booth and Cullen, 2001; Franch *et al.*, 2005; Clydesdale, 2007; Callaghan and Colton, 2008; Škori, 2010; Casagrande Bacchiocchi *et al.*, 2019). Small ski areas and ski fields are considered to suffer most from the lack of snow caused by climate change and usually are supported by a weak economic-financial buffer. They risk entering a dangerous spiral of decline, which would reduce people's opportunities to practise winter sports, especially in relation to low-cost and/or local options. In the Alps, this decline may result in the depopulation of marginal mountain areas due to the disappearance of an important element of some mountain economies (Bätzing *et al.*, 1996).

Although small ski areas are the first to suffer the impact of climate change, they can also offer innovative ideas for rethinking winter leisure in more sustainable ways. The main objective of the study is to understand the different forms of value of winter leisure and how these can be developed in a small ski area with a management model which, while (usually) weaker in terms of capitalisation, is more flexible and can break more easily. Skiing and its impact in terms of sustainability is the focus of the analysis, which draws inspiration from the community model (Murphy, 1985; Flagestad and Hope, 2001; Murphy and Murphy, 2004; Beritelli *et al.*, 2007; Beritelli *et al.*, 2016) and examines the value of the experience of skiing (as well as other related recreational activities) in terms that are not strictly economic, but rather investigate what a ski area can transfer to the surrounding region according to a concept defined as 'sense of place' in the literature. The study considers the case of New Zealand club fields as emblematic examples of small ski areas that have been able to leverage authenticity and experientiality as competitive and distinctive factors in their offers.

The research was conducted in the Broken River ski area in New Zealand during the 2019 winter season. Through both content and thematic analyses of the interviews, key themes related to the ski area management were identified (a sense of community and belonging; participation; traditions; environmental awareness). A questionnaire was carried out to capture the skiers' responses regarding the factors that attracted them to the area and the emotional dimension . The results highlight the resilience of the New Zealand model and offer interesting and original ideas that other small ski areas could consider when addressing contemporary criticalities and that involve adopting radically different strategies compared to those shaping the typical large ski resort offer.

The paper is divided into four sections. It first describes the main challenges that ski resorts are currently facing (over-tourism and climate change, in particular). It explores the theme of 'a sense of place' and 'experientiality' as strategic elements in a unique selling proposition for small ski areas that distinguishes them from large resorts. In the last sections, after outlining the structure of the field research, our findings are presented, thus highlighting the key elements of the NZ club fields model that could be implemented by small ski areas in other mountain destinations.

2. Theoretical background

2.1 Ski resorts' strategic responses to the challenges posed by sustainability and climate change

The ski sector business model not only considers how production can be aligned with demand in terms of technology, but also takes into account geographical and ecological constraints and climatic and meteorological trends which determine whether or not the essential conditions for skiing, such as temperature and snow cover, can be guaranteed (Clydesdale, 2007). Indeed, the competitive success of a resort derives from maintaining a complex balance between management strategies, technology, and the specific environmental conditions in which the resort's services are provided (Pröbstl-Haider *et al.*, 2019) With regard to this last factor, one of the main challenges for ski resorts is climate change. Numerous studies have shown that the ski season is becoming more and more uncertain with each year that passes, and that the whole ski industry is vulnerable to imminent crisis (Unbehaun *et al.*, 2008; Scott *et al.*, 2008; Rutty *et al.*, 2015 and 2017). As the freezing level rises, natural snow cover decreases and the ski seasons shorten. Possible response strategies to climate change have been identified (Bicknell and McManus, 2006), including new snow technologies, but the issue remains critical. As a response to climate change, the Intergovernmental Panel on Climate Change (IPCC) has introduced the important concepts of mitigation and adaptation (McCarthy, 2001, pp. 85-95), which should be rapidly integrated into the medium/long-term strategies of ski resorts and their surrounding regions.

A second critical factor affecting some ski areas is overtourism. An exponential increase in tourists in concentrated periods of time results in congestion for tourists, residents and the ecosystem, and can slide into uncontrolled tourism, exceeding the carrying capacity of the area (Goodwin, 2017; Peeters *et al.*, 2018; Dodds and Butler, 2019). Even the most successful ski areas often suffer from overtourism, with thresholds of ecological sustainability being exceeded, leading to negative impacts on the area (Weiss *et al.*, 1998). This situation entails not only environmental costs (traffic congestion, uncontrolled waste generation, consumption of particularly fragile natural resources), but also various social inconveniences, as residents have to put up with frustrating conditions such as increased tourist flows at certain (often sensitive) times of the year (e.g., during the Christmas holidays). Excessive tourist numbers have been shown to impact a community's social fabric and subsequent loss of local traditions and customs. Tourists, too, have a negative experience, characterised by high prices and overcrowding, which limits both the enjoyment of skiing and, more generally, the fun and relaxation associated with a holiday (Tung and Ritchie, 2011). The context described so far concerns ski resorts in general: the geo-morphological and dimensional features of each place naturally entail considerable differences between them, depending on whether they are big commercial resorts, located in areas with high tourist intensity, or small neighbourhood ski areas, with limited capacity. The latter are more likely to be located at altitudes where natural snow cover cannot be guaranteed now. Major resorts with high capital and turnover volumes are lengthening their ski seasons (or even becoming year-round resorts), because they are located in places with high tourist densities (Martini *et al.*, 2019). Some large resorts, however, have committed to implementing destination management and marketing strategies that are shifting away from pro-growth models towards more sustainable ones (Gill and Williams, 1994). Small ski areas facing similar challenges are in a very different situation and have profoundly different strategic, organisational and financial structures (Flagestad and Hope, 2001; Martini *et al.*, 2019). It would thus seem unwise, and maybe also impossible, for them to try to compete with large ski resorts in terms of products/markets.

The basic hypothesis of this study is that, by developing different dimensions than those focused on by the larger resorts, small ski areas can find distinctive, innovative ways to deliver leisure experiences. Rather than pursuing a model that would inevitably put them at a competitive disadvantage -while also undermining the environmental and social sustainability of the offer itself- we argue that the strategic development path of small ski areas should be based on two key elements:
- the development of a sense of place, which can be achieved through the active involvement of residents;
- the experiential nature of the offer, which can be significantly enhanced by providing services that require little infrastructure but have high symbolic and intangible value.

2.2 From sense of place to experientiality through the involvement of tourists and residents: opportunities for smaller ski resorts

In tourism, the importance of the resident community is well established based on the awareness that when residents perceive tourism as a benefit, they treat visitors in a kind and friendly manner, thus increasing tourist satisfaction, and hence positive word of mouth about the destination (Oviedo-Garcia *et al.*, 2008; Presenza *et al.*, 2013). It is not, however, easy to coordinate residents' involvement in tourism activities, since their opinions about, and interests in, tourism naturally differ: the challenge is to draw diverse ideas, opinions and behaviours together into an overall shared vision. Public sector intervention has an important strategic role to play here, starting with information/education initiatives targeting all local actors (Simmons, 1994). Such initiatives would enhance community awareness and the capacity to support planned, organised tourism and a more equitable distribution of power among local actors that would facilitate the destination's economic development (Wondirad and Ewnetu, 2019).

In small ski areas, the involvement of local stakeholders and residents facilitates the creation of a sense of place, a tridimensional concept involving the physical setting of, and human interactions within, a place, and the social and psychological processes that link people to it (Relph, 1997). A sense of place is born when people relate to each other and to their natural surroundings within a particular geographical space (Eisenhauer *et al.*, 2000), i.e. from a connection that develops between nature, culture, traditions and relationships, so that the characteristics of certain landscapes can become the basis of feelings of attachment and satisfaction. Sense of place transcends social constructions and, as pointed out by Stedman (2003), the physical environment can contribute to the creation of profound place-related meaning. A sense of place connotes a 'special place' that is considered particularly valuable for an individual (Eisenhauer *et al.*, 2000) but also necessarily incorporates human activity, in terms of presence and action, and the atmosphere, social context and ties that are created with the local community. Thus, each community, on the basis of its culture and the historical elements that characterise it, determines the meaning of (its particular) place through a process of co-creation (Campelo *et al.*, 2014).

This co-creation can occur when local communities, service producers and consumers/tourists all participate in its collaborative process. Many tourists wish to be actively involved in the experience production process (Prebensen *et al.*, 2013; Prebensen and Xie, 2017), thereby helping to generate added value for the service itself (McLeay *et al.*, 2019). The literature includes research on the affective responses that tourists generate during co-production processes in the service sector (Pencarelli and Forlani, 2018), and the link between the perceived quality of a service and the direct participation of tourists in the process of producing the experience in question (Gallan *et al.*, 2013; Pencarelli, 2016). When an individual is asked to co-create an experience (particularly an adventurous one), that experience will more likely generate special memories that contribute to the individual's sense of having enjoyed a unique experience (Tung and Ritchie, 2011; Shaw *et al.*, 2011). People who take an active part in the creation of a product value that product more highly: indeed, "the time and effort consumers put in is directly proportional to their willingness to buy and pay a higher price" (Lala and Chakraborty, 2015; Busser and Shulga, 2018 p. 70).

In snow tourism, skiers co-create their own experiences through a range of activities (skiing, dining on the slopes, socialising with other guests, sharing photos online, recounting episodes from their day) (Kreziak and Frochot, 2011). Skiers also seek the opportunity to relax, reminisce, escape their daily routines, improve their skiing skills and experience adrenaline-fueled emotions (Hall *et al.*, 2017). McLeay *et al.* (2019), in a study on the co-creation of ski chalet experiences, highlighted five relevant elements:

- Socialisation: enjoyment of conviviality in the chalet. The chalet "community" is key, in that it allows guests to socialise and share their days' experiences; staff must also be able to participate in this co-creation;
- Pseudo-authentic infrastructure: the "ideal mountain village" context is considered to be pseudo-authentic, because the perceived naturalness of the landscape clashes with the artificiality of the facilities and services offered;

- Hedonistic skiing: search for, and opportunity to find, enjoyment both on and off (après-ski) the slopes. When hedonistic experience is shared/co-created, skiers are more inclined to socialize with each other;
- Location/place: physical location of the chalet and its atmosphere (vibe);
- Enhanced skier communities, both on and offline: sharing of information through word of mouth, but also on social media (McLeay *et al.*, 2019).

Tourism thus becomes an activity with strong symbolic and experiential content; tourists perceive themselves to have "escaped" - one of the main motives for travel - when they feel that they have distanced themselves from their daily routines (Oh *et al.*, 2007). In a study of the factors that elicit experiences during a holiday, with specific reference to tourism in natural settings, Farber and Hall (2007) identified four types of stimuli (landscapes, recreational activities, wildlife and social interaction), which combine to generate emotional responses in tourists and create high quality recreational experiences. By focusing on these four stimuli, small ski areas could implement supply strategies that were likely to prove effective at attracting specific consumer segments.

3. Case study and research design

3.1 Small ski areas in New Zealand: key features of the club fields

New Zealand is famous worldwide as a skiing destination. Before the Covid-19 pandemic, its resorts were frequented between June and October by tourists from not only New Zealand and Australia, but also the northern hemisphere. New Zealand offers skiing opportunities in wide open spaces, with slopes that suit a diverse range of technical abilities and preferences. Both the North and South Islands provide ski areas with modern ski lifts that are similar to European/North American resorts. Of particular interest to us, however, are the country's small ski areas - called club fields - which have continued to operate - and flourish - using an old-fashioned lifting-system. They are located mainly in the Selwyn district, which is known for its magnificent mountains (a section of the Southern Alps) and impressive rivers. Selwyn lies between 100-120 km north-west of Christchurch and it is a favourite destination for skiers who put adventure before comfort: the ski lifts are rudimentary and the slopes ungroomed. The New Zealand club fields are almost a hundred years old, having been established between the late 1920s and early 1950s. They are a testament to the passion and commitment of different groups of young people with a love of snow and fun, camaraderie and adventure, who realised their dream of creating small ski fields. A club field is a non-profit organisation run by a group of members who invest time and money in the field so that they can have a familiar place to ski. The club fields have only recently opened to non-members, who can now spend quiet days or holidays in the snow. They are often difficult to reach, located on unpaved mountain roads or even accessible only on foot (shouldering one's equipment), or by cable car.

There are six club fields in the Selwyn District (Porters, Cheeseman, Broken River, Craigieburn Valley, Temple Basin and Mt Olympus), with the city of Christchurch as their hub. The Mt Hutt Ski Area, a much larger and more modern ski area with new facilities and groomed slopes, is also nearby.Although their organisation and management structures are similar, the six club fields differ in terms of terrain and membership, with the latter leading to occasional 'parochial' animosities. Most offer neither groomed slopes nor artificial snow, and are therefore always dependent on natural snowfall. Table 1 summarises the main characteristics of the club fields in the Selwyn District.

The rope tow, which dates back to the 1940s, is a typical feature of New Zealand club fields. Nothing has changed in the last 80 years, except at Porters and Cheeseman, where a small chairlift, treadmills (magic-carpet) and a T-bar have been installed. In the other club fields, the old rope tow system is still in place. It consists of a metal rope positioned at hip-height: the skier holds on to this rope and hooks the harness to a metal clamp (nutcracker) so he or she can be towed to the top. Unsurprisingly, skiers are often alarmed by this challenging lift system. It has, however, been in operation for more than eighty years and is well suited to the region's geography and climate (a remote area, sometimes without electricity, and exposed to the New Zealand wind, the main cause of enforced closures of ski areas with aerial lifts). The environmental impact of the rope tows, which use little energy, is also very limited: in the past they were driven by tractor engines, but now they are usually connected to an electric generator.

Tab. 1: Club Fields in the Selwyn District

	Km to Christchurch airport	Ski-Lift	Top elevation	Bottom elevation	Skiable terrain	Type of Access
Porters	83,8 km	1 chairlift, 3 T-bars, 1x poma-lift, 1x magic-carpet	1980 m	1320 m	285 ha	Short access road, 2WD snow chains
Cheeseman	105 km	2x T-bars, 1x drag-lift, 1x rope tow	1860 m	1540 m	50 ha	2WD with snow chains
Broken River	106 km	5x rope tow	1820 m	1425 m	175 ha	2WD with snow chains + 30 minute walk (mountain tram)
Craigieburn Valley	107 km	3x rope tow	1811 m	1310 m	290 ha	2WD with snow chains
Temple Basin	146 km	3x rope tow	1923 m	1493 m	380 ha	45-60 minute walk (cableway for goods)
Mt Olympus	135 km	4x rope tow	1880 m	1430 m	60 ha	4WD with snow chains

Source: authors' elaboration based on Selwyn District website (https://www.christchurchnz.com/explore/seasonal-guides/winter/ski-selwyn)

3.2 The case study: Broken River Club Field

The Broken River ski field was created by a group of young people in the 1950s. The timber that was cut to make way for the new access road was used to build the huts near the ski lift. The first ski mountaineering trip to Broken River took place in 1951, and the first rope tow was built shortly afterwards. All the work was carried out voluntarily by the club members. Today, Broken River has 400 members, four huts, five rope tows and a funicular system (the "Broken River mountain tram") which was initially used for freight transport and was only tested for passenger transport in 2009. A decisive change occurred in the late 1980s and early 1990s, when the power source for the lifts shifted from diesel to the electricity.

The Broken River members see themselves as a large family that meets when possible to ski and spend time together. Many of the members are the children or grandchildren of the founding members carrying on the latter's traditions and keeping their passion alight. The concept of a ski day here is very different to that in a large commercial resort. The atmosphere is extremely tranquil, there are no queues outside the ticket office, people can cook their own lunch either in the kitchen or a barbecue area provided for guests of the highest hut called "daily lodge" by club members and, at the end of the day, guests spend time together before and after dinner playing cards or chatting. Guests are also required to help the lodge staff by washing dishes, taking out the rubbish or shovelling snow (there are no snowploughs).

The Broken River club field was chosen for this study because it has distinctive structural and cultural characteristics and it is different from large ski resorts. It accepts volunteers, so it was possible for the researchers to join the staff for the winter season. This meant that it was possible to create a favourable situation for the study, including the opportunity to closely observe certain social phenomena and the "club life".

3.3 Framework and phases of the fieldwork: survey instruments and analysis techniques

This research project follows a case study approach, consisting of an empirical in-depth investigation and analysis (Gillham, 2000). As suggested in Yin (2006), the case study adopts both qualitative and quantitative methods to explore a real-life context. The qualitative one enabled the authors to understand how managers, club members and active fellows of the ski association are forging a very unique experience in a boutique destination. It also reveals how visitors perceive, and sometimes help create, this same experience. The quantitative method allowed the authors to analyse what has been explored subjectively. Interaction with privileged stakeholders and interviews with local skiers enabled the authors to identify key features of the ski area from both a supply and a demand perspective. The division of the research into two phases, the in-depth interviews and the delivery of the questionnaire, allowed for an iterative and incremental approach, as outlined in Eisenhardt (1989).

The overarching objective of this study is to understand the value of winter leisure, and how this has developed in a small ski area managed by an association. The focus is on the value (above and beyond the economic one) of skiing and other winter leisure activities, which was explored by analysing tourists' experiences and how they transfer (non-monetary) value to the surrounding region through the concept of a "sense of place". In July and August 2019, 15 in-depth personal interviews were conducted and 258 questionnaires collected in Broken River, the ski area chosen for the case study.

The first research phase consisted of semi-structured in-depth interviews conducted in person on site. Although expensive in terms of preparation, analysis and interpretation, this instrument is considered the most suitable for exploratory studies (Gillham, 2005, pp. 70-71). The target participants were the ski area's managers and workers, as well as its skiers. In drawing up the interview guide, the six steps proposed by Ritchie and Lewis (2003) were followed: invitation, introduction, start of the interview, during the interview, end of the interview, after the interview (Ritchie and Lewis (2003, p.144-147). The interview guide included an initial presentation, with the aim of introducing the interviewee to the project, followed by the actual interview in which the key questions were asked. This was followed by an open part included to collect any spontaneous input from the respondents. The final phase covered specific dimensions of the study and involved questions asked of all the participants. Specific questions were later added to the first interview guide to explore some themes that had emerged during the first set of interviews and enrich the data on motivations, information and conceptualisations (Gillham, 2000). The interviewer also adopted the role of a facilitator to put the interviewees at ease and elicit statements regarding feelings and experiences (Ritchie and Lewis, 2003, pp. 147-148). A total of fifteen face-to-face interviews were collected during the 2019 winter season, five of which involved staff and members with strategic roles within the association. The interviews lasted between twenty-five and fifty-five minutes.

The qualitative analysis of the data from the in-depth personal interviews was first subjected to *content analysis* with a subsequent phase closer to *thematic analysis* (Vaismorandi *et al.*, 2013): the first coding phase was followed by the *content analysis*, which resulted in a set of codes that were then used to interpret the data and served in the next phase, in which a *thematic analysis* identified the key themes to answer the research question. The data from the interviews were classified according to their relevance to each of the main research questions. In addition, implicit meanings were identified in the interview transcripts to ensure that all points in the authentic narratives were linked.

The second phase of the research employed questionnaires with both open and closed questions (multiple and dichotomous choice). The closed questions were used to obtain specific information within a short time frame and the open-ended questions were used to collect qualitative comments and insights. The latter proved very effective given the particular nature of data collection in a mountain hut, since the participants had time to reflect on their opinions before filling out the paper questionnaire. The questionnaire contained seven sections, each covering a different focus of the investigation (determinant factors for choosing a ski destination, ski spirit, club field characteristics, environmental and natural aspects, sport and events, the club field's future prospects, demographic information). Some of the participants were chosen on the basis of their knowledge of the club (long-term members or those with a strategic role in the association's board, the area's managers), others as representatives of the (non-member) skiers who were guests at the lodge. A total of 258 questionnaires were collected. The average time required to answer the questionnaire (including the open-ended questions) was about twenty minutes.

The data analysis was based on frequency analysis and some descriptive statistical measures. A Likert scale with values from 1 to 5 was adopted to measure the importance attributed by skiers to attractiveness/desirability factors. Elements with a mean of more than 4 were considered high values and elements with a standard deviation of less than 1 were considered stable values. The results are presented in the following section.

4. Findings

4.1 Results of the qualitative analysis

Through data processing using content and thematic analyses, the following themes related to skiing in the Broken River club field were identified: a sense of community and belonging, participation in club life, traditions and praxis, and environmental awareness.

The first theme, a sense of community and belonging, includes three different categories which were identified during the data interpretation process:

- *the Social aspect:* interviewees expressed a strong sense of belonging to a community; skiers not only have the opportunity to enjoy skiing, but also to build friendships that enhance this activity. Broken River's particular characteristics contribute to the experience but the main benefit, for both skiers and the club itself, is the strong community that supports the club field. Some interviewees said that the main attraction for them was being able to go up to the lodge and simply meet friends or new people. The opportunity to make friends during the ski day was perceived by the respondents as "automatic and spontaneous at Broken River".
- *Sense of place*: strongly linked, in this context, to the sense of community. Even skiers who are not members of the association come to feel that they are part of something bigger and, at the end of a day's skiing, they feel a sense of fulfilment that comes not only from the skiing itself, but also from the affiliative "atmosphere they have breathed". "It doesn't take a long stay to feel like part of the community", "it only takes a day to feel at home here in Broken River". This sense of place is also experienced by people in relation to the natural physical characteristics of Broken River, and this is unusual in the context of winter leisure, where ski lifts often compromise the perception of a natural mountain environment.
- *Kind of experience*: the concept of being "unique of its kind", clearly sums up what skiers perceive at Broken River and what the experience of skiing there represents to them. Despite initial difficulties with the rope tow, in the end it is considered "fun", but above all "a great relational tool" as skiers "help each other", so - as a unique lift system - it becomes an "interesting topic" of conversation and discussion throughout the

day. The Broken River experience was perceived positively in a variety of ways, as a series of unusual features help to build relationships, including "the possibility to access the kitchen", "preparing your own food", "dinner time together" when staff and customers all share the same tables, and then cleaning up and washing the dishes together. Skiing in a club field is like "escaping to another place" and immersing yourself in a "different dimension".

- The second theme that emerged is *participation*. This was extrapolated from the following three categories:
- *Volunteer dedication*: all Broken River members are fully dedicated to volunteering, which they see as intrinsic to their community/membership. Club members participate in "working bee" initiatives to maintain the lodges and the rope tows and also feel like protagonists in the delivery of skiers' experiences. Broken River seeks to involve people in the club's activities from an early age, which means that knowledge and skills are passed down from generation to generation. All of the interviewed members reported "a sense of responsibility" and "personal involvement" in several activities in the ski area. During the winter season, the researcher's observations confirmed volunteers' commitment to a wide range of both maintenance and management tasks.
- *Co-creation*: both members and guest-skiers take an active part in the daily life of the ski areas. Through simple chores and daily duty rotas in which they are directly involved, they all "take part in Broken River life". This "Broken River way of doing things" is perceived by the skiers as a "fun" and "useful" way to build relationships with other people in the ski area. They feel as "protagonists of the time spent in the lodge and in the mountains during the holiday". In this "ecosystem", the staff, who possess knowledge and technical skills, play an important role in structuring the co-creation of certain activities.
- *Activities and events*: activities and events organised by Broken River are perceived as important by both members and non-members. In some cases, guest-skiers became aware of Broken River's existence because of a particular event. One of the site's special features is that it offers "fun activities beyond skiing" to foster a "family-friendly atmosphere".

The theme of t*raditions and praxis* unites the three categories of: clubbies' heritage, skier characteristics, and club field wishes.

The importance of the cultural heritage of the club fields (clubbies' heritage) was perceived as particularly strong by the respondents, to the extent that some of them said that one of their main wishes was the maintenance of the "clubbies' status quo". It is clear that the features for which Broken River is famous, such as "low crowding", "short waiting times for the lift", a "friendly environment", and the "clubbies' vibe", would be lost if tourist numbers increased. Skiers go to Broken River because they know what they will find, and what they find is exactly what they want. The club field traditions are strongly supported by the generations who have been managing and frequenting the fields over the years. The respondents said that this cultural approach provided an experience which cannot be had in other ski resorts, because the "old way of skiing has remained here". Interviewees expressed the importance of Broken River's heritage, which has its roots partly in the physical characteristics of the ski area (its rope tow and nutcracker lift system and basic amenities, the considerable physical effort required to reach the ski area), and is partly the creation of the people who have passed on their passion for skiing in the club fields from generation to generation. This pattern means that the people frequenting Broken River share similar characteristics and attitudes and are in tune with the place.

Finally, the theme of *environmental awareness* emerged very clearly from the interviews. The interviewees' impression of club fields is that they are small associations that adopt simple practices in order to minimise their environmental impact and encourage their guest-skiers to follow suit. Respondents explicitly referred to the low consumption of energy involved in skiing at Broken River; to the waste management system; to the focus on being as green as possible in order to minimise energy and resource consumption. A number of interviewees spoke in some detail about the impact of climate change on the club fields, thus questioning their survival in the future.

4.2 Results of the quantitative analysis

Analysis of the 258 questionnaires administered to Broken River skiers identified both the factors of attractiveness and the facilities (i.e. physical-technical and services) that make them choose this area and the the words that describe the emotions associated with the experience. Broken River skiers mainly come from the South Island (57.7%), followed by Australia (16.3%) and the North Island (14.3%). Only a residual proportion comes from North America, Canada, Europe and Asia. The majority of respondents come to ski (67%), while none of the other activities - snowboarding, ski touring, telemark skiing - are very popular (although a week of the season is completely dedicated to a telemark festival). The respondents were almost all quite experienced: 84.8% had been skiing/snowboarding for more than five years, 11.3% for three to five years, and 3.1% for one to two years; only 1 person said to have been skiing for less than a year. Interestingly, only 28.6% of respondents were club members.

The first part of the questionnaire asked the participants to indicate, on a scale from 1 (*not important*) to 5 (*very important*), how relevant the listed elements were to their choice of ski destination. Table 2 illustrates the results obtained from the responses, ordering the factors according to their mean score; the picture that emerges is of intermediate and advanced skiers who particularly value the factors that score above the mean threshold (3.5).

Table 3 shows the services that are available at the station, ordered according to the importance attributed to them. Respondents appear to be very sensitive to the customer service aspects, in particular those regarding interaction with the staff, while children's entertainment, the availability of equipment for hire, and WIFI or cell-phone coverage are of no particular interest. The order of importance, shown in Table 3, is in sharp contrast to the results of a survey conducted in a larger ski resort: in fact, the factors considered least important here were all at the top of that list.

Tab. 2: Importance of physical-technical characteristics when choosing a place to ski (scale 1 - 5) (n = 258)

Physical-technical characteristics of the ski area	Mean	SD	N
Off-piste skiing	4.29	0.987	256
Acceptable level of crowding at ski areas	3.97	1.151	256
Snow condition, quality of slopes	3.89	1.169	255
Acceptable lift line waits	3.81	1.206	255
Number of mountain tracks	3.53	1.061	257
Sufficient no. of difficult slopes	3.45	1.377	256
Skiing hours	3.42	1.238	257
Maintenance of lift services	3.42	1.273	255
Vertical drop	3.32	1.131	256
Many ungroomed slopes	3.27	1.414	256
Height of the mountain (elevation)	3.11	1.164	256
Quality of lifts	3.08	1.206	255
Sufficient no. of easy slopes	2.25	1.293	255
Snow-making	2.09	1.174	257
Many groomed slopes	2.09	1.171	255
Special ski facilities (snow park, prepared jumps)	1.95	1.070	257

Source: authors' elaboration on the survey

Tab. 3: Importance of services when choosing to ski at Broken River (scale 1 - 5) (n = 258)

Services in the ski area	Mean	SD	N
Courtesy of employees	4.00	1.004	257
Competence of employees	3.84	1.139	254
Availability of toilets	3.46	1.174	256
Quality of food at the lodge	3.39	1.125	256
Possibility of on-mountain accommodation	3.36	1.191	257
Ski area facilities (catered services)	2.91	1.139	256
Quality of available lessons	2.42	1.363	255
Organized transport to the ski area	2.18	1.214	257
Availability of WI-FI	2.14	1.290	256
3G - 4G coverage	2.13	1.206	256
Quality of guided services	2.12	1.183	257
Day care / children's entertainment	1.68	1.124	257
Equipment for hire	1.54	0.957	256

Source: authors' elaboration on the survey

With regard to the ski area's physical environment, respondents considered (Landscape, uncontaminated environment) (4.31) to be a very important factor. Indeed, the data clearly shows the particular importance accorded to environmental factors. In relation to the economic aspects of the ski area, the ticket price is of medium importance (3.44), while resort advertising received the lowest rating (2.01). In the social/entertainment dimension, the type of people who visit the area was the highest rated factor (4.06), while the lowest was the option of extra activities (1.92).

The questionnaire also asked respondents to describe, using nouns or adjectives, a perfect day in the mountains. Tab. 4 contains the list, with the most commonly chosen words at the top. Tab. 5 shows the words that the respondents used to describe their first impressions of the club field.

Tab. 4: Adjectives/nouns used to describe a "perfect day" (count) (n = 258)

Words	Count	%
Powder	126	48.84
Bluebird day	65	25.19
Friends	19	7.36
Good snow	17	6.59
Uncrowded	8	3.10
Relaxed	3	1.16
Backcountry	1	0.39
Other words	19	7.36

Source: authors' elaboration on the survey

Tab. 5: adjectives/nouns used to describe first impressions of the club fields (count) (n = 258)

Words	Count	%
Good vibe/atmosphere	87	33.72
Friendly	37	14.34
Unique	15	5.81
Fun	8	3.10
Hard work	8	3.10
Challenging terrain	7	2.71
Relaxed	7	2.71
Family	6	2.33
Hard rope tow	5	1.94
Rustic	5	1.94
Good snow	4	1.55
Small club	4	1.55
Remote	3	1.16
Uncrowded	3	1.16
Other words	59	22.87

Source: authors' elaboration on the survey

5. Discussion of the results

The results obtained from the interviews show that skiers who choose to go to club fields are looking for a certain type of holiday, are aware of the differences between the fields and a ski resort, and opt for club fields precisely because of their particular characteristics. The feature that was most frequently mentioned by the respondents is the rope tow, considered "the ski lift par excellence" in Broken River: even people who were initially intimidated by it declared themselves satisfied and amused at the end of the day. Rope tows can only be found at club fields and nutcrackers have come to symbolise these small New Zealand ski areas. The second element demonstrated to have had a decisive impact on people's opinions about, and memories of, the experience were the challenges they faced on the snow, in particular on powder fresh snow. As Table 4 shows, "powder" was the word that was most frequently mentioned by respondents in the questionnaire when describing their perfect day out skiing.

Terrain morphology was considered a club field attraction and the adrenaline rush provided by challenging terrain is a large part of the pleasure experienced by Broken River skiers. What's more, there are off-piste skiing and no machines to groom the snow (unlike in commercial ski resorts); as we have seen, this is precisely why skiers choose to go to club fields. Another prized factor is the low tourist numbers: in Broken River the maximum number of skiers recorded on peak-season days is about 250. This is partly because it is necessary to walk along a path while carrying equipment to reach Broken River (this is true of several of the Selwyn club fields), and not everyone is able to make this considerable physical effort. The combination of these factors appear to select the type of skier who comes to club fields: they share the same passion and way of experiencing that passion; they seek both adrenaline rushes and tranquillity; they want to ski in a truly natural setting, to be able to be the first to carve through the fresh snow and to enjoy uncrowded spaces. They see the club field as a way to escape hectic city lives: the mountain becomes a refuge, a safe place to find shelter and relax while doing what they love. All these characteristics mean that the people who go to club fields share the same passion and emotions, and also possess very similar technical skills.

Another key feature of the club fields is their mountain huts, where people can spend the night, which is unique in the New Zealand context. Being able to spend the night in one of the mountain huts adds to the specialness of both place and experience.

The club field atmosphere emerged from the research as a significant factor for most respondents. Both the interviews and the questionnaires reveal that a feeling of familiarity and the friendly environment are seen as key to people's enjoyment of these small ski areas and, indeed, represent one of the latter's defining characteristics. Many skiers were impressed by the fact that everybody they met greeted them and often even started a conversation. Respondents believed this to be because the club "veterans", who all know each other, are keen to get to know, and often befriend, the "new faces" they come across. People reported quickly sensing Broken River's spirit of cooperation. When, for example, someone has difficulty with the rope tow, assistance will almost always be offered immediately either by a staff member or another skier.

After a morning's skiing, people gather at the Palmer Lodge for lunch. Here, the club field provides skiers with a kitchen and all the necessary cooking utensils and food. During the lunch break, it is common to see people gathering to prepare meals for themselves and their friends. Everyone has to tidy up and wash their own utensils, and this fosters a sense of sharing and participation that is not experienced in ordinary ski resorts, so people feel at home and, just like at home, they have to carry out certain tasks. In fact, a rota is drawn up every day assigning a particular task to each guest: some have to wash the dishes, others dispose of the rubbish or tidy the tables. This system also contributes to the feeling of being in a community.

It is evident that a solid tradition, shared by all members, has developed out of Broken River's more than eighty years of uninterrupted community events and habitual activities. A sense of attachment to the place has been generated over time by members and guests and it shared feelings about club field skiing. The interviews clearly showed the extent to which people's sense of place - both in terms of belonging to a community and in relation to their attitude to Broken River as a special place that embodies a set of meanings and values - influences their attachment to the club field. Respondents emphasised their understanding of place meaning, their attachment to the place and the satisfaction linked to these feelings. In addition, the physical environment of Broken River, characterised by its its unusual access route through the Craigieburn Forest and its attractive landscape and morphology, also elicits a range of feelings that can be traced back to a sense of place that is further enhanced by the guests' (members and non-members) participation in shaping their own holidays.

Another key aspect of the club fields is their focus on environmental protection. Discussions about ski areas often highlight their significant environmental impact. In this respect, club fields clearly differ from large ski resorts and can, in fact, be guaranteed to have a limited environmental impact and thus provide significant benefits to the territory in terms of liveability and low pollution levels. The principal reasons for this are the club fields' small size and remote settings, and therefore the limited numbers of skiers who actually access them: these factors allow club fields to limit their ecological footprint (for the type of service offered). Moreover, Broken River, unlike other club fields, has electrically powered ski lifts and has introduced a number of energy-saving policies and incentives for environmentally friendly practices.

Financially, club fields face challenges and struggle to meet their running costs, and therefore depend on volunteers. Their financial situation would almost undoubtedly be strengthened if they attracted more tourists and upgraded and expanded the area so that more people could be accommodated and more income generated. This, however, is not what the members want, as the club fields' simplicity and small size is what they value most about them. Both the interviews and the questionnaires showed that the respondents do not want major changes; many wanted the "Broken River tram" to start operating again, but no other innovations or changes were suggested. There is therefore a demand to maintain the club fields' current infrastructure and status quo in general. They thus face a huge challenge because the right balance has to be found between generating more income in order to ensure efficient management and not becoming too commercial by attracting too many skiers, since, as we have seen, the absence of crowds is one of the most valued characteristics by Broken River skiers.

6. Conclusions

The research presented in this paper reveals the created and perceived experience of a small ski area in New Zealand, and provides an in-depth exploration of how a community association is currently managing the area. The results highlight the differences between this boutique destination and large ski resorts, while providing a detailed picture of what skiers/customers value most about the former.

The study confirms that several physical-environmental factors which have been discussed in other studies on snow and winter leisure are important determinants of choice with regard to ski destinations: good snow conditions (preferably fresh), challenging terrain, wide open spaces, uncontaminated landscapes. On the other hand, many factors that usually score high in the responses collected in ski resorts (groomed slopes, snowpack, quality of lifts) do not appear to be relevant here. Opinions/feelings about the services that are available in the ski area show an even bigger divergence from what people value in a large resort. Unsurprisingly, not only do old-time members express these different sets of preferences, but new guests also appreciate the "clubbies' experience".

The sort of people that one can meet in the area, the easy and direct communication with both staff and other skiers, participating in the club field's daily routines - these are a few examples of what people appreciate about the Broken River experience besides the area's physical-environmental features. Members and staff appear to be successfully co-creating experiences and thereby developing a common sense of place attachment that other skiers pick up on and share. This affective response gives the club fields intrinsic value, which is manifested, in the case under analysis, in a sense of belonging and a desire to return. Another dimension which emerges from our research is the ease with which a harmonious balance is created between the tourists' values and those of the destination. Staff, members and guests all do their very best to respect the environment and this concern enhances the synergy between demand and supply. It also allows club fields to continue to offer sustainably managed winter leisure which, although entailing economic challenges every season, brings advantages in terms of a reduced environmental impact and a strengthened social fabric, neither of which is easily achieved in larger commercial resorts.

While club fields like Broken River are attracting both new and returning visitors to the Selwyn District, their value for the surrounding territory is also constituted by the traditions and praxis that have become a cultural treasure and a precious element of New Zealand's skiing heritage over time. The "clubby" spirit favours the development of a family atmosphere, and the fact that young people are encouraged to get involved in the fields' management facilitates the handing down of customs and habits. It is, therefore, interesting to compare Broken River with ski areas that have adopted an entirely business-oriented management strategy. In the European Alps, for example, small mountain villages have been completely by-passed and ignored as commercial towns designed to accommodate the greatest possible number of tourists and to provide them with every possible comfort were built. Although these towns are often run by large business groups, they are increasingly ending the winter season in the red while simultaneously impoverishing the local culture and social heritage. The club fields' model - which is adapted to the morphological, climatic and cultural characteristics of the Alps - could be a way to address some of the challenges faced by other smaller ski areas, challenges which climate change is finally forcing us to confront. Indeed, unless we tackle these issues now, both the small ski areas and the surrounding mountains will inevitably be abandoned. A club field's offer would certainly differ from that of larger resorts, but it is precisely in this difference that the value of this proposition lies.

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“Hey, voice assistant!” How do users perceive you? An exploratory study[1]

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Abstract

Purpose of the paper: *The increasing consumer adoption of voice-based artificial intelligence technologies is starting to catch the attention of researchers. This study fits into the nascent marketing literature on user perceptions of interactions with voice assistants (VAs) by exploring perceived VA anthropomorphism and benefits. We also seek to identify millennial clusters based on perceptual differences.*

Methodology*: Quantitative exploratory research was conducted based on questionnaires (N=337) administered to millennials. The data were analysed through exploratory factor analysis. Subsequently, to identify clusters, we performed K-means cluster analysis.*

Findings*: The EFA indicated a four-factor solution: “utilitarian and hedonic benefits”, “symbolic benefits”, “human-like voice” and “human-like presence”. The K-means cluster analysis identified three clusters: “useful and pleasant”, “human” and “status symbol”.*

Research limits*: This paper is not exempt from limitations, especially those related to the exploratory nature of the analysis techniques adopted.*

Practical implications: *Indicating the main perceptual dimensions of VA anthropomorphism and the benefits associated with user-VA interaction, our results provide marketers with important strategic implications for designing the VA interaction experience. The cluster analysis offers companies the possibility of selecting a target and addressing it by creating a specific value proposition.*

Originality of the paper: *This study contributes to the existing partial and fragmented knowledge by offering an overall integrated interpretation of consumer perceptions related to VA interactions. Our findings are the first to jointly reveal user perceptions of the human voice and of the VA as a human interlocutor. Moreover, we contribute to the literature on anthropomorphism by conceptualising the human-like voice construct.*

Key words: voice assistants; anthropomorphism; human-like voice; benefits; EFA; cluster analysis

1. Introduction

Voice assistants (VAs) are artificial intelligence (AI) technologies that simulate the human understanding of language through voice interaction

[1] This paper is the result of the joint effort of the three authors. In the final draft, however, paragraphs 2, 3, 4, 5.1 and 5.3 may be attributed to Michela Patrizi, the introduction may be attributed to Maria Vernuccio, and paragraph 5.2 may be attributed to Alberto Pastore.

(Fivesight Research, 2017). VA usage data are starting to become particularly relevant, with 90 million users in the US alone querying their VAs on smartphones at least once a month and 56 million users using a smart speaker (Voicebot, 2018). Globally, smartphones are confirmed to be the most popular device for interacting with a VA (Juniper Research, 2019), and millennials are the segment most accustomed to VA usage (Voicebot, 2018). Their interactions are characterised both by informative requests (e.g., generic questions, traffic and weather information) and ludic requests (e.g., playing music or games, taking quizzes), and they are more inclined to use VAs for product purchases than other users' generations (Voicebot, 2019a). Currently, the VA market is dominated by large players (technology providers): Google (Google Assistant), Amazon (Alexa), Apple (Siri), and Microsoft (Cortana) (Voicebot, 2018). In addition, name-brand VAs (Vernuccio *et al.*, 2018; 2020a), which are VAs that are developed in-house, speak with a specific brand voice and are activated by the user saying the brand name (e.g., "Hey Mercedes!"), are emerging.

In the academic literature, studies on VAs are starting to emerge in a variety of disciplines, including marketing and computer science. Among these, only a few began to investigate the perceptions of consumers arising from interactions with VAs and their effects on attitudinal and behavioural outcomes (e.g., attitude towards the VA, use intention, engagement and loyalty towards the VA). Regarding consumer perceptions, early studies have focused on VAs' ease of use (Moriuchi, 2019; Wagner *et al.*, 2019; Smith, 2020), perceived privacy risks (PPRs) (Lau *et al.*, 2018; Cho, 2019; McLean and Osei-Frimpong, 2019), opportunities (e.g., convenience) and challenges (e.g., lack of control) (Tuzovic and Paluch, 2018; Monsurrò and Querci, 2019) associated with interacting with VAs. Moreover, some researchers have begun to examine the anthropomorphic perceptions of VAs by referring to the human-like voice (HLV) as opposed to a synthetic/robotic voice (Chérif and Lemoine, 2019). Other scholars analysed VA humanity, which is the overall perception of the VA as a human interlocutor (Chérif and Lemoine, 2019; Cho, 2019; Cho *et al.*, 2019; McLean and Osei-Frimpong, 2019; Fernandes and Oliveira, 2021). In VA humanity studies, perceptions of benefits related to user-VA interactions have also been investigated. In particular, attention has been mainly paid to usefulness (Moriuchi, 2019; Fernandes and Oliveira, 2021), while hedonic and symbolic benefits have only been considered by McLean and Osei-Frimpong (2019).

The literature on these topics in the VA field appears disjointed, since the HLV has been investigated only in the experimental study of Chérif and Lemoine (2019) and has been treated as a stimulus; consequently, no conceptualisation has been found. Moreover, VA humanity has been analysed by adopting different measurement scales (i.e., social presence, human-likeness and perceived humanness) and theoretical perspectives (i.e., uses & gratification theory and service robot acceptance model) in specific interaction contexts (e.g., smart speaker - Alexa; laptop vs. smartphone - Cortana). In addition, utilitarian, hedonic and symbolic benefits have been examined in an integrated manner only in the smart speaker field by McLean and Osei-Frimpong (2019). Finally, regarding the joint analysis of VA anthropomorphism and benefits, the human-like voice as well as the smartphone interaction context have not been considered.

Therefore, despite the nascent interest in VA anthropomorphism and benefits, the literature appears partial and fragmented, demonstrating the need for an overall integrated interpretation of these heterogeneous perceptions when users dialogue with VAs on smartphones. For this reason, our study intends to jointly explore the main dimensions of VA anthropomorphic perceptions (i.e., human-like voice and VA humanity) and heterogeneous perceived benefits (i.e., utilitarian, hedonic and symbolic) related to user-VA interactions on smartphones. As millennials use VAs in a more advanced way (i.e., utilitarian, ludic and purchasing activities) compared to other generations of consumers, we chose to focus on users between 18 and 34 years old (e.g., Nassivera *et al.*, 2020), who use a VA on their smartphone at least once a month. Moreover, since no study has investigated the presence of perceptual differences between user groups and Millennials segment is composed by consumers with a varied range age, we set a second objective: to identify Millennials clusters based on perceptual differences. In this way, we respond to the calls by Belk and Kniazeva (2018) for more studies on VA anthropomorphism and by McLean and Osei-Frimpong (2019) for further research on perceived benefits in the VA field. Moreover, our findings provide managers with important cues for designing the user-VA interaction experience and planning communication campaigns on VAs.

To achieve our aims, the data collected through a web survey were analysed through exploratory factor analysis (EFA), followed by K-means cluster analysis.

This paper is structured as follows: In the next section (§ 2), we describe the literature on anthropomorphism and perceived benefits in the VA field, ending the section with the purpose of this study. Then, the method is described (§ 3), and the main findings are presented (§ 4). This article ends with the academic (§ 5.1) and managerial implications (§ 5.2) of the results, followed by the limitations and directions for future research (§ 5.3).

2. VA anthropomorphism and benefits perceptions

The term "anthropomorphism" refers to consumers' tendency to attribute human physical characteristics, emotions, intentions and motivations to nonhuman agents and objects (Epley *et al.*, 2007). In the academic marketing literature, anthropomorphism has long been related to physical aspects and product design aspects, such as facial features (Aggarwal and McGill, 2007; Kim and McGill, 2011; Landwehr *et al.*, 2011; Guido and Peluso, 2015; Kwak *et al.*, 2015) and human anatomical features (Guido and Peluso, 2015). With the spread of VAs, research on the anthropomorphic perceptions of VAs has begun with regard to two emerging concepts: human-like voice (Chérif and Lemoine, 2019) and VA humanity (Whang and Im, 2018; Cho, 2019; Cho *et al.*, 2019; McLean and Osei-Frimpong, 2019; Fernandes and Oliveira, 2021).

HLV has mostly been analysed in the human-computer field through experimental studies that place such a voice in opposition to a voice perceived as more synthetic/robotic. These contributions show that compared to a synthetic voice, consumers are more likely to attribute anthropomorphic characteristics to a "computerised agent" when it has a HLV (Nass and Brave, 2005; Takayama and Nass, 2008; Waytz *et al.*, 2014; Schroeder and Epley 2016). To the best of our knowledge, the only study provided by Chérif and Lemoine (2019) confirmed these results in the VA context. They highlight how the perception of VA humanity increases in the minds of users when they interact with a VA endowed with a human-like (vs. synthetic) voice (Table 1). However, since the voice has been treated as a stimulus, no conceptualisations or scales that could represent the main dimensions of HLV have been developed. In addition, the anthropomorphism literature has focused on only physical and design attributes, not considering the role of voice characteristics (Guido and Peluso, 2015; Golossenko *et al.*, 2020). In this regard, some studies in the advertising and political marketing fields have identified some voice characteristics that can stimulate the perception of traits related to the human dimension (i.e., warmth and competence), such as pitch (Morales *et al.*, 2012), accent (Zoghaib, 2017; Zoghaib, 2019) and quality (Wiener and Chartrand, 2014).

The VAs humanity finds its origins in social psychology, as applied to telecommunications, with scholars defining social presence as "the degree of salience of the other person in a mediated communication and the consequent salience of their interpersonal interactions" (Short *et al.*, 1976, p. 65). With the digital revolution, alongside interpersonal interaction mediated by a technological interface ("interactivity through the medium"), interaction between a subject and the medium itself ("interactivity with the medium") has increasingly developed. In this context, the construct of social presence has been used in the human-computer interaction field to indicate the perception of the humanity of different technological communication interfaces, such as websites (Hassanein and Head, 2007; Tung and Deng, 2007; Cioppi *et al.*, 2016), social media (Shen and Khalifa, 2009) and robots (Lee *et al.*, 2006). Concerning individual-VA interaction, VA humanity has been measured with heterogeneous scales: social presence (Chérif and Lemoine, 2019; Cho, 2019; McLean and Osei-Frimpong, 2019; Fernandes and Oliveira, 2021), human-likeness (Cho *et al.*, 2019) and perceived humanness (Fernandes and Oliveira, 2021). Moreover, the results appear fragmented since they have also been obtained by adopting different theoretical perspectives (i.e., uses & gratification theory and service robot acceptance model) in diverse interaction contexts (i.e., laptops, smartphones and smart speakers) (Table 1).

The term "utilitarian benefits" has been used with regard to functional, practical and instrumental benefits. In the experiential context of VAs, the ability to interact hands-free, with little effort and without the need to look at or touch a physical interface (e.g., the smartphone screen) are important utilitarian benefits that no other technology can offer (Hoy, 2018). Hedonic benefits refer to attributes of the user's aesthetic and emotional experience, such as pleasure and fun (Schuitema *et al.*, 2013). Finally, symbolic benefits refer to users' social identity and image, which may arise from their interaction with technology (Schuitema *et al.*, 2013). Concerning VA interactions, Moriuchi (2019) examined the perceived usefulness of Google Assistants on websites by using the technology acceptance model, while Fernandes and Oliveira (2021) considered VA perceived usefulness by following the service robot acceptance model. Only McLean and Osei-Frimpong (2019) have jointly investigated utilitarian, hedonic and symbolic benefits related to user-VA interactions on smart speakers, highlighting how utilitarian and symbolic benefits motivate individuals to use Alexa, while no significant causal relationship between hedonic benefits and usage has been noted (Table 1).

Finally, concerning the joint study of VA anthropomorphism and benefit perceptions, a few studies have proposed partial contributions (McLean and Osei-Frimpong, 2019; Fernandes and Oliveira, 2021). In particular, in the first study, benefits (i.e., utilitarian, hedonic and symbolic) and social presence were analysed as independent antecedents of in-home VA usage. In the second category, scholars have considered VA humanness, social presence and only usefulness as benefits to analyse their effects on VA acceptance. Therefore, in these contributions, not only the smartphone as a context of interaction but also human-like voice perception has not been studied.

The overview of the main empirical studies on perceived VA anthropomorphism and benefits in Table 1 reassumes the extant results in terms of theoretical perspective, methodology, main findings, context and sample.

In sum, the literature appears partial and fragmented, since on the one hand, no conceptualisation of human-like voice has been proposed, and on the other hand, VA humanity has been measured by using heterogeneous scales and theoretical perspectives in diverse interaction contexts. Moreover, concerning perceived benefits related to interactions with VAs, early studies have mainly focused on utility, and only the contribution of McLean and Osei-Frimpong (2019) has analysed even hedonic and symbolic benefits in the smart speaker context. Therefore, perceptions of utilitarian, hedonic and symbolic benefits have not yet been examined in an integrated manner in the smartphone interaction context. Finally, when perceptions of VA anthropomorphism and benefits were jointly investigated (McLean and Osei-Frimpong, 2019; Fernandes and Oliveira, 2021), the humanity of the voice was not considered, nor was the smartphone interaction context. Therefore, no study has aimed to obtain an overall view of perceptions in terms of VA anthropomorphism and benefits related to user-VA interaction on smartphones. Consequently, we formulate the following research question:

RQ1: What are the main perceptual dimensions of VA anthropomorphism and benefits associated with user-VA interactions on smartphones?

Tab. 1: Overview of the main empirical studies on perceived VA anthropomorphism and benefits

Author(s)	Theoretical perspective	Methodology	Main findings	Context	Sample
Whang and Im, 2018	N/A	Experiment + regression models	- Website (vs. VA) is perceived as more humanlike. - Consumers engaging in task-oriented interactions (vs. socially oriented) with VAs are more likely to accept VAs' recommendations.	Website vs smart speaker (Alexa)	Millennials (N=66)
Chérif and Lemoine, 2019	N/A	Experiment + regression models	- Human-like voice (vs. synthetic) create a stronger VA social presence perception	Website (Prosper)	Internet users (N=640)
Cho, 2019	N/A	Experiment + regression models	- Voice (vs. text) enhances the VA social presence perception and leads to a more favourable VA attitude. - Device difference (smartphone vs. smart speaker) did not exert perceptual impact on users.	Smartphone vs smart speaker (Google Assistant)	Undergraduate students (N=53)
Cho *et al.*, 2019	N/A	Experiment + regression models	- Voice (vs. text) increases perceived VA human likeness. - Laptop (vs. mobile phone) increases perceived VA human likeness. - Voice (vs. text) enhances perceived VA human likeness, but only in the utilitarian (vs. hedonic) task condition.	Laptop vs. smartphone (Cortana)	Undergraduate students (N=82)
McLean and Osei-Frimpong, 2019	Uses & Gratification Theory (U&GT)	Online survey + SEM	- Utilitarian and symbolic benefits motivate individuals to use in-home VAs. - Hedonic benefits do not motivate individual to use in-home VAs. - Social benefits (social presence and social attraction) motivate individuals to use in-home VAs.	Smart speaker (Alexa)	Market research firm's panel (N=724)
Mourichi, 2019	Technology Acceptance Model (TAM)	Online survey + SEM	- In transactional and nontransactional activities perceived ease of use of VA has a positive effect on VA attitude. - In transactional and nontransactional activities perceived usefulness of VA has a positive effect on VA attitude and VA engagement	Website (Google Assistant)	Participants recruited by MTurk (N=368)
Fernandes and Oliveira, 2021	Service Robot Acceptance Model (sRAM)	Cross-sectional survey + PLS-SEM	- Perceived usefulness of VA has a positive effect on VA acceptance. - Perceived humanness of VA does not affect VA acceptance. - Perceived VA social presence affects VA acceptance.	N/A	Millennials (N=238)

Source: our elaboration

Furthermore, in the VA field, no contribution has proposed a segmentation of users based on the perceptual dimensions investigated in this study. In addition, millennials, which is the segment most inclined to use VAs (Voicebot, 2018: e-Marketer, 2019), are made up of users born between 1986 and 2002 (Nassivera *et al.*, 2020). In this context, different ages match different modalities of use, since the younger subgroup has adopted VAs at a faster pace, while older millennials use them more frequently (e-Marketer, 2017). Consequently, diverse usages may correspond with differences in perceptions. In the face of this variety, it seems appropriate to perform a cluster analysis with the aim of determining the perceptual differences between user groups. Therefore, the following research question is formulated:

RQ2: Which clusters of millennials can be identified based on the differences in perceptual dimensions of VA anthropomorphism and benefits?

3. Methodology

In light of the literature's partiality and fragmented nature and the research questions, we adopted an exploratory approach. In particular, we conducted a web survey focused on millennials, i.e., those aged 18-34 years old (Nassivera *et al.*, 2020), who use VAs four times more often than baby boomers (Tuzovic and Paluch, 2018). Moreover, they are the most prone to advanced use of VA technologies since their interactions are not merely characterised by both utilitarian and playful requests but also aimed at product purchases (Voicebot, 2019b). In addition, we concentrated on interactions through a smartphone (Voicebot, 2018) because, on the one hand, the smartphone is the most used device for dialoguing with VAs, and on the other hand, no study has conjointly analysed perceptions of VA anthropomorphism and benefits in this interaction context. The survey was conducted at an academic research centre in Italy, and the respondents were selected, first, by involving bachelor's- and master's-level university students and, subsequently, through snowball sampling (Robinson, 2014). Moreover, the survey included screening questions to select users who were born between 1986 and 2002 and who are accustomed to interacting with VAs on their smartphone at least once a month. Therefore, the final sample is composed of 337 target respondents (86.4% of the total respondents). As a preliminary step, a pilot study was conducted with 10 respondents to test the survey in terms of linguistic expression and completion time. Based on the results, some minor revisions were made to the questionnaire. The sample is composed of 56.2% women (Table 2) and has an average age of 24 years.

Tab. 2: Profile of the Respondents (N = 337)

Category	(%)
Gender	
Female	56.2
Male	43.8
Education	
High School Graduate	13.6
Bachelor's Degree	70.6
Master's Degree	14.8
Other	0.9

Source: our elaboration

The questionnaire, administered through the SurveyMonkey® online platform, consists of four sections. First, anthropomorphic perceptions of VAs were measured by two constructs, HLV and HLP. HLV was measured by adapting the Human Facial Physiognomy scale (Guido and Peluso, 2015) and using the dimensions of the "humanity" of the voice, i.e., pitch, accent and quality, that emerged from the studies of Morales *et al.* (2012), Zoghaib, (2017; 2019) and Wiener and Chartrand (2014). HLP was measured by adapting the four-item scale of McLean and Osei-Frimpong (2019). In the second section, perceived benefits, i.e., utilitarian, hedonic and symbolic, were measured using the scales developed by McLean and Osei-Frimpong (2019), and attitudes towards the VA (ATT) were measured using Moriuchi's five-item scale (2019). In the third section, focused on descriptive variables, the level of expertise was measured using a seven-point scale (from 1=decisively nonexpert to 7=decisively expert), perceived privacy risk (PPR) was measured through the four-item scale developed by McLean and Osei-Frimpong (2019), and personal innovativeness (PI) was measured through the four-item scale developed by Agarwal and Prasad (1998) (Table 3). Respondents were asked to rate their agreement with items using a Likert scale ranging from (1) totally disagree to (7) totally agree. Finally, in the fourth section, structural data (gender and educational qualifications) were obtained.

4. Findings

To analyse the perceptual dimensions of VA anthropomorphism and the benefits associated with user-VA interaction, we conducted EFA through SPSS 25 software using the main components as a criterion for factor extraction and varimax rotation. The following criteria were used to identify the number of factors to be extracted: 1) eigenvalue>1 (SPSS default); 2) the scree plot; and 3) parallel analysis (Patil *et al.*, 2008). Subsequently, to identify groups of consumers based on perceptual differences, we performed K-means cluster analysis based on the factor scores.

4.1 Exploratory factor analysis results

The EFA results indicated a four-factor solution (24 items, Table 4), with all factor loadings above 0.40 (minimum value 0.603; maximum value 0.876) and no cross-loading above 0.30. These results are satisfactory according to Costello and Osborne (2005). The four factors extracted accounted for 65.31% of the total variance. In addition, the Kaiser-Meyer-Olkin (KMO) index equalled 0.896 (significant at $p < 0.001$) and confirmed the sampling adequacy, and Bartlett's test of sphericity ($\chi 2 = 5145.12$ (276), $p < 0.001$) indicated that the variables used were appropriate for the factor analysis (Hair *et al.*, 1998). Finally, Cronbach's alpha (factor 1: $\alpha = 0.919$; factor 2: $\alpha = 0.913$; factor 3: $\alpha = 0.864$; factor 4: $\alpha = 0.880$) confirmed the internal consistency of the items in each factor (Malhotra *et al.*, 2010). The extracted factors can be classified as 1) utilitarian and hedonic benefits, 2) symbolic benefits, 3) HLV and 4) HLP.

Tab. 3: Measurement Scales

	Item	Source
HLV1	My voice assistant's voice seems to be human	Adapted from Guido and Peluso (2015)
HLV2	My voice assistant's pitch seems to be human	
HLV3	My voice assistant's accent seems to be human	
HLV4	My voice assistant's voice quality seems to be human	
HLP1	When I communicate with my voice assistant, it feels like someone is near me	Adapted from McLean and Osei-Frimpong (2019)
HLP2	The interaction experience with my voice assistant is close to that with a human being	
HLP3	During interactions with my voice assistant, I feel like I am communicating with a human	
HLP4	I interact with my voice assistant in a way similar to how I interact with people	
UB1	Using my voice assistant is a convenient way to manage my time	McLean and Osei-Frimpong (2019)
UB2	Completing tasks with my voice assistant makes my life easier	
UB3	Completing tasks with my voice assistant fits with my schedule	
UB4	Completing tasks with my voice assistant is an efficient use of my time	
HB1	Ifind using my voice assistant to be enjoyable	
HB2	The actual process of using my voice assistant is entertaining	
HB3	I have fun using my voice assistant to complete tasks	
SB1	Using my voice assistant enhances my image among my peers	
SB2	Using my voice assistant makes me seem more valuable among my peers	
SB3	Using my voice assistant is a status symbol for me	
SB4	Using my voice assistant makes me seem more prestigious than those who do not use a voice assistant	
ATT1	I think my voice assistant is useful	Moriuchi (2019)
ATT2	I think my voice assistant is realistic	
ATT3	I think my voice assistant is informative	
ATT4	I think my voice assistant is specific	
ATT5	I think my voice assistant is logical	
PPR1	I have doubts over the confidentiality of my interactions with my voice assistant	McLean and Osei-Frimpong (2019)
PPR2	I am concerned about performing financial transactions via my voice assistant	
PPR3	I am concerned that my personal details stored with my voice assistant could be stolen	
PPR4	I am concerned that my voice assistant collects too much information about me	
PI1	If I heard about a new information technology, I would look for ways to experiment with it	Agarwal and Prasad (1998)
PI2	Among my peers, I am usually the first to try out new information technologies	
PI3	In general, I am hesitant to try out new information technologies	
PI4	I like to experiment with new information technologies	

Notes: HLV=human-like voice; HLP=human-like presence; UB=utilitarian benefits; HE=hedonic benefits; SB=symbolic benefits; ATT=attitude towards the VA; PPR=perceived privacy risk; PI=personal innovativeness.

Source: our elaboration

Tab. 4: Exploratory Factor Analysis (EFA) Results

Factor	Item	Factor Loading			
Factor 1 -Utilitarian and hedonic benefits (α = 0.919)	I think my voice assistant is useful	0.822			
	Completing tasks with my voice assistant makes my life easier	0.777			
	Using my voice assistant is a convenient way to manage my time	0.760			
	Completing tasks with my voice assistant is an efficient use of my time	0.746			
	I think my voice assistant is informative	0.728			
	The actual process of using my voice assistant is entertaining	0.716			
	I find using my voice assistant to be enjoyable	0.713			
	I have fun using my voice assistant to complete tasks	0.657			
	I think my voice assistant is logical	0.656			
	Completing tasks my voice assistant fits with my schedule	0.650			
	I think my voice assistant is realistic	0.608			
	I think my voice assistant is specific	0.603			
Factor 2 -Symbolic benefits (α = 0.913)	Using my voice assistant makes me seem more valuable among my peers		0.876		
	Using my voice assistant makes me seem more prestigious than those who do not use a voice assistant		0.862		
	Using my voice assistant is a status symbol for me		0.848		
	Using my voice assistant enhances my image among my peers		0.829		
Factor 3 - Human-like voice (α = 0.864)	My voice assistant's voice quality seems to be human			0.829	
	My voice assistant's pitch seems to be human			0.818	
	My voice assistant's voice seems to be human			0.798	
	My voice assistant's accent seems to be human			0.789	
Factor 4 -Human-like presence (α = 0.880)	During interactions with my voice assistant, I feel like I am communicating with a human				0.833
	The interaction experience with my voice assistant is close to that with a human being				0.829
	I interact with my voice assistant in a way similar to how I interact with people				0.779
	When I communicate with my voice assistant, it feels like someone is near me				0.652

Notes: Total variance extracted = 65.31%; KMO = 0.896; Bartlett's $\chi 2$ = 5145.12 (276), p < 0.001.

Source: our elaboration

4.2 Cluster analysis results

The four factors extracted from the EFA became the starting point for the non-hierarchical K-means cluster analysis (Ward's method) conducted to explore the existence of VA perceptions among similar users. To define the final number of clusters, we considered the following criteria: 1) the statistical properties in terms of the relationship between within-cluster and between-cluster variance (F-test); 2) the interpretability of the data; 3) the number of users per cluster; and 4) the pseudo F-test (62.44) (Caliński and Harabasz, 1974). These criteria yielded a three-cluster solution (Table 5) whose generalisability to the entire population is confirmed by the Rand index (0.778) (Rand, 1971).

Tab. 5: K-means Cluster Analysis Results

	F-statistic	Cluster		
		1. Useful and pleasant	2. Human	3. Status symbol
Factor 1 - Utilitarian and hedonic benefits	101.821*	0.61	0.18	-0.91
Factor 2 - Symbolic benefits	29.424*	-0.49	0.06	0.49
Factor 3 - Human-like voice	114.412*	-0.43	0.86	-0.55
Factor 4 - Human-like presence	30.138*	-0.46	0.48	-0.05
N	337	115	121	101
% of sample	100%	34.26%	35.80%	29.94%

Notes: *p<0.001.

Source: our elaboration

The first cluster, which we designate "useful and pleasant", is composed of 115 respondents and represents 34.26% of the sample (N=337). These users show a high level of sensitivity to utilitarian and hedonistic benefits (positive standardised score 0.61, thus above average and the highest value among the three clusters). They are not interested in symbolic benefits (-0.46, thus lower than average and the lowest value among the three clusters), nor are they interested in HLV (-0.43) or HLP (-0.46, the lowest value among the three clusters) (Table 5).

The second cluster is composed of 121 respondents (35.80% of the sample) and is designated "human" because it is particularly sensitive to HLV (0.86, the highest value among the three clusters) and the HLP of the VA (0.48, the highest value among the three clusters). These users show a reduced perception of utilitarian and hedonic benefits (0.18) and symbolic benefits (0.06).

Finally, the third cluster, designated the "status symbol", consists of 101 respondents (29.94% of the sample). This segment shows a high level of sensitivity to symbolic benefits (0.49, the highest value among the three clusters) but is not interested in utilitarian and hedonic benefits (-0.91, the lowest value among the three clusters). Moreover, it does not perceive HLV (-0.55, the lowest value among the 3 clusters) or HLP (-0.05).

To highlight the differences, the three clusters were compared based on the descriptive variables measured in the third and fourth sections of the questionnaire. The analysis of the relationships between the qualitative descriptive variables and cluster membership was conducted through the contingency table (or connection analysis) using the chi-square test. Moreover, we ran a series of one-way ANOVAs considering cluster membership as the independent variable and the quantitative descriptive variables as the dependent variables. The results show a significant association between cluster membership and gender ($\chi 2 = 5.924$ (2), $p = 0.052$) and significant differences across the three clusters in terms of age ($F(2, 321) = 6.621$, $p = 0.002$), expertise ($F(2, 321) = 6.949$, $p = 0.001$), PPR ($F(2, 321) = 2.736$, $p = 0.066$) and PI ($F(2, 321) = 5.796$, $p = 0.003$) (Table 6).

Tab. 6: One-way ANOVA Cluster Means and Significance Levels

Key dependent variables	Cluster Mean			F-statistic	P-value
	1. Useful and pleasant	2. Human	3. Status symbol		
Age	23.32	24.24	23.35	6.621	p = 0.002
Expertise	3.89	4.08	3.31	6.949	p = 0.001
Perceived privacy risk	4.59	4.01	4.27	2.736	p = 0.066
Personal innovativeness	4.8	4.91	4.3	5.796	p = 0.003

Source: our elaboration

Regarding gender, the "useful and pleasant" and "status symbol" clusters are characterised by a prevalence of female users, representing 62% and 64% of the cluster, respectively, while the "human" cluster is characterised by a slight majority of male users (51% of the cluster).

With regard to the quantitative descriptive variables (Table 7), the "useful and pleasant" cluster shows above average levels of PPR ($M_{Useful\&Pleasant} = 4.59$ vs. $M_{Human} = 4.01$; $p = 0.004$) compared to the "human" cluster, while there is no significant difference with the average of the "status symbol" cluster ($M_{Useful\&Pleasant} = 4.59$ vs. $M_{StatusSymbol} = 4.27$; $p = 0.449$NS). Moreover, the users belonging to the "human" cluster have the highest average age compared to those belonging to the "useful and pleasant" cluster ($M_{Human} = 24.24$ vs. $M_{Useful\&Pleasant} = 23.32$; $p = 0.004$) and the "status symbol" cluster ($M_{Human} = 24.24$ vs. $M_{StatusSymbol} = 23.35$; $p = 0.009$). Finally, the "status symbol" cluster has the lowest average level of expertise compared to the other two clusters ($M_{StatusSymbol} = 3.31$ vs. $M_{Useful\&Pleasant} = 3.89$; $p = 0.021$ and $MS_{tatusSymbol} = 3.31$ vs. $M_{Human} = 4.08$; $p = 0.001$), as well as the lower average PI value ($M_{StatusSymbol} = 4.3$ vs. $M_{Useful\&Pleasant} = 4.8$; $p = 0.028$ e $M_{StatusSymbol} = 4.3$ vs. $M_{Human} = 4.91$; $p = 0.004$).

In conclusion, Figure 1 summarises the findings of EFA and K-means cluster analysis by showing the integrated interpretation of the main perceptual dimensions of VA anthropomorphism and the benefits associated with user-VA interaction, as well as the millennial clusters based on these perceptual differences.

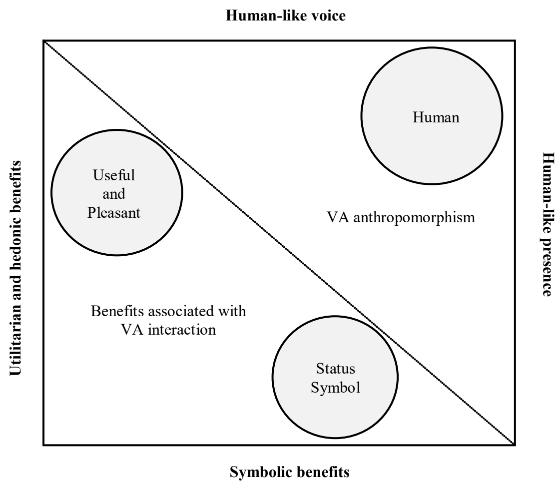
Tab. 7: One-way ANOVA Cluster Means and Significance Levels

Key dependent variables	Cluster		Mean difference	P-value
Age	2	1	0.93	p=0.004
		3	0.89	p=0.009
Expertise	3	1	-0.58	p=0.021
		2	-0.77	p=0.001
Perceived privacy risk	1	2	0.49	p=0.064
		3	0.32	p=0.449*
Personal innovativeness	3	1	-0.50	p=0.028
		2	-0.62	p=0.004

Notes: *p>0.1 NS.

Source: our elaboration

Fig. 1: Integrated interpretation of VA anthropomorphism, benefits and millennial clusters



Source: our elaboration

5. Conclusion

5.1 Discussion and academic implications

This study is part of the nascent marketing literature on VAs, identifying and interpreting in an integrated way the main perceptual dimensions of VA anthropomorphism and the benefits associated with user-VA interaction (RQ1). The EFA reveals a satisfactory structure with four conceptually clear and reliable dimensions: utilitarian and hedonic benefits, symbolic benefits, HLV and HLP. The first dimension is composed of 12 items related to functional benefits (e.g., "*Completing tasks with my voice assistant makes my life easier*"), hedonic benefits (e.g., "*I have fun using my voice assistant to complete tasks*") and VA attitude perception (e.g., "*I think my voice assistant* *is useful*"). The symbolic benefits are based on four items concerning users' image and social status (e.g., "*Using my voice assistant makes me seem more valuable among my peers*"). Concerning VA anthropomorphism, HLV is based on the perception of specific voice characteristics, such as pitch, accent and quality. Finally, the HLP factor, which is composed of four items (e.g., "*When I communicate with my voice assistant, it feels like someone is near me*"), is related to the perception of the VA as a human interlocutor.

Moreover, conducting K-means cluster analysis (RQ2), we categorise three user clusters ("useful and pleasant", "human", "status symbol") that are identified based on the factor scores and that are described in terms of PPR, PI, expertise, gender and age. The users belonging to the first cluster, "useful and pleasant", show a high level of sensitivity to utilitarian and hedonistic benefits, and they are particularly concerned about data security. Moreover, this cluster mainly consists of women, and the users in this cluster are younger than those in the other two clusters. In the "human" cluster, users are predominantly men and are older than the users associated with the other two clusters, and they have the highest perceptions of the HLV and HLP of VAs. These consumers are the most experienced in using VAs and are the most inclined to use new technologies. Finally, the "status symbol" cluster is mostly composed of women who are particularly attracted by the symbolic benefits of VA usage. These users are also characterised by the lowest levels of expertise and PI among the three clusters.

In terms of academic implications, the proposed conceptualisation of HLV (i.e., human voice, human voice quality, human pitch and human accent) contributes to both the literature on VA perceptions, in which the human-like voice has been treated only as a stimulus in an experimental research design (Chérif and Lemoine, 2019), and the literature on anthropomorphism, which to date has focused on only physical and design attributes and has not considered the role played by the vocal stimulus (Guido and Peluso, 2015; Golossenko *et al.*, 2020). Moreover, our findings jointly reveal human-like voice and human-like presence perceptions, thus responding to the call by Belk and Kniazeva (2018) for further research on VA anthropomorphic perceptions.

Concerning perceived benefits, our contribution is the first to examine utilitarian, hedonic and symbolic benefits in an integrated manner in the smartphone context. In this way, we address the call by McLean and Osei-Frimpong (2019) for more studies on benefit perceptions in the VA field. In particular, our findings show the holistic perception of utilitarian and hedonic benefits related to user-VA interactions on a smartphone. This unexpected hybrid factor, on the one hand, has indirect evidence in the concept of "utilitarism", which reflects "both hedonic and utilitarian dimensions" (Babin *et al.*, 1994, p. 645), and on the other hand, could find support in VA use for both functional and ludic purposes by Millennials (Voicebot, 2019a).

Therefore, this research fits into the partial and fragmented studies on perceptions regarding interactions with VAs (e.g., Chérif and Lemoine, 2019; McLean and Osei-Frimpong, 2019; Fernandes and Oliveira, 2021) by proposing, for the first time, an overall integrated interpretation of the main dimensions of VA anthropomorphism, which are related to both human-like voice and human-like presence, and heterogeneous benefits perceptions (i.e., utilitarian and hedonic benefits, symbolic benefits) in the smartphone context.

Finally, this is the first study to highlight millennials' perceptual differences related to interactions with VAs, identifying three user clusters (i.e., "useful and pleasant", "human", "status symbol").

5.2 Managerial implications

The results of this study provide marketers interested in new voice-based AI technologies with important insights for understanding consumers.

Specifically, the EFA results (RQ1) indicate the main dimensions of VA anthropomorphism and benefits. Concerning benefits, marketers should bear in mind that utility and hedonism are perceived as being inseparable from each other, while symbolic benefits remain a separate category. Consequently, they will have to design an interaction experience that is both playful and useful. To date, this tendency is only observed with reference to large technology providers, such as Amazon and Microsoft. In addition, marketers aiming to activate the perception of anthropomorphism in the consumer's mind must create a user-VA dialogue experience based on a human-like voice to favour the human-like presence of voice assistants. Regarding this point, interesting strategic implications emerge since the voice of a technology provider's VA cannot be changed by a brand deciding to enter the provider's ecosystem (Vernuccio *et al.*, 2020b). Therefore, companies interested in pursuing an anthropomorphisation strategy will have to consider developing a VA in-house and designing an ad hoc voice with specific characteristics (pitch, accent, quality). To date, only two international companies have chosen to pursue this strategy and build their voice assistant in-house, i.e., Mercedes and BMW.

Moreover, the cluster analysis results (RQ2) provide marketing experts with information about the demographic and attitudinal characteristics of millennial groups using VAs. Therefore, companies are offered the possibility of selecting a target segment ("useful and pleasant", "human", "status symbol") and addressing it by creating a specific value proposition. To address the "useful and pleasant" cluster, marketers will have to design an interactive experience that is both informative and ludic with both types of requests and, consequently, direct communication towards both benefits. For example, Microsoft's marketing communication on Cortana emphasises the utilitarian (e.g., check schedule, obtain weather information) and hedonic benefits (e.g., finds cinema and place to eat) that users can gain from interaction (e.g., https://www.youtube.com/watch?v=G5fa0voNxw8). Similarly, focused on user-Alexa dialogues through Amazon Echo smart speakers, both utilitarian and hedonic benefits are stressed (e.g., https://www.youtube.com/watch?v=__lAYgAYvgc). Moreover, as this cluster is the one most concerned about personal data breaches, practitioners will need to focus their marketing communication even on data security and safety. If a brand/company decides to address the "human" cluster, it will have to develop an ad hoc voice with specific characteristics (pitch, accent and quality) and endow its own VA with an HLP by working on its ability to interact (e.g., predicting a response time of the VA that is similar to that of a human interlocutor), i.e., Mercedes with MBUX and BMW with Intelligent Personal Assistant. Concerning large players, Google decided to focus its communication on the Google Assistant's ability to dialogue as a human being. As you can see in the video at the following link (https://www.youtube.com/watch?v=-qCanuYrR0g), Google Assistant, like a human, calls a restaurant to make a reservation and introduces himself "Hi! I'm the Google Assistant" and interacts exposing the day, time and number of people at the table. Finally, if the target is the "status symbol" cluster, a company will need to be able to highlight the symbolic benefits of interaction (e.g., improving the user's image among his or her friends/colleagues) in its communication campaigns related to the VA. In this case, an example is represented by Apple's marketing communication on Siri, which stresses the symbolic benefits arising from interaction by engaging the actor Dwayne Johnson (aka "The Rock"), who is known for his superhero roles (https://www.youtube.com/watch?v=fhLGBY5_0zU). Because this cluster has the lowest levels of expertise and PI among the three clusters, as Apple has done, the interaction experience should be designed to be simple and intuitive.

5.3 Limitations and future research

The limitations of the present work suggest fruitful lines of future research.

First, our study is focused on Italian millennials who interact with VAs through a smartphone. Thus, the research design could be carried out in other countries, users (i.e., Generation Z, Generation Y, Baby Boomers and Silent Generation) and devices (i.e., smart speakers and multimedia systems installed in cars).

Second, clusters are described in terms of gender, age, expertise, perceived privacy risk and personal innovativeness. Thus, other users' data, such as the structure of households, occupation and income, should be detected and used as descriptive variables.

Additional limitations of this work lie in the exploratory nature of the analysis techniques adopted for factor extraction and K-means cluster analysis. Specifically, the number of factors, as well as the number of clusters and their size, are influenced by the choices we made with regard to the extraction criterion and the rotation of factors as well as the clustering technique. To overcome these limitations, future studies collecting data characterised by a normal distribution might use maximum likelihood as a factor extraction criterion and opt for Promax rotation. Concerning the choices made with regard to cluster analysis, other clustering techniques should be adopted in future works (e.g., two-step clustering and hierarchical clustering).

In addition, as our research has exploratory value, future studies could investigate the antecedents of VA anthropomorphism and perceived benefits, as well as the consequences of these constructs for consumer behaviour, by applying specific theoretical perspectives (e.g., TAM).

Fifth, we did not consider the type of task performed by the user.

Since the previous literature (Cho, 2019) has shown that the execution of utilitarian or hedonic tasks influences VA usefulness perception, other studies could also verify effects on VA anthropomorphism perceptions and benefits.

Finally, the humanity of the voice was measured through four items based on adapting the Human Facial Physiognomy scale developed by Guido and Peluso (2015). Therefore, future research should test the validity and reliability of the scale adopted.

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Food is good for you (and the planet): balancing service quality and sustainability in hospitality[1]

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Abstract

Purpose of the paper: *Although environmental awareness is growing among hospitality customers, some environmental initiatives may lower personal comfort and overall service quality; therefore, hospitality managers need to find a balance between service quality and environmental preservation. The aim of the research is twofold: first, to investigate whether various environmentally sustainable practices affect customers' behavioral intentions differently, and second, to investigate if customers display more positive intentions toward a specific practice that is supposed to enhance overall service quality (i.e. serving local food).*

Methodology*: The empirical research is conducted through an online survey of 237 respondents. Respondents were asked to rate on a 5-point Likert scale the extent to which different sustainable practices affect their hotel selection process, their expected satisfaction during the stay, and their willingness to pay a higher price.*

Results*: Results show that all environmentally sustainable practices positively influence the hotel selection process and expected satisfaction, though to differing extents, but that few practices positively influence customers' willingness to pay a higher price. Local food is the initiative that stimulates the most positive behavioral intentions across all the dimensions.*

Research limitations: *The study addresses almost only Italian respondents and, at the moment, examines behavioral intentions rather than actual behaviors.*

Originality of the paper: *The study supports the idea that environmental sustainability is a multidimensional concept, and that different practices have different effects on customers' intentions. It adds to current knowledge that initiatives such as serving local food, which are also considered to enhance service quality and are connected to personal health, can produce a significantly more positive impact.*

Key words: environmental sustainability; hospitality; local food; service quality; customers' behavioral intentions; willingness to pay

1. Introduction

The natural environment plays a key role in tourism destinations' attractiveness and competitiveness, and tourism and hospitality are now facing increasing challenges in terms of environmental preservation (Gössling, 2002). Hotels and lodging facilities are in fact both victims of and contributors to environmental degradation (Reid *et al.*, 2017), and they can

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and should actively engage in environmentally sustainable (ES) practices (Tencati and Pogutz, 2015). In response, several initiatives are being increasingly implemented by hospitality companies to limit their impact on the natural environment, generally related to waste management, energy and water saving, green purchasing, and raising customers' awareness (e.g. Holcomb *et al.*, 2012).

Environmental concerns are also increasing among hospitality customers, who are now more conscious about impacts related to tourism activities (Verma and Chandra, 2017); previous studies have found a positive impact of ES initiatives on customers' attitudes and behaviors in terms of hotel choice (Boley and Uysal, 2013), customer satisfaction (Melissen, 2013; Cucculelli and Goffi, 2016), and willingness to pay a premium price (Xu and Gursoy, 2015). Hence, there is evidence that ES initiatives may increase business competitiveness and long-term sustainability (Gössling *et al.*, 2011).

However, ES practices vary depending on how they compromise personal comfort and service quality, and therefore produce mixed effects on customers' attitudes and behaviors. Previous literature reports that customers are less willing to engage in ES practices that reduce their personal comfort during the stay (Manaktola and Jauhari, 2007), but are more likely to appreciate those practices connected to quality, health, and personal dimensions (Iraldo *et al.*, 2017).

Food quality is a key component of the quality of the overall tourist experience. Food freshness and healthiness are important components of food quality (Namkung and Jang, 2007), and local food, which tends to be both fresh and healthy, thus meets the growing interest of customers in healthy lifestyles and healthy eating (Kim *et al.*, 2013). Local food is perceived as safe and natural (Draper and Green, 2002), and responds to customers' quest for authenticity (Sims, 2009; Cafiero *et al.*, 2019). Local purchasing, and local food, is also more sustainable than processed food in that it reduces environmental impacts associated with transportation and packaging, supports the local economy, and helps the preservation of local cultures. Buying local also clearly reduces costs associated with transportation (Gössling *et al.*, 2011; UNEP, 2015).

In sum, among the various ES practices that can be implemented by the hospitality industry, serving local food represents a "win-win" for hosts, guests, and the natural environment. Local food is sustainable from a triple bottom line perspective, it may better respond to customers' expectations for health and authenticity, and it can increase overall service quality.

As customers' behavioral intentions toward ES practices are expected to vary depending on how service quality and personal comfort are compromised, customers should display even more positive intentions toward hotels serving local food, given that this provides a healthier option relative to processed food and is considered to enhance service quality.

Via an online survey of a sample of 237 respondents, this study aims to examine the impact of different ES practices commonly implemented by the hospitality industry on three customer behavioral intentions: hotel selection process, customers' expected satisfaction during the stay, and customers' willingness to pay a higher price. The research further examines whether customers' behavioral intentions are more positive toward one specific ES practice that does not threaten comfort or quality; that is, the serving of local food.

The main findings show that all ES practices have a positive effect on hotel choice and customers' expected satisfaction, though to a differing extent, but that few practices have a positive influence on willingness to pay a premium price. Local food, in particular, received the highest rating in the hotel selection process and in customers' expected satisfaction, and stimulated greater willingness to pay a higher price than all other initiatives. In addition, customers' behavioral intentions toward the ES initiatives varied depending on respondents' demographic characteristics, including gender and education.

These results represent an important contribution to the literature on environmental sustainability in the hospitality industry and highlight several practical implications for hospitality managers and operators, helping them to solve the conflict between quality and sustainability.

The rest of the paper is organized as follows: the theoretical background is presented in Section 2, the methodology is explained in Section 3, the findings of the research are displayed in Section 4 and further discussed in Section 5, and the conclusions and main research implications are set out in Section 6.

2. Theoretical background

Environmental sustainability is a concept involving different dimensions, and different kinds of ES practices can be implemented. Previous studies have generally categorized interventions into areas such as waste management, energy and water conservation, and procurement policy, but interventions also extend to measures such as informing customers about such initiatives and involving them in basic ES behaviors (e.g. Holcomb *et al.*, 2012; Reid *et al.*, 2017). According to the Green Hotels Association, "Green hotels are environmentally-friendly properties whose managers are eager to institute programs that save water, save energy and reduce solid waste - while saving money - to help protect our one and only earth" (Green Hotels Association, 2017).

Environmental concerns are a becoming a priority for both customers and companies (Dangelico and Vocalelli, 2017), and consumers' behaviors are gradually changing toward a more sustainable orientation (Galati *et al.*, 2019). This applies equally to hospitality customers (Boley and Uysal, 2013), and tourists who are increasingly conscious of environmental impacts related to tourism activities (Mahachi *et al.*, 2015; Verma and Chandra, 2017). However, not all customers take into account the hotel's environmental policy when evaluating the overall service experience (Abrate *et al.*, 2020), and not all customers accord the same importance to ES practices (Miao and Wei, 2013). Hence, not all ES practices produce the same effect on customers' behavioral intentions, in terms of hotel selection process, expected satisfaction and willingness to pay a higher price, as discussed further below.

2.1 Customers' behavioral intentions

Environmental sustainability can have a positive effect on customers' behavioral intentions and thereby increase business long-term sustainability and competitiveness (Gössling, 2002). Although intentions and actual behaviors may not always correspond (Juvan and Dolnicar, 2014), there is evidence in previous research that environmental sustainability is becoming an element of influence in purchasing choice, and that ES behaviors may increase a hospitality company's overall bookings (Boley and Uysal, 2013). With increasing environmental awareness, customers may prefer lodging facilities that are moving toward sustainability and may be more likely to stay in a hotel that adopts measures to minimize its environmental impacts (Mahachi *et al.*, 2015). A study in the Indian context (Verma and Chandra, 2017) reveals that some elements of environmental sustainability (e.g., greenscaping) may affect the hotel selection process more than other variables (such as price and location). A true commitment to the environment can have a positive influence on hotel choice and therefore create a win-win situation for both the natural environment and hospitality companies (Bohdanowicz and Zientara, 2008). A study of a sample of Italian travelers shows that a reduction in energy consumption and pollution, availability of eco-friendly transportation, promotion of local products, opportunity for direct contact with nature, local people, and local culture are the main motivations for choosing sustainable accommodation; less importance is accorded to any environmental certification (Fermani *et al.*, 2016).

Literature also suggests that environmental sustainability may not only lead to higher customer demand, but also to increased customer satisfaction during the stay (Melissen, 2013). The image of being "green," if supported by an effective green marketing strategy, has been found to improve customers' loyalty, trust, and satisfaction (Martínez, 2015). There exist market segments that place high value on ES behaviors (Sirakaya-Turk *et al.*, 2014), and sustainability can be perceived as a relevant part of overall service quality (Iraldo *et al.*, 2017).

Cucculelli and Goffi (2016) show that factors directly relating to sustainability have a positive impact on the competitiveness of small Italian destinations. A sustainable tourism policy, together with the quality of natural resources and local empowerment in the tourism sector, have a significant impact on destination competitiveness in terms of tourist satisfaction. Moreover, the study provides evidence that factors that closely relate to sustainability have a larger impact on competitiveness than indicators not directly related to sustainability.

An overall ES supply chain may positively affect customers' loyalty, satisfaction, and even willingness to pay a premium price (Xu and Gursoy, 2015). In line with growing market pressures toward sustainability, lodging facilities that adopt ES behaviors may benefit from premium pricing and increased sales (Martínez, 2015). A study in the Spanish context shows that implementing ES measures can generate room prices that are higher by 5.15% on average (Sánchez-Ollero *et al.*, 2014). Willingness to pay increases even more with practices related to service quality and customers' personal sphere (Iraldo *et al.*, 2017), since customers are more inclined to appreciate sustainability practices close to their personal dimension (Edwards-Jones *et al.*, 2008).

Other studies, however, find that not all customers value ES measures (Abrate *et al.*, 2020; Xu and Gursoy, 2015) and that sustainability alone does not always increase customer demand (Geerts, 2014). Some ES behaviors may even lower customer satisfaction (Haastert and Grosbois, 2010), and generally pro-environmental attitudes of people traveling are not the same as when such people are at home (Miao and Wei, 2013). Moreover, even when customers are concerned about sustainability and patronize hotels that have adopted practices aimed at reducing their impacts, they may not be willing to pay more (Manaktola and Jauhari, 2007). In particular, hospitality customers have been found to display a negative attitude toward ES behaviors when personal comfort and luxury are compromised (Line and Hanks, 2016; Miao and Wei, 2013). Quality is a key attribute to ensure the competitiveness and long-term survival of hospitality companies and should not be compromised in the pursuit of sustainability (Manaktola and Jauhari, 2007). Research in the Canadian small hospitality industry found that careless customers do not make an effort to reduce their energy and water consumption (Haastert and Grosbois, 2010); ES behaviors can be perceived as a tool aimed at cutting costs and therefore they can represent a threat both to service quality and overall customer satisfaction (López-Gamero *et al.*, 2011).

Many studies have highlighted the important role of demographic characteristics in understanding customers' attitudes, behaviors, and intentions. Basic characteristics such as gender, age, and education can have a significant impact on sustainable behavioral intentions.

Female customers have been found to be generally more conscious of the need for environmental preservation (Mohai, 1992). A study in the hotel context showed that women are more willing to stay in a green hotel, to recommend it, and to pay for it (Han *et al.*, 2011; Han *et al.*, 2009). However, a study of Italian travelers provides evidence that even if women are generally less willing to exploit the natural environment than men, they are less eco-oriented when choosing accommodation (Fermani *et al.*, 2016). Age-related differences have also been found to affect sustainable buying behaviors, and younger customers generally tend to display more green purchasing intentions (Evanschitzky and Wunderlich, 2006). However, studies related to the hotel context provide mixed results, or even show that age does not have any significant role in explaining customers' sustainable intentions (Han *et al.*, 2011). A study of a sample of Italian respondents shows that adults are generally more willing to pay extra for sustainable accommodation than younger travelers; however, findings related to hotel choice are mixed (Fermani *et al.*, 2016).

Finally, customers with higher levels of education tend to be more environmentally conscious and purchase sustainable products (Keaveney and Parthasarathy, 2001). However, Han *et al.* (2011) found that hotel customers' willingness to visit a green hotel and their intentions to recommend it and to pay more for it are not necessarily related to education level.

In sum, in addition to demographic characteristics, customers' behavioral intentions toward ES initiatives are highly dependent on the degree to which service quality and personal comfort are compromised; hospitality managers must take into account sustainability-related issues but at the same time meet standards for hospitality and comfort (Font *et al.*, 2008). In other words, hospitality has to find a balance between service quality and environmental preservation (Haastert and Grosbois, 2010).

2.2 Serving local food

The Green Restaurant Association (2007) defines green food as being organic and local, and highly encourages purchasing food via sustainable, organic and local channels. Local purchasing clearly reduces transportation costs (Wang *et al.*, 2013); it also lowers environmental impacts associated with transportation in terms of reduced GHG emissions and packaging waste (Gössling *et al.*, 2011). Products that are supplied closer to their final destination involve fewer environmental costs in terms of transportation, packaging, and cooling. Hence, the more processed a product is, the more energy it consumes (UNEP, 2015).

Moreover, local food, and local purchasing in general, is a way to support the local economy both directly through payments and indirectly through the creation of jobs (UNEP, 2015), to maintain regional identities and support agricultural diversification (Gössling *et al.*, 2011), and to foster local and sustainable development, especially in marginalized areas (Montanari and Staniscia, 2009).

Local purchasing and local food therefore contribute to sustainability from a triple bottom line perspective, supporting the economic, social, and environmental dimensions of sustainability. Several studies show that customers quite often associate organic food with environmental preservation and that customers' positive attitudes toward the environment have a strong influence on organic food decision-making process (De Magistris and Gracia, 2008; Seegebarth *et al.*, 2016).

Moreover, local food is also associated with the visitors' demand for quality, health, and authenticity. Some ES practices, in fact, can be perceived as a relevant part of overall service quality, and this is especially true for those practices that enhance luxury and comfort, that focus on health-related dimensions (Iraldo *et al.*, 2017), or that are very close to the customers' personal sphere, such as organic food, seasonal food, or food from small and local producers (Edwards-Jones *et al.*, 2008).

Food quality has obvious implications for customer satisfaction and food freshness and healthiness are important components of the overall food quality (Namkung and Jang, 2007). It is also consistent with the growing interest of customers in healthy lifestyles and healthy eating (Kim *et al.*, 2013). Local food is generally considered safe and natural (Draper and Green, 2002), and may provide a healthier option than processed and preserved food (UNEP, 2015). A research on a sample of Italian consumers (De Magistris and Gracia, 2008) provides evidence that having a healthy lifestyle and following a healthy and balanced diet are among the major predictors of organic food buying. Fresh and healthy food (i.e. local food) can make a difference to customer satisfaction, provide superior value to customers, and even contribute to the formation of revisit intentions (Kim *et al.* 2013). A study in the US reports that almost all customers would pay more to eat in a green restaurant (Schubert *et al.*, 2010). Research on the Italian wine market shows that customers are willing to pay more for "natural," i.e. organic and local, wine (Galati *et al.*, 2019); further, Italian customers are willing to pay more for local and organic olive oil as well (Perito *et al.*, 2019). Moreover, a study on culinary tourism in central and southern Italy provides evidence that tourists interested in local wine and gastronomy generally show good levels of spending capacity (Montanari and Staniscia, 2009).

Promoting high-quality local food is also one possible way to achieve differentiation and attract customers that are interested in the typical traits of a destination (Woodland and Acott, 2007). Locally distinctive food contributes to the creation of a destination image (Cohen and Avieli, 2004); the possibility of enjoying a genuine gastronomic experience may represent a strong motivation for selecting a specific tourist destination and food has long played and still plays a key role in attracting tourists to Italy (Hjalager and Corigliano, 2000; Karim and Chi, 2010).

Moreover, local food is associated with service quality since it responds to the customers' quest for authenticity (Sims, 2009), and local and authentic food is considered to better represent and preserve a destination's local culture. Italy is acknowledged worldwide for the richness of its gastronomy (Cucculelli and Goffi, 2016), and culinary tourism has grown considerably in the recent years, becoming one of the most dynamic segments of the Italian tourism (Ferrari and Gilli, 2015). Wine and cuisine represent an important part of the local Italian culture, and Italy's destination image is strongly connected to gastronomic values (Karim and Chi, 2010). In a study on destination image held by US travelers, Italy was mostly associated with "food, cuisine, pasta, wine" (Baloglu and Mangaloglu, 2001). In a recent study on tourism destinations imagery, Italy was ranked as top preferred food destination by a sample of more than 1000 European and Asian tourists (Cardoso *et al.*, 2020). Local gastronomy and local food, as vital expressions of local culture and traditions, should thus be used to promote tourism and foster local development, especially in smaller tourist destinations (Cafiero *et al.*, 2019).

The same demographic characteristics that affect customers' attitudes and intentions toward sustainability may also affect their behavioral intentions toward local and organic food. Healthier eating and organic food are generally associated with "femininity" (Shin and Mattila, 2019), and, in a recent study on green restaurants, gender exerted a significant moderating effect on visit intentions (Moon, 2021). However, in the same study, age showed mixed results: although older respondents had a higher intention to visit green restaurants, they experienced lower levels of satisfaction than younger respondents (Moon, 2021). The vast majority of studies on organic purchase behaviors however agrees that more educated customers are more willing to purchase organic food (Dimitri and Dettman, 2011). A choice experiment on Italian consumers' attitudes toward organic food shows that the most educated respondents significantly prefer organic apples, while again age shows inconsistent results (Ceschi *et al.*, 2018). Italian tourists interested in high quality food and wine generally display medium-high levels of education and spending capacity (Montanari and Staniscia, 2009). Last, in a study of the Italian wine market, younger customers and those with a lower level of education were more willing to pay for natural wine (Galati *et al.*, 2019); however, education was relatively high for the majority of respondents.

In sum, serving local food provides advantages for both hosts and guests; since it has a positive impact from a triple bottom line perspective, it may better respond to customer expectations for health and authenticity, and it may increase the overall service quality. In addition to demographic characteristics, customers' behavioral intentions toward ES practices are expected to vary according to the impact of each practice on quality and personal comfort. Customers therefore are expected to display more positive intentions toward the specific practice of serving local food, as it provides a healthier option to processed food and is considered an important component of service quality.

This study aims to examine the impact of different ES practices, including local food, commonly implemented by the hospitality industry, and provide support for the following hypotheses:

Hypothesis 1: Different ES practices in the hospitality industry have a different impact on hotel selection process, customers' expected satisfaction, and customers' willingness to pay a higher price.

Hypothesis 2: Serving local food has a positive influence on hotel selection process, customers' expected satisfaction, and customers' willingness to pay a higher price.

3. Methodology

3.1 Measures

A questionnaire was developed to test the research hypotheses. Previously validated measures for (a) hotel selection process, (b) customers' expected satisfaction, and (c) customers' willingness to pay a premium price were adapted from prior studies on customers' pro-environmental attitudes in the hospitality industry (Line and Hanks, 2016; Martínez, 2015; Xu and Gursoy, 2015).

Various ES practices were derived from the existing literature (e.g. Reid *et al.*, 2017; Holcomb *et al.*, 2012); in particular, 10 practices dealing with different dimensions of sustainability and that require a different level of compromise in terms of personal comfort were included in the questionnaire: two practices related to waste management (separate collection of waste and refillable soap and shampoo dispensers), two practices related to water conservation (rainwater recycling and a towel reuse program), two practices related to energy conservation (energy saving through LED lighting and renewable sources of energy), two practices dealing with customer involvement (informing customers about an environmental policy and involving customers in basic ES initiatives), and two practices related to sustainable purchasing (eco-friendly detergents and local food).

Finally, the respondents' demographic information was collected, including age, gender, city and country of origin, profession, income, education, frequency of traveling, and motivations for traveling.

The final questionnaire is comprised of four sections. Section 1, "The reservation," deals with hotel choice: respondents are asked to imagine that they have to make a reservation at a hotel, or another kind of lodging facility, and to rate their level of agreement on a 5-point Likert scale in selecting accommodation that implements one of the 10 previously identified ES behaviors. In Section 2, "The stay," respondents have to rate their expected satisfaction during the stay in the accommodation that implements one of the 10 ES behaviors. In Section 3, "The bill," they have to rate their willingness to pay a 5% premium for staying in an accommodation that implements one of the 10 ES behaviors. In the last section, respondents are asked for their demographic information and to leave any additional suggestions or observations, as recommended by the literature (Bell, 2006).

A pilot test was conducted prior to the full survey, to adjust the survey instrument and incorporate suggestions from respondents. One of the main purposes of a pilot test is to ensure that respondents face no problem when answering the questions (Saunders *et al.*, 2009). In this case, the original ordering of questions was adjusted to make it clearer to respondents; in particular, instead of grouping questions according to the type of ES behavior, questions are grouped into three steps in a logical order from the respondents' point of view (i.e. the reservation, the stay, and the bill).

3.2 Sample and data collection

The final questionnaire was created with the aid of the LimeSurvey platform and distributed online through social networks, mostly Facebook. A non-probabilistic convenience sampling technique was adopted (Saunders *et al.*, 2009), and a link to the survey was posted on several Italian Facebook pages related to travel, tourism, and hospitality. Over the two-month period of the survey (July-August 2018), 328 questionnaires were returned, including 91 incomplete questionnaires. The final sample size is therefore comprised of 237 usable questionnaires.

Descriptive statistics were calculated for each item, including mean, median, and standard error. Subsequently, t-tests were performed to compare differences between respondent subsamples. Last, an exploratory factor analysis was conducted. All data analysis was performed with the aid of SPSS statistical software.

Of the 237 final sample respondents, most were women (70%); the average age was 40 years, spanning a minimum of 19 years and a maximum of 78 years. The large majority of respondents were Italian (95%), with 3% coming from northern European countries and 2% from eastern European countries, though all resided in Italy. With respect to professional status, 51% were employees, 18% were self-employees, 14% were students, 7% were retired, 4% were managers, 4% were unemployed, 1% performed household work, and 1% performed other jobs. The majority of the respondents (69%) defined their income as average, 14% as above average, 14% as below average, and 3% preferred not to answer this question. Regarding educational levels, 34% had a master's degree, 32% a high school diploma, 17% a PhD, 12% a bachelor's degree, 2% a postgraduate degree, 2% an education level lower than high school, and 1% another kind of degree.

With respect to frequency of traveling, 24% traveled 1-5 nights per year, 28% 6-10 nights per year, 20% 11-15 nights per year, and 28% more than 15 nights per year. The majority of the respondents (84%) generally traveled for leisure, while 16% traveled for business. A positive, weak correlation (+0.364) was found between frequency of travel and reasons for travel, suggesting that respondents who traveled for business reasons generally traveled more often than those who traveled for holidays.

4. Results

All ES practices have a positive influence on the hotel selection process, since they all obtained an average rating higher than 3.00, which is the median value. However, ratings range from 3.47 for having a towel reuse program to 4.72 for preferring local food to the processed option, indicating that different ES practices exert a different level of influence on the hotel selection process. Very similar trends emerge for customers' expected satisfaction during the stay: again, all ES practices are rated higher than 3.00 on average, and, again, ratings range from 3.64 for having a towel reuse program to 4.73 for preferring local food. These results support the idea that customers' expected satisfaction varies with different ES behaviors.

With respect to customers' willingness to pay a higher price to stay in green accommodation, variability in ratings increases: preferring local food to the processed option remains the most influential ES practice, with an average rating of 4.10, and the towel reuse program again receives the lowest rating, that in this case is even below the median value (2.75). These results suggest that some ES behaviors may exert a negative influence on customers' willingness to pay a premium price. These results are in line with previous studies reporting a gap between environmental concerns and willingness to pay extra for ES services (Manaktola and Jauhari, 2007).

The mean, median, and standard deviation for each ES practice in the hotel selection process, customers' expected satisfaction, and customers' willingness to pay a premium price are reported in Tables 1, 2, and 3 respectively.

An independent sample t-test was performed to assess the differences between men and women. This analysis technique takes into account the standard error of the estimates of the means for each group; therefore, the different sample size between men and women was not a concern. Results indicate that women hold more favorable behavioral intentions toward almost all ES behaviors at a 0.05 level of significance, as shown in Table 4. Choosing a hotel where separate collection is in place and paying extra for a towel reuse program were the only ES behaviors where no significant difference between men and women emerged.

Tab. 1: Hotel selection - Descriptive statistics

Variable	Mean	Median	SD
Towel reuse program	3.47	4	1.42
Involving customers	3.79	4	1.18
Refillable dispensers	3.87	4	1.22
Informing customers	4.22	5	0.96
Rainwater recycling	4.30	5	1.02
Energy saving	4.30	5	0.95
Separate collection of waste	4.32	5	0.98
Eco-friendly detergents	4.41	5	0.86
Renewable sources of energy	4.46	5	0.84
Local food	4.72	5	0.69

Source: our elaboration on SPSS

Tab. 2: Customers' expected satisfaction - Descriptive statistics

Variable	Mean	Median	SD
Towel reuse program	3.64	4	1.39
Refillable dispensers	4.00	4	1.19
Involving customers	4.08	4	1.05
Informing customers	4.23	5	0.99
Rainwater recycling	4.49	5	0.82
Energy saving	4.49	5	0.85
Eco-friendly detergents	4.57	5	0.77
Separate collection of waste	4.59	5	0.77
Renewable sources of energy	4.59	5	0.76
Local food	4.73	5	0.70

Source: our elaboration on SPSS

Tab. 3: Willingness to pay a premium - Descriptive statistics

Variable	Mean	Median	SD
Towel reuse program	2.75	3	1.44
Informing customers	2.79	3	1.42
Involving customers	3.03	3	1.37
Refillable dispensers	3.03	3	1.39
Separate collection of waste	3.10	3	1.43
Energy saving	3.13	3	1.34
Rainwater recycling	3.14	3	1.37
Renewable sources of energy	3.43	4	1.34
Eco-friendly detergents	3.50	4	1.39
Local food	4.10	5	1.23

Source: our elaboration on SPSS

Tab. 4: Gender t-test

Variable	Gender	N	Mean	SD	SD in Mean	P-value (2-tailed)
Choose_local food	M F	72 165	4.56 4.79	.977 .512	.115 .040	.015
Choose_rainwater recycling	M F	72 165	3.86 4.48	1.248 .838	.147 .065	.000
Choose_energy saving	M F	72 165	3.92 4.47	1.148 .793	.135 .062	.000
Choose_informing customers	M F	72 165	3.92 4.35	1.110 .860	.131 .067	.004
Choose_towel reuse program	M F	72 165	3.00 3.68	1.511 1.334	.178 .104	.001
Choose_involving customers	M F	72 165	3.33 3.99	1.233 1.099	.145 .086	.000
Choose_refillable dispenser	M F	72 165	3.43 4.07	1.392 1.083	.164 .084	.000
Choose_renewable sources of energy	M F	72 165	4.10 4.62	1.077 .647	.127 .050	.000
Choose_eco-friendly detergents	M F	72 165	4.03 4.58	1.061 .691	.125 .054	.000
Satisfied_separate collection of waste	M F	72 165	4.33 4.70	1.007 .609	.119 .047	.001
Satisfied_local food	M F	72 165	4.57 4.81	.962 .528	.113 .041	.016
Satisfied_rainwtaer recycling	M F	72 165	4.14 4.65	1.039 .652	.122 .051	.000
Satisfied_energy saving	M F	72 165	4.10 4.65	1.128 .631	.133 .049	.000
Satisfied_informing customers	M F	72 165	3.81 4.42	1.171 .849	.138 .066	.000
Satisfied_towel reuse program	M F	72 165	3.25 3.81	1.441 1.342	.170 .104	.006
Satisfied_involving customers	M F	72 165	3.63 4.27	1.156 .939	.136 .073	.000
Satisfied_refillable dispensers	M F	72 165	3.71 4.12	1.326 1.109	.156 .086	.014
Satisfied_renewable sources of energy	M F	72 165	4.31 4.72	.973 .611	.115 .048	.000
Satisfied_eco-friendly detergents	M F	72 165	4.32 4.68	.990 .613	.117 .048	.001
Pay_separate collection of waste	M F	72 165	2.74 3.26	1.463 1.396	.172 .109	.011
Pay_local food	M F	72 165	3.85 4.21	1.440 1.114	.170 .087	.036
Pay_rainwater recycling	M F	72 165	2.69 3.33	1.380 1.327	.163 .103	.001
Pay_energy saving	M F	72 165	2.67 3.33	1.384 1.274	.163 .099	.001
Pay_informing customers	M F	72 165	2.36 2.98	1.335 1.416	.157 .110	.002
Pay_involving customers	M F	72 165	2.65 3.20	1.436 1.303	.169 .101	.006
Pay_refillable dispenser	M F	72 165	2.65 3.19	1.396 1.355	.164 .105	.007
Pay_renewable sources of energy	M F	72 165	2.90 3.67	1.416 1.246	.167 .097	.000
Pay_eco-friendly detergents	M F	72 165	3.03 3.70	1.510 1.279	.178 .100	.000

Source: our elaboration on SPSS

Another independent sample t-test was performed to assess the differences between subsamples with different levels of education. For the purposes of this analysis, the education level was split into two groups: those with at least a bachelor's degree (156 respondents) and those with a high school diploma or below (81 respondents).

Results indicate that people with a higher level of education display more favorable behavioral intentions toward items related to local food at a 0.05 level of significance. Moreover, they are more likely to choose a hotel where customers are informed about ES behaviors that are in place and are more likely to be satisfied with refillable dispensers and renewable sources of energy. These findings are reported in Table 5.

Tab. 5: Education t-test

Variable	Education	N	Mean	SD	SD in Mean	P-value (2-tailed)
Choose_local food	Higher Lower	156 81	4.79 4.58	.553 .893	.044 .099	.024
Choose_informing customers	Higher Lower	156 81	4.31 4.02	.878 1.084	.070 .120	.028
Satisfied_local food	Higher Lower	156 81	4.81 4.58	.566 .878	.045 .098	.014
Satisfied_refillable dispensers	Higher Lower	156 81	4.13 3.73	1.060 1.379	.085 .153	.012
Satisfied_renewable sources of energy	Higher Lower	156 81	4.69 4.41	.597 .985	.048 .109	.006
Pay_local food	Higher Lower	156 81	4.22 3.86	1.145 1.358	.092 .151	.032

Source: our elaboration on SPSS

With respect to the age of respondents, no significant differences were found.

Last, an exploratory factor analysis was conducted, using the principal components method to extract factors. The ES behaviors displayed significantly different average ratings across all three dimensions investigated in this study: local-food-related behaviors always displayed the highest ratings, behaviors that lower personal comfort, such as the towel reuse program, received the lowest rating, while more "neutral" behaviors were for the most part rated as average. In any case, all ES behaviors received the lowest rating in the willingness to pay dimension. Both the Kaiser-Meyer-Olkin and Barlett's test of sphericity were satisfactory, supporting the appropriateness of factor analysis; the final rotated Varimax solutions displayed four factors, as reported in Table 6.

Tab. 6: Exploratory factor analysis

Factors	Loadings	Cronbach's alpha
Factor 1: Neutral behaviors		0.948
Choose_separate collection of waste	0.754	
Choose_rainwater recycling	0.750	
Choose_energy saving	0.776	
Choose_informing customers	0.674	
Choose_renewable sources of energy	0.812	
Choose_eco-friendly detergent	0.781	
Satisfied_separate collection of waste	0.702	
Satisfied_rainwater recycling	0.762	
Satisfied_energy saving	0.781	
Satisfied_informing customers	0.624	
Satisfied_involving customers	0.538	
Satisfied_renewable sources of energy	0.778	
Satisfied_eco-friendly detergent	0.758	
Factor 2: Willingness to pay		0.959
Pay_separate collection of waste	0.805	
Pay_rainwater recycling	0.855	
Pay_energy saving	0.871	
Pay_informing customers	0.809	
Pay_towel reuse program	0.726	
Pay_involving customers	0.873	
Pay_refillable dispenser	0.805	
Pay_renewable sources of energy	0.824	
Pay_eco-friendly detergent	0.821	
Factor 3: Low comfort behaviors		0.859
Choose_towel reuse program	0.776	
Choose_involving customers	0.541	
Choose_refillable dispenser	0.510	
Satisfied_towel reuse program	0.822	
Satisfied_refillable dispenser	0.563	
Factor 4: Local food		0.762
Choose_local food	0.830	
Satisfied_local food	0.864	
Pay_local food	0.692	
Cronbach's alpha of the total scale 0.956 % Variance explained: 71.178 KMO: 0.913 Bartlett: 7071.223 Significance: 0.000		

Source: our elaboration on SPSS

5. Discussion

Results of this study provide support for Hypothesis 1, since they show that different ES practices do not display the same influence on customers' behavioral intentions. In particular, all ES practices have a positive influence on the hotel selection process and customers' expected satisfaction, though to differing extents, but not all ES practices positively affect customers' willingness to pay a higher price.

The exploratory factor analysis also supports the existence of four different types of ES behaviors; namely, neutral behaviors, on payment behaviors, low comfort behaviors, and food-related behaviors. These findings thus provide evidence that environmental sustainability is a multidimensional concept and that initiatives that lower personal comfort produce different effects on customers' behavioral intentions than more neutral initiatives and those related to food.

Considering the variability in ratings across dimensions and the results of the factor analysis, these findings are also in line with previous research related to the gap between customers' attitudes (such as hotel choice and expected satisfaction) and willingness to pay (Manaktola and Jauhari, 2007). Moreover, results are in line with previous studies stressing the importance of finding a balance between environmental preservation and service quality (Font *et al.*, 2008; Haastert and Grosbois, 2010; Iraldo *et al.* 2017).

In addition, in line with previous research (Han *et al.*, 2011), t-tests demonstrated that women generally display more favorable behavioral intentions than men for almost all the ES initiatives investigated in this study; respondents who held at least a bachelor's degree were also more likely to appreciate initiatives related to local food, together with other more neutral initiatives (i.e. informing customers and providing refillable dispensers and renewable sources of energy). Consistent with previous research (Han *et al.*, 2011; Ceschi *et al.*, 2018), results related to age differences were not significant.

Hypothesis 2 is also supported by the results, showing that among the different ES initiatives, serving local food has the most positive influence on the hotel selection process, customers' expected satisfaction during the stay, and customers' willingness to pay a higher price. Local food is, in fact, the only specific ES practice that has a mean value higher than 4 and a median value equal to 5 across all customer behavioral intentions, and all items related to food, including willingness to pay extra, belong to the same factor. In line with previous studies (Montanari and Staniscia, 2009: Dimitri and Dettman, 2011; Moon, 2021), women with higher education levels are more likely to show positive behavioral intentions toward local food.

This finding may be explained not just in terms of customers' growing concerns about social and environmental sustainability (Boley and Uysal, 2013; Cucculelli and Goffi, 2016), but by the increasing attention to healthy food and healthy lifestyles (Kim *et al.*, 2013), by visitors' demand for authenticity (Sims, 2009; Cafiero *et al.*, 2019), and by the perception that quality food is a key component of overall destination image (Cardoso *et al.*, 2020) and service quality (Namkung and Jang, 2007).

Regardless of the explanation, this result is of crucial importance from a triple bottom line perspective, since it confirms that local food can provide advantages for both hosts and guests, and for the natural environment (Gössling *et al.*, 2011; Wang *et al.*, 2013; UNEP, 2015; UNEP, 2005): local food, which has a relatively small environmental impact in terms of GHG emissions, a positive economic impact for businesses by reducing costs of transportation, and a positive social impact by supporting local economies, is also an initiative that positively affects customers' hotel selection process, customers' expected satisfaction during the stay, and even customers' willingness to pay a premium price.

6. Conclusions

The aim of this research was to investigate whether different ES practices generally adopted by the hospitality industry produce different effects on customers' behavioral intentions in terms of hotel selection process, expected satisfaction during the stay, and willingness to pay a higher price. In particular, the research aimed to examine the effect of different ES practices depending on how service quality and personal comfort are compromised, and the particular effect of an ES practice that is highly connected to customer health and represents a key component of overall service quality; namely, local food.

Both hypotheses of the study are supported by the results, implying that environmental sustainability involves different dimensions and that the ES initiatives that better contribute to overall service quality (i.e. local food) are better able to stimulate positive customer behavioral intentions across all the dimensions analyzed in the current research: hotel choice, expected satisfaction, and willingness to pay more.

In addition, results show that there may be different behavioral intentions toward ES initiatives depending on travelers' demographic characteristics, such as gender and education levels.

The research adds to previous literature on sustainability and customers' behavioral intentions in the hospitality industry by highlighting specific dimensions of environmental sustainability, rather than treating it as a single, and sometimes quite abstract, notion.

In addition, the findings provide further support to previous literature by stressing the importance of meeting hospitality and comfort standards while taking into account environment-related issues, and ultimately, finding a balance between service quality and environmental preservation (Font *et al.*, 2008; Haastert and Grosbois, 2010). In line with previous research (Cucculelli and Goffi, 2016), this study strengthens the idea that ES initiatives can create a "win-win" for both the natural environment and hospitality companies' competitiveness.

Moreover, results provide important practical implications for hospitality managers. First and foremost, results suggest that all ES behaviors should be emphasized by corporate marketing and communication strategies, since they all positively affect the hotel selection process and overall expected customer satisfaction. However, according to the results, it is possible to assess priorities for different ES behaviors, as addressing all possible behaviors would be a difficult task for hospitality operators, and indeed, some ES practices may lead to more positive results than others.

Moreover, with respect to customers' willingness to pay a higher price, a company's preference for local and organic food should definitely be encouraged and promoted-a finding that is also in line with previous studies (Montanari and Staniscia, 2009: Iraldo *et al.*, 2017; Cafiero *et al.*, 2019). This research argues clearly that serving local food can serve as a means to increase both hospitality companies' competitiveness and long-term sustainability.

Customers' sociodemographic characteristics such as gender and education should also be taken into account when developing communication and promotion strategies for green hotels. Hospitality managers should in any case reassure customers of the quality of the service being provided (Line and Hanks, 2016), try to make the physical environment more conducive to sustainability (Miao and Wei, 2013), and integrate these kinds of practices into a consistent and coherent marketing strategy, so that customers become more aware of the value that these ES behaviors represent for the natural environment, and understand that they are not merely a way to allow companies to cut costs.

A limitation of the study is that it addresses almost only Italian respondents, thus preventing the possibility of making comparisons across different cultures and nationalities. This is particularly significant as previous research has found that nationality can play a significant role in eco-behaviors and intentions (Fermani *et al.*, 2016), and on organic food-related choices (Seegebarth *et al.*, 2016). Further research should enlarge the sample to include respondents from other countries, especially from northern European countries, who have been found to display greater awareness of environmental preservation. Enlarging the sample may allow the derivation of market segmentation based on customer nationality. Another important limitation of the research is that only customers' behavioral intentions are investigated, while there is often a gap between intentions and actual behaviors (Juvan and Dolnicar, 2014). Further research may provide insights into real customer behaviors.

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Book reviews

Per un dibattito sul management nell'era digitale Riflessioni sul libro: Francesco Varanini, **Le cinque leggi bronzee dell'era digitale** ***e perché conviene trasgredirle***, Guerini e Associati, Milano, 2020

by Claudio Baccarani

Con questo testo Francesco Varanini si propone di "raccontare fasti e nefasti dell'Era Digitale" (p. 15). Lo fa ricorrendo ad un linguaggio tra il tecnico e il divulgativo, mosso dal desiderio di aprire un dialogo sugli innumerevoli e preziosi vantaggi dei processi di digitalizzazione, alla luce dei rischi che ne potrebbero conseguire.

Rischi derivanti dall' evoluzione della ricerca sulle tecnologie digitali verso forme di Intelligenza Artificiale, che potrebbero dotare le macchine di pensiero con la possibilità di sostituire completamente le persone sul posto di lavoro e di porre le basi di una società dai contorni non certo ben definiti, ma che vedrebbe la compresenza di esseri umani e di altre creature, quali ad esempio androidi, il cui nome, guarda caso, è stato adottato dal sistema operativo di Google (android).

Situazione del tutto nuova nella storia dell'umanità, che ha sempre visto la tecnologia supportare e trasformare le varie forme di lavoro - anche attraverso sconvolgimenti come quelli occorsi a seguito della prima rivoluzione industriale - ma mai prospettare una generalizzata fuoriuscita dal lavoro delle persone, sostituite da macchine capaci di pensare, con la conseguente necessità di rivedere alla base la configurazione del sistema sociale di riferimento.

Confesso che a temi di questo tipo non ho mai dedicato tanta attenzione, se non in gioventù, nelle mie vesti di appassionato lettore di romanzi di fantascienza pubblicati nella storica collana Urania, edita da Mondadori a partire dal 1952, o come spettatore di film sulla stessa lunghezza d'onda, tra i quali subito la memoria corre a "2001 Odissea nello spazio" di Stanley Kubrick (1968), ad "A.I. Artificial Intelligence" (2001) di Steven Spielberg e a "Minority Report" (2002) dello stesso autore.

Mi sono quindi avvicinato con circospezione e prudenza alla lettura del testo, spinto da una risoluta curiosità e dal desiderio di esplorare mondi in gran parte nuovi alla mia esperienza.

Il libro si apre con una premessa apparentemente lontana dal tema - peraltro opportunamente senza titolo - nella quale si accostano pensiero letterario (Leopardi e Goethe) e pensiero politico-economico (Lassalle e Marx) nella condivisione dell'esistenza di leggi bronzee, cioè, solide, durevoli e resistenti che caratterizzano il divenire delle diverse epoche storiche.

La sorpresa generata da questa apertura ha stimolato ancor più la mia curiosità. Così, sono stato catturato dalla lettura dei capitoli successivi condotti con una narrazione ritmata e incalzante, caratterizzata da frequenti rimandi e richiami che ne fanno risaltare il carattere di costruzione letteraria romanzesca, il cui profilo potrebbe ben proporsi come base per la sceneggiatura di una rappresentazione teatrale o di un film.

La costruzione dell'A. appare, infatti, come un'inchiesta che narra in una forma brillante, cadenzata e del tutto originale il divenire dei progressi in campo digitale. Lo fa attraverso il racconto delle scelte di esperti che hanno lavorato, e lavorano, su queste tecnologie, scandagliandone in profondità le posizioni e la visione nel contesto del loro vissuto personale.

In questo modo prendono forma le cinque leggi bronzee che campeggiano nei titoli dei capitoli centrali del libro: "ti arrenderai a un codice straniero", "preferirai la macchina a te stesso", "non sarai più cittadino: sarai suddito o tecnico", "lascerai alla macchina il governo", "vorrai essere macchina". Capitoli dedicati a porre in risalto in modo dettagliato e circostanziato i possibili impatti della citata evoluzione tecnologica sulla vita degli individui, che gradualmente potrebbero divenire parte di una massa indistinta dominata da una tecnocrazia composta da una ristretta cerchia di potenti tecnici e costruttori.

Il sottotitolo del libro invita però a trasgredire queste leggi, per riaffermare il tratto umano della persona nell'agire per il bene, il bello e il buono come elemento differenziale rispetto a macchine che, seppur progredite, sono chiamate ad agire sotto il suo controllo.

Invito che prende forma nel capitolo finale attraverso i verbi che ne scolpiscono il titolo, "distinguere, giudicare, scegliere", e l'approccio letterario, filosofico e sociologico che lo caratterizza nel ribadire la centralità della persona per le scelte fondanti la costruzione del futuro.

Emblematici al riguardo sono due passaggi del testo nei quali vengono descritte le differenze tra *Homo digitalis* e *Homo sapiens* e viene proposta una creativa narrazione della funzione del computer attraverso l'immedesimazione dell'A. con Nestore il grande narratore del mondo omerico.

Nel primo dei due passaggi citati Varanini chiarisce che: "l'*Homo digitalis* riduce il suo sforzo di conoscere al porre domande alla macchina: si fida di un algoritmo. Conosce e si relaziona con gli altri essere umani attraverso macchine e algoritmo (p. 274)…..mentre……l'*Homo sapiens* sa che esistono varie maniere per conoscere il mondo, se stesso e gli altri. Usare le macchine è solo uno dei modi possibili, non il migliore. …Per cautela, non fa tutto ciò che la macchina chiede; ricorda sempre che non gli è dato di sapere cosa è scritto nel codice; si protegge per quanto possibile dall'incessante osservazione della macchina" (p. 275).

Così l'Homo digitalis fugge dalla complessità delle relazioni umane e opta per un isolamento individuale nella semplicità di un mondo vissuto attraverso le macchine. Al contrario, l'Homo sapiens accetta la complessità del mondo reale, all'interno del quale si pone alla continua ricerca di senso per quello che come persona e individuo è chiamato a fare nella comunità in cui vive attraverso la ricerca, la narrazione, le relazioni umane, la cultura e l'arte come esaltazione della propria capacità inventiva ed espressiva.

Nel secondo dei due passi citati l'A. immagina, invece, un ideale racconto di Nestore nel quale ogni persona è come un viandante in cammino attraverso un presente che lo conduce "dal passato al futuro, dal noto all'ignoto". In questo incessante viaggio è supportata da un bastone, il computer, "al quale appoggiarsi, al quale ricorrere per aumentare il raggio e la potenza della propria azione"; da una bisaccia, il computer, "lo strumento leggero che può essere portato sempre con sé…che permette di mantenere a disposizione gli utensili" necessari al viaggio; da una scarpa vecchia, il computer,…"…. lo strumento plastico che si conforma al corpo, al pensiero, alle intenzioni, alle necessità della persona che l'ha in uso" (292-293).

In questo modo, viene posto in risalto il valore di uno strumento progredito che può accompagnare e sostenere la persona nel proprio "viaggio nell'esplorazione del mondo", in un cammino plasticamente e metaforicamente rivelato da Charlie Chaplin nel finale di Tempi Moderni, quando Charlot e la Monella, provati, ma mai sconfitti, si incamminano mano nella mano sulla strada dell'avvenire. Tutto questo però a patto che si sappia resistere al "soave incantamento" di macchine che reclamano attenzione come le sirene di Ulisse.

Con questo scritto l'A. si propone di lanciare un allarme alla società civile che inconsapevolmente viaggia nella direzione descritta per almeno due motivi. Da una parte, la condizione di disinformazione, o di incredulità, nella quale versa il cittadino al riguardo di un fenomeno costruito con linguaggi e codici inaccessibili ai non tecnici e in gran parte mantenuto circoscritto al loro ristretto ambito di studio e discussione. Dall'altra, il muovere strisciante verso questo orizzonte secondo forme impalpabili dal "fascino discreto", che abituano gradualmente le persone alla dipendenza dalle macchine, come ognuno di noi può sperimentare nel proprio vivere quotidiano, se si ferma un momento ad osservare il divenire del rapporto con le "macchine digitali" che usa.

Riconoscendo il valore dei progressi delle tecnologie digitali, il libro non si muove sui piani della rassicurazione o del catastrofismo, traccia, piuttosto, dei percorsi e lascia trasparire tutta una serie di domande rispetto alle quali il Lettore è chiamato a prendere posizione.

In realtà, numerosi sono gli interrogativi generati dalla lettura del libro: è mai possibile che le macchine prendano il controllo delle persone? qual è il confine tra realtà e fantascienza? perché di questi temi pur se con intensità crescente non si parla che a livello di addetti ai lavori? discutere di questi temi significa porsi contro il progresso scientifico? abbiamo mai riflettuto su tutto questo nell'ambito del nostro vissuto quotidiano? perché gli studi condotti sull'argomento frequentemente non introducono riferimenti storici? perché gli aspetti etico-filosofici di questa possibile evoluzione sono posti in secondo piano? è possibile capire il presente e il futuro di questa condizione senza una conoscenza del passato e l'intelligenza poetico- letteraria di leggere tra le righe del cambiamento?

Ma soprattutto, cosa accadrà nel mondo del lavoro e delle relazioni sociali a seguito di una più o meno intensa riduzione di posti di lavoro a seconda del livello di sviluppo dei diversi Paesi? Non è che questa robotizzazione intelligente possa porsi come un "cigno nero" imprevedibile e incontrollabile nei suoi effetti sociali ben più di una pandemia? Non siamo di fronte ad un nuovo paradigma che ci obbliga a ripensare radicalmente e a reinventare il management nel governo dell'impresa e delle relazioni organizzative e sociali? (Jacques Martin, 2017).

E ancora, come si dovrà distribuire la ricchezza prodotta nelle fabbriche, magari a luci spente, come le *lights-out factoris* di Philip Dick (p. 149) dove il buio domina perché popolate solo da macchine che non necessitano della luce? Per cosa saranno remunerate le persone che perdono il loro lavoro? Come dovranno essere ridefinite le relazioni tra stato e imprese dal punto di vista delle relazioni sociali? Quali saranno i nuovi spazi di lavoro? Perché questo tema non è così evidente nelle discussioni delle parti sociali? È possibile un'epoca della felicità senza lavoro (Primo Levi, 1978)?

Queste solo alcune domande. Di certo ogni Lettore ne troverà altre alle quali sarà eticamente chiamato dal proprio Sé a cercare una risposta.

E questa capacità del libro di generare domande costituisce un significativo contributo del lavoro dell'A., per la forza che le domande possiedono come sostegno ai processi di innovazione e cambiamento (Jostein Gaarder, 1997).

Contributo che scaturisce dal valore delle approfondite ricerche condotte, che traspare anche dalla copiosa bibliografia curata secondo un ormai inusuale, quanto prezioso, indice analitico, oltre che dalla puntigliosa indicazione dei periodi di consultazione dei materiali su internet. Ma anche dalla capacità dell'A. di catturare l'attenzione del Lettore coinvolgendolo nella narrazione.

Come detto, ho letto il libro di Francesco Varanini a digiuno del tema trattato, quindi da semplice componente di quella società civile che nelle prospettive delineate rischia la trasformazione in sudditanza o addirittura in schiavitù delle macchine.

Per questo sono ancor più grato all'A. perché con questo suo lavoro apre una breccia nel pesante "silenzio pubblico" sul tema e traccia un percorso a sostegno di scelte capaci di condurre la società civile a godere dei vantaggi dell'Intelligenza Artificiale attraverso un "essere umani tramite la tecnica" (p. 276).

Lo fa consapevole della forza e del valore della memoria storica, dell'arte e della bellezza che non possono essere immagazzinate in una macchina, perché sempre rigenerate in un continuo movimento con le esperienze dei singoli individui.

Così, condividendo questa prospettiva di approfondimento, mi auguro che il tema possa uscire dalle ristrette analisi e valutazioni degli esperti per poter coinvolgere in un approccio interdisciplinare e pubblico le voci in grado di disegnare le tappe di un progredire sociale comune.

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Sinergie Italian Journal of Management

Useful information for readers and authors

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Sinergie Italian Journal of Management, the official journal of the Società Italiana Management (SIMA-the Italian Society of Management), is a peer-reviewed scholarly publication that presents leading research across all business and management areas and focuses on the main trends and boundary-pushing ideas in management studies.

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When is the journal published during the year and are special issues part of the editorial planning?

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Principles and vision

What principles drive the conduct of this journal?

A few fundamental principles drive the conduct of Sinergie Italian Journal of Management:

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- **Respect**: The journal promotes constructive, respectful dialogue among authors, staff and readers and recognises the dignity of individuals and the validity of their opinions.

What vision has inspired the development of this journal?

Connections between research, ethics, creative thinking and managerial action are the foundational premises on which to build a future based on the common good.

Peer review procedures

How is journal content quality assured?

Sinergie is a double-blind reviewed journal.

Only original content is published, following evaluation procedures. The journal's editor-in-chief and co-editor are in charge of evaluating the papers and supervising the peer-review process.

Each paper is submitted for evaluation to two anonymous independent reviewers, who are academics chosen among experts in the field.

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The editors reserve the right to require changes to a manuscript, including to its length, as a condition of acceptance. The editors reserve the right, notwithstanding acceptance, not to publish the paper if for any reason such publication would, in the reasonable judgement of the editors, result in legal liability or violation of the journal's ethical practices. If the editors decide not to publish a paper, the author or authors are free to submit it to any other journal of any publisher.

The peer-review process can lead to:
- acceptance of the paper as it is
- acceptance with minor proposals for improvements
- acceptance subject to substantial modifications
- revise and resubmit
- rejection.

The review forms will be sent back to the corresponding author, who must return the paper within a specified time frame after revising it according to the reviewers' comments. In case of substantial modifications and of "revise and resubmit", the manuscript is sent again to reviewers for further evaluation.
Guidance by the editor-in-chief, guest editors and blind referees results in a 'training ground for young researchers', which at the time of foundation was declared as the mission of *Sinergie* by its founder, Giovanni Panati.

Reviewers apply the following criteria when assessing submissions:
1. correctness of the methodological approach
2. relevance of the primary and secondary data sources and of the references
3. clarity of expression
4. originality/innovation
5. relevance from theoretical and empirical viewpoints, and potential impact of managerial implications.

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Publishing ethics and publication malpractice statement

How does the journal enforce publishing ethics and prevent malpractices?

The editors of Sinergie Italian Journal of Management apply the principles of independence, confidentiality and fairness when reviewing submissions.

Reviewers examine the submissions objectively and confidentially, in a way that helps authors to improve their manuscript.
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Length
The paper should not exceed 7,000 words, including charts, figures, tables, footnotes and references.

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No longer than 250 words. The abstract must be structured according to the following layout: frame of the research, purpose of the paper, methodology, results, research limitations, practical implications and originality of the study.

Keywords
A minimum of three and a maximum of six keywords must be included to identify the framework of the study's main topic.

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The body of the text and of the notes must be justified.

Italics may be used to emphasise certain parts of the text and for English words that are not commonly used. Neither boldface (except in paragraph titles) nor underlining should be used.

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Any tables and figures included in the paper must be numbered in progressive order, have a title (above the table/figure) and source (under the table/figure), be black and white (or grey if necessary), and be inserted in the Word document in the most appropriate position.
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Books

PORTER. M. (1985), *The competitive advantage: creating and sustaining superior performance,* Free Press, New York.

Articles

BACCARANI C., GOLINELLI G.M. (2015), "The non-existent firm: relations between corporate image and strategy", *Sinergie Italian Journal of Management,* vol. 33, n. 97, May-Aug., pp. 313-323.

Book chapters

PHILLIPS R., BARNEY J., FREEMAN R., HARRISON J. (2019), "Stakeholder Theory", in Harrison J., Barney J., Freeman R., Phillips R. (edited by), *The Cambridge Handbook of Stakeholder Theory,* Cambridge University Press, Cambridge.

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- limiti della ricerca
- implicazioni manageriali
- originalità del paper

(*English abstract*)
- framing of the research
- purpose of the paper
- methodology
- results
- research limitations
- managerial implications
- originality of the paper.

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