

Last AND least: when hotel guests do not care about environmental policies¹

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Abstract

Purpose of the paper: *The study tests whether guests' perceptions of the environmental policies put in place by the hotel influences guests' evaluation of their overall experience.*

Methodology: *The empirical analysis uses a dataset of 52,764 reviews from a hotel chain's internal platform, which specifically requests for a guest evaluation of the environmental policies. The sample includes data from 105 European hotels in 2017-2018. A semantic content analysis of almost 100,000 observations from the chain's internal platform and from open peer-to-peer platforms complements the quantitative study.*

Findings: *Findings suggest that hotel guests, when evaluating the overall experience, do not take their own evaluation on the environmental policy into account.*

Research limits: *The study adopts a single case-study approach, which does not allow for the generalizability of its findings. The study cannot disentangle the motivation of the results (e.g. limited care about the environment or inability to make the assessment). Moreover, the research does not consider the eventual impact on consumers' purchase intention or willingness to pay.*

Practical implications: *Hotel managers can improve their environmental communication strategies to enhance their perceived relevance. Open peer-to-peer platforms could promote environmental discussion by adding a specific review item. More generally, environmental regulation remains crucial, since results suggest caution in relying on consumer-driven greening strategies.*

Originality of the paper: *To our knowledge, this is the first study providing a specific assessment of the effect of environmental policies on hotel guests' overall satisfaction. Previous studies largely suggest that "greening" a hotel appears to be inevitable to meet hospitality consumers' increasing green needs, but the analysis of consumers' evaluations contradicts this view.*

Key words: Environmental policies; consumer experience; mixed-method analysis; hospitality industry

1. Introduction

Companies are facing increasing pressure to both maintain profitability and behave in a sustainable way. Growing awareness and concern regarding

¹ The authors thank the NH Hotel Group for sharing the data at the base of this study.

sustainability has, undeniably, fully reached the tourism sector (Dwyer *et al.*, 2010; Font and McCabe, 2017; Gossling and Peeters, 2015). Tourism is primarily conceived as an economic activity, the sustainability of which is contingent upon the reduction of associated social and environmental costs. The goal is to balance the well-being of host communities, the satisfaction of guests, and the profits of the industry, while ensuring that the recreational services upon which the industry depends are maintained (Liu, 2003).

With increasing awareness of environmental sustainability, a strong pressure from externally imposed government regulations encourages practices that keep up with ecological standards (Abrate *et al.*, 2015). Beyond legislative and regulatory efforts, key triggers to engage in environmental practices come from stakeholder demands, and more specifically those of consumers. Consumers and companies alike are looking for alternatives to mitigate pressing environmental demands resulting from continuous population and economic growth. As detailed by Ambec and Lenoie (2008), possible theoretical reasons configuring a win-win situation for environmental and economic performances may regard both the revenue side and the cost side. As to the revenue side, this happens when consumers (or some specific consumer segments) tend to employ a company's sustainable image in purchase and consumption decision-making. Understanding the public's specific attitude towards the environment was already prominent in the 1970s (Dunlap *et al.*, 2000) and is now becoming prominent in the travel and tourism literature (Formica and Uysal, 2002).

A major question for hoteliers has been whether managers' decisions should involve environmental sustainability issues. Despite hotel managers' spending substantial time and money on environmental initiatives, they are not sure whether their guests perceive their green efforts appropriately. A new type of tourist is indeed replacing the traditional one, and these people have different values and lifestyles, higher degrees of independence (Brunetti *et al.*, 2011), so understanding these new needs and values has become a key issue in the tourism industry. As a result, having not only effective green practices, but also coherent communication of environmental practices to stakeholders (Siano, 2012; Testa *et al.*, 2018) is of paramount importance. Hotels have recently received much attention, due to the awareness of the negative impact that they may have on the environment (Kasim, 2004). Accordingly, environmentally sensitive tourist choices have gained importance in recent years and more and more eco-conscious customers look for hotels following practices to protect the environment (Han *et al.*, 2018; Han and Yoon, 2015; Manaktola and Jauhari, 2007). Thus, the positive marketing of environmentally friendly practices can be an effective strategy for a hotel looking to promote its public image by positioning them effectively and competitively (Erdem and Tetik, 2013), while achieving a potential reduction in operating costs, especially in the case of building and utility costs (Lee *et al.*, 2010).

However, research into green marketing is still incipient (Chan, 2014). Overall, despite the plethora of studies about hotel attributes in general, those examining the importance of green attributes have been relatively

limited (Dolnicar and Otter, 2003; Watkins, 1994; Kasim, 2004). In a rather dated study, Watkins (1994) found that frequent travellers would stay in hotels with environmental strategies but would not be willing to pay a price premium for those rooms. His study also indicated that the environmentally friendly hotel attributes that travellers consider when selecting a green hotel included recycling bins, energy-efficient lighting, recycled paper for promotional materials, changing sheets only when requested, and turning off lights in unoccupied guestrooms (Watkins, 1994).

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Despite the passing of 25 years since that study, researchers have provided little information on how environmental hotel efforts are evaluated by consumers. This is even more surprising considering the growth of digital platforms and the diffusion of consumers' evaluations in the format of both online textual reviews and ratings. A large body of the literature has proven that online ratings have significant business value positively affecting both purchase intentions and willingness to pay (e.g. Mauri and Minazzi, 2013; Abrate and Viglia, 2014). Another stream of literature focuses on measuring the antecedents of overall customer rating (e.g. Zhao *et al.*, 2019). In both cases, the eventual role of environmental aspects is largely ignored. One recent exception is D'Acunto *et al.* (2018), who investigated how consumers assess the environmental dimension of corporate social responsibility from textual reviews on TripAdvisor.

This paper attempts to contribute to the identified gap related to guests' perceptions of the environmental policies put in place by hotels. In particular, the study tests whether the guests' evaluation of a hotel's environmental performance is a foundation for the hotel's overall evaluation. The case study refers to a large hotel chain that consists of 105 European hotels and presents two main peculiar features. First, while the hotel group declares its commitment in promoting eco-friendly projects, it does not position itself as a "green" hotel and targets a broad category of consumers who are not specifically green. Thus, as opposed to the literature focusing on specific niches of environmentally-conscious market segments, the goal of the paper is to understand if the 'average' consumer cares about environmental policy. Second, the empirical analysis considers customers' reviews from a hotel chain's internal platform. Among the various hotel review items (such as location, service, and so on), this internal survey specifically requests a guest evaluation of the hotel's environmental policies. This is a key distinction compared to all popular open online review platforms, which lack a specific review item dedicated to sustainability. Thanks to this feature, it is possible to develop a quantitative approach to measure the way each partial assessment of specific aspects of the guest experience - including the assessment of the environmental policy - contributes to the overall rating.

Few issues in tourism research are as practically relevant to the industry as the investigation of the role that hotel attributes play in consumers' minds. Knowing the attributes that determine accommodation choice and the features that are perceived as important in a hotel and the hotel characteristics that lead to higher customer retention enables hotel managers to make optimal hotel development decisions. By focusing

attention on the role of environmental policy, seen as an attribute of the overall experience, the paper discusses the practical implications of the promotion of sustainable development in the hotel industry.

2. The drivers in environmental policies adoption by hotels

Companies are increasingly implementing corporate social responsibility and sustainability practices, either as 'stand-alone' commitments or integrated in an environmental management system (Segarra-Oña *et al.*, 2012). However, for a long time managers have associated environmental protection with additional costs imposed by government, which in turn erode a firm's global competitiveness. This view relies on a basic paradigm according to which markets work well to make optimal use of scarce resources, so that government intervention is useful only for redistributing revenues, or when markets are no longer fulfilling their role effectively (Ambec and Lanoie, 2008). This is precisely what occurs in the case of environmental problems. However, in the course of the last two decades, a new paradigm called "triple-bottom-line" or "triple-P" (Planet, Profit, People) has emerged (Elkington, 1998), stemming from a threefold notion of corporate responsibility involving environmental and social - besides strictly economic - factors. This paradigm has been supported by a number of studies (e.g. Porter and van der Linde, 1995) that propose a number of ways thanks to which improving a company's environmental performance can entail better economic performance. Ambec and Lanoie (2008) show that the expenses that are incurred to reduce pollution can be offset by gains made elsewhere. This more recent approach has produced, systems, and processes in recent studies to measure the level of sustainability of an enterprise, thus allowing for the establishment of corporate reporting based on environmental, social and economic parameters (Siano, 2012).

Research into the reasons for, and effects of, such environmental commitments has mainly focused on manufacturing industries (Johnstone and Labonne, 2009). However, the role of environmental concerns is increasingly investigated in the service industry (Cainelli *et al.*, 2011), and particularly in the tourism and hospitality industry (Erdogan and Tosun, 2009; McNamara and Gibson, 2008; Segarra-Oña *et al.*, 2012; Tzschentke *et al.*, 2004, 2008). Hotels are progressively implementing environmental policies and practices, and pursue official certifications for their initiatives.

A green hotel is an environmental-friendly lodging property that initiates and follows ecologically sound programs/practices (e.g., water and energy saving, reduction of solid waste, and cost saving) to help protect our planet. When green management was first introduced, the major reasons for a hotel to "go green" centred on complying with government regulations and saving money by reducing waste and energy usage (Lee *et al.*, 2010). A plethora of drivers led hotels to pursue environmental sustainability beyond government regulations. These include factors such as a manager's disposition (Park *et al.*, 2014) and response to public scrutiny to enhance employees' job satisfaction and commitment and improve investor relations, or for moral reasons (Rahman *et al.*, 2012).

In sum, several environment-focused green initiatives have been executed. Gilg *et al.*, (2005) emphasized the three Rs - reduce, reuse, and recycle - and two Es - energy and efficiency - as the core definitional elements for distinguishing green from non-green initiatives. Drawing upon related literature (Dutta *et al.*, 2008; Cordano and Frieze, 2000), we identified five categories of environment-focused green initiatives revolving around the notions of the three Rs and two Es: (1) recycling and composting (First, 2008), (2) renewable power (Fahmy *et al.*, 2012), (3) pollution prevention and reduction (Cordano and Frieze, 2000), (4) energy efficiency and conservation (Lee *et al.*, 2010), and (5) water efficiency and conservation (First, 2008). The financial benefits and increased competitiveness are often predominantly pointed out as primary reasons for hotels to implement sustainability activities (Claver-Cortés and Pereira-Moline, 2007; Kang *et al.*, 2010; Kim and Han, 2010; Molina-Azorin *et al.*, 2009; Rahman *et al.*, 2012; Segarra-Oña *et al.*, 2012; Tarí *et al.*, 2010). Potential reduction in operating costs, especially in the case of building and utility costs, are also strong reasons to engage in environmental policies (Rahman *et al.*, 2012). By making minor changes in the construction, building management and use of technology, energy usage can be reduced by 20% in existing buildings and 50% in new buildings (ibid), water usage can be reduced by 40%, and better management of waste disposal can result in a cost saving of 25% (Hawkins, 2006).

With a growing number of customers seeking green operations, being a green hotel can provide a basis for good marketing strategies, in that its environmental-friendly practices may help position it more favorably in the competitive arena (Manaktola and Jauhari, 2007). In addition to gaining a competitive edge, differentiating themselves from similar, albeit non-green operations, and fulfilling customers' needs for environmentally friendly hotels, appear to be strong drivers. A green hotel's overall image can contribute to more favorable behavioral intentions (Han *et al.*, 2010).

However, whether being committed to environmental-friendly initiatives can be useful only to target specific and limited niches of the market or enable sustainable initiatives to be recognized by the "average" consumer as a significant attribute of its overall experience, remains unclear. Despite ongoing efforts, the tourism industry is still known as one of the least developed industries in regards to the implementation of sustainability policies (Smith and Feldman, 2003), and leading European hotel chains are accused of lagging behind comparably sized corporations from other industries (Lane and Hill, 2006).

3. Guests' perceptions of environmental hotel practices

Today, society judges firms based on their business ethics, social accountability and socio-economic awareness, as well as their financial outcomes. As public understanding about global warming and climate change grows, stakeholders, including employees and customers, expect hotels to act on their understanding (Trang *et al.*, 2019). This global trend guides hotels to move in a green direction. As this study suggests, a green

hotel image may become a powerful operational tool in attracting and retaining more guests. Incorporating (functional and emotional) green positioning into hotel operations is a prerequisite for the creation of a green hotel image (Lee *et al.*, 2010). Such authors suggest that a green hotel's overall image favorably enhances behavioral intentions. Greening a hotel appears to be inevitable in order to meet hospitality customers' increasing green needs and boost their positive intention and behavior towards the firm (Han *et al.*, 2011; Han and Hyun, 2018). The main reason why guests choose to stay at a green hotel is to achieve the sense that their purchase decision contributes to saving the planet and leaving a green environment for their children. These emotional benefits can be classified as follows: (1) a feeling of well-being inspired by altruistic behavior (Ritov and Kahnemann, 1997), (2) auto-expression benefits associated with socially conscious consumption of green products/services (Belz and Dyllik, 1996) and (3) a feeling associated with nature, such as loving nature and having an emotional fondness for nature (Kals *et al.*, 1999).

Prior studies confirm the relevant role of environmental consciousness as a moderator in the relationship between a company's green image and consumer behavior. Martínez *et al.*, (2018) demonstrate that customer perceptions of green practices act as a major driver when choosing a certified hotel (Han *et al.*, 2009). Oliver (1996) defined "green satisfaction" as "a pleasurable level of consumption-related fulfilment to satisfy a customer's environmental desires, sustainable expectations, and green needs". The measurement of green satisfaction includes four items: (1) You are happy about the decision to choose this brand because of its environmental commitments; (2) You believe that it is a right thing to purchase this brand because of its environmental performance; (3) Overall, you are glad to buy this brand because it is environmental friendly; and (4) Overall, you are satisfied with this brand because of its environmental concern. Many further steps aimed at engaging consumers in hotel environmental policies could still be put in place. Sustainability practices are, indeed, mainly implemented in back-of-house areas (i.e. areas where hotel guests have no access), which neglects the opportunity to involve and encourage guests to reduce their environmental impact. There are some exceptions, with hotels increasingly encouraging guests to reduce their electricity and water consumption through information stickers in bed- and bathrooms. The most commonly used sustainability practice involving guests is the towel and linen reuse programme (El Dief and Font, 2010; Goldstein *et al.*, 2008; Shang *et al.*, 2010). This can also save the hotel considerable costs on electricity, water and cleaning products. Overall, previous research is consistent in suggesting this green turn (Han *et al.*, 2011).

On the other hand, a few studies in consumer behavior seem to produce controversial findings related to the importance that consumers give to marketing social responsibility issues. Belk, Devinney and Eckhardt (2005) show how there is a general lack of consumer concern for ethical issues across cultures in general. Carrigan and Attalla (2001) point out that despite consumers' becoming more aware and sophisticated, this does not necessarily translate into behavior that favors ethical companies and punishes unethical firms.

4. Methodology

4.1 Overview of the study

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The unit of analysis is the consumer level in this study, and more specifically the professional and leisure guests of an international hotel group who provided an evaluation of their overall experience.

A case-study strategy was chosen because it offers new insights into a phenomenon of which little is known (Eisenhardt, 1989). The case study aims at theory building (Eisenhardt, 1989) and is particularly useful in forming a holistic view of context-specific and complicated situations and topics (Yin, 2003). The study adopted a sequential transformative mixed-method approach (Creswell *et al.*, 2003, p. 182), consisting of:

- A quantitative analysis on a dataset of 52,764 observations coming from the group's internal platform, which specifically requests for a guest evaluation of the environmental policies.
- A subsequent qualitative semantic analysis on the open-ended textual reviews coming from both internal data (the company's internal survey) and public, external data (Booking.com, Google, Expedia, and TripAdvisor).

A mixed-method research approach enhanced the overall validity of results by permitting a triangulation of the findings. In this specific study, the qualitative results are meant to complement and confirm the main quantitative analysis, thus making the study of greater use.

The empirical analysis has selected an international context benefiting from the collaboration of the NH Hotel Group. NH is an international hotel group with a portfolio of 350 hotels across multiple urban destinations in Europe that caters to both business and leisure users, and is positioned within the top 50 ranking worldwide as a mid- and upscale range hotel group.

Empirical data were verified and triangulated with interviews with the company's management and secondary sources (internal reports, confidential material, digital data from the website) to obtain a fuller and more precise perception of the context and to enhance the reliability of the research (Eisenhardt, 1989; Yin, 2013). This study administrated an internal questionnaire survey to verify the research question.

The hotel group's sustainable commitment is communicated through different channels. The digital platform, where the company communicates its strategic environmental plan and results through its website, is undoubtedly a powerful one. The company engages in various ecologically sound practices (including, for example, the Carbon Disclosure Project (CDP); Spanish Green Growth Group; #PorElClima Community; One million Commitments for Climate Change promoted by the United Nations) that aim to reduce the emissions generated by hotels and their related activities.

On the website, sustainability is claimed to be a strategic value for the hotel group acting as a cross value enabler to build the future of the company, which keeps on investing in innovation in order to develop eco-efficient solutions. In accordance with Directive 2009/28 / EC, 61%

of European hotels have some type of renewable energy supply in place to promote the use of renewable energies in the European Union.

Since 2007, the company has reduced energy consumption by 34% per room. This reduction has been possible thanks to several measures that have been implemented by the company. The energy efficiency concept is centered around the constant consideration of opportunities aimed at improving the building's energy performance (e.g. replacement of equipment to achieve greater efficiency, explore new technologies, improve insulation, select the right light bulbs, best minibars, washing systems, heating and air/conditioning equipment).

In the same timeframe, the company has reduced water consumption by 31%. This reduction has been possible thanks to the sustainable measures that have been implemented by the company (selection of best equipment, water saving systems of faucets, showers and toilets, recycling of greywater, reuse of water for irrigation and reduction systems in swimming pools).

From a marketing point of view, the company's commitment has also been highlighted through different new proposals. Among such new services the website promotes "eco-friendly meetings" for company events that enable clients to organize carbon neutral meetings, and make up for any impact by supporting sustainable development and climate change projects. A compensation for emissions is also offered, thus making a more limited impact on the environment.

In sum, despite the fact that environmental practices are not part of the company's core services or core competencies, and that the company does not position itself strictly as a "green" hotel that bases its competitive advantage on its stance in environmental issues, the company enforces rigorous environmental policies that are strongly communicated through digital means. Consequently, the company markets itself to a broad range of consumers who are not specifically green.

4.2 Quantitative method

The hotel chain that was analyzed in the case study monitors reviews from different platforms: open online platforms, such as TripAdvisor, Booking.com, Google, Expedia, and an internal platform designed to gather feedback on specific aspects of the consumer experience. In comparison to the public platforms, the peculiarity of the internal platform is its request for a specific guest evaluation of the environmental policies. This unique source of data is therefore perfectly suitable for the main purpose of our study, that is investigating the way the guest perception of the hotel's environmental commitment influences the overall guest evaluation of his/her experience.

The dataset includes all consumers' reviews in relation to a sample of 105 hotels in 8 European cities: Amsterdam, Barcelona, Berlin, Brussels, Frankfurt, Madrid, Milan, Rome. The data are the result of a survey that is regularly carried out by the hotel chain and is administered by e-mail a week after a guest's check-out while offering him/her a 15% discount on his/her next stay (see Appendix 1).

The analysis covers the period from January 2017 to October 2018, with a total amount of 84,470 consumers' reviews on the internal platform. Each review assesses quality regarding 11 different dimensions, namely: overall evaluation (*OVERALL*), cleanliness (*CLEAN*), value for money (*VALUE*), staff friendliness and service (*SERV*), quickness and efficiency in check-in and check-out (*CHECK*), location (*LOC*), room and bathroom (*ROOM*), food and beverages (*FB*), installations (*INST*), sleep quality (*SLEEP*) and environmental strategy (*ENV*). For each dimension, the consumer has to provide a distinct quantitative score on a scale from 1 to 5 (the overall score is also a distinct score, thus, not the average of the other dimensions).

Table 1 provides a summary of the available data. Some reviews only contained partial information, because the consumer did not evaluate every single item. However, the vast majority of quality dimensions displayed a frequency of missing values that is lower than 1 percent. The number of cases that do not provide an assessment of the value for money was a bit higher (2.5 percent), while the incidence is much more evident for two specific assessments: *FB* and *ENV*. While, in the case of *FB*, it is natural to associate these missing values to guests who did not consume any food and beverage (or breakfast) at the hotel, the number of missing evaluations associated to the environmental policy is significant in itself. About one out of every four consumers did not provide any evaluation on environmental policies, and this could reflect indifference, or perhaps the inability, to assess this dimension. The total number of reviews presenting complete information on all the specific items is equal to 52,764.

Tab. 1: Descriptive statistics

Quality dimension	N. of observations	(% missing)	Average score	(Standard deviation)
OVERALL	84,470	(0.00%)	4.28	(0.86)
CLEAN	84,113	(0.42%)	4.36	(0.85)
VALUE	82,386	(2.47%)	3.98	(0.89)
SERV	84,007	(0.55%)	4.48	(0.78)
CHECK	83,964	(0.60%)	4.41	(0.83)
LOC	84,166	(0.36%)	4.32	(0.79)
ROOM	84,233	(0.28%)	4.18	(0.92)
FB	70,126	(16.98%)	4.16	(0.85)
INST	83,853	(0.73%)	4.16	(0.92)
SLEEP	83,963	(0.60%)	4.31	(0.87)
ENV	63,333	(25.02%)	4.18	(0.76)

Source: our elaboration

As to the score levels, the overall experience is rated rather positively (4.28 over 5), which is in line with the scores one can find on booking.com (provided they are rescaled in scale 1 to 10) for 4-star rated hotels. Guests tend to be more critical when assessing value for money, which received the lowest average score (3.98), while service earned the highest score (4.48). The scores over the different dimensions clearly exhibit a high degree of correlation, as shown in Table 2, although the value of correlation

never exceeded 0.7. Moreover, a regression of the *OVERALL* score on all the other dimensions signals an average Variance Inflation Factor (*VIF*) equal to 2, with a maximum *VIF* of 2.54, excluding major problems due to multi-collinearity (Hair *et al.*, 2010).

Tab. 2: Correlation Matrix

	OVERALL	CLEAN	VALUE	SERV	CHECK	LOC	ROOM	FB	INST	SLEEP	ENV
OVERALL	1										
CLEAN	0.62	1									
VALUE	0.69	0.53	1								
SERV	0.61	0.49	0.49	1							
CHECK	0.57	0.46	0.47	0.66	1						
LOC	0.42	0.35	0.38	0.36	0.34	1					
ROOM	0.69	0.68	0.60	0.46	0.44	0.36	1				
FB	0.53	0.42	0.48	0.47	0.41	0.37	0.43	1			
INST	0.59	0.56	0.50	0.43	0.42	0.33	0.60	0.43	1		
SLEEP	0.61	0.51	0.51	0.50	0.48	0.34	0.56	0.41	0.54	1	
ENV	0.58	0.53	0.55	0.52	0.52	0.42	0.53	0.51	0.52	0.52	1

Source: our elaboration

The quantitative analysis aimed at assessing the relative components of the overall score given by the guest. In other words, the assumption is that the overall evaluation can be seen as a weighted average of the partial assessments that were attributed to the specific aspects of the guest experience. To disentangle these relative weights, the empirical analysis employed the following constrained linear regression model:

$$\begin{aligned}
 \text{OVERALL} &= \beta_0 + \sum_i \beta_i + \varepsilon & [1] \\
 i &\in \{ \text{CLEAN, VALUE, SERV, CHECK, LOC, ROOM, FB, INST, SLEEP, ENV} \} \\
 \sum_i \beta_i &= 1
 \end{aligned}$$

The sum of the parameters β_i is constrained to 1, so that each parameter associated to a specific quality dimension can be interpreted as the relative impact of the specific quality item on the overall experience. The usual white noise assumptions hold true regarding the error term ε .

4.3 Qualitative method

The qualitative phase of the research aimed to complement the first quantitative phase of the study by investigating whether and in which terms consumers assess hotels' environmental practices when they write a review about their accommodation experience. A semantic content analysis was performed on the open-ended textual reviews coming from both internal data (the company's internal survey) and public data from peer-to-peer platforms (Booking.com, Google, Expedia, and TripAdvisor). As regards reviews (both internal and public), text is important because it includes affective words conveying positive and negative emotions and strengthening the intent of a review. Content and narrative analyses of consumer reviews have attracted considerable attention in recent

studies in order to gain insight about consumption experiences. Service features that consumers care about can be highlighted, and more detailed interpretations of their perceptions can be provided (e.g. Zhao *et al.*, 2019).

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5. Results and discussion

5.1 Quantitative Results

Table 3 presents the results of the constrained linear regression on the full sample. The most important factor appears to be value for money (with a weight approaching 25%), followed by the quality of the room (19.5%) and service (16%). The most striking result is that all partial evaluations except the environmental policy had a weight that was significantly different from 0. This suggests that guests, when evaluating the overall experience, did not seem to take their own evaluation on the environmental policy into account. One useful measure of the accuracy of the model consists in the Median Absolute Percentage Error (MdAPE) between the forecast obtained by substituting the estimated parameters in equation [1] and the real values of the dependent variable. This value is equal to 5.1 percent, with a significant improvement compared to a naïve model weighting all factors equally (in which case the MdAPE would be equal to 5.6 percent).

Tab. 3: Results

Explanatory variables (i)	Estimated β	(t-statistics)
CLEAN	0.068**	(17.75)
VALUE	0.247**	(74.09)
SERV	0.158**	(40.05)
CHECK	0.067**	(18.41)
LOC	0.028**	(9.48)
ROOM	0.195**	(53.67)
FB	0.073**	(23.00)
INST	0.069**	(21.59)
SLEEP	0.095**	(28.30)
ENV	0.000	(-0.13)
Constant (β_0)	0.074**	(29.34)
Root Mean Square Error	0.9417	
MdAPE	5.12%	
Number of observations	52,764	

** p-value <0.01; * p-value<0.05

Source: our elaboration

One limit of the model above is the assumption that all guests give the same weight to the different factors. One possible option to refine the analysis is to resort to clustering. Cluster analysis is a method for multivariate data that allows grouped observations based on a set of selected characteristics. The resulting groups are more homogeneous and can be interpreted as different segments of consumers. Specifically, the k-means algorithm (MacQueen, 1967) is an iterative algorithm that assigns

each observation to a predefined number of cluster, so as to minimize the sum of the squared Euclidean distances between the observations and their cluster centroid (the arithmetic mean of all the data points belonging to that cluster). The input variables for the k-means algorithm include all the quality dimensions of the review and the number of clusters has been set to three, in consideration of pursuing both accuracy and parsimony objectives.

Table 4 show the results of the constrained regression model applied to the three identified clusters, which define three distinct consumer profiles. The first group (around 50 percent of the sample) might be defined as the “service-oriented” consumer and gives the most importance to the service dimension, as well as to cleanliness and check-in/check-out. This type of guest pays particular attention to human interaction with employees, that is, the social servicescape. Instead, the second group of consumer (around 9 percent of the sample) is more practical and “value-oriented”. In fact, almost 40 percent of the overall evaluation depends on his/her rating in terms of value for money. The dimensions reflecting human interactions take on the least weight, while great importance is attributed to physical tangible attributes, such as room facilities, installations and sleep quality. Finally, the third group of consumers (the remaining 40 percent of the sample) tends to average across all types of evaluations.

The predictive power of the model reduces the MdAPE to 4.3 percent. By focusing on the main goal of the analysis, the results confirm that environmental policy is the least important factor in consumers’ overall evaluation of the accommodation experience. This also holds in the third cluster of consumers, which however pay at least a certain amount of attention to environmental policies (4 percent).

Tab. 4: Results after clustering

	Cluster 1	“Service-oriented”	Cluster 2	“Value-oriented”	Cluster 3	“Neutral”
Explanatory variables (i)	β	(t-statistics)	β	(t-statistics)	β	(t-statistics)
CLEAN	0.109**	(17.90)	0.037**	(3.51)	0.058**	(9.92)
VALUE	0.132**	(33.52)	0.403**	(34.09)	0.256**	(45.40)
SERV	0.239**	(35.64)	0.150**	(14.00)	0.128**	(21.18)
CHECK	0.105**	(18.29)	0.057**	(5.55)	0.053**	(9.67)
LOC	0.061**	(15.45)	0.034**	(3.46)	0.071**	(14.86)
ROOM	0.139**	(27.18)	0.152**	(13.29)	0.164**	(28.36)
FB	0.077**	(18.87)	0.026*	(2.44)	0.095**	(19.08)
INST	0.048**	(11.03)	0.069**	(6.90)	0.060**	(11.82)
SLEEP	0.081**	(15.81)	0.097**	(10.04)	0.074**	(14.44)
ENV	0.009*	(2.15)	-0.026	(-1.92)	0.040**	(6.31)
Constant (β_0)	0.170**	(30.92)	-0.289**	(-11.33)	0.165**	(18.12)
Root Mean Square Error	0.7074		1.3055		1.0320	
Number of observations	26,998		4,545		21,221	
MdAPE	4.33%					

** p-value <0.01; * p-value<0.05

Source: our elaboration

5.2 Qualitative findings

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The analysis searched for specific keywords (i.d. *sustainability*, *green*, *environmental* in English and Italian), which produced extremely limited results. Out of 25,117 Italian and 68,389 English reviews, only 28 mentioned environmental issues (20 from the internal survey and 8 from public data coming from Booking.com, Google, Expedia, and TripAdvisor). This result is inverted compared to the overall number of textual reviews (28% originated from the internal survey and 72% from the public platforms). In any case, environmental discourse is undeniably scant in the textual reviews of the accommodation experience. As such, the qualitative semantic analysis complemented the quantitative study without producing the rich insights that qualitative research is potentially able to provide. Despite the scarcity paucity and quality (very few words when present) of the reviews, the data can be categorized in the following themes. First of all, the study revealed that the environmental elements are mainly (over 2/3) associated with negative emotions and regard negative hotel behaviors about waste and energy management. Indeed, the few positive comments (3 out of a total of 28) are quite generic and simply mention “*Environmental policy*” (Booking.com). One comment refers, instead, to CSR activities: “*I loved ... promoting local artists through custom art pieces in each room and art that funds environmental causes like the protection of Chinese elephants*” (Expedia).

The main negative comments regarding *energy consumption* that emerged from the reviews often mention the towel re-use policy during the stay (13 out of 28 reviews). The following excerpt reflects the customers’ views on this issue: “*As regards the environmental profile - it is frustrating, with signs stating ‘hang up towels if you want to re-use’ when towels are changed anyway*” (Internal survey) or “*Like all the hotels we stayed at in Spain, they claimed to be eco friendly by not washing towels*” (TripAdvisor). A second negative issue refers to the hotel’s waste management practices, as the following review suggests: “*The waste of food on such a large scale was absolutely horrendous and, as an environmentally conscious group, quite shocking*” (TripAdvisor). Or: “*The environment is very important to me. The high level of service sometimes did not align with the important and worthy environmental strategy of the NH Hotel Group. For example ... the bar of soap was changed very often, despite being only very lightly used. One bar in the sink and one in the shower were more than enough for the duration of the 4-day stay*” (Internal Survey). Along the same lines: “*The hotel shows no environmental awareness. No possibility to recycle garbage in the rooms. No environmental-friendly products (soap, shampoo, etc). No organic food. Sugar and butter were supplied in small packages producing unnecessary garbage*” (Internal Survey).

Additionally, a suggestion to market the company’s environmental commitment more powerfully is put forward by the following neutral review: “*Market all the environmental-friendly work that is carried out in the hotel. I learnt about it from one of the managers of the hotel chain. There is only a certificate in the reception, no info in the room or elsewhere for the guests to see*” (Internal Survey).

The negative reviews reflected a general perception of misalignment and scant correspondence between the company's actual practices (e.g. towel changing) and its environmental commitment. Consumers that write negative reviews on this issue are, indeed, aware of the company's general commitment and of the great gap with current behaviors. The scarcity of the guests' content mentioning environmental issue through both the internal and external platforms, is to be considered a finding in itself that confirms the limited relevance of environmental policies in guests' mental model of an overall accommodation experience.

6. Discussion and conclusions

Environmental policies have been widely recognized as a prominent strategy for hotel businesses and thus received substantial attention from hospitality and tourism scholars (Geerts, 2014; Han *et al.*, 2011). While previous research has examined guest participation intention in relation to green hotel practices, willingness to pay, and loyalty intention (e.g. Han *et al.*, 2018;), the way consumers evaluate environmental policies has been overlooked by researchers, also due to the absence of a specific review item dedicated to sustainability in popular open online review platforms. Thanks to a unique source of data from a hotel chain's internal platform, this study investigated how consumers assess hotels' environmental policies and whether such an evaluation influences their overall satisfaction. Overall satisfaction is a multi-dimensional construct. The quantitative model allowed the assessment of the way each partial evaluation of a specific aspect of the guest experience, contributes to the multi-dimensional overall evaluation. In a hotel context, both the social servicescape (i.e., interactions with employees) and physical servicescape (i.e. building, landscape and interior facilities) drive consumer satisfaction.

Our main contribution to the marketing and tourism literature lies in its unveiling that green practices are "nonessential attributes" that seem to have very limited relevance in consumers' mental models of an accommodation experience. Despite the increasing concern for and awareness of environmental issues of governments, companies, and other stakeholders, consumers do not seem to perceive these issues as relevant. Our findings indicate that high values in environmental policies are not reflected in high values of the overall evaluation. Simply put, a good evaluation of the company's environmental policies does not enhance an overall consumer satisfaction.

The results of this study may be explained in a number of ways. An initial straightforward explanation either suggests that hotel guests are simply indifferent to hotel environmental policies or that they are unable to assess this dimension due to a lack of information on the hotel's activity in this sense. The overarching nature of an 'environmental strategy' may be too complex for the guests to evaluate on their own. The ability of a hotel to clearly signpost what actions and environmental policies it is enacting to guests may also impact on guests' ability to comment on policies, as they may remain unseen if not explicitly signaled during a stay. An alternative

explanation could be that guests may expect certain environmental policies like the towel re-use policy as 'normal' hotel behavior and therefore not consider it worth commenting on.

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As far as the open peer-to-peer platforms are concerned, the fact that environmental policies are not an item that consumers are asked to rate may lead to a lack of perceived relevance when filling out the review. When completing the review in fact, consumers may not think of mentioning any environmental content because there is no previous reference to it in the rating section. However, we cannot avoid suggesting that these poor results could reflect the fact that environmental issues are not key pillars in consumers' mental models of an overall satisfaction of an accommodation experience.

From a managerial standpoint, this study has three implications. The first regards the need to raise consumer relevance and awareness regarding environmental issues. This study recommends that hotels invest more in communicating environmental practices that can be directly "experienced" by consumers (e.g. water management during room cleaning) and involve them (e.g. towel re-use activity) by moving beyond the practices that are implemented in back-of-house areas (i.e. areas hotel guests have no access to) that are not noticed by consumers. Second, in addition to raising the relevance of environmental issues, hotel management should make their environmental commitment known beyond the content on the hotel's website and the few communication artefacts within the hotel. The company's positive achievements in environmental policies that are described at present on the website could raise awareness and relevance in consumers' mental models if communicated more broadly. As suggested by the qualitative results, to deal with this, frontline employees (e.g. receptionists and service staff) should be properly trained in explaining environmental initiatives programs. By proceeding in this direction, not only are consumers stimulated to become involved in environmental initiatives, but an increase in the relevancy of environmental issues may also be facilitated. Third, the company's practices should always be in line with the environmental commitment it lays claim to. The company must consistently implement the environmental policy that it communicates to consumers, especially ones that invite consumers' participation (e.g. towel re-use activity). If not, mere communication can backfire because it raises consumers' expectations without "walking the talk".

This study also has implications for open peer-to-peer platforms. The inclusion of a specific review item on environmental strategy could promote environmental discussion contributing to an increase in consumers' awareness and perception of the relevance of such an issue. Moreover, the study's results recommend caution in relying on the development of environmental-friendly strategies as part of a market-orientation approach. Thus, regulation continues to play a crucial role in promoting the sustainability of the hotel industry.

This study presents a few limitations that further research should mitigate. First, despite the uniqueness and richness of the dataset (more than 50,000 reviews for the quantitative study and almost 100,000 observations for the semantic content analysis), the information is limited to a single

hotel chain. Whilst important aspects of this study can be transferred to, and have relevance for practice, a case study research design limits the generalizability of its findings. Second, both quantitative and qualitative data analyses could be deepened through other kinds of research methods; a further in-depth face-to-face analysis with consumers could help to unveil and unpack what environmental policies mean to them. The data collection methods that were used in this study to evaluate environmental factors were effective in capturing a general picture but a more delicate qualitative tool would unlock a more nuanced set of responses. Future research could disentangle the previously mentioned reasons for the results (e.g. lack of care about the environment or inability to make assessments on environmental policies), also by means of experimental settings. Third, the study is limited to the analysis of consumers' post-consumption reviews without investigating consumers' purchase intention and willingness to pay ex-ante. Finally, in light of the qualitative semantic analysis focused on a limited number of keywords, future research should include a broader dictionary, as done in D'Acunto *et al.*, (2018) on a TripAdvisor reviews database.

References

- ABRATE G., BRUNO C., ERBETTA F., FRAQUELLI G. (2015), "Business innovation and waste management sustainability: the case of door-to-door collection", *Sinergie Italian Journal of Management*, vol. 33, n. 98, pp. 377-393.
- ABRATE G., VIGLIA G. (2014), "Reputazione e monitoraggio della competizione in tempo reale: le sfide innovative del pricing online", *Sinergie Italian Journal of Management*, n. 93, pp. 35-53.
- AMBEC S., LANOIE P. (2008), "Does it pay to be green? A systematic overview", *The Academy of Management Perspectives*, vol. 22, n. 4, pp. 45-62.
- AUGER P., DEVINNEY T.M. (2007), "Do what consumers say matter? The misalignment of preferences with unconstrained ethical intentions", *Journal of Business Ethics*, vol. 76, n. 1, pp. 361-383.
- BELK R., DEVINNEY T., ECKHARDT G. (2005), "Consumer ethics across cultures", *Consumption Markets and Culture*, vol. 8, n. 3, pp. 275-289.
- BELZ F., DYLLIK T. (1996), "Okologische positionierungsstrategien", in Tomczak T.R., Roosdorp A. (Eds.), *Positionierung - Kernentscheidung des marketing* (pp. 170-179). St Gallen, Switzerland: Thexis Verlag.
- BRUNETTI F., TESTA F., UGOLINI M. (2011), "Il cliente nell'agenzia viaggi", *Sinergie Italian Journal of Management*, n. 66, pp. 181-211.
- CAINELLI G., MAZZANTI M., ZOBOLI R. (2011). "Environmentally oriented innovative strategies and firm performance in services: micro-evidence from Italy", *International Review of Applied Economics*, vol. 25, n. 1, pp. 61-85.
- CARRIGAN M., ATTALLA A. (2001). "The myth of the ethical consumer-do ethics matter in purchase behaviour?", *Journal of Consumer Marketing*, vol. 18, n. 7, pp. 560-578.
- CHAN E.S.W. (2014), "Green marketing: hotel customers' perspective", *Journal of Travel and Tourism Marketing*, vol. 31, n. 8, pp. 915-936.

- CHEN A., PENG N. (2012), "Green hotel knowledge and tourists' staying behaviour", *Annals of Tourism Research*, vol. 39, n. 4, pp. 2211-2219.
- CLAVER-CORTÉS E., PEREIRA-MOLINE J. (2007), "Competitiveness in mass tourism", *Annals of Tourism Research*, vol. 34, n. 3, pp. 727-745.
- CORDANO M., FRIEZE I.H. (2000), "Pollution reduction preferences of U.S. environmental managers: applying Ajzen's theory of planned behaviour", *Academy of Management Journal*, vol. 43, n. 4, pp. 627-641.
- CRESWELL J.W., PLANO CLARK V.L., GUTMANN M.L., HANSON W.E. (2003), *Advanced mixed methods research designs*, Handbook of Mixed Methods in Social and Behavioural Research, pp. 209-240.
- D'ACUNTO D., TUAN A., DALLI D., VIGLIA G. (2018), "Do consumers care about CSR? Analyzing online hotel review content through a big data approach", presented at CHME 2018, Bornemouth, UK.
- DOLNICAR S., OTTER T. (2003), "Which Hotel Attributes Matter? A Review of Previous and a Framework for Future Research", in Griffin T., Harris R. (eds.) *Proceedings of the 9th Annual Conference of the Asia Pacific Tourism Association (APTA)*, University of Technology Sydney, 2003, n. 1, pp. 176-188.
- DUNLAP R., VAN LIERE K., MERTIG A., JONES R. (2000), "Measuring endorsement of the new ecological paradigm: A revised NEP scale", *Journal of Social Issues*, vol. 56, n. 3, pp. 425-442.
- DWYER L., FORSYTH P., SPURR R., HOQUE S. (2010), "Estimating the carbon footprint of Australian tourism", *Journal of Sustainable Tourism*, vol. 18, n. 3, pp. 355-376.
- DUTTA K., UMASHANKAR V., CHOI G., PARSA H.G. (2008), "A comparative study of consumers' green practice orientation in India and the United States: a study from the restaurant industry", *Journal of Food service Business Research*, vol. 3, n. 11, pp. 269-285.
- EL DIEF M., FONT X. (2010), "The determinants of hotels' marketing managers' green marketing behaviour", *Journal of Sustainable Tourism*, vol. 18, n. 2, pp. 157-174.
- ELKINGTON J. (1998), *Cannibals with forks: the triple bottom line of 21st century business*, Capston Publishing, Oxford.
- ERDEM B., TETIK N. (2013), "An environmentally-sensitive approach in the hotel industry: ecolodges", *International Journal for Responsible Tourism*, vol. 2, n. 2, p. 22.
- ERDOGAN N., TOSUN C. (2009), "Environmental performance of tourism accommodations in the protected areas: case of Goreme Historical National Park", *International Journal of Hospitality Management*, vol. 28, n. 3, pp. 406-414.
- EISENHARDT K.M. (1989), "Building theories from case study research", *Academy of Management Review*, vol. 14, n. 4, pp. 532-550.
- FAHMY F.H., AHMED N., FARGHALLY H. (2012), "Optimization of renewable energy power system for small scale brackish reverse osmosis desalination unit and a tourism motel in Egypt", *Smart Grid Renewable Energy*, vol. 3, n. 1, pp. 43-50.
- FONT X., MCCABE S. (2017), "Sustainability and marketing in tourism: its contexts, paradoxes, approaches, challenges and potential", *Journal of Sustainable Tourism*, vol. 25, n. 7, pp. 869-883.

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- FORMICA S., UYSAL M. (2002), "Segmentation of travelers based on environmental attitudes", *Journal of Hospitality and Leisure Marketing*, vol. 9, n. 3/4, pp. 35-49.
- GEERTS, W. (2014), "Environmental certification schemes: Hotel managers' views and perceptions", *International Journal of Hospitality Management*, vol. 39, pp. 87-96.
- GILG A., BARR S., FORD N. (2005), "Green consumption or sustainable lifestyles? Identifying the sustainable consumer", *Futures*, vol. 37, n. 6, pp. 481-504.
- GOLDSTEIN N.J., CIALDINI R.B., GRISKEVICIUS V. (2008), "A room with a viewpoint: using social norms to motivate environmental conservation in hotels", *Journal of Consumer Research*, vol. 35, n. 3, pp. 472-482.
- GOSSLING S., PEETERS P. (2015), "Assessing tourism's global environmental impact 1900-2050", *Journal of Sustainable Tourism*, vol. 23, n. 5, pp. 639-659.
- HAIR J.F., BLACK W.C., BABIN B.J., ANDERSON R.E., TATHAM R.L. (2010), *Multivariate Data Analysis*, 7th edition, Pearson, New York.
- HAN H., HYUN S.S. (2018), "What influences water conservation and towel reuse practices of hotel guests?", *Tourism Management*, vol. 64, pp. 87-97.
- HAN H., HSU L.T., LEE. J.S. (2009), "Empirical investigation of the roles of attitudes toward green behaviours, overall image, gender and age in customers' eco-friendly decision-making process", *International Journal of Hospitality Management*, vol. 28, n. 4, pp. 519-528.
- HAN H., HSU L.T.J., SHEU C. (2010), "Application of the theory of planned behaviour to green hotel choice: Testing the effect of environmental friendly activities", *Tourism Management*, vol. 31, n. 3, pp. 325-334.
- HAN H., LEE J., TRANG H., KIM W. (2018), "Water conservation and waste reduction management for increasing guest loyalty and green hotel practices", *International Journal of Hospitality Management*, vol. 75, pp. 58-66.
- HAN H., YOON H. (2015), "Customer retention in the eco-friendly hotel sector: examining the diverse processes of post-purchase decision-making", *Journal of Sustainable Tourism*, vol. 23, n. 7, pp. 1095-1113.
- HAWKINS R. (2006), "Accounting for the environment: reflecting environmental information in accounting systems", in Harris P., Mongiello M. (Eds.), *Accounting and Financial Management - Developments in the International Hospitality Industry*, Butterworth-Heinemann, Oxford, pp. 262-281.
- JOHNSTONE N., LABONNE J. (2009), "Why do manufacturing facilities introduce environmental management systems? Improving and/or signalling performance?", *Ecological Economics*, vol. 68, n. 3, pp. 719-730.
- KALS E., SCHUMACHER D., MONTADA L. (1999), "Emotional affinity toward nature as a motivational basis to protect nature", *Environment and Behaviour*, vol. 31, n. 2, pp. 178-202.
- KANG K.H., LEE S., HUH C. (2010), "Impacts of positive and negative corporate social responsibility activities on company performance in the hospitality industry", *International Journal of Hospitality Management*, vol. 29, n. 1, pp. 72-82.
- KASIM A. (2004), "Socio-environmentally responsible hotel business: Do tourists to Penang Island, Malaysia care?", *Journal of Hospitality and Leisure Marketing*, vol. 1, n. 4, pp. 5-28.

- KIM Y., HAN H. (2010), "Intention to pay conventional-hotel prices at a green hotel - a modification of the theory of planned behaviour", *Journal of Sustainable Tourism*, vol. 18, n. 8, pp. 997-1014.
- LANE G., HILL C. (2006), "Corporate responsibility in the hospitality sector: pain or gain?", *Hospitality Directions-Europe Edition*, vol. 13, pp. 1-12.
- LEE J.S., HSU L.T., HAN H., KIM Y. (2010), "Understanding how consumers view green hotels: how a hotel's green image can influence behavioural intentions", *Journal of Sustainable Tourism*, vol. 18, n. 7, pp. 901-914.
- LIU Z. (2003), "Sustainable tourism development: A critique", *Journal of Sustainable Tourism*, vol. 11, n. 6, pp. 459-475.
- MACQUEEN J. (1967). "Some methods for classification and analysis of multivariate observations", in *Proceedings of the fifth Berkeley symposium on mathematical statistics and probability*, vol. 1, n. 14, pp. 281-297.
- MANAKTOLA K., JAUHARI V. (2007), "Exploring consumer attitude and behaviour towards green practices in the lodging industry in India", *International Journal of Contemporary Hospitality Management*, vol. 19, n. 5, pp. 364-377.
- MAURI A.G., MINAZZI R. (2013), "Web reviews influence on expectations and purchasing intentions of hotel potential customers", *International Journal of Hospitality Management*, vol. 34, pp. 99-107.
- MARTÍNEZ GARCÍA DE LEANIZ P., HERRERO CRESPO Á., GÓMEZ LÓPEZ R. (2018), "Customer responses to environmentally certified hotels: The moderating effect of environmental consciousness on the formation of behavioural intentions", *Journal of Sustainable Tourism*, vol. 26, n. 7, pp. 1160-1177.
- MCNAMARAA E.K., GIBSON C. (2008), "Environmental sustainability in practice? A macro-scale profile of tourist accommodation facilities in Australia's coastal zone", *Journal of Sustainable Tourism*, vol. 16, n. 1, pp. 85-100.
- MOLINA-AZORIN J.F., CLAVER-CORTÉS E., PEREIRA-MOLINE J., TARÍ J.J. (2009), "Environmental practices and firm performance: an empirical analysis in the Spanish hotel industry", *Journal of Cleaner Production*, vol. 17, n. 5, pp. 516-524.
- OLIVER R.L. (1996), *Satisfaction: A Behavioural Perspective on the Consumer*, McGraw-Hill, NY, USA.
- PARK J., KIM H.J., MCCLEARY K.W. (2014), "The impact of top management's environmental attitudes on hotel companies' environmental management", *Journal of Hospitality and Tourism Research*, vol. 38, n. 1, pp. 95-115.
- PORTER M., VAN DER LINDE C. (1995), "Toward a new conception of the environment-competitiveness relationship", *Journal of Economic Perspective*, vol. 9, n. 4, pp. 97-118.
- RAHMAN I., REYNOLDS D., SVAREN S. (2012). "How "green" are North American hotels? An exploration of low-cost adoption practices", *International Journal of Hospitality Management*, vol. 31, n. 3, pp. 720-727.
- RITOV I., KAHNEMANN D. (1997), "How people value the environment: Attitudes versus economic values", in Bazermann M.H., Messick D.M., Tenbrunsel A.E., Wade-Benzoni K.A. (Eds.), *Environment, ethics, and behaviour* (pp. 33-51), San Francisco, CA: The New Lexington Press.
- SEGARRA-OÑA M., PEIRÓ-SIGNES Á., VERMA R., MIRET-PASTOR L. (2012), "Does environmental certification help the economic performance of hotels? Evidence from the Spanish hotel industry", *Cornell Hospitality Quarterly*, vol. 53, n. 3, pp. 242-256.

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- SHANG J., BASIL D.Z., WYMER W. (2010), "Using social marketing to enhance hotel reuse programs", *Journal of Business Research*, vol. 63, n. 2, pp. 166-172.
- SIANO A. (2012), "La comunicazione per la sostenibilità nel management delle imprese", *Sinergie Italian Journal of Management*, n. 89, pp. 3-23.
- SMITH G., FELDMAN D. (2003), "Company Codes of Conduct and International Standards: An Analytical Comparison", *Part I of II: Apparel, Footwear and Light Manufacturing, Agribusiness, Tourism*, The World Bank Group and International Finance Corporation, Washington, DC.
- TARÍ J.J., CLAVER-CORTÉS E., PEREIRA-MOLINE J., MOLINA-AZORIN J.F. (2010), "Levels of quality and environmental management in the hotel industry: their joint influence on firm performance", *International Journal of Hospitality Management*, vol. 29, n. 3, pp. 500-510.
- TESTA F., MIROSHNYCHENKO I., BARONTINI R., FREY M. (2018), "Does it pay to be a greenwasher or a brownwasher?", *Business Strategy and the Environment*, vol. 27, n. 7, pp. 1104-1116.
- TRANG H.L.T., LEE J.S., HAN H. (2019), "How do green attributes elicit pro-environmental behaviors in guests? The case of green hotels in Vietnam", *Journal of Travel and Tourism Marketing*, vol. 36, n. 1, pp. 14-28.
- TZSCHENTKE N., KIRK D., LYNCH P.A. (2004), "Reasons for going green in serviced accommodation establishments", *International Journal of Contemporary Hospitality Management*, vol. 16, n. 2, pp. 116-124.
- TZSCHENTKE N., KIRK D., LYNCH P. (2008), "Going green: decisional factors in small hospitality operations", *International Journal of Hospitality Management*, vol. 27, n. 1, pp. 126-133.
- YIN R.K. (2013), *Case study research: Design and methods*, Sage publications, Thousand Oaks, CA.
- WATKINS, E. (1994), "Do guests want green hotels?", *Lodging Hospitality*, vol. 50, n. 4, pp. 70-72.
- ZHAO Y., XU X., WANG M. (2019), "Predicting overall customer satisfaction: Big data evidence from hotel online textual reviews", *International Journal of Hospitality Management*, vol. 76, pp. 111-121

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Appendix 1: Excerpt of survey questionnaire

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NH SATISFACTION SURVEY

We would like to know what you think of staying at the hotel. Your comments will help us improve our service and will be treated anonymously. Please, value your satisfaction regarding the following concepts:

Are you travelling on:	Meeting at the hotel		Leisure		Business	
	Very unsatisfied	Unsatisfied	Quite satisfied	Satisfied	Very satisfied	Don't apply
OVERALL HOTEL SATISFACTION	☆	☆	☆	☆	☆	?
How likely are you to recommend this hotel to a friend or colleague?	☆	☆	☆	☆	☆	?
Value for money	☆	☆	☆	☆	☆	?
Hotel Location	☆	☆	☆	☆	☆	?
Room and Bathroom	☆	☆	☆	☆	☆	?
Cleanliness	☆	☆	☆	☆	☆	?
Hotel systems (air conditioning, heating, water, ...)	☆	☆	☆	☆	☆	?
Breakfast buffet quality and variety	☆	☆	☆	☆	☆	?
Other Food & Beverages services (quality and variety)	☆	☆	☆	☆	☆	?
Staff friendliness	☆	☆	☆	☆	☆	?
Sleep quality /Pleasant rest	☆	☆	☆	☆	☆	?
Check in / Check out process (efficiency and quickness)	☆	☆	☆	☆	☆	?
Environmental strategy of the hotel	☆	☆	☆	☆	☆	?

What did you like in this hotel?
(max. 400 characters)

Answer here...

What can we do to improve our service?
(max. 400 characters)

Answer here...

	YES	NO
Regarding your suggestions, would you like to be contacted by NH Hotel Group?	V	X
Do you want to help other travelers? If you click "Yes", we will publish your comments and your first name on our web, so that other travelers can read the opinion of real customers.	V	X

SEND



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