

SUSTAINABILITY BADGES AND THEIR IMPACT ON PURCHASE INTENTION IN THE CONTEXT OF GREEN TRAVEL CHOICES

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Dissertation presented as partial requirement for obtaining
the Master's degree in Statistics and Information
Management, with a specialisation in Marketing Intelligence

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November 2022

ABSTRACT

Travelling is subject to a constant change dictated by the different challenges and development over the centuries. Nowadays, travellers prefer to adopt a more sustainable approach to travelling, despite the difficulty in finding environmentally friendly options in the market. On the other side, holiday and accommodation providers have started to roll out solutions to fulfil consumers' needs.

The study analysed the impact of adding sustainability labels on accommodation provider listings (conventional vs. peer-to-peer ones) to assess their impact on purchase intention, business credibility and trust.

Results demonstrated that the presence of sustainability labels didn't trigger a more favourable purchase intention. Despite the outcome, the impact of relationship norms (communal vs. exchange) in the relation showed that exchange norms were proven to have a detrimental effect on buying. Finally, no mediation effects were found to be significant for trust and credibility.

Those findings have important implications for shaping communication based on the type of relationship established between accommodation providers and the end consumers, other than underlining the importance of visual cues and their impact on customers and their decision-making process.

KEYWORDS

Visual Cues; Sustainable behaviour; Purchase intention; Relationship norms; Consumer behaviour; Exchange relationship; Trust

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LIST OF ABBREVIATIONS AND ACRONYMS

CSR Corporate Social Responsibility

P2P Peer-to-Peer

1. INTRODUCTION

Society is becoming more aware of the problems of our century: environmental change is the centre of many discussions in the political and socio-economic domains on how we should secure a sustainable future. One of the industries that affects environmental sustainability the most is tourism. In order to ensure a healthy future for the tourism industry and for global communities, it is critical to demand tourism to become more environmentally sustainable (Juvan & Dolnicar, 2017). The COVID-19 pandemic gave a boost to this process of change, and modified many aspects in the way people will travel in a post-pandemic world. Reports conducted on travellers' sentiment reported that the uprising trend is for holidaymakers to engage in meaningful travels: giving back to the planet and to communities and reconnecting with nature (Euronews Travel & Globetrender, 2020), planning travels with sustainability in mind (ABTA, 2021), and a general sense of consciousness with a desire to give back to communities, engaging eventually with "philantourism" - tourism that has a positive impact on societies (American Express & Morning Consult, 2021).

Travellers interviewed from one of the hospitality industry players reported the willingness to stay in a sustainable accommodation (81%), even though half of them believed that there are not enough environmental-friendly options in the hospitality industry to choose from (Booking.com, 2021). Although companies, entities and organisations from the tourism industry try to encourage travellers to take positive actions with the help of tools and strategies such as awards, schemes and campaigns, the response from consumers is weak (Budeanu, 2007).

It is known that people's behaviour in vacation is less environmentally sustainable compared to when they are at home (Dolnicar & Grün, 2008), and this is related to the fact that the tourism context is not hedonic in nature (Dolnicar et al., 2016). Nevertheless, there are timid steps going into the desired direction, with individuals trying to be more environmentally conscious when travelling. On the other side, companies have started to roll out solutions to meet the needs of ever increasing environmentally sustainable travellers: Booking.com launched the first ever Travel Sustainable Badge on their digital travel platforms, and set itself as a leader in supporting sustainable stays and sustainable practices (Booking.com, 2021b).

As Sahin et al. (2019) already reported, what it is urged is how accommodation providers communicate their environmental-friendly and ecological practices to the end consumer, in order to effectively support the sustainable behaviour in travellers and convey purchase intention, eventually. Sustainable practices have been adopted by most businesses after the intensification of issues related to climate change and several calls from governments, organisations and the general public. Companies use advertising to communicate the adoption of those sustainable practices, and turn it into a more "green" type of marketing when promoting their image, initiatives, sustainable products and services and influencing purchase decisions (Sahin et al., 2019).

The effectiveness of advertising is a topic that is constantly being studied in marketing and consumer behaviour. This subject is then broken down and analysed in regard of the different facets that comprises it, and an increasing number of studies are now focusing on sustainable, or "green", advertising, its effect on emotions and how the manipulation of visual cues (textual and visual) affects its efficacy (Sahin et al., 2019).

While past researches investigated the influence of different types of sustainable versus non-sustainable advertisements on the effectiveness of consumers' attitude and purchase intention (Atkinson & Rosenthal, 2014; Bickart & Ruth, 2012), focusing on the hospitality industry (W. H. Kim et al., 2019), on different accommodation price-segments (Sahin et al., 2019), message appeals and social norms (W. H. Kim et al., 2019), little is known about the impact of sustainable visual cues on the type of accommodation provider, specifically if it is a conventional (i.e., hotels) versus a peer-to-peer (i.e., apartments or rooms rented on Airbnb) one; and whether the different types of providers are perceived in having communal or exchange relationships with consumers, and if this difference affects the strength in purchase intention.

The purpose of this study was to investigate the influence of environmentally sustainable visual cues (textual and visual) on purchase intention for peer-to-peer (P2P) and conventional accommodation providers, and how different provider types affected the strength of purchase intention, based on the type of relationship norms governing the relation between accommodation provider type and end consumers.

Moreover, the present study intended to address and fill several research gaps identified in the literature of hospitality industry in regards of green choices and behaviours.

First, it aimed at providing a more comprehensive experimental study on the effect of visual cues, specifically sustainability badges, in order to extend the literature that analysed the use of green versus non-green advertisement. Second, the study analysed the effects of those appeals on conventional versus peer-to-peer accommodation providers, in order to assess the effectiveness. Third, it supported and extended existing research on relationship norms (communal versus exchange relationships) in the hospitality industry, and how peer-to-peer service providers (i.e., Airbnb) versus conventional one (i.e., hotels) impacted behaviour and purchase intention in different ways (Shuqair, Pinto, & Mattila, 2021; Shuqair, Pinto, So, et al., 2021).

Finally, it extended the existing limited research on the impact of sustainable or green labels and badges on advertising persuasion and trust (Atkinson & Rosenthal, 2014; Bickart & Ruth, 2012; Sahin et al., 2019).

2. LITERATURE REVIEW AND HYPOTHESIS

2.1. The concept of visual and textual appeals

Individuals process verbal and non-verbal information using different cognitive subsystems. Pure visual appeals (i.e., images, pictures and logos) require less cognitive thinking, whereas verbal appeals (i.e., text) lead to a thorough cognitive thinking (Sahin et al., 2019). Sahin et al. (2019) showed in their study that advertisement of green hotels, using a combination of visual and verbal cues (text, logos and images), had a greater impact on advertisement effectiveness than the same hotels using visual and verbal appeals separately. Hotels could successfully use at least one of the green message representations to effectively communicate their environmentally sustainable initiatives to consumers. Other than that, using a certificate of sustainability in advertisements was more effective than textual cues - although it applied only for high-end hotels.

Other studies in consumer behaviour reported that product information is processed differently for consumers when it carries visual and/or textual appeals. Visual cues had a different impact on the effectiveness of the message, as well as textual ones: in their study, Broeder & Schouten (2022) showed that product tagging on social media platforms (Instagram) proved to have a positive effect on purchase intention and trust. Another research focused on food labelling showed similar results: the presence of labels on food packaging had a positive impact on choice, especially when the label aligned with the respondent's personal beliefs (Kaczorowska et al., 2021); despite the literature being in discord about attitude towards green product purchase and green product purchase behaviour, research by Riskos et al. (2021) proved that consumer knowledge, beliefs and their attitude enhanced ecolabel credibility and involvement, leading to a positive purchase intention of green products. However, the impact can be different based on the audience age: younger generations are less susceptible to product labels when purchasing online, showing low recognition of sustainable labels (Kabaja et al., 2022).

Research on the use of labels extended to "eco-labels": defined by the International Standards Organization (ISO), they consist of verified certifications laid down by official bodies and supported by governments, that assess and guarantee the existence of specific environmental requirements. Eco-labels can be product-focused (e.g., label on water use, energy consumption, etc.) or concerning different environmental aspect (e.g., BREEAM, Blauer Engel, etc.). Their use resulted in an increase in trust and in fostering a positive attitude that influenced pro-environmental consumer behaviour (Taufique et al., 2016).

The present study intends to investigate the impact of the presence (versus absence) of sustainability labels on different types of property listings on purchase intention.

H1. The presence of sustainability label induces a more favourable purchase intention.

2.2. Relationship norms in the hospitality industry and their moderating role in purchase

intention

Relationship norms have been applied to the business-consumer relationship domain to understand the characteristics and the underlying perception of their connection (Aggarwal, 2004, Goodwin, 1996). It is proved that consumers form relationships with brands similarly to how people form relationships with their fellows (Aggarwal, 2004). Prior research suggested that consumer attitudinal and behavioural responses to brand messages were influenced by brand relationship norms activated in the current phase of the relation (Simon 2017; Fournier and Alvarez 2012; Wan, Hui, and Wyer 2011). Aggarwal and Law (2005) demonstrated that brand information is processed at different levels of abstraction depending on the relationship norm being triggered.

When consumers engage in activities with brands that are either purely commercial or non-commercial, they use relationship norms to process and evaluate every aspect related to the company, and as a guide to assess which kind of behaviour they should use with it (Aggarwal, 2004; Aggarwal and Law, 2005).

In the hospitality sector, relationships with peer-to-peer accommodation providers (a P2P accommodation provider is defined as an online networking platform for short-term rentals, allowing people to list on the platform part of their property, or the entire property, for a short period of time (Belk, 2014)) are comparable to communal relationships, whereas conventional providers (e.g., hotels) are associated with exchange relationships (Shuqair, Pinto, So, et al., 2021). This is due to the social proximity of the interaction: communal relationships are delineated by altruistic concerns, social interactions and caring about others' need, traits driven by social factors (Clark & Mils, 1993; Clark & Mils, 1997; Johnson & Grimm, 2010); exchange relationships, on the other side, are driven by economic factors, where the connection exists in order to satisfy needs and duties (Clark & Mils, 1993; Aggarwal, 2004).

Given the aforementioned distinction, the present study intended to investigate whether communal (versus exchange norms) were more effective in purchase intention in the context of green travel choices, where peer-to-peer provides should rank higher in communal norms versus conventional providers ranking higher in exchange norms, as reported by previous study (Shuqair, Pinto, So, et al., 2021).

H2. The effect of sustainability label on purchase intention is moderated by relationship norms.

2.3. The mediating role of trust on consumers

Participation in the sharing economy is subjected to different factors, that change depending on the P2P industry type and platform. The reasons for using Airbnb, for example, are linked to factors like: economic benefits, flexibility, amenities, cultural and local experiences, enjoyment of use, trust and reputation (Finley, 2013; Guttentag, 2015; Hamari et al., 2016; S. B. Yang et al., 2019). Trust is a

fundamental element in the sharing economy, and past researches examined how the trust factor worked in the Airbnb context, with the help of several models and theories, shading a light on different facets.

A way to analyse trust in the hospitality industry was made through the trust building model (TBM) (S. B. Yang et al., 2019). The model is based on three phases: trust antecedents, trusting beliefs and intentions, and trusting behaviours (McKnight et al., 2002 as cited in S. B. Yang et al., 2019). Trust antecedents influence consumers' trust beliefs and intentions. Antecedents are divided in two types: cognitive- and affective-based trust factor. However, a better trust antecedent distinction lies between the identification of two different entities: trust-in-host and trust-in-platform (Mao et al., 2020).

Trust-in-host refers to a more personal type of trust, highly subjective and measured at an individual level using dimensions like affection, cognition and behaviour. For example, personal trust can be defined as a traveller's willingness to be vulnerable and to expect his or her expectations to be fulfilled by the host obligations and promises (Mao et al., 2020).

Trust-in-platform refers to a more institutional type of trust, where situational normality and structural assurance are components of it. This type of trust influences credibility in the e-commerce environment, particularly the website social presence, perceived privacy, perceived security, perceived information quality and perceived website quality (Mao et al., 2020).

Trust in the online environment shapes purchase intention, and consumers that have higher level of trust are more willing to engage online than consumers with lower level of trust (Azar et al., 2016 as cited in Broeder & Schouten, 2022). However, the high propensity of engaging in an online transaction can be compromised if trust in the online shopping environment fails (referred to as "initial trust"). On the other hand, "trustworthiness" - intended as holding positive opinion and attitude on the e-commerce environment based on the familiarity built with it (i.e., past or recurring purchase transactions) compensate the negative scenario (Broeder, 2020; Broeder & Schouten, 2022).

The present study intended to assess whether trust influenced consumers purchase intention.

H3. Trust acts as a mediator between the sustainability label and purchase intention.

2.4. The mediating role of perceived credibility

The development of interpersonal relationships is subjected to different factors, among which self-disclosure and social attraction play a crucial role.

To better understand the relationship formation process, it is useful to start with the theory of similarity attraction by Byrne (1997). The theory states that individuals prefer and feel more attracted to those that are more similar to themselves. Similarity includes basic demographics (gender, age, nationality, etc), physical appearance, attitudes, hobbies, values, etc. Attractiveness can be strengthened thanks to "reciprocal rewards" within the interaction, meaning that if individuals share the same view and agree on the same topics, attraction within the relationship increases (Kwok & Xie, 2018).

The type, magnitude and similarity of information disclosed and shared between individuals can determine the strength of attractiveness in a relationship: the more information is shared between the two parties, the more the strength of the attraction; the more the same traits and attributes are shared between people, the stronger the attraction (Kaplan & Anderson, 1973, as cited in Kwok & Xie, 2018).

This theory can be translated also on business relationships: the buyer-seller relationship, as described by Lichtenthal and Tellefsen (2001) (as cited in Kwok & Xie, 2018), is improved by similarity traits shared between salespeople and buyers. Similarity, again, includes a wide range of points: from demographics to personality, values, etc. Sharing similar traits leads to an increase in consumers choosing and paying for products and services sold by the seller.

In the context of online traditional and particularly of peer-to-peer transactions, the type of information shared and the exposure to that information have an impact on the host credibility. Credibility is a cornerstone in the success of online transactions, especially in the context of peer-to-peer services where there is no formal intermediary (Jun, 2020). Credibility is needed to ease uncertainty (Miyazaki and Fernandez, 2001, as cited in Moon et al., 2019) and to build engagement in the interaction. Under the umbrella of perceived credibility, perceived website quality of the seller is also an important feature to be taken into account. In this case, website quality can be interpreted as information quality, system quality and service quality. Relevant to this study is information quality, intended as the consumers' perceptions of the information type present on any seller's website (X. Chen et al., 2015).

Therefore, the present study intended to investigate if perceived credibility mediated the relationship between sustainability label and purchase intention.

H4. Perceived credibility acts as a mediator between sustainability label and purchase intention.

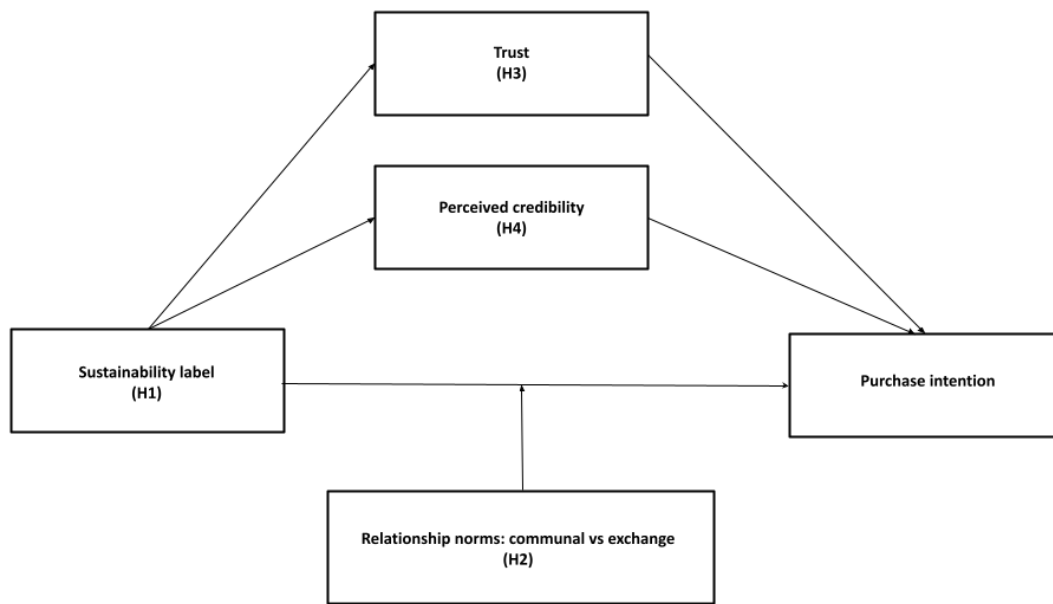


Fig. 1. Conceptual framework.

3. METHODOLOGY

The study aim was to obtain evidence that the presence (versus absence) of the sustainability label induced a more favourable purchase intention. It employed a 2 (sustainability label: presence vs. absence) X 2 (P2P vs. conventional provider) between-subjects experimental design to test the moderating role of relationship norms on the effect of using the sustainability label on purchase intention. The study postulated that since travellers should expected higher (vs. lower) level of sustainability and environmental concern from peer-to-peer providers (vs. conventional ones) as a result of communal norms (vs. exchange norms) governing the relationship, they would report a higher purchase intention for peer-to-peer accommodation provider displaying the sustainability label. Then, a mediation approach tested the hypotheses that purchase intention towards the presence of the sustainability label was driven by trust and perceived credibility.

A total of one hundred and ninety-nine participants were recruited via an online platform Amazon Mechanical Turk "MTurk" (N = 199; 49.75% Male; M_{age} = 42 , SD = 12.93) in exchange for \$0.50. Participants completed an online questionnaire in English developed on Qualtrics. After providing informed consent, participants were randomly assigned to the P2P (vs. conventional) provider condition.

The P2P provider was Airbnb and it read the following scenario: *"Please imagine that you were travelling to Barcelona and wanted to find an accommodation, preferably something with sustainability in mind. After comparing all housing options, you found a suitable accommodation with a host (Sebastián) on Airbnb for €70 per night."* Together with the scenario, an image showed the listing on the Airbnb website, with photos of the apartment, the host profile and details regarding dates booked and price.

The conventional provider was booking.com and it read the following scenario: *"Please imagine that you were travelling to Barcelona and wanted to find an accommodation, preferably something with sustainability in mind. After comparing several hotel room options on a hotel booking app, you found suitable accommodation for a room at a 4-star hotel for €70 per night."* Together with the scenario, an image showed the listing on the booking.com website, with the name of the hotel, photos and services provided. See Appendix A for the full scenario.

To manipulate the presence or absence of sustainability label, half of the participants were presented with a "Travel Sustainable Property" badge on the image showing the listing and, subsequently, a question asked "In the picture displaying the accommodation there is a "Sustainable property" badge?".

80 participants were dropped from the analysis as they failed the attention check. The final sample size was (N = 119).

Additionally, 28.64% of respondents were Airbnb users, that is, people that booked an Airbnb in the past 12 months, and 38.69% of respondents were booking.com users. Regarding the accommodation provider type to whom respondents were exposed and asked to evaluate, 63 (52.94%) were presented to Airbnb and 56 (47.06%) were shown to booking.com.

4. MEASURES

In addition to the report of the measures and scales used in this study that is illustrated in the following paragraph, it is possible to see a more detailed description in Appendix B.

Participants responded to study measures on a scale from 1 (strongly disagree) to 7 (strongly agree).

Communal and exchange norms. It was used Shuqair, Pinto, & Mattila, (2021) measures for communal norms (i.e., I perceive the service provider as a friend, as a family member) and exchange norms (i.e., I perceive the service provider as a business person, as a company) ($\alpha = 0.70$).

Trust. To measure trust, three items from Moon et al. (2019) were used: *“The message on the listing was transparent and trustful; I felt that I can trust the message in the listing; The message was truly sincere”* ($\alpha = 0.83$).

Booking Intentions. It is the key dependent variable, measured by “I would be likely to book this room/apartment” rated on a seven-point scale from “Extremely unlikely” to “Extremely likely” (Teubner and Graul, 2020).

Information Quality. Four items from Chen et al. (2015) were used to measure information quality: *“The platform provides me with information relevant to what I am looking for; The platform provides me with sufficient information; The platform provides me with accurate information; The platform provides me with up-to-date information”* ($\alpha = 0.83$).

Perceived credibility. Four items from Moon et al. (2019) were used to measure perceived credibility: *“The service provider’s photos posted on the app were credible; The service provider description showed experience; The service provider explanation of the accommodations was trustworthy; The service provider’s overall profile information published on the app was reliable”* ($\alpha = 0.85$).

5. RESULTS

5.1. Main Outcome

A two-way ANOVA was performed to analyse the main effects of accommodation type and sustainability label as well as their interaction effects on purchase intention.

Type of accommodation and sustainability label resulted to be not statistically significant ($F(1,115) = 0.689$, $p = 0.131$, $\eta^2 = 0.006$).

Simple main effects analysis showed that accommodation type did not have a statistically significant effect on purchase intention ($F(1,115) = 0.563$, $p = 0.455$, $\eta^2 = 0.005$).

Simple main effect analysis showed that presence of the sustainability label did not have a statistically significant effect on purchase intention ($F(1, 115) = 0.072$, $p = 0.788$, $\eta^2 = 0.001$). Results are displayed in appendix C.

However, looking at the estimated marginal means, in the no label condition, purchase intention for Airbnb was higher than booking.com ($M_{\text{Airbnb}} = 6.29$, $SD_{\text{Airbnb}} = 0.83$; $M_{\text{booking.com}} = 5.88$, $SD_{\text{booking.com}} = 0.99$), as show in figure 2.

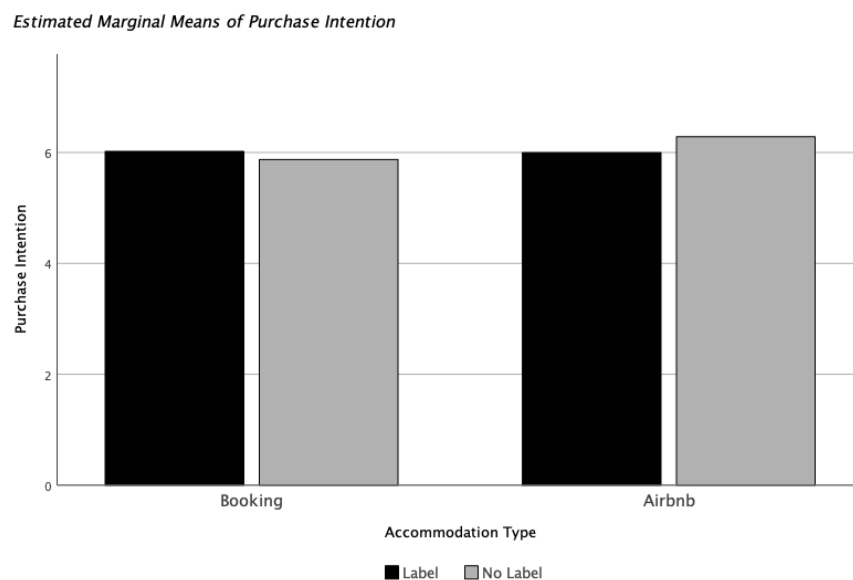


Fig. 2. Estimated marginal means of purchase intention

5.2. Moderation analysis

Next, relationship norms were analysed in order to assess if they were impacting the relation between sustainability label and purchase intention.

A preliminary descriptive analysis showed that in the label scenario, participants perceived both the P2P and conventional accommodation provider being high in exchange norms ($M_{\text{Airbnb}} = 5.5$, $SD_{\text{Airbnb}} = 1.05$; $M_{\text{booking.com}} = 5.76$, $SD_{\text{booking.com}} = 1.05$). In the non-label scenario, participants perceived the conventional provider being higher in exchange norms than the P2P one ($M_{\text{booking.com}} = 5.75$, $SD_{\text{booking.com}} = 0.71$; $M_{\text{Airbnb}} = 4.42$, $SD_{\text{Airbnb}} = 1.84$).

When analysing communal norms, in the label scenario participants felt neutral in perceiving those type of norms in both the P2P and conventional provider ($M_{\text{Airbnb}} = 4.5$, $SD_{\text{Airbnb}} = 1.57$, $M_{\text{booking.com}} = 4.43$, $SD_{\text{booking.com}} = 1.86$), as opposed to the non-label scenario, where participants were disagreeing regarding communal norms governing the relationship ($M_{\text{Airbnb}} = 3.29$, $SD_{\text{Airbnb}} = 1.81$, $M_{\text{booking.com}} = 3.25$, $SD_{\text{booking.com}} = 1.69$).

To further investigate the effect of the sustainability label on purchase intention being moderated by relationship norms, a simple moderation analysis was performed using PROCESS model 1 (Hayes, 2017). The outcome variable for analysis was purchase intention. The predictor variable for the analysis was the presence of the sustainability label. The moderator variables evaluated for the analysis were exchange and communal norms.

The interaction between sustainability label and exchange norms was found to be statistically significant ($b = -0.57$, $SE = 0.15$, $p < 0.01$), indicating that exchange norms were a significant moderator of the effect of sustainability label on purchase intention.

The interaction term between sustainability label and exchange norms accounted for a significant proportion of the variance in purchase intention, $\Delta R^2 = .089$, $\Delta F(1, 115) = 13.97$, $p < 0.01$.

The effect of sustainability label on purchase intention was positive but non-significant ($b = 0.21$, $s.e. = 0.23$, $p = 0.37$), conditional on exchange norms=0.

The conditional effect of exchange norms was positive and significant ($b = 0.47$, $s.e. = 0.08$, $p < 0.001$), conditional on sustainability tag=0.

The conditional effect of sustainable tag on purchase intention showed the following results. At -1 sd (i.e., at -1.2047) on the centred exchange norm variable (representing low perception of exchange norms), the relationship between the sustainability label and purchase intention was positive and significant ($b = 0.89$, $SE = 0.26$, $p < 0.01$). Conversely, at the mean (i.e., at 0) on the centred moderator variable (representing medium perception of exchange norms), the relationship was positive, but non-significant ($b = 0.21$, $SE = 0.23$, $p = 0.37$). Finally, at +1sd (i.e., +1.2047) on the centred exchange norm variable (representing high perception of exchange norms), the relationship was negative and non-significant ($b = -0.48$, $SE = 0.32$, $p = 0.14$).

Those results identified exchange norms as a negative moderator of the relationship between sustainability label and purchase intention: as the perception of exchange norms decreased, the relationship between presence of the label and purchase intention became more positive.

On the other hand, the interaction between sustainability label and communal norms was found to be not statistically significant ($b = -0.07$, $SE = 0.14$, $p = 0.63$). The interaction term between sustainability label and communal norms accounted for a non-significant proportion of the variance in purchase intention, $\Delta R^2 = 0.0018$, $\Delta F(1, 115) = 0.23$, $p = 0.63$. Results identified communal norms as a non-moderator of the relationship between sustainability label and purchase intention. Results are displayed in appendix D.

Accommodation type was added as a covariate to the model, however, it did not affect results, as shown in appendix D.3. and D.4.

5.3. Mediation analysis

Next, we examined whether trust, information quality and perceived credibility mediated the relationship between sustainability label and purchase intention. We performed a multiple mediation analysis, considering the mediators one at a time, using PROCESS model 4 with 5000 samples (Hayes, 2017).

Sustainability label (IV) → trust (mediator - M1) → purchase intention (DV)

Sustainability label (IV) → information quality (mediator - M2) → purchase intention (DV)

Sustainability label (IV) → perceived credibility (mediator - M3) → purchase intention (DV)

Trust

Results revealed insignificant effect of the sustainability label on trust ($b = 0.09$, $SE = 0.20$, $p = 0.66$). Next, while controlling for trust, the results of the second regression analysis showed that sustainability label was not a significant predictor of purchase intention ($b = 0.05$, $SE = 0.18$, $p = 0.78$). The results of the indirect effect based on 5000 bootstrap samples showed a non-significant indirect relationship between sustainability label and purchase intention mediated by trust ($a*b = 0.08$, $BootLCCI = -0.28$, $BootULCI = 0.46$). There was no statistically significant direct effect between sustainability label and purchase intention ($b = 0.05$, $SE = 0.18$, $p = 0.78$). Appendix E displays the results of the mediation analysis.

Information quality

Results revealed insignificant effect of the sustainability label on information quality ($b = 0.11$, $SE = 0.19$, $p = 0.58$). Next, while controlling for information quality, the results of the second regression

analysis showed that sustainability label was not a significant predictor of purchase intention ($b = 0.06$, $SE = 0.22$, $p = 0.78$).

The results of the indirect effect based on 5000 bootstrap samples showed a non-significant indirect relationship between sustainability label and purchase intention mediated by information quality ($a*b = 0.07$, $BootLCCI = -0.17$, $BootULCI = 0.33$). There was no statistically significant direct effect between sustainability label and purchase intention ($b = 0.06$, $SE = 0.22$, $p = 0.78$). Appendix F displays the results of the mediation analysis.

Perceived credibility

Results revealed insignificant effect of the sustainability label on perceived credibility ($b = -0.04$, $SE = 0.22$, $p = 0.85$). Next, while controlling for perceived credibility, the results of the second regression analysis showed that sustainability label was not a significant predictor of purchase intention ($b = 0.15$, $SE = 0.20$, $p = 0.433$).

The results of the indirect effect based on 5000 bootstrap samples show a non-significant indirect relationship between sustainability label and purchase intention mediated by perceived credibility ($a*b = -0.03$, $BootLCCI = -0.32$, $BootULCI = 0.29$). There was no statistically significant direct effect between sustainability label and purchase intention ($b = 0.15$, $SE = 0.20$, $p = 0.43$). Appendix G displays the results of the mediation analysis.

Supplementary - Corporate Social Responsibility

Finally, the study analysed also the impact of corporate social responsibility as a mediator variable in the relationship between sustainability label and purchase intention.

However, measures should have been developed differently and be better adapted to the current study. Therefore, results were not significant enough to be inserted into the results section. Appendix H displays the results of the mediation analysis.

5.4. Moderated Mediation

A moderated mediation model was added to the analysis using PROCESS model 8 (Hayes, 2017). All mediators' variables were assessed. The model was tested using a bootstrapping approach to assess the significance of indirect effects at different levels of the moderator (accommodation type).

The index of moderated mediation was not significant for all three mediators examined: information quality ($b = -0.01$, 95% percentile CI $[-0.14, 0.15]$), trust ($b = -0.07$, 95% percentile CI $[-0.57, 0.45]$) and perceived credibility ($b = -0.05$, 95% percentile CI $[-0.31, 0.24]$). Those results provided evidence for the absence of moderated mediation.

Appendix I displays the results of the moderated mediation analysis.

6. DISCUSSION

The exploratory analysis underlined no statistically significant correlation between the presence of sustainability label on the different accommodation provider listings and purchase intention. However, when looking at the estimated marginal means, results showed that participants indicated higher purchase intention for Airbnb rather than booking.com in the scenario without the label.

The moderation analysis aimed at testing the role of relationship norms on purchase intention for the different scenarios. Findings indicated that relationship norms partially moderated the relationship between sustainability label and purchase intention, as only exchange norms were found to be statistically significant in terms of results. Precisely, exchange norms were found to be negatively impacting purchase intention. On the other hand, no significant results were found for communal norms. As reported, the presence of the label had an impact in changing the perception of accommodation providers when considering relationship norms (exchange vs. communal): it had a neutral impact on both accommodation providers when they were rated for communal norms, in contrast to the scenario without the label, where the overall opinion was dissenting for both accommodation providers in having commercial norms. In the exchange norms scenario, instead, the presence of the label made both accommodation providers be perceived more commercial. However, without the label, the conventional provider still was perceived as being commercial, whereas for the peer-to-peer one participants felt neutral about it. Those results could suggest that labels, seals and certificates are viewed as pure commercial and business-driven recognitions, even if those labels carry a different purpose (like, in this case, a socially-related one).

No mediators were found to be significant.

Next, theoretical contributions and managerial implications of the study are detailed, along with the discussion of some limitations and suggestions for future research.

6.1. Theoretical implications

The study findings demonstrated that relationship norms influenced purchase intention in the context of green accommodation choices and the use of visual cues, in the form of badges. Findings provided additional literature support to prior research on the connection between consumer behaviour and relationship norms (Shuqair, Pinto, So, et al., 2021) relationship norms (e.g., Aggarwal, 2004; Shuqair, Pinto, & Mattila, 2021; Shuqair, Pinto, So, et al., 2021) and the relation between the use of visual appeals and advertising effectiveness (e.g., Sahin et al., 2019; Broeder & Schouten, 2022; Kabaja et al., 2022; Riskos et al., 2021).

Prior research examined the role of relationship norms on consumer attitude and behaviour towards a brand, studying the effect of different drivers, such as perceived warmth (Yang and Aggarwal, 2019; Wan et al., 2011) and empathy (Shuqair, Pinto, & Mattila, 2021), just to mention a few. This study supported and extended existing research on relationship norms (communal versus exchange relationships) in the hospitality industry, and how peer service providers (i.e., Airbnb) versus conventional providers (i.e., hotels) impacted on a different way behaviours and intentions (Shuqair,

Pinto, & Mattila, 2021; Shuqair, Pinto, So, et al., 2021). Specifically, the study results showed that exchange norms had a detrimental effect on purchase intention.

To the best of knowledge, this study is the first to examine relationship norms in the context of green choices and behaviours in the hospitality industry, therefore our findings are the first to demonstrate the impact of relationship norms in the context of sustainable practices.

6.2. Managerial Implications

The findings of this study offer some suggestions for managers and marketers in the hospitality industry, and for online product presentation - how to showcase specific product information and how information is processed by consumers.

Visual and verbal information of digital product presentation are the fundamentals for influencing consumer decision. It was proven that verbal information had a stronger effect on purchase intention, whereas visual information was weaker in driving intent (Kim and Lennon, 2008). However, nowadays, visual and verbal information work in combination for more effective delivery in presenting any kind of product or service, as well as advertising messages.

As complex visual information lowers information processing, the use of labels helps in improving fluency perception. Plus, it reinforces the authority principle in the influence domain (Cialdini, 2006) as individuals tend to follow experts, or generally speaking, who or what embraces any kind of authoritative cues: the label, in this case, acts as a certified seal that is charged with regulative meaning, other than activating different associations in the consumers' minds. As Sahin et al. (2019) reported, labels and certifications add also more credibility to accommodation listings as they make tangible the intangibility of the service and add extra layers of credibility.

It is important to mention that consumers' attitude towards a specific product plays a fundamental role in determining purchase: in the context of green products, it is showed that when consumers bear a favourable attitude towards green product purchase, they pay more attention to labels and ecolabels information, getting more involved in the decision-making process before buying, eventually. Therefore, it is proved that label involvement draws consumers' attention (Riskos et al., 2021).

Moreover, findings suggest that specific visual cues have a different impact on consumers and their decision-making process, and that visual information has a stronger impact on framing brand-consumer norms: on the provider side, it helps to let those accommodation providers stand out among the competition; on the consumer side, it helps to reduce the intrinsic perceived risk and increases the likelihood of making a purchase (H. S. Chen et al., 2017). Findings suggest, however, that exchange norms have a negative impact on purchase intention in the presence of those labels: very likely, it could be linked to exchange relationship being perceived as more business-related, therefore the perception of giving back to community or committing to sustainable practices is eroded by those norms. As the study conducted by Shuqair, Pinto, & Mattila (2021) provided further support to findings of the current study, consumers' responses to peer-to-peer providers are based on communal relationship norms, as social elements are perceived existing in the relationship. Therefore, for

conventional providers it would be useful to decrease the perception of exchange norms with leveraging other traits, as for example, empathy and perceived warmth, as well as increasing more and more social interactions between hotel guests, local communities and the local environment, rolling out and promoting activities, schemes and more.

6.3. Limitations and future research

This research has several limitations, offering some recommendations for future research.

The study aimed at providing a more comprehensive understanding on the effectiveness of visual cues, namely sustainability labels, on peer-to-peer vs conventional accommodation providers. Results emerged to be not significant, and one of the first reasons could be related to the manipulation check: 40% of survey respondents were dropped from the analysis as they failed the manipulation check, that was precisely focused on the sustainability label. This caused a discrepancy in the sample sizes of the different groups, and data analysis was therefore sensitive to this disparity. Future research should ensure to better design the manipulation check and keep drop rate at the minimum.

In this study, exchange norms showed to have a detrimental effect on purchase intention. However, communal norms failed to show significant results. Moreover, survey respondents could not have understood properly if the accommodation provider held more personal or commercial traits, therefore this could have impacted on the outcome of the relationship norms assessment. Future research should replicate the study and better frame the relationship norms questions, or using other methods to assess if there could exist a significant change.

Future research should replicate the study on a different type of industry, keeping the focus on sustainable actions.

In the ANOVA test, Shapiro-Wilk tests indicated that the data were not normally distributed for the group combinations: (label, booking.com) $p < 0.001$, (label, Airbnb) $p < 0.001$, (no label, Airbnb) $p = 0.002$. The box plot showed that there were seven outliers in the dataset, therefore results should be interpreted with increased caution.

The experiment should also be optimised to the different types of devices used for survey respondents: it is proven that larger screen size is effective in eliciting, among all, purchase intention and trust thanks to heuristic stimulation, whereas smaller screens stimulate the systematic information cognitive part (M. Kim, 2019).

Another factor to take into consideration is to replicate the study to a different type of segment, or to focus on specific segments, in order to understand if culture, age groups or other factors have an impact on the variables analysed in the study.

Future research should also take in account the interplay between relationship norms (communal vs exchange) and social norms (injunctive vs descriptive): there is scant research focused on the interaction between the two, whereas past researches focused on the interaction between labels or certificates and social norms and their impact on selected factors.

Future research should also further study the so-called “green gap” in the Theory of Planner Behaviour (Ajzen, 1985), in order to understand whether there is a match between consumer attitudes-beliefs and green purchase behaviour.

Further research should test the effectiveness of certified eco-labels vs. non-official green labels. It is worth to mention that the ever-growing number of eco and sustainable labels, together with the misuse of those seals and certificates by companies and businesses, causes skepticism among consumers and difficulty in comprehending the credibility of those labels. Credibility is also negatively impacted by the lack of awareness among consumers, untrustworthy labels and institutions not performing inspections and lack of reviews of labels use (Riskos et al., 2021).

Finally, further research should focus on the perceived credibility of labels: prior research showed that ecolabels proved to be positively influencing the attitude towards green product purchase and green product purchase behaviour, sparking interest to those products (Riskos et al., 2021).

7. CONCLUSIONS

Sustainable practices have been adopted by an ever-growing number of businesses in order to comply with the current status quo that governments, organisations and the general public established in order to have a positive environmental impact and align with global frameworks focused on sustainability. The travel industry is no exception, and accommodation providers are taking actions with the implementation of several measures.

With consumers being demanding when making choices based on their ever-changing needs and their raising awareness on current topics like climate change and environmental sustainability, businesses have to successfully stand out in order to effectively support consumers' environment-friendly behaviour and convey purchase intention, eventually: awards, schemes and campaigns are only some of the tools and strategies that companies adopted. Visual cues (textual and imagery) can further strengthen and support the message to be conveyed.

The study aimed to understand the impact of including visual cues, in the form of sustainability labels, to different type of accommodation listings on inducing a more favourable purchase intention, and whether travellers could consider this addition relevant in order to influence their perception on trust and perceived credibility. In addition to that, the study aimed to assess the role of relationship norms regarding the different types of accommodation providers in inducing a stronger purchase intention in the context of green travel choices.

Results demonstrated that the presence of sustainability label didn't have a more favourable purchase intention. The impact of relationship norms is only partially confirmed: exchange norms were proved to have a detrimental effect on purchase intention, whereas no effect was found for communal norms impacting the outcome.

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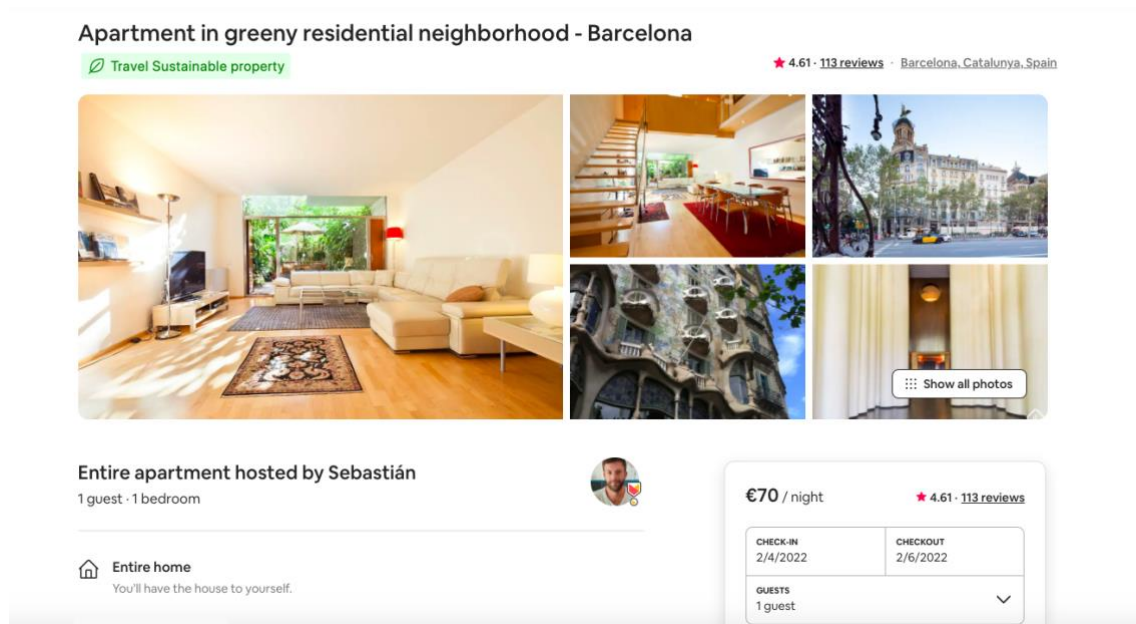
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9. APPENDIXES

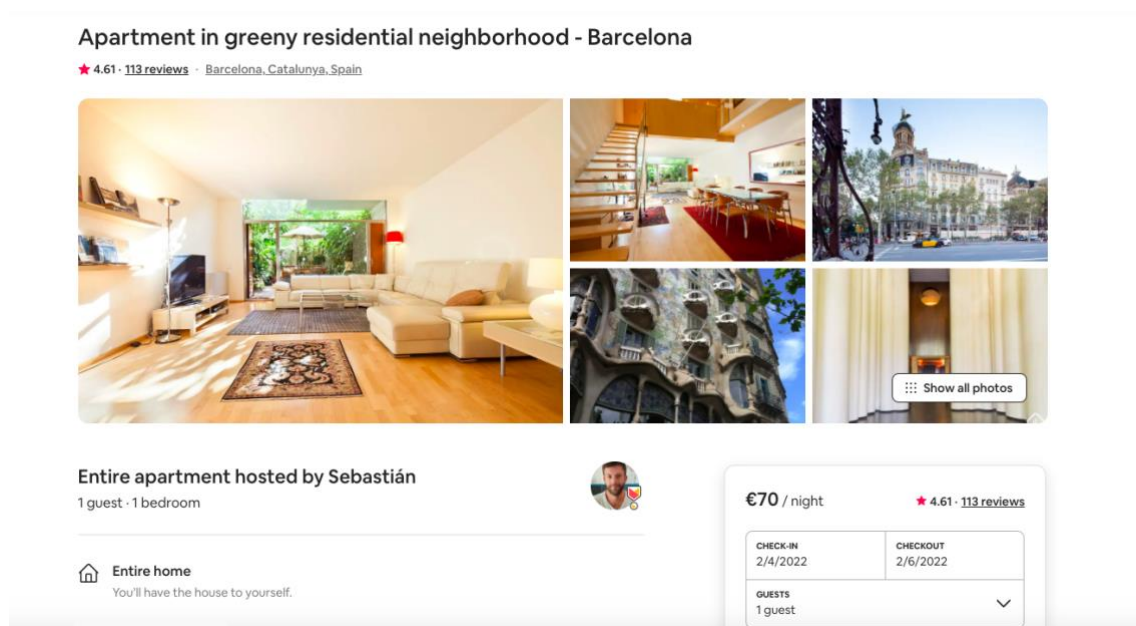
APPENDIX A – SCENARIOS

P2P provider - more sustainable Adapted from Shuqair et al. (2021)	“Please imagine that you were travelling to Barcelona and wanted to find an accommodation for your stay, preferably something with sustainability in mind. After comparing all housing options, you found a suitable accommodation, hosted by Sebastián, on Airbnb for €70 per night. Sebastián has been the owner of this apartment in Barcelona for many years. He relies on this property to supplement his income, renting it out on Airbnb. His profile description reads that he describes himself, among other things, as an environmentally friendly person. Recently, he made some changes in his apartment in order to improve the Airbnb experience. As you go through the facilities list, you read the following: - recycling facilities - elimination of single-use plastic toiletries - switch to LED light fixtures - apartment running on 100% renewable energy sources (solar, biomass and wind) - investing a percentage of his pay-out into the local community and conservation projects”
P2P provider - less sustainable Adapted from Shuqair et al. (2021)	“Please imagine that you were travelling to Barcelona and wanted to find an accommodation for your stay, preferably something with sustainability in mind. After comparing all housing options, you found a suitable accommodation, hosted by Sebastián, on Airbnb for €70 per night. Sebastián has been the owner of this apartment in Barcelona for many years. He relies on this apartment to supplement his income, renting it out on Airbnb. Recently, he made some changes in order to improve the Airbnb experience. As you go through the facilities list, you read the following: - recycling facilities - elimination of single-use plastic toiletries”

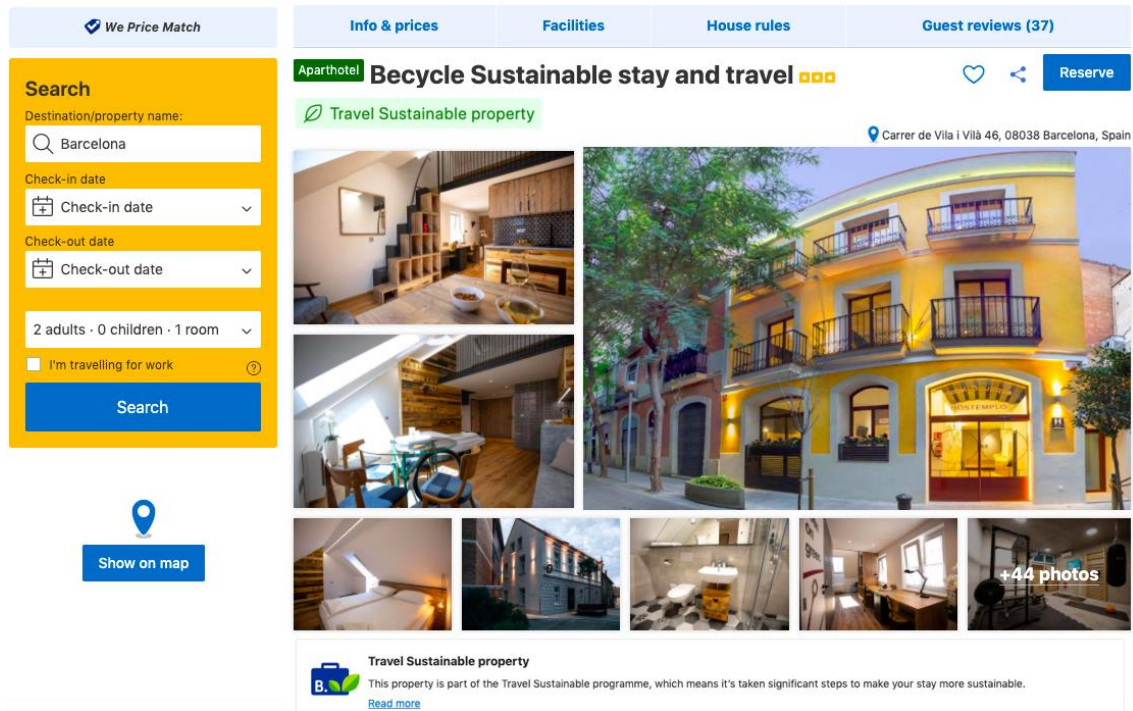
Conventional accommodation provider - more sustainable Adapted from Shuqair et al. (2021)	“Please imagine that you were travelling to Barcelona and wanted to find an accommodation for your stay, preferably something with sustainability in mind. After comparing several hotel room options on a hotel booking app, you found suitable accommodation for a room at a 4-star hotel for €70 per night. You read that, recently, the hotel made some changes on the premises in order to improve the accommodation experience. As you go through the facilities list, you read the following: - recycling facilities - elimination of single-use plastic toiletries - switch to LED light fixtures hotel running on 100% renewable energy sources (solar, biomass and wind) - investing a percentage of hotel profits into the local community and conservation projects”
Conventional accommodation provider - less sustainable Adapted from Shuqair et al. (2021)	“Please imagine that you were travelling to Barcelona and wanted to find an accommodation for your stay, preferably something with sustainability in mind. After comparing several hotel room options on a hotel booking app, you found suitable accommodation for a room at 4-star hotel for €70 per night. You read that, recently, the hotel made some changes on the premises in order to improve the accommodation experience. As you go through the facilities list, you read the following: - recycling facilities - elimination of single-use plastic toiletries”



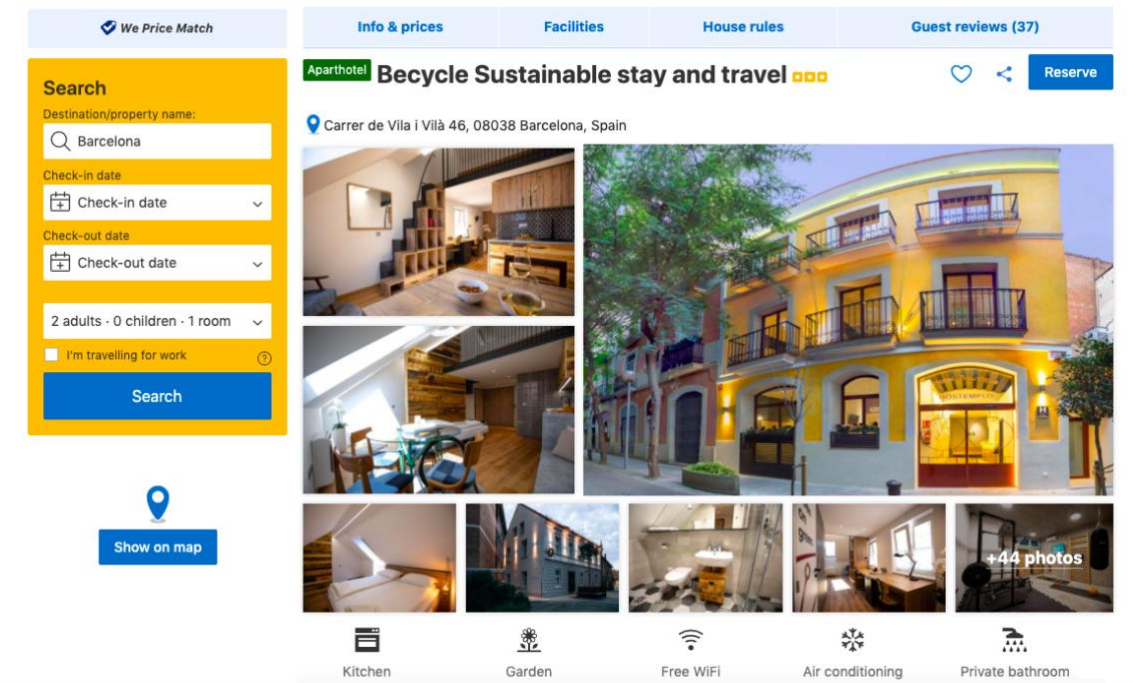
Appendix A.1. P2P provider with sustainable label displayed



Appendix A.1.2. P2P provider without sustainable label displayed



Appendix A.2.1. Conventional provider with sustainable label displayed



Appendix A.2.2. Conventional provider without sustainable label displayed

APPENDIX B: SCALES AND MEASURES

Communal norms	• I perceive the service provider as a close friend • I perceive the service as a family member	Seven-point scale	Shuqair, Pinto, & Mattila, (2021), Aggarwal (2004)
Exchange norms	• I perceive the service as a business person • I perceive the service as a company	Seven-point scale	Shuqair, Pinto, & Mattila, (2021), Aggarwal (2004)
Trust	Trust • The message on the listing was transparent and trustful • I felt that I can trust the message in the listing • The message was truly sincere Booking intentions • I would be likely to book with the service provider Information Quality (Website based trust) • The platform provides me with information relevant to what I am looking for. • The platform provides me with sufficient information. • The platform provides me with accurate information. • The platform provides me with up-to-date information	Seven-point scale	Chen et al. (2015), Moon et al. (2019), Teubner and Graul, (2020), and White, MacDonnell, and Dahl (2011)

Perceived credibility	• The service provider's photos posted on the app were credible • The service provider personal introductions written on the app showed experience • The service provider explanation of the accommodations was trustworthy • The service provider's overall profile information published on the app was reliable	Seven-point scale	Moon et al. (2019)
Corporate social responsibility	• How do you think you will enjoy your stay at the service provider accommodation? • How important do you think it is for companies to give back to society? • Do you think giving back to the environment is a responsible behaviour? • Do you think giving back to the community is a responsible behaviour?	Seven-point scale	Chernev & Blair, (2015)

APPENDIX C: ANOVA

Anova

Predictor	Sum of Squares	df	Mean Square	F	p	partial η^2
Intercept	2460.33	1.00	2460.33	2164.60	0.00	0.95
Accommodation_type	0.64	1.00	0.64	0.56	0.45	0.00
Label	0.08	1.00	0.08	0.07	0.79	0.00
Accommodation_type *	0.78	1.00	0.78	0.69	0.41	0.01
Label						
Error	130.71	115.00	1.14			

Appendix C. Anova

APPENDIX D: MODERATION ANALYSIS

Moderation Model

Model	coeff	Std.Err	t	p	95% CI	
					Lower	Upper
Constant	4.44	0.74	5.98	0.00	2.97	5.92
Label	0.61	0.55	1.10	0.27	-0.49	1.70
Communal	0.28	0.18	1.61	0.11	-0.06	0.63
Int_1	-0.07	0.14	-0.48	0.63	-0.35	0.21

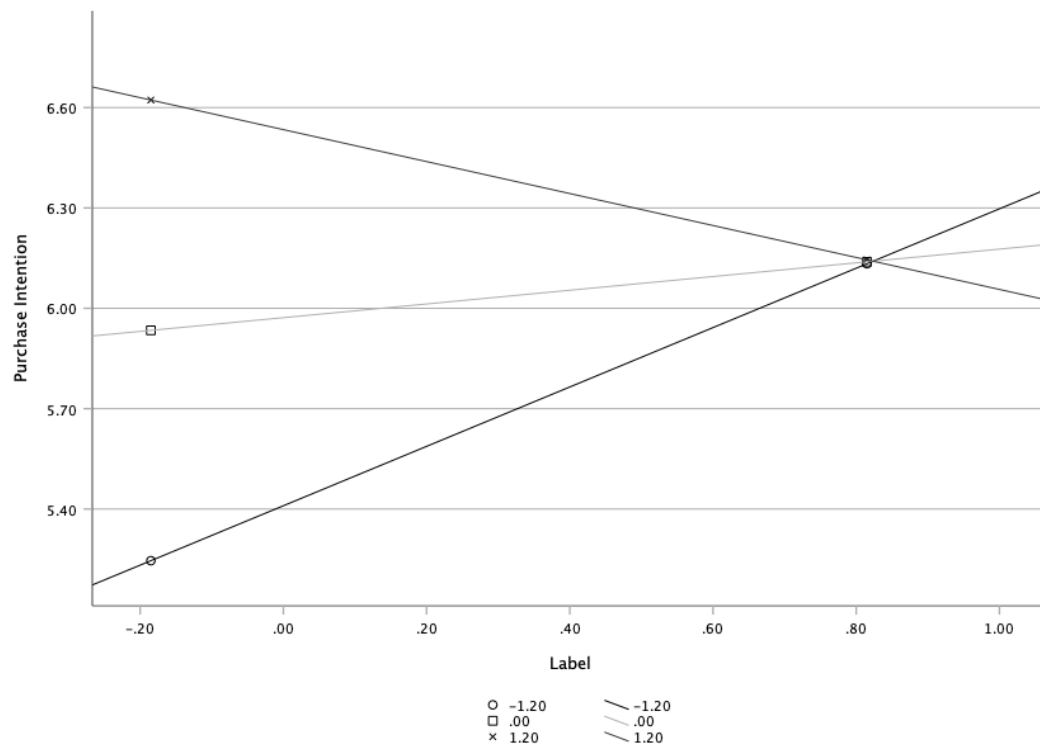
Appendix D.1. Moderation analysis by communal norms

Moderation Model

Model	coeff	Std.Err	t	p	95% CI	
					Lower	Upper
Constant	-0.53	1.20	-0.44	0.66	-2.91	1.86
Label	3.32	0.81	4.08	0.00	1.70	4.93
Exchange	1.14	0.22	5.25	0.00	0.71	1.57
Int_1	-0.57	0.15	-3.74	0.00	-0.87	-0.27

Appendix D.2. Moderation analysis by exchange norms

Scatter plot of Moderation Analysis by Exchange Norms



Appendix D.2.1. Scatter plot of Moderation Analysis by Exchange norms

Conditional effect of focal predictor (Label) at values of the moderator (Exchange norms)

Exchange	Effect	se	t	p	LLCI	ULCI
1.00	2.75	0.67	4.12	0.00	1.43	4.08
1.30	2.58	0.63	4.12	0.00	1.34	3.82
1.60	2.41	0.58	4.13	0.00	1.26	3.57
1.90	2.24	0.54	4.14	0.00	1.17	3.32
2.20	2.07	0.50	4.14	0.00	1.08	3.06
2.50	1.90	0.46	4.13	0.00	0.99	2.82
2.80	1.73	0.42	4.11	0.00	0.90	2.57
3.10	1.56	0.38	4.07	0.00	0.80	2.32
3.40	1.39	0.35	4.00	0.00	0.70	2.08
3.70	1.22	0.31	3.89	0.00	0.60	1.84
4.00	1.05	0.28	3.71	0.00	0.49	1.62
4.30	0.88	0.26	3.42	0.00	0.37	1.39
4.60	0.71	0.24	2.99	0.00	0.24	1.19
4.90	0.54	0.23	2.39	0.02	0.09	0.99
5.08	0.44	0.22	1.98	0.05	0.00	0.89
5.20	0.37	0.22	1.67	0.10	-0.07	0.81
5.50	0.20	0.23	0.88	0.38	-0.25	0.66
5.80	0.03	0.24	0.13	0.89	-0.45	0.51
6.10	-0.14	0.26	-0.52	0.60	-0.66	0.39
6.40	-0.31	0.29	-1.05	0.29	-0.89	0.27
6.70	-0.48	0.32	-1.48	0.14	-1.12	0.16
7.00	-0.65	0.36	-1.81	0.07	-1.36	0.06

Appendix D.2.2. Conditional effect of focal predictor (label) at values of the moderator
(exchange norms)

Moderation Model with Covariate

Model	coeff	Std.Err	t	p	95% CI	
					Lower	Upper
Constant	4.44	0.74	5.98	0.00	2.97	5.92
Label	0.61	0.55	1.10	0.27	-0.49	1.70
Communal	0.28	0.18	1.61	0.11	-0.06	0.63
Int_1	-0.07	0.14	-0.48	0.63	-0.35	0.21
Acc_type	0.04	0.19	0.21	0.83	-0.33	0.41

Appendix D.3. Moderation analysis by communal norms with accommodation type added as covariate to the model

Moderation Model with Covariate

Model	coeff	Std.Err	t	p	95% CI	
					Lower	Upper
Constant	-0.53	1.20	-0.44	0.66	-2.91	1.86
Label	3.32	0.81	4.08	0.00	1.70	4.93
Exchange	1.14	0.22	5.25	0.00	0.71	1.57
Int_1	-0.57	0.15	-3.74	0.00	-0.87	-0.27
Acc_type	0.19	0.17	1.07	0.29	-0.16	0.53

Appendix D.4. Moderation analysis by exchange norms with accommodation type added as covariate to the model.

APPENDIX E: MEDIATION ANALYSIS ON TRUST

Mediaton Model

Total effect of X on Y

Estimate	Std.Err	t	p	95% CI	
				Lower	Upper
0.13	0.25	0.50	0.62	-0.37	0.62

Direct effect of X on Y

Estimate	Std.Err	t	p	95% CI	
				Lower	Upper
0.05	0.18	0.27	0.78	-0.31	0.41

Indirect effect(s) of X on Y

	Effect	95% CI	
		Lower	Upper
Trust	0.08	-0.28	0.46

Appendix E. Mediation analysis on trust

APPENDIX F: MEDIATION ANALYSIS ON INFORMATION QUALITY

Mediator Model

Total effect of X on Y

Estimate	Std.Err	t	p	95% CI	
				Lower	Upper
0.13	0.25	0.50	0.62	-0.37	0.62

Direct effect of X on Y

Estimate	Std.Err	t	p	95% CI	
				Lower	Upper
0.06	0.22	0.27	0.79	-0.38	0.50

Indirect effect(s) of X on Y

		95% CI	
		Lower	Upper
Trust	0.07	0.13	-0.17

Appendix F. Mediation analysis on information quality

APPENDIX G: MEDIATION ANALYSIS ON PERCEIVED CREDIBILITY

Mediaton Model

Total effect of X on Y

Estimate	Std.Err	t	p	95% CI	
				Lower	Upper
0.13	0.25	0.50	0.62	-0.37	0.62

Direct effect of X on Y

Estimate	Std.Err	t	p	95% CI	
				Lower	Upper
0.15	0.20	0.79	0.43	-0.24	0.55

Indirect effect(s) of X on Y

	Effect	95% CI	
		Lower	Upper
Trust	-0.03	0.15	-0.32

Appendix G. Mediation analysis on perceived credibility

APPENDIX H: MEDIATION ANALYSIS ON CORPORATE SOCIAL RESPONSIBILITY

The study took under analysis corporate social responsibility (CSR) in order to understand if it mediated the relationship between sustainability label and purchase intention. Among CSR variables, significant results could only be observed on the subjective importance of social goodwill (related to the environment). Results revealed significant effect of the sustainability label on social goodwill ($b = 0.53$, $SE = 0.19$; $p < 0.01$). Next, while controlling for social goodwill, the results of the second regression analysis showed that sustainability label were not a significant predictor of purchase intention ($b = -0.27$, $SE = 0.21$; $p = 0.20$).

The direct effect ($b = -0.27$, $SE = 0.21$, $t [116] = -1.28$, $p = 0.20$; 95% CI = $[-0.69, 0.15]$) was not significant, while results of the indirect effect based on 5000 bootstrap samples showed a significant indirect relationship between sustainability label and purchase intention mediated by social goodwill ($a*b = 0.40$, 95% CI = $[0.17, 0.66]$), indicating full mediation.

The analysis revealed that corporate social responsibility, in the shape of respondent's moral values, resulted to mediate the relationship between sustainability label and purchase intention. Specifically, subjective importance of social goodwill appeared to be significantly strong in regards to the environment, suggesting that participants most likely felt particularly benevolent and closer to environmental issues.

However, measures should have been developed differently and be better adapted to the current study. For this reason, future research should further analyse the moderated role of CSR between sustainable labels and purchase intentions.

Mediaton Model

Total effect of X on Y

Estimate	Std.Err	t	p	95% CI	
				Lower	Upper
0.13	0.25	0.50	0.62	-0.37	0.62

Direct effect of X on Y

Estimate	Std.Err	t	p	95% CI	
				Lower	Upper
0.03	0.17	0.20	0.84	-0.31	0.37

Indirect effect(s) of X on Y

	Effect	95% CI	
		Lower	Upper
CSR_1	-0.07	0.12	-0.29
CSR_2	0.00	0.09	-0.16
CSR_3.1	0.12	0.06	0.00
CSR_3.2	0.05	0.05	-0.03

Appendix H. Mediation analysis on corporate social responsibility

APPENDIX I: MODERATED MEDIATION

Moderated Mediation Model

Conditional Indirect Effects

Mediator	b	Boot 95% CI
Information quality	-0.01	[-0.14, 0.15]
Trust	-0.07	[-0.57, 0.45]
Perceived credibility	-0.05	[-0.31, 0.24]

Appendix I. Moderated mediation analysis on Information quality, trust and perceived credibility

