The Combined (Non)Impact of Self-Declared Sustainability Claims and Business Performance Ratings on Customer Intentions

Abstract

Businesses often make claims about their sustainability credentials that are not independently certified. Although these internal (i.e., originating from the business) signals are generally considered suboptimal, does their influence depend on how customers weigh them against external (i.e., originating from other sources) signals about the past performance of the business? Our research examines the separate and combined impact of self-declared sustainability claims (i.e., internal signal) and aggregated performance ratings (i.e., external signal) on customers. A scenario-based experiment showed that both, self-declared sustainability claims and performance ratings, independently increase customers' intention to visit a hotel or restaurant. However, we found no evidence for an interaction effect – i.e., the combination of the two signals appears to have no effect on customers. To gain a deeper understanding, we conducted a qualitative study, which revealed mixed and paradoxical perceptions among customers. While the two signals are perceived to be distinct (communicating different attributes) and even dissonant (communicating opposing attributes), they are also perceived to mutually influence one another in that a high (vs. low) performance rating reflects positively on a self-declared sustainability claim, and *vice versa*. Subsequently, we discuss managerial strategies for communicating sustainability credentials vis-à-visthe overall performance of the business.

Keywords

self-declared sustainability claim; performance rating; signaling theory; electronic word of mouth.

1. Introduction

The concept of "doing well by doing good" has attracted attention from researchers and practitioners in many fields (Melo et al., 2017). This idea suggests that when an organization positions itself as a responsible enterprise, it can benefit not only the environment and society but also its own business. Studies have demonstrated that more sustainable organizations outperform less sustainable ones in various aspects, including competitive advantage (Hamdoun et al., 2022) and stock market and accounting performance (Eccles et al., 2014). This indicates a connection between a business' performance and its sustainability efforts. However, it is not fully understood whether this connection also influences customer behavior.

Sustainability initiatives are being conducted by businesses across various sectors and have become increasingly important, particularly within the hospitality and tourism industry (Greene et al., 2024; Theodorou, 2023). Major hotel chains worldwide are competing to be the most sustainable company (Hospitality Net, 2023), while many small and independent hotels are also emphasizing sustainability initiatives. The emphasis on sustainability within the hospitality and tourism industry is largely driven by stakeholders and customers (Theodorou, 2023). Additionally, the industry expects benefits from sustainability initiatives such as potentially lower energy costs and improved customer perceptions (Dolnicar, 2020; Theodorou, 2023). However, there are also concerns about the sustainability initiatives promoted by the hospitality industry. Some express doubts about the industry's genuine sustainability despite its various sustainability initiatives and communications to customers (e.g., Tounta, 2022). Careless promotion of sustainability initiatives in the industry can lead to perceptions of greenwashing (Dogru et al., 2022). Moreover, claims of sustainability by the hospitality industry may not necessarily prompt customers to behave more sustainably

(e.g, Greene et al., 2024). As a result, it is unclear whether customers perceive sustainability initiatives and the performance of businesses in the hospitality industry as interconnected.

We therefore seek to better understand how customers perceive self-declared sustainability claims in relation to information about a hospitality business' performance shaped by online ratings. Research that provides a simultaneous examination of signals about a business' sustainability and performance is still scarce but important because customers are often simultaneously confronted with both types of signals. To investigate this phenomenon we build on signaling theory (Spence, 1973), cue consistency theory (Maheswaran & Chaiken, 1991), and their recent developments (e.g., Connelly et al., 2011; Drover et al., 2018; Osburg et al., 2022). We acknowledge that customers often refer to online ratings when deciding whether to visit a business, while also encountering information about the business' sustainability efforts, such as sustainability claims on its website (Nilashi et al., 2019; Osburg et al., 2022). Therefore, individual decision-making processes involve considering both external signals (not controlled by the business, e.g., online ratings) and internal signals (controlled by the business, e.g., sustainability claims) (Osburg et al., 2020). While research suggests that customers tend to view external signals (e.g., product ratings) as more credible and less biased than internal signals (Darke et al., 1998), there is limited understanding of how third-party product ratings can influence perceptions when internal signals, such as a business' self-declared sustainability claim, are present (Basuroy et al., 2006; Chen & Xie, 2005; Line et al., 2016). Additionally, previous studies have emphasized the need to consider how environmental cues interact with other marketing attributes, rather than relying solely on environmental cues to attract customers (Dekhili & Achabou, 2014).

Therefore, the contribution of this research is manyfold. First, we contribute to signaling theory and cue consistency theory by providing deeper insights into how customers consider conflicting market signals. Second, our study demonstrates the importance of understanding

how customers combine internal and external signals to shape their perceptions and intentions towards a business. This emphasizes the need to differentiate between internal and external signals, and explore not just their individual effects, but also their combined effects. Third, we examine whether customers subconsciously take into account market observations about the superior performance of sustainable businesses when evaluating businesses, which has implications for advising on the self-declaration of sustainability initiatives. Fourth, our research explores managerially relevant strategies to address customers' misperceptions of sustainability and performance signals.

2. Theoretical background

2.1. Conceptual overview

Signaling theory (Spence, 1973; Stigler, 1961) is concerned with reducing information asymmetries between a signaler and the signal receiver (firms and customers respectively in this research) (Bergh et al., 2014). Signaling theory offers a framework that explains how one party uses cues or signals to communicate selected information to another party to generate purchases (Wells et al., 2011). Signals can be manipulated by the sender (Mavlanova et al., 2016; Spence, 1973); for instance, businesses can decide which information they want to communicate to their customers.

Customers rely on a variety of signals when deciding about the business of their choice. External signals are obtained from outside entities (e.g., electronic word of mouth), while internal signals are produced by the company (Mavlanova et al., 2016; Osburg et al., 2020). For example, a hotel's sustainability claims can be perceived as an *internal signal* aimed at influencing customer perceptions. Signals that are produced internally are difficult to verify and tend to be perceived as less credible (Dogru et al., 2022; Mavlanova et al., 2016).

Previous research demonstrates that when multiple market signals are simultaneously present in the marketplace, their effects on customer perceptions depend on each other (Dekhili & Achabou, 2015; Osburg et al., 2022).

2.2. Internal signals: self-declared sustainability claims

Communicating the sustainability efforts of a business can have positive impacts on attitude and image formation as well as customer behavior (Mo et al., 2018; Osburg et al., 2020). However, sustainability claims can emerge from different sources. Previous studies have shown that labels issued by third parties generally appear to be superior to self-declared labels because customers perceive third-party information as more trustworthy and reliable (e.g., Dekhili & Achabou, 2014; Osburg et al., 2017). Most research indicates that third-party labels are associated with competitive advantage (Karstens & Belz, 2006), whereas self-declared information can be perceived as less credible than external signals (e.g., Dogru et al., 2022; Mavlanova et al., 2016).

Nonetheless, the potential value of self-declared sustainability claims as internal marketing signals should not be underestimated (Line et al., 2016). Research suggests that even a self-declared claim can be successful if it originates from a well-established brand (Dekhili & Achabou, 2014), or a brand with a highly regarded Corporate Social Responsibility (CSR) image (Karstens & Belz, 2006), and such claims are frequently used in the travel and tourism industries.

2.3. External signals: performance ratings

While external signals can emerge from various sources, peer customer ratings are important signals influencing customer decisions (Cheung et al., 2014). Particularly without previous experience with a business, customers search for, and rely on, information provided by external entities (Rodríguez del Bosque et al., 2006). For example, customers use

TripAdvisor to compare how different restaurants performed in the past before making their choice. Whereas customers can consider a range of information about past performance (e.g., corporate reputation, organizational reports, rankings by independent organizations), electronic word of mouth is becoming customers' most frequently consulted information source (Liu et al., 2019; Melo et al., 2017). Two types of electronic word of mouth can thereby be distinguished: aggregated rating (base rate) vs. individual reviews (individuating information) (Liu et al., 2019). While aggregated ratings summarize customers' overall evaluation, individual reviews refer to a single customer's assessment.

Previous research has shown that high-performance ratings are associated with various customer benefits such as satisfaction (Vázquez-Casielles et al., 2007), loyalty (Park et al., 2012), and weaker impacts of service failures (Vázquez-Casielles et al., 2007). Previous research also acknowledges the influence of predictive expectations on customer choices (Rodríguez del Bosque et al., 2006), i.e., customers tend to anticipate future performance based on information about a business' past performance.

2.4. Customers' simultaneous consideration of self-declared sustainability claims (internal) and performance ratings (external)

Building upon signaling theory, the central research question is as follows: *How does a business' self-declared sustainability claim (internal signal) coupled with its global performance rating (external signal) influence customers' perceptions and behaviors?*

The simultaneous presence of internal and external signals can induce different outcomes from the presence of only one of these signal types. Albrecht (1981) and Archibald et al. (1983) were among the first to suggest that with the presence of third-party ratings, the impact of marketing signals (e.g., price and advertising) on perceived quality would increase. Research suggests that a complementary relationship between marketing signals and third-

party ratings has a positive interaction effect on perceived quality (Akdeniz et al., 2013). Two signals (e.g., internal and external) seem to have a complementary effect; one increasing the effectiveness of the other, and a substitutive relationship can also exist between dissimilar signals like marketing signals and independent third-party information (ratings in our context) (ibid). Cue consistency theory (Maheswaran & Chaiken, 1991) indicates that multiple sources of information are more efficient when they offer corroborating information. In other words, positive effects are not guaranteed when conflictive signals are present. Albrecht (1981) demonstrates that when external signals are perceived as more credible, they reduce the effectiveness of internal signals on customer perceptions. In our context, the sustainability claim (internal signal) is self-declared (and non-verified by a third-party entity or legitimate organisation) and consequently is perceived as less credible than external signals (customer's ratings).

In this context, sustainability claims and performance ratings should have a complementary effect on the customer, but self-declared sustainability claim effectiveness is altered by the strong credibility of the external signal (performance ratings). Therefore, a self-declared sustainability claim should be considered in conjunction with information about a business' past performance. Considering that customers are likely be exposed to the superior performance of sustainable businesses in daily life (Eccles et al., 2014) and acknowledging that sustainability and high performance are both positive signals suggests that a self-declared sustainability claim should lead to favorable behavioral responses for high-performance ratings.

> **H1**: A self-declared sustainability claim has a positive effect on customer behavioral intention when the performance rating of a business is high.

However, customers are more and more confronted with the contradictory situation of a rise in CSR communication paired with increasing irresponsible business behavior (Skarmeas & Leonidou, 2013). Due to the growth in greenwashing instances (i.e., businesses deliberately present themselves as more sustainable than they are), customers see such claims more frequently, which ultimately means that customers can be increasingly skeptical when confronted with a sustainability claim (Chen & Chang, 2013). Similarly, there are various reasons why positive attitudes towards sustainability initiatives may not lead to favorable behavior changes including the cognitive load associated with information processing (Dolnicar & Demeter, 2024). Osburg et al. (2021) discuss how sustainability features may not always imply a competitive advantage, for instance, in sustainable luxury products and services. Acuti et al. (2022) show that a business' sustainability communication can backfire and result in unintended negative side-effects such as a low purchase intention, for example, when customers are confronted with conflicting information or information requiring deep cognitive effort to be processed. This may indeed be the case when customers receive a simultaneous communication of a business' low performance paired with sustainability claims. Similarly, the literature suggests that communicating sustainability features may not be advantageous for low-performing businesses. In this vein, Nyilasy et al. (2014) have shown that green advertising decreases brand attitude and purchase intention if the business' environmental performance is low. Consequently, the combination of a self-declared sustainability claim with low business performance should exert a negative effect on customer behavioral responses.

> **H2**: A self-declared sustainability claim has a negative effect on customer behavioral intention when the performance rating of a business is low.

3. Study 1: Effects of self-declared sustainability claims *vis-à-vis* performance ratings

We designed an experiment to test the proposed dual effects of internal and external signals, namely, a self-declared sustainability claim and organizational performance ratings on customer behavioral intentions. Our studies focus on the hospitality field because creating a more sustainable future has become a particularly important topic for this industry (Dolnicar, 2020; Theodorou, 2023; van Bussel et al., 2022).

3.1. Method

A random sample of 700 European holidaymakers were recruited through a market research firm; all participants had recently completed a hotel stay (M_{age}/SD = 47.4/14.9; 55.4% female). The experiment applied a 3 (*performance rating*: highest, average, lowest) x 2 (*self-declared sustainability claim*: present, absent) between-subjects design. At the beginning of the survey, participants were randomly assigned to one of the experimental conditions. Participants were instructed that while searching for a restaurant online, they find information about a particular (fictitious) restaurant, at which point they were presented with a visual representation of an online review site displaying the self-declared sustainability claim and online performance rating of the restaurant. High performance rating was operationalized by an overall ranking of number 1 out of 100 restaurants (i.e., best rank), medium performance rating as number 50 out of 100 (i.e., average rank) and low performance rating as number 100 out of 100 restaurants (i.e., worst rank). The sustainability claim shown as part of the restaurant advertisement included the statement, “We are the most sustainable restaurant in town, and we are looking forward to hosting you!” whereas the control condition stated, “We are looking forward to hosting you!”. All other information presented on the fictitious online review site and restaurant advertisement was kept constant across the conditions.

Following the presentation of the experimental stimulus, we measured behavioral intention using the four-item scale (see Table 1) adapted from Choi et al. (2018) (Cronbach's α = 0.934). Responses were measured on 7-point scales ranging from "strongly disagree" (1) to "strongly agree" (7). Manipulation checks were included as follows (results reported in the next section): sustainability claim – "*it is doubtless that this is a sustainable restaurant*" (7-point Likert adapted from Skarmeas & Leonidou, 2013); performance rating – "*this restaurant is poor/high quality*" (7-point semantic differential adapted from Yoo & Donthu, 2001).

INSERT TABLE 1 ABOUT HERE

3.2. Analysis and results

The manipulation checks were significant for the sustainability claim (ΔM = 0.72; t = 6.8; p = 0.000) and performance rating (F/df = 148.81/2; with average rating as the base condition: ΔM_{low} = -1.41, p = 0.000 and ΔM_{high} = 0.62, p = 0.000) conditions. We specified a generalized structural equation model (GSEM) for hypothesis testing as described in Equations 1 and 2, whereby *Behavioral_Intention* is a latent construct, which is reflected in the observed variables BI_1 – BI_4 (i.e., scale items) and λ_1 – λ_4 are the respective factor loadings, while α, β, and ε represent the intercept, slope, and error terms respectively. The GSEM approach incorporates both the factorial path model component (i.e., representing the effects of experimental manipulations on the dependent variable) and the measurement model component for the estimation of the latent construct (behavioral intention). The model is estimated using maximum likelihood in an integrated manner – i.e., Equations 1 and 2 are estimated together in one analysis that includes all variables (observed, latent, and experimental manipulations). Therefore, the GSEM approach is more robust compared to standard regression in that it explicitly accounts for measurement error, while also mitigating

compounding errors arising from piecemeal analyses that only include subsets of the relevant variables (Skrondal and Rabe-Hesketh, 2004; Wulff et al., 2023). In GSEM analyses, model fit is established comparatively – i.e., a reduction in information criteria (e.g., AIC, BIC) is considered an improvement in the fit of one model over another. Accordingly, we compared our model (as in Equations 1 and 2) to a base model that does not include the effects of the experimental manipulations on behavioral intentions; a likelihood ratio test, supported by accompanying AIC and BIC values, revealed that our model provides a significantly better fit ($\Delta\chi 2/df = 279.2/5$; $p = 0.0000$; $\Delta AIC = 269.2$; $\Delta BIC = 246.4$). Table 2 provides the results from the GSEM analysis incorporating Equations 1 and 2.

$$
\begin{aligned}
Behavioral\_Intention \\
&= \alpha + \beta_1 \circ Sustainbility\_Claim_{present} + \beta_2 \circ Performance\_Rating_{low} \\
&+ \beta_3 \circ Performance\_Rating_{high} + \beta_4 \\
&\circ (Sustainbility\_Claim_{present} \times Performance\_Rating_{low}) + \beta_5 \\
&\circ (Sustainbility\_Claim_{present} \times Performance\_Rating_{high}) + \varepsilon_0
\end{aligned}
$$

(Equation 1)

$$
\mathrm{BI}_i = \lambda_i \circ Behavioral\_Intention + \varepsilon_i, \qquad for\ i\ = 1, 2, 3, 4
$$

(Equation 2)

INSERT TABLE 2 ABOUT HERE

3.3. Results

This study shows that both the self-declared sustainability claim (present vs. absent) and a high (vs. average) performance rating have significant conditional main effects as expected. The presence of a self-declared sustainability claim has a positive effect on behavioral

intention. Low performance rating has a negative effect on behavioral intention, while high performance rating exerts a positive effect. However, there is no evidence for an interaction effect between a self-declared sustainability claim and performance rating. Similarly, the interaction effect of a self-declared sustainability claim paired with a low (vs. average) performance rating on behavioral intention is also not significant. Hence, both H1 and H2 are not supported. Nonetheless, the findings are interesting in that, independently, self-declared sustainability claims and performance ratings, both exert a positive effect on customer intentions; however, when they are combined, the positive effect on customers does not materialize.

4. Study 2: Understanding the absence of an interaction effect between self-declared sustainability claims and performance ratings

4.1. Method

We conducted a qualitative study to understand further the absence of an interaction effect between a self-declared sustainability claim and performance ratings observed in Study 1. We deployed the structured interview method using an open-ended online questionnaire (Salmons, 2016). Sampling was done randomly, without seeking theoretical representativeness (Creswell & Clark, 2017), but we targeted a variety of European participants aged 18 and over with the support of a marketing research firm. The hospitality context was expanded to include hotels as this would broaden the scope of our potential contributions beyond one aspect of the industry. In particular, the qualitative study aimed to: 1) explore customer perceptions of businesses with a high (low) performance rating that promote themselves as a sustainable business, and 2) to determine customer expectations of the sustainability efforts and practices of businesses in relation to their performance rating

(high vs. low). To facilitate participants' understanding of performance, we referred to TripAdvisor ratings.

Specifically, the research instrument covered the following four questions: 1) What do you think about a hotel that has high overall ratings on TripAdvisor and promotes itself as a sustainable business? (average character count: 107.86), 2) What do you think about a hotel that has low overall ratings on TripAdvisor and promotes itself as a sustainable business? (average character count: 110.08), 3) What can a hotel that has high overall ratings on TripAdvisor do to convince you that it is a sustainable business? (average character count: 105,31), and 4) What can a hotel that has low overall ratings on TripAdvisor do to convince you that it is a sustainable business? (average character count: 104.76)

The response length per participant varied between 208 and 1505 characters, with an average character count of 428.43. A total of 134 participants were recruited, where the average age of the participants was 35 years and approximately 61% of the sample were men. A thematic analysis was then carried out on the resulting qualitative data by two separate researchers (Miles et al., 2013).

4.2. Exploring common themes

We explored common themes across the two major categories of hotels: those with high vs. low overall performance ratings. The overall perceptions of participants regarding hotels, expectedly, mirrored the overall performance ratings. For instance, many comments from participants reflect a positive view towards hotels with high ratings, associating them with good reputation and responsibility, as the comments below illustrate:

> *"More than likely good, I would be likely to choose this hotel over others."*
>
> *"I would think positively about it. More likely to consider it to book."*
>
> *"That it is a positive for me as I use TripAdvisor a lot for reviews."*

In contrast, participants often expressed skepticism towards hotels with low ratings, associating them with poor quality or service, for example:

> *"Low ratings are invariably a bad thing. Doesn't matter at all if they promote themselves as sustainable or not."*
>
> *"Probably a very bad hotel with people having very bad experiences. I would not stay at a hotel of this kind."*
>
> *"I wouldn't want to visit due to poor ratings. That is what I look for."*

Regarding views on sustainability credentials in particular, we noted that participants revealed a greater degree of sustainability skepticism towards low-performance hotels than high-performance hotels. For high-performance hotels, participants often mention the importance of genuine sustainability practices to support the hotel's claims, although they found high ratings to be generally trustworthy.

> *"Excellent place to stay if has high ratings but needs to provide proof/evidence that it is a sustainable business."*
>
> *"I would definitely look at this place as I sort my hotels by its overall rating, so the sustainable logo is simply a bonus rather than something I look for."*
>
> *"I want to know if it is really sustainable or just greenwashing."*

So, hotels with high overall ratings still needed to convince customers of their sustainability credentials to avoid greenwashing perceptions. However, for hotels with low overall ratings, there was a marked difference in how participants questioned the hotels' motives and sustainability performance, as the quotes below illustrate:

> *"I would be put off from booking this hotel due to the low ratings, as it would make me also think that its promotion as a sustainable business was questionable."*

> *"I'll be doubtful of their claim due to the rating. I won't believe their claim as a sustainable business because of the overall rating."*

4.3. Further insights into the relative importance of self-declared sustainability claims versus performance ratings

The responses of the participants tend to show that performance rating constitutes a more important selection criterion than the sustainability claim in the tested service sector:

> "*The high ratings are important and that what makes me choose it, the sustainable business is an extra bonus.*"

Performance rating seems to guide more customers in their choices of hotels:

> "*I would definitely look up hotels on TripAdvisor and check ratings before booking accommodation, promoting sustainability is a plus but it is not the main decision factor for me.*"

Consequently, in the case of a low performance rating, some customers tend to avoid the hotel even if it highlights sustainable actions:

> "*I would be less inclined to view the hotel favorably even though it's promoted as sustainable*"; "*they should look at improving the hotel then working on the environmental side.*"

4.4. Further insights into the combined effects of signals and mixed perceptions

Regarding the link between the two signals, different issues emerged from the respondents' discourse. At an overall level, several participants consider "performance rating" and "sustainability claim" to be two distinct information items projecting different kinds of information that are only weakly linked:

> "*I don't think sustainability has much to do with high or low ratings, though I would more likely stay in a hotel which promotes itself as sustainable. I think of the high ratings of a hotel to do with customer service and cleanliness*."

In this sense, for some individuals, the two signals are dissonant and should not be related as "performance rating" is connected with a high-quality service with a significant level of comfort for customers needing resources consumption (water, energy, buildings, …), while sustainability suggests moderation:

> "*I would question it. The high ratings would lead me to believe it is luxurious and this doesn't usually go hand in hand with sustainability*"; "*High ratings often correlate with hotels who have towels and bed sheets changed every day – not sustainable.*"

Regarding the valence of the two provided cues, on the one hand, when the two signals provide corroborating positive information, customers could express positive perceptions. In this case, the double information seems to help customers build their evaluation of the service:

> "*that it must be a good hotel in terms of service but also does stuff for the local environment and helps the local economy*."

In addition, the presence of one signal seems to influence the evaluation of the second. In particular, a high performance rating tends to enhance the effect of the sustainability claim:

> "*I tend to believe them due to the ratings. I will think they're a sustainable business because of the TripAdvisor ratings*"; "*a hotel I would stay in, as it promotes that it is sustainable, and the good ratings bolster that.*"

In the other direction, some ideas underline the effect of sustainability information on performance perceptions. Few individuals associate sustainable hotels with a better service:

> "*I would assume it to be clean and the staff friendly, brilliant, knowing they make a positive impact on the environment.*"

Consequently, sustainability efforts help, from the customer point of view, to increase performance ratings:

> "*I would think that they have overall good practices that benefit the environment and take sustainability into consideration in a lot of aspects. I think they would focus on sustainability as a priority and that contributed to their high ratings.*"

On the other hand, signals with contradictory information tend to favor negative customer perceptions. In particular, a low performance rating is perceived as incongruent with a sustainability claim:

> "*most times these ratings may be due to minor issues. But a sustainable business with low ratings, something seems off.*"

Overall perception in this case is not strengthened by the positive signal; the sustainability information becomes suspicious:

> "*I would think that perhaps they aren't as sustainable as they claim to be*"; "*well it could simply be greenwashing, so I immediately assume they deserve the low rating.*"

Customers think that low ranked hotels that adopt sustainable claims are opportunistic; they are only seeking to green their image and profiting from a customer demand:

> "*doesn't care about customers and just wants money and probably doesn't much do to please its customers.*"

> "*I would think they are not really a sustainable business, and they are just using buzzwords to attract customers.*"

The perceived incongruence between the two signals, in the case of opposite valences, makes it hard to evaluate the service and pushes customers to seek additional information:

> "*that I should be careful and check more into details.*"

In particular the respondents express the need for external proofs, as labels, to trust sustainability claims:

> "*the claim is fine, but I would seek independent verification,*" or use their own experiences: "*I am positively inclined to this hotel, but I prefer personal experience in order to make up my mind.*"

Other respondents view sustainability involvement as a risk in terms of service performance, since the service providers, in the case of a sincere engagement, could invest time and effort on sustainability practices to the detriment of the core of the business:

> "*I would think that the hotel was neglecting its core business of satisfying its customers.*"

A low performance rating is explained in this case by a strong investment in sustainability:

> "*possibly focused too much on the sustainability aspect.*"

4.5. Recommendations from participants

In light of the above findings, we considered the comments from participants regarding what the hotels could do to convince them of their sustainability performance. As noted earlier, there is some level of skepticism regarding the sustainability performance of high-performance hotels, although this was not as pronounced as in the case of low-performance hotels. Accordingly, we identified three themes among the recommendations for high-performance hotels: transparency and certification, effective communication of sustainability efforts, and consistency in practices.

Under the first theme of 'transparency and certification', participants suggested that high-rated hotels should provide clear evidence of their sustainable practices, such as certifications and transparent reporting:

"Provide information that supports the claim of being a sustainable business."

"Prove it on TripAdvisor. TripAdvisor could act as an intermediary and provide this 'certification'."

"More transparency on the website and on ads. More sponsored posts on social media to entice you in."

For the second theme, participants frequently recommended that high-performance hotels communicate about sustainability initiatives, such as recycling programs and energy-saving measures, more effectively:

"Give examples of how it is sustainable e.g., information about where they source their supplies."

"Doing green corporate communication, for example, 1 night booked = 1 tree planted."

"Show certifications, show more photos, and show me the projects it is working on."

Under the third theme of 'consistency in practices', participants recommended that high-performance hotels maintain consistent sustainability practices and share their progress over time to convince customers of their sustainability credentials:

"That they continue to keep making improvements and investment in the business to keep standards consistently high."

"To publish their goals for maintaining a sustainable business and their progress against these goals."

"High ratings are hard to be maintained. If the ratings stay the same, I would be convinced that the business is sustainable."

Importantly, for low-performance hotels, we identified three other themes that came up frequently in the participants' comments: need for visible changes, communication of real change, and the improvement of overall ratings.

Under the first theme, participants emphasized that low-rated hotels need to make significant and visible improvements in sustainability practices:

> *"Make genuine effort to improve and take concerns on board."*
>
> *"Show evidence of their sustainability and try to improve their services to have more satisfied customers."*

Furthermore, similar to high-rated hotels, participants recommend that low-rated hotels identify better communication of sustainability efforts to be crucial. However, the focus of low-rated hotels should be on demonstrating real change:

> *"Rely much on power of mouth [sic], doing communication on social networks, little partnership with local associations."*
>
> *"Quote figures to show improvement year on year. Put the figures for everyone to see on web page."*

Notably, participants often viewed the improvement of overall performance ratings, through better service, for example, as essential to gaining trust regarding low-rated hotels' sustainability credentials:

> *"Get new management. Show a roadmap to improvement. Tell customers how they are trying to change the hotel rating."*
>
> *"Fix the problems listed on those low ratings and increase the overall ratings."*
>
> *"Highlight their credentials more. Who are they working with that makes their sustainability worth paying attention to."*

The last point reemphasizes the importance of high overall performance in establishing the credibility of sustainability efforts in the customers' eyes.

5. General discussion

The present research explored customers' perception of a business' self-declared sustainability claim *vis-à-vis* organizational performance captured by online ratings (electronic word of mouth). Drawing on signaling (Spence, 1973) and cue consistency theory (Maheswaran & Chaiken, 1991), we predicted that a self-declared sustainability claim combined with high (low) online ratings should have a positive (negative) effect on customer behavioral intention. To test our theorizing, we conducted two studies. Study 1, which employed an experimental design, failed to find empirical support for our two hypotheses. To understand the reasons underlying the lack of support for our predicted effects, we conducted Study 2, which used a qualitative design. This study uncovered several patterns, including the greater importance of external performance ratings as opposed to internal sustainability claims in customers' eyes and the perceived disconnect between sustainability claims and performance ratings, among others.

5.1. Theoretical contributions

This research enriches the existing literature on multiple fronts. We examined the combined effect of an internal signal (i.e., self-declared sustainability claim) and an external signal (i.e., aggregated customer online ratings) on customer perceptions of a business, thereby advancing the literature on the interplay between these two types of signals (Basuroy et al., 2006; Chen & Xie, 2005). Thus, this research highlights the importance of exploring how customers integrate different marketing signals when deciding to visit a business. In line with previous research, we show that internal signals such as a sustainability claim (e.g., Dekhili & Achabou, 2014; Osburg et al., 2020) and external signals such as performance ratings (e.g., Liu et al., 2019; Osburg et al., 2022) individually influence customer perceptions and

behavioral intentions. Thus, it is important to explore their individual as well as joint effects on customer behavior.

Additionally, this research expands the literature on signaling theory (Bergh et al., 2014; Mavlanova et al., 2016; Spence, 1973; Wells et al., 2011) and cue consistency theory (Maheswaran & Chaiken, 1991) by offering deeper insights into customer perception of a potential disconnect between internal signals of sustainability and external signals of organizational performance. Our findings are not in line with our hypotheses which predicted an interaction effect of both signals. Surprisingly, we find that customers' behavioral intention to sustainability claims are not more favorable in case of a high (vs. average) performance rating, neither more negative in case of a sustainability claim paired with low (vs. average) performance rating. Thus, customers' behavioral intention does not necessarily mimic market observations about the superior performance of sustainable businesses (e.g., Eccles et al., 2014; Hamdoun et al., 2022).

Our qualitative study helps shed further light on this surprising observation by showing that customers tend to see sustainability and performance information as disconnected, i.e., as communicating different attributes, and even dissonant, i.e., as communicating opposing attributes. Further, while we cannot find a joint influence of both signals on customer behavior in Study 1, Study 2 indicates that customers may nevertheless reflect on the joint presentation of both signals, although it does not necessarily have to manifest in their behavior, but rather their cognitions. For example, the qualitative comments suggest that customers tend to be more sceptical towards sustainability claims from low-performing businesses, which partly mimics market observations. However, some customers also express potential incompatibility perceptions regarding high-performing businesses, which they associate with luxuriousness and indulgence, and their sustainability efforts. This finding partially aligns with the ongoing discussion about the compatibility of sustainability and

luxury signals (e.g., Osburg et al., 2021). Taken together, these observations help better understand the nonexistence of an interaction effect in Study 1.

5.2. Managerial implications

This research provides important implications for marketing managers. The findings document that sustainability is clearly an important topic, not only for our environment and society, but it can also be beneficial for businesses to acquire new, and keep existing, customers. Customers are generally aware of the importance of sustainable solutions, and they value these initiatives *per se*. The same applies for information about the business' past performance; such information is very influential in customers' decision-making processes, and should be communicated if favorable. Importantly, marketing managers must be aware that customers evaluate these signals (e.g., sustainability and performance information) not individually but may base their judgments on the combined set of signals available to them. In particular, the second study indicates that businesses with low performance ratings should first engage in improving their performance before focusing too much on communicating sustainability initiatives. Further, the communication of sustainability claims should also be carefully drafted based on the characteristics of the target customer groups. In any case, customers appear to look for authenticity, i.e., sustainability and performance information should be authentic and match with other characteristics of the business. In other words, customers increasingly engage in a critical evaluation of the practices they observe and compare these to the claims made by the business. Finally, marketing managers must be aware that customers integrate information from different sources in their decision-making process, such as internal and external signals. It is important that internal signals match with, or successfully counteract, external signals. This should be carefully tested when deciding about marketing communication strategies.

Based on the results of our research, we recommend three specific strategies each for low- and high-performance organizations. For low-performance organizations, the need for visible changes, enhanced communication of these changes, and, especially, the improvement of overall performance, are crucial to convincing customers about their sustainability credentials. For high-performance organizations, too, strengthening their credibility regarding sustainability is crucial. To achieve this, our findings suggest that transparency and third-party certification, effective communication of sustainability efforts, and maintaining consistency in their practices (including reporting progress over time on sustainability) can help high-performance organizations.

5.3. Limitations and future research

This research offers several avenues for future studies. While we focused on two prominent signals customers are frequently confronted with (i.e., sustainability claims as an internal and performance ratings as an external signal), future research should explore the interplay between other internal (e.g., claims about quality, service, and performance) and external (e.g., blogs, family and friends) signals. This will further contribute to the debate on the (in)compatibility of different marketing signals. Special consideration should also be given to the customer decision-making process in the case of potentially contradictory claims, also under consideration of conducting field studies (Demeter et al., 2023). Further, in our quantitative study, we operationalized high, medium, and low performance ratings using the most obvious values (i.e., ratings of 1, 50, and 100 out of 100 businesses). This approach may have influenced the results, as customers' reactions to businesses performing extremely well or extremely poorly could be more nuanced compared to moderately well or moderately poorly performing enterprises. Therefore, future research could validate our findings by using less extreme operationalizations. Moreover, since our research was conducted in hospitality settings, future researchers might want to explore the joint effect of sustainability claims and

performance ratings outside these settings. Furthermore, given the significant influence of cultural context on customer behavior (Henrich et al., 2010), future studies could explore the potential interplay between sustainability claims and performance ratings with non-European customers.

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Table 1. Scale items

Scale item (***Behavioral Intention***)	Mean	Std. Deviation
I would seek to visit this restaurant	3.45	1.66
I would seek more information about this restaurant	3.91	1.78
I would recommend this restaurant to a friend	3.35	1.60
I would say positive things about this restaurant	3.56	1.50

Table 2. Results of the experimental study

Conditional Effects on *Behavioral Intention* (Equation 1: Structural Component)	**B [95% CI]**	**SE**	**p**
Self-declared Sustainability Claim (present vs. absent)	0.33 [0.02, 0.65]	0.16	0.04
Performance Rating:			
low rating (vs. average)	-1.62 [-1.95, -1.29]	0.17	0.00
high rating (vs. average)	0.70 [0.37, 1.04]	0.17	0.00
Self-declared Sustainability Claim x *Performance Rating:*			
low rating (vs. average)	0.01 [-0.46, 0.47]	0.24	0.98
high rating (vs. average)	-0.35 [-0.82, 0.11]	0.24	0.14
Factor Loadings for *Behavioral Intention* (Equation 2: Measurement Component)	**λ [95% CI]**	**SE**	**p**
I would seek to visit this restaurant	1	(constrained)	
I would seek more information about this restaurant	0.92 [0.86, 0.98]	0.03	0.00
I would recommend this restaurant to a friend	0.96 [0.92, 1.00]	0.02	0.00
I would say positive things about this restaurant	0.90 [0.86, 0.94]	0.02	0.00

Notes. B: effect coefficient. λ: factor loading. CI: confidence interval. SE: standard error. p: significance value.