Pricing Strategy for Green Hotel Industry

Flávio Ferreira, Fernanda A. Ferreira, and Cristina Rodrigues

Abstract Holistic health and prevention are increasingly at the center of tourists' decisions. Tourists expect to may continue their health and wellness lifestyles when they are away from home. Hospitality can find in the "health and wellness" sector a good response to the requalification needs for the post-COVID period. In fact, since 1900s, the hospitality niche of health and wellness has been increasing around the world, and it has been an important issue for the profit growth for the hospitality destinations. But what is wellness tourism? The Global Wellness Institute defines wellness tourism as travel associated with the pursuit of maintaining or enhancing one's personal wellbeing. Several hotels have introduced green innovation as the innovation that emphasizes health, safety, and environmental friendliness and implementation of environmental management to ensure ecological wellbeing. One way for hotels to be environmentally friendly is to implement corporate social responsibility (CSR) initiatives. In this paper, we will study the effects of corporate social responsibility policies in the hotel industry. To do that, we will model a non-cooperative hotel competition using game theory concepts. We recall that game theory is a formal, mathematical discipline that studies situations of competition and cooperation between several involved parties and aims to help us understand situations in which decision-makers interact. The model consists in a competition between a CSR hotel and a state-owned (SO) hotel that set room rates. The choice of room rates can be made either simultaneously or sequentially. Our main result is that the CSR hotel profits more than the SO hotel, regardless of the order of movements.

Keywords Corporate social responsability · Green hospitality · Health and wellness

JEL Classifications L83 · M14 · Z30

F. Ferreira (✉) · F. A. Ferreira
School of Hospitality and Tourism, Applied Management Research Unit (UNIAG), Polytechnic Institute of Porto, CiTUR, Rua D. Sancho I, 981, 4480-876 Vila do Conde, Portugal
e-mail: fff@esht.ipp.pt; faf@esht.ipp.pt

C. Rodrigues
Applied Management Research Unit (UNIAG), Vila do Conde, Portugal
e-mail: cilro@portic.ipp.pt

1 Introduction and Literature Review

Contemporary society is more concerned and sensitive about health and wellbeing, both physical and psychological, and in general about quality of life, a holistic concept that incorporates different dimensions that should work in harmony (Edlin & Golanty, 2019). As more consumers adopt the "health and wellness" as a lifestyle, this becomes a driver of motivation and decision for many trips and vacations (Global Wellness Tourism Economy, 2018). Thorne (2021) mentions that this awareness encourages consumers to travel to meet their personal wellness requirements. The intersections between health, wellness and leisure are huge (Young et al., 2021). Global Wellness Institute understand the act of travel itself as having a wellness enhancing activity. For these reasons, the "health and wellness" sector has a great potential for various tourism market segments, such as wellness tourism (Dimitrovski & Todorović, 2015; Wang et al., 2021); medical tourism (Birader & Ozturen, 2019; Groshev & Krasnoslobodtsev, 2017; Habibi et al., 2021); spa tourism (Anaya-Aguilar et al., 2021; Pinos Navarrete et al., 2021; Štefko et al., 2020), and thermal tourism (Chrobak et al., 2020). Even more, "health and wellbeing are crucial for achieving sustainable societies" (Von Heimburg & Ness, 2021, p. 639). From this point of view, the hospitality can play a very important role in offering experiences that provide a complete state of satisfaction and wellbeing to tourists. Based on these changes, the hospitality sector needs to develop strategies that respond positively to these sensibilities (Aksöz et al., 2021), bringing competitiveness of hotel companies and benefits for this segment of tourists. This segment of consumers is already well documented in the literature, known as "Lifestyle of Health and Sustainability" (LOHAS). These consumers, at several times also tourists, pay particular attention to their holistic health and value behaviors that promotes the sustainable development; they are environmentally aware and socially attuned (Osti & Goffi, 2021; Pícha & Navrátil, 2019). In order to attract this important segment, hotel managers have become increasingly active following green practices and strategies (Chung, 2020).

One way for hotels to be environmental and sustainable friendly is to implement corporate social responsibility (CSR) initiatives. A CSR culture includes an active contribution to the welfare of the community by managing the business to generate shared value for society through ethical conduct (Latapí Agudelo et al., 2019; Sharma, 2019). This is achievable with specific measures that are socially responsible (Chaffee, 2017). The implementation of CSR actions brings the possibility of achieving sustainability, value creation and competitive advantage (Bohdanowicz & Zientara, 2008; Cheng & Ding, 2021). Moreover, it is a powerful tool to influence society, create a better life for people, shape public opinion for a brand, and is also a strong marketing tool (Sharma, 2019). Particularly in the hospitality, a range of stakeholders perceive that this industry has an obligation to provide benefits, owing to its financial gains (Wong et al., 2021). Therefore, hospitality companies are increasingly investing in CSR to generate strong relationships with stakeholders while aiming to benefit their own performance (Franco et al., 2020; Ghaderi et al., 2019). Particularly for the competitiveness of the sector, CSR has already shown

positive effects, on companies' reputation, generating brand preference and higher levels of customer trust and identification with the company (Liu et al., 2019; Serra-Cantallops et al., 2018). It is recognized that customers are rewarding companies involved in CSR initiatives, directly and indirectly through perceived service quality (Aljarah & Alrawashdeh, 2021). However, CSR in hospitality remains an under-researched area, with great scope for growth and development (Moyeen et al., 2019; Qian et al., 2021; Serra-Cantallops et al., 2018). As explained by Xu et al. (2017), the costs of adopting sustainable practices and policies in companies can under-mine their commitment with sustainability. Qian et al. (2021) confirm that high- and mid-tier hotels were more involved in this philosophy due to their devotion to CSR practices than low-tier or budget hotels. For Gutierrez-Martinez and Duhamel (2019), the implementation of sustainability processes in the hospitality depends on the ability of leaders to craft systems, build commitment, and align interests and goals consistent with sustainability.

Miranda and Cantallops (2012) argue that a hotel is at a high level of CSR when there is a competitive product which meets ethical, labor, social, and environmental criteria. Dahlsrud (2008) identifies five dimensions of CSR: environmental; social; economic; stakeholder; and voluntariness. In this vein, Bohdanowicz and Zientara (2008) emphasizes fair treatment with employees, suppliers and customers, efforts to support local communities, help charities, and promote environmental sustainability. The environmental strategy, particularly the "3Rs" (reduce, reuse, and recycle), plays an important role among firms in the hospitality industry (Chen & Peng, 2016; Ioan-nidis et al., 2021), and its implementation can be beneficial for their performance and success. Regarding sustainable performance indicators for the hospitality, Franzoni et al. (2021), on environmental dimension, identify: CO_2 emission; energy consumption per guest night; the energy produced by renewable sources; water consumption; plastic consumption; environmental certification; certified cleaning products. Castillo and Villagra (2019) indicate that CSR communication in the Spanish hotel sector is often related to environmental issues, on the companies' websites and respective Facebook pages. Similarly, Mohammed and Al-Swidi (2020) revealed that environment related with CSR has significant and direct impacts on customers' positive "electronic word of mouth." Environmental CSR practices affect commit-ment and respect to the tourism industry (Bogan & Dedeoglu, 2019; Han et al., 2019). In summary, these practices support corporate sustainability that fosters the social, economic and environmental wellbeing of the community, now and in the future (Rela et al., 2020), helping in the transition toward more sustainable societies and healthy living (Biswas, 2020).

Font and Lynes (2018) explored how CSR has developed within the tourism and hospitality literature. One way for hotels to be environmentally friendly is to implement corporate social responsibility (CSR) initiatives. As pointed out by Lewis (2021), "CSR is important in hospitality as it encourages organizations to do good within society, and further benefits them from a business point of view—think positive media attention, publicity and societal respect. The benefits of CSR policies in a business are far and wide—ranging from societal, economic, and environmental. CSR is particularly important within hospitality as the industry as it has historically had a

rather dramatic impact on the environment through energy and water consumption, food waste, and the use of consumable goods—to name a few. The hotel sector alone currently accounts for around 1% of global carbon emissions, and this is only set to increase as the industry grows."

Wang et al. (2018) studied the effects of CSR practices under three different mixed duopolies: Cournot competition; Stackelberg competition with the CSR firm acting as the leader; and turnover, with the profit maximizing firm playing the lead position. Ferreira et al. (2022) studied the same issues, but using prices instead of quantities as strategic variables, in the context of hospitality industry.

In this paper, we contribute to the development of the theory about CSR. We closely follow the model used by Ferreira et al. (2022), but considering a market competition between a CSR hotel and a state-owned (SO) hotel (instead of a CSR hotel competing with a private hotel).

The remainder of this paper is organized as follows. In Sect. 2, we describe the model. Section 3 develops the model with simultaneous decisions and the effects of social concerns. Sections 4 and 5 analyze the model with sequential decisions and the effects of social concerns. Finally, the conclusions are presented in Sect. 6.

2 Methods

We consider a market with two hotels, which compete on prices (Bertrand competition). We assume that the representative consumer maximizes:

$$U(q_1, q_2) - p_1 q_1 - p_2 q_2,$$

where q_i is the quantity (occupancy rate) of hotel H_i and p_i is the its price, with $i = 1, 2$. The function U is assumed to be quadratic, strictly concave, and symmetric in q_1 and q_2:

$$U(q_1, q_2) = \alpha(q_1 + q_2) - \frac{1}{2}(q_1^2 + 2\gamma q_1 q_2 + q_2^2),$$

where $\alpha > 0$ indicates the total market size and $\gamma \in (0, 1)$ is a measure of the degree of the differentiation of the hotels' rooms or services.

Assumption 1 For simplicity, we assume $\gamma = 0.5$.

So, the direct demand is characterized by

$$p_i = \alpha - q_i - \frac{1}{2}q_j,$$

where $i, j = 1, 2$ with $i \neq j$. Therefore, the direct demand is given by

$$q_i = \frac{2}{3}(\alpha - 2p_i + p_j).$$

For simplicity, we assume that both hotels have the same constant marginal cost c. We consider from now on prices net of marginal costs. This is without loss of generality since if marginal cost is positive, we may replace α by $\alpha - c$. The profit function π_i of hotel H_i is then

$$
\begin{aligned}
\pi_i &= \left(\alpha - q_i - \frac{1}{2}q_j\right)q_i \\
&= \frac{2}{3}(\alpha - 2p_i + p_j)p_i,
\end{aligned}
$$

with $i, j = 1, 2$ and $i \neq j$.

The market we model is composed of 2 hotels: one SO hotel (H_1) and one CSR hotel (H_2). Following Lambertini and Tampieri (2010) and Wang et al. (2018), all social concerns are integrated as part of consumer surplus. Thus, the objective function of the CSR hotel is

$$V = \pi_2 + wCS,$$

where $w \in (0, 1)$ is the weight that the CSR hotel assigns to the consumer surplus, and the consumer surplus CS is given by:

$$
\begin{aligned}
CS &= \frac{1}{2}(q_1^2 + q_1q_2 + q_2^2) \\
&= \frac{2}{3}(p_1^2 - p_1p_2 + p_2^2 + \alpha(\alpha - p_1 - p_2)).
\end{aligned}
$$

Assumption 2 In order to have interior solutions, we assume $0 < w < 2/3$.

The SO hotel H_1 aims to maximize social welfare W that is defined as the sum of hotels' profits and consumer surplus:

$$W = \pi_1 + \pi_2 + CS.$$

We will study and discuss three cases: (i) both hotels take their decisions simultaneously; (ii) the CSR hotel takes the leader position; (iii) the SO hotel takes the leader position.

3   Results: Simultaneous Decisions

In this section, we suppose that both hotels decide their room rates simultaneously.

The SO hotel H_1 solves the optimization problem $\max\limits_{p_1} W$, and the CSR hotel H_2 solves the optimization problem $\max\limits_{p_2} V$. By solving the system

$$\begin{cases} \dfrac{\partial W}{\partial p_1} = 0 \\[2mm] \dfrac{\partial V}{\partial p_2} = 0 \end{cases}$$

we get the Nash equilibrium[1]:

$$p_1^S = \frac{\alpha(1-w)}{7-3w} \text{ and } p_2^S = \frac{2\alpha(1-w)}{7-3w}.$$

Thus, the resulting profits are:

$$\pi_1^S = \frac{2\alpha^2(1-w)}{3(7-3w)} \text{ and } \pi_2^S = \frac{16\alpha^2(1-w)}{3(7-3w)^2}.$$

Therefore, the equilibrium consumer surplus and social welfare are given by:

$$CS^S = \frac{2\alpha^2\left(31 - 18w + 3w^2\right)}{3(7-3w)^2} \text{ and } W^S = \frac{4\alpha^2\left(23 - 18w + 3w^2\right)}{3(7-3w)^2}.$$

From

$$p_1^S - p_2^S = -\frac{\alpha(1-w)}{7-3w} \text{ and } \pi_1^S - \pi_2^S = -\frac{2\alpha^2(1-w)(1+3w)}{3(7-3w)^2}$$

we conclude the following proposition.

Proposition 1 If both hotels decide, simultaneously, their room rates, then

(i)   The room rate set by the CSR hotel is higher than that of the SO hotel.
(ii) The CSR hotel's profit is higher than the SO hotel's profit.

The statement (i) of proposition 1 is the opposite of that verified in the case of CSR hotel competing with a private hotel (Ferreira et al., 2022). The statement (ii) of proposition 1 is also different of that verified in the case of CSR hotel competing with a private hotel, in which the relationship between profits depends upon the weight w that the CSR hotel assigns to the consumer surplus.

---

[1] Throughout the paper, we use the notation superscript S to refer the simultaneous decisions competition.

3.1 Comparative Static Analysis

Here, we evaluate the effect of the CSR hotel's preference for consumer surplus on the market equilibrium outputs. From

$$\frac{\partial p_1^S}{\partial w} = -\frac{4\alpha}{(7-3w)^2} < 0, \quad \frac{\partial p_2^S}{\partial w} = -\frac{8\alpha}{(7-3w)^2} < 0,$$

$$\frac{\partial \pi_1^S}{\partial w} = -\frac{8\alpha^2}{3(7-3w)^3} < 0, \quad \frac{\partial \pi_2^S}{\partial w} = \frac{166\alpha^2(1+3w)}{3(7-3w)^3} > 0,$$

$$\frac{\partial CS^S}{\partial w} = \frac{8\alpha^2(5-w)}{3(7-3w)^3} > 0, \quad \frac{\partial W^S}{\partial w} = \frac{16\alpha^2(1-w)}{(7-3w)^3} > 0,$$

we conclude the following proposition.

Proposition 2 If both hotels decide, simultaneously, their room rates, then

(i)   The prices set by both hotels decrease with the CSR hotel's preference for consumer surplus.
(ii) The profit of the SO hotel decreases with the CSR hotel's preference for consumer surplus, whereas the opposite is the case for the CSR hotel.
(iii) Both consumer surplus and social welfare increase with the CSR hotel's preference for consumer surplus.

We note that, while in the case studied here, the profit of the CSR hotel increases with w, in case the CSR hotel competes with a private hotel, its profit decreases with w. Furthermore, in our model, social welfare increases with the CSR hotel's preference for consumer surplus, but the opposite happens when the CSR hotel competes with a private hotel.

4   Results: CSR Hotel Acts as the Leader

In this section, we consider the case in which the CSR hotel assumes a leading role, and the SO hotel responds. So, the model consists in the following two-stages game:

- In the first stage, the CSR hotel H_2 chooses its room rate p_2;
- Then, in the second stage, the SO hotel H_1 chooses its room rate p_1.

The model is solved by backward induction to obtain the subgame perfect Nash equilibrium. In the second stage, the SO hotel H_1 chooses p_1 to maximizes social welfare W. Appling the first-order optimal condition $\frac{\partial W}{\partial p_1} = 0$, we get (1)

$$p_1 = \frac{1}{2}p_2. \tag{1}$$

Putting (1) into the objective function V, the first-order optimal condition $\frac{\partial V}{\partial p_2} = 0$ gives[2] (2):

$$p_2^L = \frac{\alpha(2 - 3w)}{3(2 - w)}. \tag{2}$$

Now, putting (2) into (1), we obtain

$$p_1^L = \frac{\alpha(2 - 3w)}{6(2 - w)}.$$

Thus, the resulting profits, consumer surplus, and social welfare are as follows:

$$\pi_1^L = \frac{\alpha^2(2 - 3w)}{9(2 - w)}, \quad \pi_2^L = \frac{\alpha^2(2 + w)(2 - 3w)}{9(2 - w)^2},$$

$$CS^L = \frac{\alpha^2(28 - 12w + 3w^2)}{18(2 - w)^2}, \quad W^L = \frac{\alpha^2(44 - 36w + 3w^2)}{18(2 - w)^2},$$

From

$$p_1^L - p_2^L = -\frac{\alpha(2 - 3w)}{6(2 - w)} < 0$$

and

$$\pi_1^L - \pi_2^L = -\frac{2\alpha w(2 - 3w)}{9(2 - 3w)^2} < 0$$

we conclude the following proposition.

Proposition 3 If the CSR hotel acts as a leader, then

(i)   The room rate set by the CSR hotel is higher than that of the SO hotel.
(ii) The CSR hotel's profit is higher than the SO hotel's profit.

The results presented in Proposition 3 are slightly different than that verified in the case where the CSR hotel competing with a private hotel, in which the both relationship between room rates and between profits depend upon the weight w that the CSR hotel assigns to the consumer surplus.

---

[2] Throughout the paper, we use the notation superscript L to refer the sequential decisions with the CSR hotel acting as the leader.

4.1   Comparative Static Analysis

Here, we evaluate the effect of the CSR hotel's preference for consumer surplus on the market equilibrium outputs. From

$$\frac{\partial p_1^S}{\partial w} = -\frac{2\alpha}{3(2-w)^2} < 0, \quad \frac{\partial p_2^S}{\partial w} = -\frac{4\alpha}{3(2-w)^2} < 0,$$

$$\frac{\partial \pi_1^S}{\partial w} = -\frac{4\alpha^2}{9(2-w)^2} < 0, \quad \frac{\partial \pi_2^S}{\partial w} = -\frac{16\alpha^2 w}{9(2-w)^3} < 0,$$

$$\frac{\partial \pi_1^S}{\partial w} = -\frac{4\alpha^2}{9(2-w)^2} < 0, \quad \frac{\partial W^S}{\partial w} = \frac{4\alpha^2(2-3w)}{9(2-w)^3} > 0,$$

we conclude the following proposition.

Proposition 4 If the CSR hotel acts as a leader, then

(i)   The prices set by both hotels decrease with the CSR hotel's preference for consumer surplus.

(ii) The profit of both CSR and SO hotels decrease with the CSR hotel's preference for consumer surplus.

(iii) Both consumer surplus and social welfare increase with the CSR hotel's preference for consumer surplus.

5   Results: SO Hotel Acts as the Leader

In this section, we consider the case in which the SO hotel assumes a leading role, and the CSR hotel responds. So, the model consists in the following two-stages game:

- In the first stage, the SO hotel H_1 chooses its room rate p_1;
- Then, in the second stage, the CSR hotel H_2 chooses its room rate p_2.

The model is solved by backward induction to obtain the subgame perfect Nash equilibrium. In the second stage, the CSR hotel H_2 chooses p_2 to maximizes its objective function V. Appling the first-order optimal condition $\frac{\partial V}{\partial p_2} = 0$, we get (3)

$$p_2 = \frac{(\alpha + p_1)(1 - w)}{2(2 - w)} \tag{3}$$

Putting (3) into the objective function W of the SO hotel, the first-order optimal condition $\frac{\partial W}{\partial p_1} = 0$ gives[3] (4)

---

[3] Throughout the paper, we use the notation superscript F to refer the sequential decisions with the CSR hotel acting as a follower.

$$p_1^F = \frac{\alpha(1-w)}{13 - 12w + 3w^2}. \tag{4}$$

Now, putting (4) into (3), we obtain

$$p_2^F = \frac{\alpha(1-w)(7-3w)}{2(13 - 12w + 3w^2)}.$$

Thus, the resulting profits, consumer surplus, and social welfare are as follows:

$$\pi_1^F = \frac{\alpha^2(1-w)(29 - 30w + 9w^2)}{3(13 - 12w + 3w^2)^2}, \quad \pi_2^F = \frac{\alpha^2(1-w)(7-3w)^2}{3(13 - 12w + 3w^2)^2},$$

$$CS^F = \frac{\alpha^2(37 - 30w + 9w^2)}{6(13 - 12w + 3w^2)}, \quad W^F = \frac{\alpha^2(49 - 42w + 9w^2)}{6(13 - 12w + 3w^2)}.$$

From

$$p_1^F - p_2^F = -\frac{\alpha(1-w)(5-3w)}{2(13 - 12w + 3w^2)} < 0$$

and

$$\pi_1^F - \pi_2^F = -\frac{4\alpha^2(1-w)(5-3w)}{3(13 - 12w + 3w^2)^2} < 0$$

we conclude the following proposition.

Proposition 5 If the SO hotel acts as a leacder, then

(i)   The room rate set by the CSR hotel is higher than that of the SO hotel.
(ii) The CSR hotel's profit is higher than the SO hotel's profit.

The result (i) of Proposition 5 is quite different than that verified in the case where the CSR hotel competing with a private hotel rather than a SO hotel. The result (ii) of Proposition 5 can also be different than that verified in the case where the CSR hotel competing with a private hotel rather than a SO hotel, depending on the CSR hotel's preference w for consumer surplus.

5.1 Comparative Static Analysis

Here, we evaluate the effect of the CSR hotel's preference for consumer surplus on the market equilibrium outputs. From

$$\frac{\partial p_1^F}{\partial w} = -\frac{\alpha\left(1 + 6w - 3w^2\right)}{\left(13 - 12w + 3w^2\right)^2} < 0, \quad \frac{\partial p_2^F}{\partial w} = -\frac{\alpha\left(23 - 18w + 3w^2\right)}{\left(13 - 12w + 3w^2\right)^2} < 0$$

$$\frac{\partial \pi_1^F}{\partial w} = -\frac{\alpha^2\left(71 + 42w - 180w^2 + 126w^3 - 27w^4\right)}{3\left(13 - 12w + 3w^2\right)^3} < 0,$$

$$\frac{\partial \pi_2^F}{\partial w} = -\frac{\alpha^2(7 - 3w)\left(1 + 51w - 45w^2 + 9w^3\right)}{3\left(13 - 12w + 3w^2\right)^3} < 0,$$

$$\frac{\partial CS^F}{\partial w} = \frac{\alpha^2\left(9 + 2w - 3w^2\right)}{\left(13 - 12w + 3w^2\right)^2} > 0,$$

$$\frac{\partial W^F}{\partial w} = \frac{\alpha^2\left(7 - 10w + 3w^2\right)}{\left(13 - 12w + 3w^2\right)^2} > 0$$

we conclude the following proposition.

Proposition 6 If the SO hotel acts as a leader, then

(i) The prices set by both hotels decrease with the CSR hotel's preference for consumer surplus.
(ii) The profit of both CSR and SO hotels decrease with the CSR hotel's preference for consumer surplus.
(iii) Both consumer surplus and social welfare increase with the CSR hotel's preference for consumer surplus.

6 Conclusion

By practicing corporate social responsibility, companies can be conscious of the kind of impact they are having on all aspects of society, including economic, social, and environmental. The hospitality industry embraces different social issues and major hotel companies have implemented CSR initiatives related to environment preservation and community development.

In this study, we used game theory concepts to find a Nash equilibrium of price competition between a private hotel with CSR practices and a state-owned (SO) hotel. We considered three motion orders in decision-making: simultaneous decisions; CSR hotel acting as a leader; and SO hotel acting as a leader.

The results indicate that although profits decline dwell with the CSR hotel's preference for consumer surplus (with the exception of the case of simultaneous decisions, in which CSR hotel's profit grows), the CSR hotel always profits more than the SO hotel, regardless of the order of movements.

Furthermore, we also showed that both consumer surplus and social welfare increase with the CSR hotel's preference for consumer surplus.

References

Aksöz, E. O., Aydın, B., & Yüsel, E. (2021). Tourists approaches to eco-friendly hotels and determination of green hotel preferences: The case of Eskişehir. *Turizam, 25*(2), 83–95.

Aljarah, A., & Alrawashdeh, M. (2021). Boosting customer citizenship behavior through corporate social responsibility. Does perceived service quality matter? *Social Responsibility Journal, 17*(5), 631–647.

Anaya-Aguilar, R., Gemar, G., & Anaya-Aguilar, C. (2021). Challenges of spa tourism in Andalusia: Experts' proposed solutions. *International Journal of Environmental Research and Public Health, 18*(4), 1829.

Birader, T. K., & Ozturen, A. (2019). Motivators and perceptions of island residents towards medical tourism in mainland. *Journal of Tourism and Services, 10*(19), 164–176.

Biswas, A. (2020). A nexus between environmental literacy, environmental attitude and healthy living. *Environmental Science and Pollution Research, 27*(6), 5922–5931.

Bogan, E., & Dedeoglu, B. (2019). The influence of corporate social responsibility in hospitality establishments on students' level of commitment and intention to recommend. *Journal of Hospitality Leisure Sport & Tourism Education, 25*, 100205.

Bohdanowicz, P., & Zientara, P. (2008). Corporate social responsibility in hospitality: Issues and implications. A case study of Scandic. *Scandinavian Journal of Hospitality and Tourism, 8*(4), 271–293.

Castillo, I., & Villagra, N. (2019). The communication of CSR. Analysis of the hotel sector. *Revista Latina De Comunicacion Social, 74*, 1580–1609.

Chaffee, E. C. (2017). The origins of corporate social responsibility. *University of Cincinnati Law Review, 85*, 347–373.

Chen, X., & Peng, Q. (2016). A content analysis of corporate social responsibility: Perspectives from China's top 30 hotel-management companies. *Hospitality & Society, 6*(2), 153–181.

Cheng, H., & Ding, H. (2021). Dynamic game of corporate social responsibility in a supply chain with competition. *Journal of Cleaner Production, 317*, 128398.

Chrobak, A., Ugolini, F., Pearlmutter, D., & Raschi, A. (2020). Thermal tourism and geoheritage: Examining visitor motivations and perceptions. *Resources, 9*(5), 58.

Chung, K. C. (2020). Green marketing orientation: Achieving sustainable development in green hotel management. *Journal of Hospitality Marketing & Management, 29*(6), 722–738.

Dahlsrud, A. (2008). How corporate social responsibility is defined: An analysis of 37 definitions. *Corporate Social Responsibility and Environmental Management, 15*(1), 1–13.

Dimitrovski, D., & Todorović, A. (2015). Clustering wellness tourists in spa environment. *Tourism Management Perspectives, 16*(1), 259–265.

Edlin, G., & Golanty, E. (2019). *Health and wellness*. Jones & Bartlett Learning.

Ferreira, F. A., Ferreira, F., & Gomes, C. F. S. (2022). Price-setting hotel competition with corporate social responsibility. In *Proceedings of the 12th International Conference on Industrial Engineering and Operations Management (IEOM)* (pp. 325–333).

Font, X., & Lynes, J. (2018). Corporate social responsibility in tourism and hospitality. *Journal of Sustainable Tourism, 26*(7), 1027–1042.

Franco, S., Caroli, M., Cappa, F., & Del Chiappa, G. (2020). Are you good enough? CSR, quality management and corporate financial performance in the hospitality industry. *International Journal of Hospitality Management, 88*, 102395.

Franzoni, S., Sarwar, H., & Ishaq, M. (2021). The mediating role of HRM in the relationship between CSR and performance in the hospitality industry. *Sustainability, 13*, 13699.

Ghaderi, Z., Mirzapour, M., Henderson, J. C., & Richardson, S. (2019). Corporate social responsibility and hotel performance: A view from Tehran, Iran. *Tourism Management Perspectives, 29*, 41–47.

Global Wellness Tourism Economy. (2018). Global Wellness Institute. https://globalwellnessinstitute.org/wp-content/uploads/2018/11/GWI_GlobalWellnessTourismEconomyReport.pdf

Groshev, I., & Krasnoslobodtsev, A. A. (2017). World market of medical tourism. *World Economy and International Relations, 61*(10), 87–95.

Gutierrez-Martinez, I., & Duhamel, F. (2019). Translating sustainability into competitive advantage: The case of Mexico's hospitality industry. *Corporate Governance: The International Journal of Business in Society, 19*(6), 1324–1343.

Habibi, A., Mousavi, M., Jamali, S. M., & Ebrahim, N. A., (2021). A bibliometric study of medical tourism. *Anatolia*, 1–18.

Han, H., Yu, J., & Kim, W. (2019). Environmental corporate social responsibility and the strategy to boost the airline's image and customer loyalty intentions. *Journal of Travel & Tourism Marketing, 36*(3), 371–383.

Ioannidis, A., Chalvatzis, K., Leonidou, L., & Feng, Z. (2021). Applying the reduce, reuse, and recycle principle in the hospitality sector: Its antecedents and performance implications. *Business Strategy and the Environment, 30*(7), 3394–3410.

Lambertini, L., & Tampieri, A. (2010). Corporate social responsibility in a mixed duopoly. In *Working paper* (Vol. 723). University of Bologna.

Latapí Agudelo, M. A., Jóhannsdóttir, L., & Davídsdóttir, B. (2019). A literature review of the history and evolution of corporate social responsibility. *International Journal of Corporate Social Responsibility, 4*(1), 1–23.

Lewis, A., (2021). What is greenwashing & CSR in the hospitality industry? https://www.highspeedtraining.co.uk/hub/greenwashing-and-csr-in-the-hospitality-industry/

Liu, M., Liu, Y., Mo, Z., Zhao, Z., & Zhu, Z. (2019). How CSR influences customer behavioural loyalty in the Chinese hotel industry. *Asia Pacific Journal of Marketing and Logistics, 32*(1), 1–22.

Miranda, D. D. P., & Cantallops, A. S. (2012). Responsabilidad social empresarial en el sector turístico: Estudio de caso en empresa de alojamiento de la ciudad de Santa Marta, Colombia. *Estudos e Perspectivas Em Turismo, 21*, 1456–1480.

Mohammed, A., & Al-Swidi, A. (2020). The mediating role of affective commitment between corporate social responsibility and eWOM in the hospitality industry. *Journal of Sustainable Tourism, 29*(4), 570–594.

Moyeen, A., Kamal, S., & Yousuf, M., (2019). A content analysis of CSR research in hotel industry, 2006–2017. In D. Crowther, S. Seifi & T. Wond (Eds.), *Responsibility and governance. Approaches to global sustainability, markets, and governance* (pp. 163–179). Springer.

Navarrete, A. P., Escolano, L. M. S., & Martos, J. C. M. (2021). Spa tourism in Western Europe: Reconceptualization and new space functions in a comparative perspective. *Boletin De La Asociacion De Geografos Espanoles, 88*, 1–39.

Osti, L., & Goffi, G. (2021). Lifestyle of health & sustainability: The hospitality sector's response to a new market segment. *Journal of Hospitality and Tourism Management, 46*, 360–363.

Pícha, K., & Navrátil, J. (2019). The factors of lifestyle of health and sustainability influencing pro-environmental buying behaviour. *Journal of Cleaner Production, 234*, 233–241.

Qian, J., Law, R., Wei, J., & Li, X. (2021). Progress of hotel corporate social responsibility research in terms of theoretical, methodological, and thematic development. *Journal of Hospitality Marketing & Management, 30*(6), 717–737.

Rela, I. Z., Awang, A. H., Ramli, Z., Md Sum, S., & Meisanti, M. (2020). Effects of environmental corporate social responsibility on environmental well-being perception and the mediation role of community resilience. *Corporate Social Responsibility and Environmental Management, 27*(5), 2176–2187.

Serra-Cantallops, A., Peña-Miranda, D. D., Ramón-Cardona, J., & Martorell-Cunill, O. (2018). Progress in research on CSR and the hotel industry (2006–2015). *Cornell Hospitality Quarterly, 59*(1), 15–38. https://doi.org/10.1177/1938965517719267

Sharma, E. (2019). A review of corporate social responsibility in developed and developing nations. *Corporate Social Responsibility and Environmental Management, 26*(4), 712–720.

Štefko, R., Jenčová, S., & Vašaničová, P. (2020). The Slovak spa industry and spa companies: Financial and economic situation. *Journal of Tourism and Services, 20*(11), 28–43.

Thorne, S. (2021). Are spas and wellness still considered luxurious in today's world? *Research in Hospitality Management, 11*(1), 9–14.

von Heimburg, D., & Ness, O. (2021). Relational welfare: A socially just response to co-creating health and wellbeing for all. *Scandinavian Journal of Public Health, 49*(6), 639–652.

Wang, C., Nie, P.-Y., & Meng, Y. (2018). Duopoly competition with corporate social responsibility. *Australian Economic Papers, 57*, 327–345.

Wang, L., Togtokhbuyan, L., & Yadmaa, Z. (2021). Visual analysis of the international wellness tourism WOS literature from 1992 to 2019. *International Journal of Spa and Wellness, 4*(1), 1–16.

Wong, A., Koseoglu, M., Kim, S., & Leung, D. (2021). Contribution of corporate social responsibility studies to the intellectual structure of the hospitality and tourism literature. *International Journal of Hospitality Management, 99*, 103081.

Xu, X., Xiao, G., & Gursoy, D. (2017). Maximizing profits through optimal pricing and sustainability strategies: A joint optimization approach. *Journal of Hospitality Marketing & Management, 26*(4), 395–415.

Young, J., Maxwell, H., & Peel, N. (2021). Leisure meets health: Important intersections and alternative discourses. *Annals of Leisure Research, 24*(3), 275–282.