Original Article

Sustainability Practices and Brand Identity in City Hotels: The Moderating Impact of Guests' Length of Stay

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ABSTRACT

The adoption of sustainability practices in city hotels is increasingly prevalent, driven by the imperative to reduce environmental impact, comply with regulations, and meet the growing demand for sustainable offerings. These practices serve to differentiate city hotels from traditional brands and bolster brand identity. However, the extent to which sustainability initiatives contribute to a hotel's objectives and are perceived by guests remains debated. This study, conducted in Nairobi County, assessed the impact of sustainability practices on brand identity and guest travel preferences. It explored the mediating role of travel preferences in the relationship between sustainability practices and brand identity, as well as the moderating influence of length of stay. Drawing on the Triple Bottom Line (TBL), Environmental Attitude Behaviour (EAB), and Brand Identity Prism (BIP) frameworks, survey data from 205 guests across 36 classified hotels in Nairobi were analysed using structural equation models. The results confirmed a positive and significant relationship between sustainability practices and brand identity, as well as their impact on guest travel preferences. While mediation effects were not observed, the study revealed that both short and long stays significantly moderated the relationship between sustainability practices and brand identity. This research contributes empirical evidence on the interplay between sustainability practices, guest preferences, and brand identity across different lengths of stay. It suggests that hoteliers can leverage environmental and social sustainability initiatives to cultivate a brand identity aligned with guests' environmental and hedonic inclinations, thus gaining a competitive edge in the city hotel market.

INTRODUCTION

Hotel Sustainability Practices (HSPs) encompass interventions to mitigate environmental impacts (Moise et al., 2020). They include environmental strategies like resource conservation, eco-sensitive design, and waste management (Yu et al., 2017). Social sustainability involves employee empowerment, community engagement, and good governance. Economic sustainability focuses on cost control and market expansion (Pereira et al., 2021). However, the industry prioritizes visible environmental practices, termed "green practices," over social initiatives (Abdou et al., 2020). This disparity, known as "greenwashing," underscores the need for balanced sustainability efforts.

Nevertheless, an emerging trend is evident whereby leading international hotel brands are placing greater emphasis on their commitment to the host community by integrating social sustainability concerns into their strategic plans (Abdou et al., 2020). For example, Marriott International, a prominent global hotel group boasting 30 brands and nearly 8,700 properties across 139 countries, attributes their success to their social sustainability strategy, which promotes diversity, equity, and inclusivity (Marriot Hotels, 2024). Conversely, social sustainability programs present an opportunity for smaller independent single-unit hotels with limited capacity to implement large-scale social sustainability initiatives.

Guests' preference for eco-friendly products is driving hotels to embrace sustainability (Zdravković & Peković, 2020). Consumers are increasingly aware of the ecological, social, and economic impacts of their choices (Molina-Azorín et al., 2016), translating concern into pro-environmental behaviour (Tan & Yeap, 2012). Urban hotel guests align with this perspective, prompting hotels to adopt distinct practices (Chan, 2013). Studies show a positive link between guest preferences and hotel sustainability (Jones et al., 2014). However, limited evidence exists on how hotel sustainability practices affect guest travel preferences, especially in urban settings.

Consumer awareness and demand for sustainable products are driving hotels to adopt eco-friendly practices (Soni et al., 2022). Global environmental challenges like climate change and pollution further motivate hotels, especially in urban areas, to prioritize sustainability (González-Rodríguez & Díaz-Fernández, 2020). Hotel operations significantly impact the environment through energy and water consumption, waste generation, and greenhouse gas emissions (Sustainable Hospitality Alliance, 2023). Pressure from regulations, NGOs, consumer groups, and the media also pushes hotels towards sustainability (Soni et al., 2022).

Research underscores the positive link between HSPs and hotel operational goals across market segments. These include profitability (Yenidogan et al., 2021; Xu et al., 2017), market share (Pereira-Moliner et al., 2021), brand capital (Tsou et al., 2022), guest satisfaction (Berezan et al., 2014), and post-stay behaviours like recommending the hotel (Hameed et al., 2022; Moise et al., 2019) and repeat visits (Berezan et al., 2013). Implementing sustainability practices proves advantageous, particularly for city hotels facing fierce competition. However, hotel managers face the challenge of optimizing these practices to enhance brand identity effectively. This requires careful prioritization of sustainable initiatives amidst investment considerations and technological changes. Hotels need to make informed decisions regarding sustainable investments, considering customer preferences and the impact on operational objectives (Berezan et al., 2014).

Existing literature lacks insights into how specific hotel sustainability practices shape brand identity

in line with diverse guest preferences. While studies have focused on environmental sustainability (Wang et al, 2019; Dang-Van et al., 2023; Sowamber et al., 2017), the impact of social sustainability initiatives remains unexplored. This gap leaves hotel managers unsure about aligning sustainability efforts with guest preferences to enhance brand competitiveness. Addressing this void is crucial for managers seeking strategic insights into brand differentiation.

The study addresses this gap by exploring the relationship between hotel sustainability practices, guest preferences, and brand identity. It examines both social and environmental sustainability practices to understand their impact on guest perceptions. Additionally, it explores how length of stay moderates this relationship in city hotels. Drawing from data collected in Nairobi City hotels, the study offers insights for both business and leisure travellers. Ultimately, it equips hotel managers with actionable strategies to align sustainability efforts with guest preferences, enhancing brand image and competitiveness in the hospitality industry.

LITERATURE REVIEW

Theoretical review

The triple bottom line theory (TBL) proposed by Elkington (1994) advocates for reporting financial, social, and environmental performance, with "profit, people, and planet" identified as the three "bottom lines" for a business. Advocates of the TBL theory assert its holistic approach to business performance assessment by considering the three sustainability dimensions and encouraging the reporting of non-financial indicators that reflect impacts on people and the environment (Gomes et al., 2021; Wilaiporn & Techakesari, 2021). Nonetheless, critics like Feng and Wu (2021) argue that the framework is simplistic and fails to account for the complex interactions between sustainability's three dimensions.

The Triple Bottom Line (TBL) framework significantly promotes sustainability in the hotel and tourism sector. Muñoz-Pascual et al. (2019) underscore its role in enhancing sustainable product innovation performance, especially within Small and Medium Enterprises (SMEs). Kealy (2019) suggests TBL sustainability reporting enhances tangibility, aiding hotels and tourism businesses in comprehensively assessing and communicating sustainability efforts. Moreover, Do (2020) advocates integrating sustainability into strategic management for gaining a competitive edge. Scholars use the TBL to conceptualize hotel performance metrics, defining sustainability performance across economic, social, and environmental dimensions (Elzek et al., 2021). Research demonstrates extensive reporting improves hotel performance (Assaf et al., 2012). Studies also investigate the impact of sustainability practices, like energy-saving technologies and waste management, on hotel performance outcomes (Berezan et al., 2014). Social sustainability practices, such as sourcing from local suppliers, are explored, emphasizing the need to consider empirical factors and local conditions (Berezan et al., 2014). Building on this understanding, the present study employed the TBL framework to identify and analyse environmental and social sustainability practices implemented by hotels in the study area.

Based on the Environmental Attitude-Behaviour theory (EAB), hotel guest's travel preferences encompass two primary categories: environmental attitude-based preferences and hedonic preferences (Ajzen, 1991). Environmental attitude-based preferences refer to guests' inclinations and choices influenced by their environmental attitudes and beliefs (Bamberg & Möser, 2007). These preferences may include selecting accommodations and destinations known for their eco-friendly practices, such as using renewable energy sources or implementing recycling programs (Huang & Liu, 2015). On the other hand, hedonic preferences pertain to guests' desires for enjoyable and pleasurable experiences during their travels (Hjalager, 2010). These preferences may involve factors like luxurious amenities, scenic locations, or engaging recreational activities, regardless of

their environmental impact (Chen & Gursoy, 2001).

Behaviour theories like the EAB offer insights into guest preferences in environmental matters and travel choices. These predispositions, influenced by factors like worldview and place attachment, shape behaviours and accommodation selections (Wynveen et al., 2014; Cho & Kang, 2017; Bonnes et al., 2011). Scholars, such as Acampora et al. (2022) and Merli et al. (2019), have explored these mechanisms. Their studies on Italian hotels and Beach Clubs revealed that while environmental concern positively influenced attitudes towards green practices, it didn't directly impact guest satisfaction and loyalty. However, the performance of green practices positively affected guest satisfaction and loyalty. These findings suggest theoretical links between guest travel preferences, ranging from environmental attitudes to hedonic preferences, and hotel sustainability practices, warranting further study.

Building upon the research conducted by Merli et al. (2019) and Acampora et al. (2022), this study utilizes the EAB theory to define hotel guest travel preferences. It distinguishes between hotel guests, who prioritize green accommodation experiences, and those primarily seeking luxury, comfort, and personal indulgence.

Aaker (1996) defines brand identity as the core representation of a brand's essence, offering a strategic roadmap for how it wishes to be perceived by stakeholders. Jean-Noël Kapferer (1976) introduced the Brand Identity Prism (BIP) theory to aid companies in crafting and managing their brand identity. According to Kapferer (1986), brand identity comprises six key elements—physique, personality, culture, relationship, reflection, and self-image—that collectively shape a brand's image.

Aligned with Kapferer's BIP Framework, a hotel's brand identity encompasses Physique, Relationship, Reflection, Personality, Culture, and Self-image (Gupta & Purohit, 2015; Kim et al., 2017; Hsu et al., 2016; Berezan & Susskind,

2016; Eid & El-Gohary, 2015; Kapferer, 2012). Recent studies highlight how hotels use sustainability to define their brand identity. Through environmental design, hotels signal their commitment to sustainability, attracting eco-conscious guests (Chen et al., 2022; Wang et al., 2021; Yang & Tang, 2021). Sustainability efforts, like waste reduction, resonate with guests valuing eco-living, enhancing loyalty and willingness to pay more for eco-friendly stays (Xess et al., 2021). Additionally, sustainability initiatives reflect local culture, promoting inclusivity and diversity, and appealing to socially conscious guests (Fujimoto et al., 2019; Kohon, 2018). This study applies the BIP theory to lifestyle hotels, recognizing its versatility and emphasis on customer preferences in brand identity development (Kapferer, 2012)

Empirical Review and Hypothesis Development

Hotel Sustainability Practices and Brand Identity

Numerous studies have examined the impact of Hotel Sustainability Practices (HSPs) on guests' post-stay evaluations: Yadav et al. (2016) conducted a mixed-methods study in India, revealing that hotels embracing sustainability had a more favourable corporate image. Similarly, Lee et al. (2017) investigated the relationship between restaurants' green practices and brand equity in South Korea, finding that such initiatives led to higher brand equity mediated by customer satisfaction and trust. Chen et al. (2022) further explored this relationship, utilizing a mixed-methods approach involving guest surveys and website content analysis. Their findings supported a positive impact of HSPs on hotels' lifestyle brand identity, indicating that sustainable hotels were perceived as more innovative, unique, and authentic.

Drawing from prior research (e.g., Chen et al., 2022; Lee et al., 2017; Yadav et al., 2016), this study examined the influence of HSPs on the brand identity of city hotels in a developing country, and proposed the hypothesis:

H_1: Hotel sustainability practices positively influence hotel brand identity.

Hotel Sustainability Practices and Guest Travel Preference

Recent studies highlight the significant impact of HSPs on guest travel preferences. Berezan et al. (2014) found that specific green practices, such as the use of clean and renewable energy sources contribute to guest satisfaction and reinforce environmental attitudes, enhancing a hotel's competitive advantage. Han et al. (2018) investigated the influence of HSPs on guests' environmental attitudes, focusing on practices like water conservation and waste reduction. Their study revealed that these practices increased both hedonic and utilitarian values, significantly enhancing pro-environmental intentions among guests. Similarly, Han et al. (2019) developed a theoretical framework linking guests' perceptions of hotel performance in green practices, such as recycling and energy conservation, with loyalty. Structural analysis results indicated that perceptions of hotel performance in water saving and energy conservation significantly impacted attitudinal loyalty formation. Additionally, Xess et al. (2021) demonstrated that hotels' visible commitment to sustainability enhances guest loyalty by aligning with their environmental values, fostering a positive attitude and incentivizing repeat business. Xess et al. (2021) concluded that HPSs aligned with guests' ecological awareness leads to a willingness to pay more for environmentally responsible accommodations.

Building on this body of research (Berezan et al., 2014; Han et al., 2018; Han et al., 2019; Xess et al. (2021), the present study examined the influence of HSPs on guest travel preferences in Nairobi city hotels, proposing the hypothesis:

H_2: Hotel sustainability practices positively influence guests' travel preferences.

Guest Travel Preference and Hotel Brand Identity

González-Rodríguez, Díaz-Fernández, and Font (2020) found that customers' environmental concerns significantly influence their willingness to pay a premium for eco-friendly hotels. Previous studies (Kucukusta et al., 2013; Martínez & del Bosque, 2013) support the idea that eco-friendly practices enhance a firm's image and reputation, fostering trust and customer identification. While González-Rodríguez et al. (2020) did not directly explore the link between guests' environmental attitudes and hotel brand identity, Meiriana (2020) argues that brand identity is a key competitive advantage for hotels, reflecting features guests appreciate. Oh, Lee, and Lee (2021) suggest consumers prefer brands aligning with their authentic selves, such as sustainable and hedonistic experiences. Thus, it's reasonable to hypothesize that guests' preferences influence lifestyle hotel guests' post-stay perception of brand identity, forming the basis of the third hypothesis in this study.

H_3: Guests' travel preferences positively influence hotel brand identity.

Mediating Role of Guest Travel Preferences

Majeed et al. (2022) studied green marketing's impact on Pakistani consumers' intentions to purchase environmentally friendly fast-moving consumer goods (FMCG), finding a significant, positive influence. Customer environmental attitudes mediated this effect, indicating increased environmental awareness driving changes in purchasing behaviour. Similarly, Nguyen-Viet et al. (2024) explored CSR's impact on green brand image (GBI), green trust (GT), and behavioral intentions in Vietnam's coatings industry. They found GT and CSR positively influenced word-of-mouth, willingness-to-pay, and green purchase intentions, with GT mediating between GBI and green purchase intentions, as well as between CSR and green purchase intentions. In tourism, Godovykh et al. (2024) investigated sustainability badges and awareness of sustainable practices' effects on tourists' attitudes and intentions. They found sustainability badges positively influenced hotel booking intentions, with attitudes fully mediating this relationship.

Following from these studies, the study hypothesised that guests travel preferences including their environmental/hedonic

predisposition significantly mediated the relationship between HSPs and brand identity for Nairobi Hotels.

H_4: Guest's travel preferences mediate the influence of hotel sustainability practices on brand identity.

Moderating Role of Length of Stay

The literature suggests that length of stay (LOS) can moderate various aspects of guest experiences in the hospitality sector. Ben-Haobin et al. (2021) found that LOS negatively moderates the link between customer mindfulness and brand experience, while Kim and Han (2023) observed a similar effect on customer satisfaction in London hotels. Inspired by these findings, we propose that LOS may also moderate the

relationship between HSPs and brand identity. Longer stays may increase exposure to sustainability initiatives, enhancing perceptions of the hotel's brand identity as environmentally conscious. Conversely, shorter stays may limit this exposure, weakening the association between HSPs and brand identity:

H_5: Guest's length of stay moderates the influence of hotel sustainability practices on brand identity.

Based on the findings from the reviewed empirical literature, the study developed a conceptual model, as depicted in Figure 1. The model elucidates the relationships between the various study variables and facilitates empirical tests of the research hypotheses.

Figure 1: Conceptual Framework and Research Hypothesis
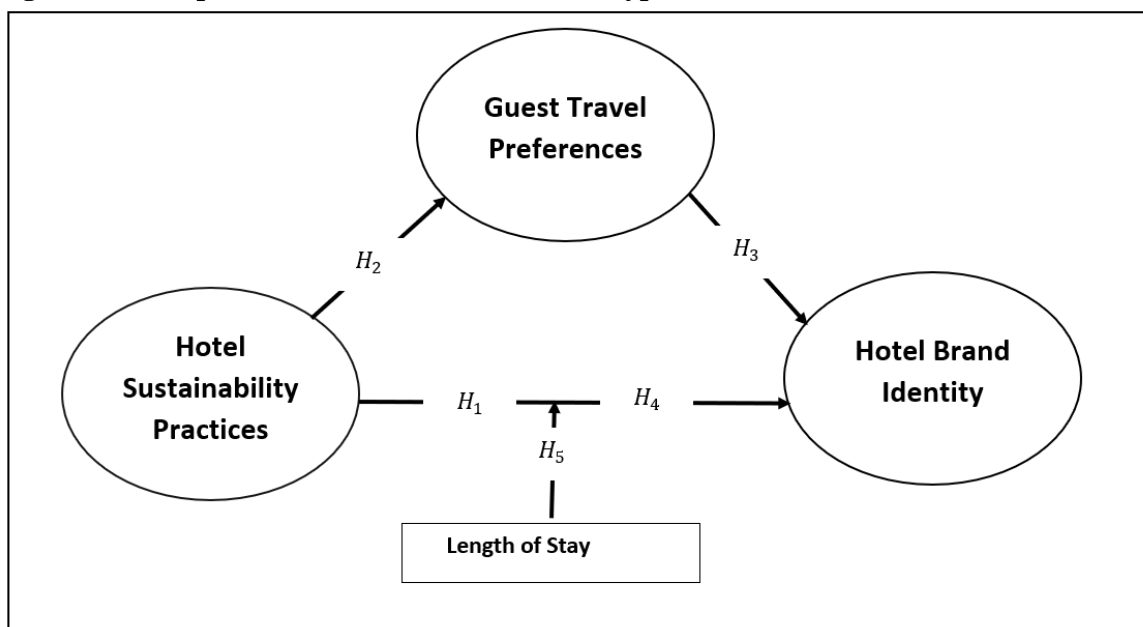
METHODOLOGY

Sampling and Data Collection

The study targeted guests who had lodged in Nairobi City Hotels for a minimum of one night. Nairobi, a significant administrative, economic, and cultural centre, ranks among Africa's largest and fastest-growing cities (Mundia, 2017). Its selection as the study location stemmed from its crucial role in Kenya's tourism sector as the gateway to major tourist attractions. Nairobi

serves as a convenient entry point for international tourists, boasting a well-developed hotel infrastructure. As of 2019, Nairobi accounted for 12% of Kenya's hotels, 29% of available rooms, and 27% of available beds (Kenya National Bureau of Statistics [KNBS], 2022).

To determine the sample size, Cochran's equation was employed, assuming a known population size, a 95% confidence level (Z=1.96), and a margin of error (e) of ±5%. The proportion of the population with the desired characteristics (hotel

guests who lodged for at least one night) was assumed to be p=50%, with q=1-p. Substituting these values into Cochran's equation yielded a sample size of 384 hotel guests.

The study employed simple random sampling to select guests for the survey. Following Kim et al. (2021), a list of all hotels in Nairobi was prepared from the 36 classified hotels in Nairobi (Tourism Regulatory Authority [TRA], 2023) and guests selected from the 3–5-star hotels. This method ensured equal and known opportunities for hotel guests' participation, promoting sample representativeness and facilitating the generalizability of findings (Pajo, 2017). Trained field enumerators administered the survey instrument to guests during check-out. A total of 205 usable questionnaires were completed, resulting in a response rate of 53%. This response rate is consistent with similar studies conducted in hotel settings where guest protection policies restrict access to survey respondents, achieving rates between 50% and 80% (Chen & Chang, 2020; Smith & Johnson, 2019).

Variable Measurements

To ensure data validity, variables were operationalized based on TBL, BIP, and EAB theories, and insights from previous studies. The questionnaire included 19 items to measure environmental and social sustainability dimensions (Cohen, 2018; Driml & Thomsen, 2013; Gössling et al., 2013). Respondents rated practices' adequacy on a five-point Likert scale. Guest travel preferences (environmental and hedonic) were captured through 14 statements (Wynveen et al., 2014; Cho & Kang, 2017; Bonnes et al., 2011). Brand identity was measured with 6 items reflecting Kapferer's dimensions, rated on a five-point Likert scale (1 = strongly disagree, 5 = strongly agree) (Kapferer, 2012). Demographic details like age, education, and occupation were collected categorically. Length of stay was recorded as a continuous variable representing nights spent at the hotel (Kim & Han, 2023).

RESULTS

Hotel Guests Demographic Profile and Length of Stay

Descriptive statistics, including percentage frequency, mean, and standard deviation, were computed to profile guests based on their demographic attributes and trip characteristics, notably length of stay and repeat visits. *Table 1* illustrates the guest profile.

Table 1: Demographic profile

Demographic Attribute	Level	Frequency	Percentage
	18 – 24 years	55	26.96
	25 – 40 years	58	28.43
	41 – 56 years	49	24.02
Age	57 – 75 years	42	20.59
	High School Diploma or equivalent	40	19.70
	College Diploma	41	20.20
	Bachelor's Degree	33	16.26
	Master's Degree	56	27.59
Educational Qualification	PhD or Equivalent	33	16.26

Table 1 outlines the demographic profile of the respondents. The majority of participants (28%, n = 58) fell within the 25 to 40 age group, representing Millennials, followed by Generation Z (27%). Baby boomers were the least represented cohort (21%, n = 42), indicating a balanced distribution across generational groups. A notable proportion of respondents held master's degrees (28%), while 60% (n = 122) possessed university qualifications ranging from bachelor's to PhD levels. The majority of guests (56%, n = 115) were repeat visitors, with stays ranging from 0 to 36 nights ($\bar{x} = 5.00$, SD = 5.44). Repeat visitors spent slightly more nights on average ($\bar{x} = 4.90$, SD = 5.43) than first-time guests ($\bar{x} = 4.74$, SD = 4.67).

However, there was no significant difference in LOS between repeat and first-time visitors (

$$t_{(199)} = 0.22, p = 0.83ns$$

).

Measurement Model

The study examined the structural relationships between the research variables and their indicators, proposing a robust measurement model. Confirmatory Factor Analysis (CFA) was utilized to evaluate the unidimensionality of the measurement items within the model. *Table 2* presents factor loadings (λ), Cronbach's alpha (α), and t-values for factors significantly loading on their respective constructs (p < 0.001).

Table 2: Confirmatory factor analysis and reliability analysis

Construct	Factor Loading (λ)	t-value	p-value
Hotel Sustainability Practices (HSP) (α = 0.79)			
Elimination of single-use plastic containers	0.64	**	
Utilization of refillable soap dispensers	0.67	7.92	< .001
Use of eco-friendly toiletries	0.61	7.15	< .001
Use of local materials in the interior décor	0.59	7.08	< .001
Inclusion of local foods in the hotel's menu	0.60	7.27	< .001
Support for local businesses	0.65	7.62	< .001
Guests Travel Preferences (GTP) (α = 0.66)			
Sensitivity to the environmental impacts of hotel enterprises	0.61	6.91	< .001
Inclination to explore and try new foods	0.61	6.82	< .001
Indulging in luxury accommodation experiences	0.65	**	
Hotel Brand Identity (HBI) (α = 0.66)			
Environmental efforts reflect the guests' personal lifestyle choices	0.60	6.97	< .001
Hotel's sustainability practices foster guest loyalty	0.64	7.33	< .001
Hotel's sustainability practices promote diversity and inclusivity	0.66	**	
** Terms constrained for identification purposes, α = Cronbach's alpha			

The CFA results demonstrated an excellent model fit, as indicated by the following model fit indices: Normed chi-square (χ^2/df) = 1.29, Goodness of Fit Index (GFI) = 0.95, Comparative Fit Index (CFI) = 0.98, Normed Fit Index (NFI) = 0.92, Tucker–Lewis Index (TLI) = 0.97, and Root Mean Square Error of Approximation (RMSEA) = 0.04. The results in table 2 confirm that all items loaded significantly at the 99% significance level on their corresponding constructs (p < 0.001). Six items loaded significantly on HSPs (λ = 0.56 - 0.67), three items on guests travel preferences (GTP) (λ = 0.61 - 0.65) and three items on hotel brand identity (HBI) (λ = 0.60 - 0.66).

The composite reliability (CR) for each of the three constructs exceeded 0.66, surpassing the conventional threshold of 0.6, indicating robust internal consistency for each construct. Examining the Average Variance Extracted (AVE), the study observed values of 0.39, 0.39, and 0.40 for hotel guests' travel preferences, sustainability practices, and hotel brand identity, respectively. These values surpassed the recommended threshold of 0.36, indicating acceptable convergent validity (Hair et al., 2017). Discriminant validity was tested by comparing the square root of AVE for each construct with the correlation between that construct and other constructs, following established methods (Fornell & Larcker, 1981; Gerbing & Anderson, 1988; Hair et al., 1998). The results are presented in table 3.

Table 3: Discriminant validity - squared roots of AVE

Construct	TP	HOSP	HBI
Guests Travel Preferences (GTP)	0.88		
Hotel Sustainability Practices (HSPs)	0.63	0.89	
Hotel brand Identity (HBI)	0.77	0.63	0.64

As per Fornell and Larcker (1981), discriminant validity is confirmed when the correlation coefficient between two constructs is lower than the square root of the AVE for each construct. *Table 3* demonstrates that all constructs in this model fulfilled this criterion, signifying sufficient discriminant validity.

Structural Models

The study estimated four (4) full structural equation models in AMOS to explore the connections between HSPs, GTP, LOS, and HBI. The aim was to test the research hypotheses concerning direct, indirect (mediation), and moderation effects. Fit indices of the estimated structural models indicated strong model fit (Hair et al.'s (2010). *Table 4* shows path standardized regression weights/path coefficients (β) C.R, and the Significance of the model (p < 0.05).

Table 4: Path coefficients for the structural models

Path	Standardized Regression Weights (β)	Critical ratio (CR)	P - Value	Conclusion
HSP $=>$ HBI[1]	0.92	3.11	0.002	Reject Null
HSP $=>$ GTP	0.87	6.30	0.001	Reject Null
GTP $=>$ HBI	-0.03	-.11	0.91	Fail to reject null
HSP $=>$ GTP $=>$ HBI[2]	-0.03	-0.04	0.96	Fail to reject null
HSP $*$ S_LOS $=>$ HBI[3]	-0.36	-2.27	0.02	Reject Null
HSP $*$ L_LOS $=>$ HBI[4]	0.33	2.28	0.02	Reject Null
Model fit Indices				
Model 1	χ^2/df = 1.29, GFI = 0.95, TLI = 0.97, CFI = 0.98, and RMSEA = 0.04			
Model 2	χ^2/df = 1.29, GFI = 0.95, TLI = 0.97, CFI = 0.98, and RMSEA = 0.04			
Model 3	χ^2/df = 1.27, GFI = 0.95, TLI = 0.97, CFI = 0.98, and RMSEA = 0.04			
Model 4	χ^2/df = 1.17, GFI = 0.95, TLI = 0.97, CFI = 0.99, and RMSEA = 0.03			

The results presented in *Table 4* reveal several key findings. Firstly, there is strong evidence of significant and positive relationship between HSPs and HBI (β = 0.92, CR = 3.11, p < 0.01). Similarly, HSPs also exert a significant positive influence on GTP (β = 0.87, CR = 6.30, p < 0.01). However, the direct relationship between GTP and HBI was found to be non-significant. Moreover, the mediation analysis suggests that GTP does not mediate the impact of HSPs on HBI (β = -0.03, CR = -0.04, p = 0.96ns).

Regarding the moderating effect of Length of Stay (LOS) on the relationship between HSP and HBI, the findings indicate that short LOS significantly moderates this relationship, as evidenced by the statistically significant standardized path coefficient (β = -0.36, CR = -2.27, p < 0.05). Conversely, long LOS also moderates the influence of HSP on HBI, with the path coefficient being statistically significant (β = 0.33, CR = 2.28, p < 0.05) (see also figure 2)

Figure 2: Results of SEM – direct, mediated and moderated influence of HSPs on hotel brand image
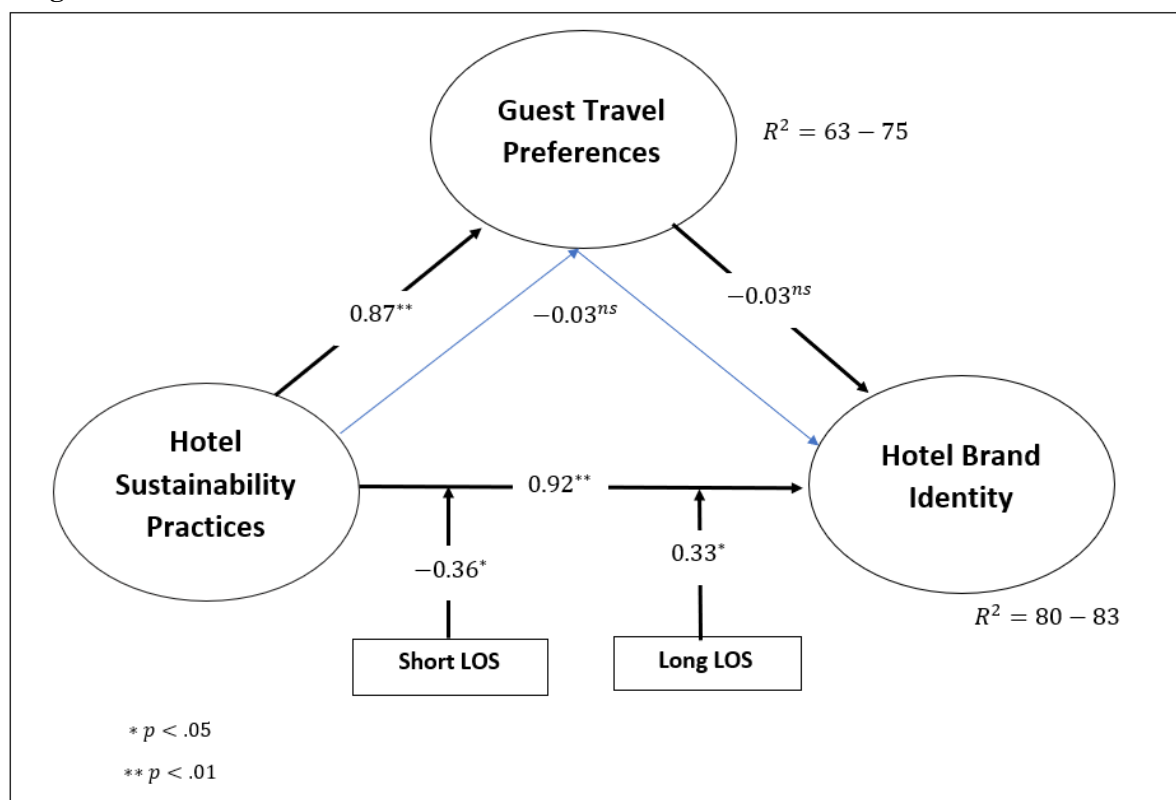
DISCUSSIONS

The study identified key sustainable practices of Nairobi hotels, including eliminating single-use plastics, using refillable soap dispensers, offering eco-friendly toiletries, incorporating local materials in décor, featuring local foods, and supporting local businesses. Additionally, it highlighted guests' perceptions of the hotel's reflection of lifestyle choices, loyalty-building capabilities, and promotion of inclusivity and diversity as indicators of brand identity.

The results confirmed a significant positive influence of HSPs on hotel brand identity, aligning with previous research indicating that sustainability enhances guest satisfaction and post-stay behaviour (Wang et al., 2019). The result echoes Han and Lee (2021) observation that hotels increasingly emphasize sustainability to gain a competitive edge and strengthen their brand. While there is limited literature on the city hotel segments, commentators propose that city hotels can differentiate themselves by adopting HSPs as a strategy to align with prospective customers' needs for brands that embody environmental consciousness as a lifestyle choice reflected in their consumption activities. Commenting on sustainability in the global hotel industry, Jones et al. (2014) observe that an ever-growing number of hotels now seek to emphasize and demonstrate their sustainability credentials to enhance their competitive advantage, build their brand, and differentiate themselves from competitors

The study found a strong, positive influence of HSPs on guests' travel preferences, reinforcing their ecological sensitivity, culinary exploration, and luxury preferences. Prior research, including studies by Moise et al. (2021) underscore the importance of eco-friendly initiatives in addressing guests' environmental concerns, particularly among city hotel guests who prioritize sustainability and are willing to pay more for green services.

Growing environmental consciousness among consumers has spurred a surge in demand for eco-friendly practices across industries like

hospitality. Hotels are responding by ditching single-use plastics and opting for local materials and cuisine, aligning with environmentally conscious guests' values and boosting their attractiveness. Research by Chang and Lee (2019) found that hotels implementing eco-friendly measures experienced higher customer satisfaction and loyalty, thanks to initiatives like energy-efficient lighting and water conservation. Prioritizing local sourcing not only aids sustainability but also fosters community ties and cultural authenticity, appealing to travellers seeking immersive experiences. Similarly, Smith et al. (2020) discovered that lifestyle hotels embracing sustainability witnessed increased guest satisfaction and positive referrals, underlining the importance of Hospitality Sustainable Practices (HSPs) in meeting eco-conscious travellers' preferences and enhancing overall guest satisfaction.

The study found no significant relationship between guests' travel preferences and hotel brand identity, indicating that factors beyond pre-stay preferences, such as actual experiences during the stay and interactions with hotel sustainability practices (Chen & Chang, 2017). Similarly, no mediation effect of guests' travel preferences on the impact of HSP on brand identity was observed, suggesting that other factors shape guests' perceptions of brand identity (Chen & Chang, 2017). The literature distinguishes between brand identity and brand image (Keller, 1993). Brand identity reflects the hotel's promised image to guests, shaped by marketing efforts, while brand image stems from the guest's actual experience. Therefore, factors HSPs, service quality experiences by guests have a have a greater influence on brand image rather than the hotel's brand identity (Chen & Chang, 2017).

The study explored how length of stay affects the relationship between hotel sustainability practices (HSPs) and brand identity (BHI). Guests with longer stays (calculated by subtracting the standard deviation from the average stay length) were more influenced by HSPs, leading to a stronger association between HSPs and BHI.

Conversely, short stays (calculated by adding the standard deviation) resulted in a weaker HSP-BHI connection. This suggests that extended exposure to HSPs during longer stays strengthens their impact on brand perception. However, Ben-Haobin et al. (2021) found a negative moderating influence of LOS on guest brand experience in 3 to 5-star hotels in Guangding Province, China. Similarly, Kim and Han (2023) noted negative direct effects of LOS on customer satisfaction in London high-end hotels suggesting that brand experience may decline as other factors become more pronounced.

CONCLUSION

The study's findings underscore the pivotal role of robust environmental practices in enhancing guest loyalty within the hospitality sector. Specifically, initiatives such as utilizing local resources and supporting indigenous businesses contribute to inclusivity and diversity, particularly resonant with lifestyle hotel guests. This highlights the dual function of sustainable practices: not only do they demonstrate environmental responsibility but also shape a hotel's brand identity, thereby appealing to its clientele.

Moreover, the research highlights a direct link between Hospitality Sustainable Practices and guests' travel preferences, especially discernible in lifestyle hotels that align sustainability profiles with guest preferences. However, the absence of evidence supporting a direct or mediating impact of guest preferences on HSP and Hotel Brand Identity (HBI) emphasizes the importance of guest experiences during their stay over pre-stay predispositions.

These findings underscore the need for hotel managers to navigate the delicate balance between revenue benefits and post-consumption guest evaluation. Consistency in maintaining sustainability credentials and effective communication emerge as vital for positively influencing brand perception. The significant moderating influence of longer stays further emphasizes the necessity for continuous and active communication of HSPs to mould hotel brand identity effectively.

Recommendations

Based on the findings, the research recommends hotels focus on communicating sustainability initiatives, especially social programs like CSR and HR interventions, to raise awareness and improve their sustainability image. Additionally, the study suggests offering opportunities for guest participation in sustainability activities such as tree-planting and CSR initiatives during their stay. This approach enhances the hotel's sustainability profile and aligns better with guests' environmental preferences.

Due to data limitations, the study focused solely on environmental and social sustainability practices in lifestyle hotels, omitting economic sustainability. Future research should integrate all three dimensions to better understand sustainability outcomes in the hotel sector. This comprehensive approach can improve the design of effective sustainability strategies for hoteliers and industry regulators

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