

Customer Green Ecosystem and Hotel Competitiveness in the Hospitality Industry: A Case of Selected Hotels in Entebbe Municipality, Uganda

¹Wilber Ssebuyungo Kivekayunga, ²Kibs Boaz Muhanguzi

¹*Wilber Ssebuyungo Kivekayunga; MBA Graduate; Clarke International University*

²*Kibs Boaz Muhanguzi; Senior Lecturer; Clarke International University*

ABSTRACT

This study examined customer green ecosystems and hotel competitiveness in the hospitality industry, with emphasis on how incorporating green ecosystems influences hotel competitiveness in Entebbe Municipality in Uganda. The study utilized a mixed research approach, a cross-sectional research design in sync with the descriptive research design. A quantitative survey of 352 respondents involving hotel workers and check-in customers was conducted alongside 21 interviews with community leaders and organizational heads. The study found that incorporation of customer green ecosystem influences hotel competitiveness with a strong positive β -value of 0.623 which is very significant at p value of 0.000, with the rating varying across the category of participants and gender. The study concluded that incorporation of green ecosystem has a strong positive and significant influence on hotel competitiveness with at an r^2 value of 39.2% in variation. The study recommended that Uganda Hotel Owners Associations (UHOA) working with Uganda Tourism Board, Uganda Wildlife Authority and hospitality focused organizations, directors and managers should integrate green, eco-friendly systems and practices in their strategic plans and operations to soar their competitive levels in a diverse international destination environment like Entebbe Municipality.

KEYWORDS: *Customer Green Ecosystems, Hotel Competitiveness, Hospitality Industry, Uganda.*

1. INTRODUCTION

World over, the hospitality sector is beginning to recognize the importance of Customer Green Ecosystem (CGE) as contributing factor towards overall hotel industry competitiveness. Customers are increasingly seeking hotel services that not only meet their expectations but deliver service quality and good CGE. The CGE highlights an establishment of commitment to sustainability and environmental friendliness including establishing green physical elements such as tree shed and shrubs provision, ground greenery, indoor and outdoor natural floral decorations, and the promotion of clean air through non-polluting practices. The CGE in an establishment plays a vital role in customer satisfaction and uplifting hotel competitiveness. Customers increasingly prefer hotels that adopt eco-friendly practices, viewing these efforts as synonymous with enhanced service quality and increasing marketability (Kaithlin, 2024;Puertos, 2025; Chang, 2024) Green ecosystems is the ability of a hotel to provides its customers with environmental friendly services and services which embrace sustainability, reduce carbon emission, provide green ambiances, reduce environmental risks, reduce wastage, preserve nature and providing eco-friendly infrastructure (Zafar, 2025).

Porter defines hotel competitiveness as the ability of a hotel to deliver superior value and quality service compared to its competitors in the hospitality sector (Porter, 1985). Competitiveness is often characterized by the capacity to interest and hold customers through a combination of service quality, customer contentment, propelling the institution to solid market positioning (Hasan, 2021; ,Singh *et al*, 2023). Hotel competitiveness refers to the ability of a hotel to attract and retain guests compared to its competitors in the market. Effective hotel competitiveness is crucial for maintaining a strong market position and ensuring ongoing success in the hospitality industry. Hotel competitiveness is also the ability and capacity of a hotel to attract, retain and expand its customer base beyond its rivals (Wisdom Libary, 2026). The capacity of a hotel to drawn in and maintain its guests when compared to other hotels in the same hospitality industry provide a ground for weighing competition. Competitiveness was weighed against the ability to influence environmental protection, sustainability efforts and

embracing environmental factors in the operations of a hotel (Wisdom Library, 2026). Hotel competitiveness is the capacity of the hotel to stand out from their rivals to win the favour and interest of their customers (Li, 2025).

Contextually, the hospitality sector is also subjected to growing expectations surrounding sustainability, a critical component in contemporary customer experience. Travelers in the world exhibit a marked preference for accommodations that embrace eco-friendly practices. This trend aligns with the increasing consumer demand for responsible tourism, wherein guests actively seek hotels that promote a green ecosystem through initiatives such as incorporating tree shade, indoor flora, and non-polluting practices.

Entebbe municipality has numerous standard hotels in Uganda due to its 2 main strategic geographic location factors: first, proximity to the country's only existing international airport 'Entebbe International Airport', and second, its strategic location along the shores of Lake Victoria, the biggest fresh water body in Africa. These 2 factors attract tourists from different corners of the world into this place. Other factors like presence of the Uganda Wildlife Education Centre, the presidential statehouse, numerous religious centers, the Golf Course, schools, and the recently concluded modern road transport system 'the Entebbe express way' cannot be underestimated in attracting tourists that later seek accommodation and conference room services. Despite of these factors that would promote hotel competitiveness in the hospitality industry in this area, recent study Tripadvisor finds challenges that might hinder cutting edge hotel competitiveness. Respondents, both local and international guests, indicated inconsistencies in customer experience, insufficient attentiveness during service delivery, inadequate post-service engagement, and unwelcoming environments (Tripadvisor, 2025). These deficiencies jeopardize customer satisfaction and hotel competitiveness (Blanco-Moreno, 2025).

Nonetheless, without the adoption of CGE measures, hotels in Entebbe risk alienating environmentally conscious travelers, significantly impacting on their market competitive position. If customer green ecosystems are not deeply studied, hotels are likely to operate blindfold of the key elements that can make them more competitive locally and internationally.

Therefore, this study investigates whether incorporation of CGE enhances hotel competitiveness in the hospitality industry in Uganda, with a focus on Entebbe Municipality. The need to improve both local and international competitiveness should remain an outstanding concern for all hotel owners.

2. METHODOLOGY

A cross-sectional research design was used for data collection on a cross-section of hotels in Entebbe. Both qualitative and quantitative data was solicited from the research respondents to obtain opinions on CGE and the description of hotel competitiveness respectively. In total, a sample of 352 was used for quantitative survey carrying closed-ended question with a Likert scale of 1 to 5. A survey questionnaire was used to collect data from the respondents (Table 2.1) from the 6 internationally ranked three-star and four-star hotels (UTB, 2024) in Entebbe Municipality using both structured and unstructured questions. The questions were presented in open-ended and closed-ended formats to facilitate the collection of qualitative and quantitative data sets from hotel managers, chefs, waiters, and waitresses who could read and write. For qualitative responses, a sample of 21 key informants from within the hotels and outside community were drawn (Table 2.2).

Table 2.1: Quantitative sampling strategy

Participants	Sample
Hotel Managers	6
Chefs	9
Waiters/Waitresses	96
Customers (On Visiting)	241
Total	352

Table 2.2. Qualitative sampling strategy

Participants	Sample
Customers (On Visiting)	11
Organizational Leaders (Little Me Schools, Uganda Wildlife Authority, Petroleum Authority Uganda, Nkumba University and ROUTE)	5
Local Council Chairpersons (Including LC V & III who regularly attend conferences and hold meetings in these hotels)	3
LC Councillor s (V & III)-those who attested to have regularly attended conferences and meetings in these hotels)	2
Total	21

2.1 Variables' description and its measurement

Following Wisdom Library (2026) and Li's (2025) definition of hotel competitiveness, this study uses the concept of "the capacity of the hotel to stand out from their rivals to win the favour and interest of their customers" to develop questions which were set and asked to the respondents.

Likewise, from Zafar's (2025) conceptualization of customer green ecosystem, this study asked the respondents questions related to 'whether the hotel has well established green physical elements such as tree shed and shrubs provision, indoor and outdoor natural floral decorations, and the promotion of clean air through non-polluting practices'. The green eco-friendly practices within its operational structures, internal and external natural environments of the hotel help to support customer satisfaction and propel hotel competitive edge.

2.2 Data analysis

The study analyzed quantitative data using descriptive statistics of mean and standard deviation and the results were correlated using Pearson Correlation Analysis with alpha value set at 0.05 for 95% confidence interval. Regression analysis was also conducted to analyze the direction of causality, the strength of the effect, and the level of significance of the relationship between CGE and hotel competitiveness. Qualitative data was analyzed using content analysis and thematic analysis.

3. RESULTS

This section presents sample characterization, descriptive statistics, and correlational and regression results.

Table 3.1: Participant Category and Gender Distribution of Respondents**Participant Category * Gender Cross tabulation**

Count		Gender		Total
		Male	Female	
Participant Category	Managers	2	4	6
	Chefs	3	6	9
	Waiter/Waitress	36	60	96
	Customers	104	137	241
Total	145	207	352	
Percent		42.2	58.8	100

Source: Field study (2025)

The table 3.1 presents the gender distribution of the 352 respondents involved in the study. Of these, 145 respondents (41.2%) were male, while 207 respondents (58.8%) were female. This indicates that there was a comprehensive representation of both male and female perspectives. This balanced distribution ensured that the insights gathered reflect diverse views across genders, contributing to an inclusive understanding of the influence of customer green ecosystem experiences and hotel competitiveness in the hospitality industry within Entebbe Municipality.

Table 3.2: Descriptive statistics table

	Descriptive Statistics		
	Mean	Std. Deviation	N
Hotel Competiveness	4.18	0.855	352
Incorporation of Customer Green Ecosystem	4.07	0.951	352
Years At Hotel	1.57	.680	352
Participant Category	3.63	.624	352
Gender	1.59	.493	352

From the descriptive statistics Table 3.2, the pooled mean of 4.18 with a standard deviation of 0.855 imply that the survey respondents have a strong positive perception that hotels in Entebbe Municipality are competitive. Most of the key informants concurred that the surroundings of hotels are pleasant and adding to the overall competitiveness. Respondents agree that staff handled requests smoothly and appreciated the variety and quality of services making them to feel comfortable, receiving value proportionality compared to others hotels. The hotels are perceived truly competitive for meeting some basic modern expectations of three-star hotel grade, though some four star hotels are laboring, they are perceived to be miles away from meeting standards. A local council chairperson urged that hotel managers and directors need to compare with international hotels that exist nearer airport environments to gain significant lessons for meeting international standards. Customers noted that although follow up was done, feedback is not often given accounting for the gap between 4.18 perceptions and the expected 5.0.

The hotels are also perceived to positively incorporate green ecosystems in their operations at a mean of 4.07 and standard deviation of 0.951. This was supported by informant interview findings which revealed that the air quality in and around the hotel is clean and refreshing during wet sessions but in dry seasons, dust accumulated contaminating the air breathe affecting hotels' competitive level. Customers agree with hotel organizational heads and community leaders that indoor greenery in pots makes hotels more appealing and that hotel islands having nature flora was pleasing. Respondents do not agree with the concept of paving everywhere or making the whole compound concrete, and stone-covered. Local council councils argued that paving grounds leaves little space for green ecosystem. Although the perception using green ecosystem was rated with a higher perception, respondents show that hotels still relied on copying what foreign hotels have adopted yet customers prefer non-exotic but natural and local settings in hotels such as shrubs, local trees sheds, terrestrial and aquatic flora. However, respondents mentioned that generators make noise especially in outages of the national power grip. Adding that these fossil powered generators were are nearer to customer residential rooms creating discomforting noise and contaminating air, suggesting incorporating green sustainable energy practices to create a more organized environment.

Most of the participants had spent 1.5 years at the hotel and most of these participants were customers. A mean of 1.59 in gender where 1 was male and 2 females indicates that most participants were female respondents. Correlating explanatory variables with hotel competitiveness, Table 3.3 sums up the relationship.

Table 3.3: The correlations table

		Correlations				
		Hotel Competitiveness	Incorporation of Customer Green Ecosystem	Years At Hotel	Participant Category	Gender
Pearson Correlation	Hotel Competitiveness	1.000				
	Incorporation of Customer Green Ecosystem	0.596 (0.000)	1.000			
	Years At Hotel	0.078 (0.072)	0.210 (0.000)	1.000		
	Participant Category	-0.025 (0.319)	-0.053 (0.160)	0.009 (0.431)	1.000	
	Gender	0.147 (0.003)	-0.039 (0.231)	0.202 (0.000)	-0.059 (0.134)	1.000

*Number of observations 352

*In parenthesis are the standard errors

The results show that hotel competitiveness solely has a moderate positive correlation with incorporation of customer green ecosystem with ($r=0.596$). This suggests that better hotel green practices are likely to influence hotel competitiveness. This influence is statistically very significant at $p=0.000$. There is a weak positive correlation between hotel competitiveness and years spent at the hotel with ($r=0.078$, $p=0.072$). This suggests a weak but not significant relationship. This is so since hotels in Entebbe host more mobile international customers, their stay is short lived and thus green ecosystems can be experienced by a customer regardless of how long the customer has stayed at that hotel.

The correlation between participant category and hotel competitiveness ($r=0.025$, $p=0.319$) implies that the category of participants does not influence perceptions of the hotel's competitive advantage.

The correlation results revealed a weak positive but statistically significant correlation between gender and hotel competitiveness ($r=0.147$, $p=0.003$) suggesting that the competitiveness of a hotel is viewed differently across gender. Females can perceive competitiveness of a hotel different from males and this correlation is very significant at measuring hotel competitive advantage. This shows that environmental initiatives and eco-friendly practices influence hotel competitiveness but this influence is influenced by gender perceptions. The hotel needed to assess green ecosystem practices and tailor them to embody gender differing needs.

The regression analysis summarizes the results in Table 3.4.

Table 3.4: Regression results for Customer Green Ecosystem and Hotel Competitiveness Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	18.477	2.852		6.478	.000
	Incorporation of Customer Green Ecosystem	.985	.068	.623	14.478	.000
	Years At Hotel	-.941	.450	-.092	-2.093	.037
	Participant Category	.225	.470	.020	.478	.633
	Gender	2.709	.608	.192	4.456	.000

a. Dependent Variable: Hotel Competitiveness

The standardized beta coefficient of 0.623, was obtained explaining a strong positive influence of incorporation of customer green ecosystem on hotel competitiveness in Entebbe Municipality. This is very statistically significant at $P=0.000$. This implies that hotels that incorporate customer green ecosystem are perceived to have a strong influence on competitiveness in the market. This influence is not by chance. A t-value of 14.478 was obtained which was well above the critical value of about 1.97 at $df=351$, underscores a meaningful and statistically strong positive influence of incorporating customer green ecosystem on hotel competitiveness making CGE worth an investment priority area.

This regression analysis indicates that gender has a significant influence on the perception of hotel competitiveness since $P < 0.001$ demanding hotels to carefully present gender focused green ecosystems. The longer customers stay at the hotel, the more their perceived competitiveness declines about 0.941 units each additional year and this is significant at $p = 0.037$ as customers staying longer were most likely to view CGE as usual requiring hotels to continuously advance to mitigate the overstay-undervalue effect. However, the category of participants did not have a meaningful impact on the competitiveness of a hotel.

Some qualitative insights revealed that operational inefficiencies such as inadequate landscaping with low greenery, noise pollution, and resource wastage which undermine the full potential of green initiatives to enhance competitiveness. Some respondents expressed dissatisfaction with the use of artificial plants and poorly maintained green spaces, indicating that green efforts are not always effectively executed and communicated.

1.4 Discussion

The results show that incorporation of the CGE has a strong impact on hotel competitiveness. This implies that adopting green landscapes and authentic local flora is vital in hotels as previously indicated by many scholars (Li, 2025; Dashmukhe-*et-al*, 2025; Blanco-Moreno, 2025).

green branding and credentials is core (Sica-*et-al*, 2025). However, Kusa *et al.*, (2023) emphasizes that these green initiatives have to be communicated. The study findings differ from those of Miano (2021) who found that the hotel competitive differentiators are only service, price, brand image and personnel. Ahead of Miano's (2021) study, this study adds CGE as another explanatory and differentiator factor for hotel competitiveness. Therefore, this study introduces the need to incorporate customer green ecosystem as a unique differentiator while defining competitive hotels.

1.5 Summary

Quantitative findings revealed a strong positive and very significant influence of incorporation of customer green ecosystem on hotel competitiveness suggesting that increasing emphasis on incorporation of customer green ecosystem is closely associated with improvements in the position of hotel competitiveness. Qualitative findings also allude to this. Guests were not satisfied with the use of artificial, plastic plants, and lack of organized green spaces which presented a low authentic ecological experience. Overall, respondents agree that a good customer green ecosystem increases competitive advantage of hotels. There is a strong positive yet statistically significant influence of incorporation of customer green ecosystems on hotel competitiveness.

1.6 Conclusion

From the study results, hotels should embrace and increase efforts towards adoption, adaption, creation and maintenance of customer green ecosystems. This should be embraced by hotel planning, management, operations and evaluation committee members.

However, since some qualitative insights revealed some operational inefficiencies such as inadequate landscaping with low greenery, noise pollution, and dumping which undermine the full potential of green initiatives to enhance competitiveness, and these deviations from the ideal practices suggest that green ecosystems must be emphasized to keep hotels at a top notch competitive position.

1.7 Recommendations

Uganda Hotel Owners Association working with the Uganda Tourism Board and Uganda Wildlife Authority should plan, implement and enforce customer green ecosystems, establish a standardized green certification schemes, create targeted training for improving environmental efforts, and conduct regular audits to ensure that hotels in Entebbe Municipality promote sustainable landscaping, promote clean energy efficiency, reduce carbon emissions, intensify waste management, noise control and ecological integration practices such as planting sheds and shrubs, plant local flora, present aquatic environments, wild ecosystems and other sustainable green ecosystems for taking competitive advantage.

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