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**THE IMPACT OF FLOATING HOTELS' GREEN PRACTICES ON  
CUSTOMERS' SATISFACTION AND RETENTION**

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**ABSTRACT**

*The absence of interest in green practices in floating hotels causes many negative effects and negatively effects on Customers' Satisfaction and Retention. Hotel administrators anticipate that green practices programming will save costs and boost a hotel's brand value without alienating current guests. The aim of this research is to measure the influence of green practices as an independent variable effect on customers' satisfaction and retention as dependent variables. Primary data was collected through survey with a standardized questionnaire was distributed directly to customers in(11) floating hotel to 401 customers who have visited the floating Hotels at Luxor governorate, stratified random sample method was used to collect research sample. A five-point Likert scale used to test the attitude of the participators toward research variables. Data collected were analyzed using SPSS (23). The main result of the research was that there was a significant influence of floating hotel s' green practices on customers' satisfaction and retention. The research recommended that the floating hotels managements should apply green practices and develop plans for their hotels in order to achieve increase customers' satisfaction and retention. The floating hotels managements should hold training programs for employees to raise their abilities to apply green practices. The floating hotels managements should continuing follow-up of customers' impressions and develop of performance to continuously gain customers'' satisfaction.*

**KEYWORDS:** Floating Hotels, Green Practices, Customers' Satisfaction, Customers' Retention.

## **1. INTRODUCTION**

According to the Lanjewar (2015), green practices are programs that encourage the hoteliers to save water, energy and reduce the solid waste, reducing operational costs and protecting the earth; it has been proven that green practices are the ideal and beneficial choice for the hospitality industry. Despite the great importance of green practices and the increasing environmental awareness at the global level, some floating hotels do not pay enough attention to these practices, which affects customer satisfaction and retention (Moise et al., 2018). In addition, some floating hotels do not have sufficient awareness of these green practices. It is suggested to conduct an analytical future study of environmental practices in floating hotels (Rady , 2018). On the other hand, the research will identify the impact of floating hotel s' green practices on customers' satisfaction and retention. As consumers have grown more conscious of green consumption and sustainable development concepts, they have shown high loyalty and repurchase intention for businesses that embrace green marketing (Wang, et al., 2017). Customers' knowledge of green companies can enhance customers repurchase intentions (Kang et al., 2012). Green practices have become, at the present time, of great importance in hospitality establishments because of their importance in terms of saving expenses and maintaining customers. (Ham & Han, 2013; Manaktola & Jauhari, 2007). However, the adoption of green practices has an impact on hotel services, particularly the availability of financial resources(Leonidou et al., 2013). According to Blanco et al (2009), Rey-Maqueira, and Lozano (2009), adopting green hotel practices can result in financial gains, comparative advantages, inventiveness, customer involvement, and green purchasing behavior (Chin et al.,2018). Hotels typically respond to green practices, accept responsibility for the environmental issues they generate, and promote their green efforts in a variety of ways (Ham & Han, 2013). Green hotel practices have advanced as a result of public acceptance and promotion of sustainable tourism (Chou et al., 2012).According to pertinent academic research, hotels' adoption of green practices will have a positive financial impact (Blanco et al., 2009), as well as strategic advantages and inventiveness, as well as customer satisfaction, engagement, and green purchasing behavior (Chin et al., 2018). Therefore, hotels often take accountability for the environmental problems they generate, adopt sustainable strategies in response, and make different efforts to market their green activities (Ham & Han, 2013). Over the past 15 years, the cruise industry has experienced rapid expansion and has emerged as one of the most alluring segments of the tourist sector (CLIA, 2018; 2019). Companies in this sector have made significant investments to create and differentiate their goods, set high standards, supply high-

quality facilities, and model innovative propulsion technologies (Parnyakov, 2014). This research aims to examine the impact of floating hotels' green practices on customers' satisfaction and retention, effect of the customer satisfaction on the customer retention.

## **2. LITERATURE REVIEW**

### **2.1 GREEN PRACTICES IN FLOATING HOTELS'**

Floating hotels are intricately designed buildings that can accommodate most of the needs and wants of its passengers, including 24-hour food service, housing, and recreational activities. In coastal and marine cities, solid waste management is posing a greater issue (Pereira & Fernandino 2019; Granit et al., 2017; Fugita & Andrade, 2014).

Kim et al. (2017) define "green" practices as "a value-added business strategy that benefits a hospitality operation that engages in environmental protection initiatives". Such initiatives can generate positive reactions from guests who are ever more aware of and concerned about environmental issues and can be seen as crucial factors in customers' hotel selection decisions (Kim et al., 2012).

In this context, the most important environmental practices for tourists are recycling and reusing, energy efficiency and conservation, efficiency and water conservation, landscape, transportation, and purchases of local and ecological products (Can et al., 2014). Another issue that is gaining popularity, especially among tourists, is green certification. The existence of eco-certification has had a significant impact on tourists' hotel choices (Constantin et al., 2013).

Authors such as Kasimu et al. (2012) have classified green practices into four groups: energy management, waste management, water savings and general support for green practices. In addition, Moise et al., (2021) classified such practices into five programs: (1) solid waste and water in rooms, (2) energy, (3) solid waste and water in cleaning, (4) water saving options for customers and (5) biodiversity.

Customers' attention has been drawn to the negative effect of hotels on the community in recent decades (Jones et al., 2014). As a result, an increasing body of literature has examined hotel sustainable practices, with the aim of evaluating and identifying the standard of success for these practices around the world (Jones et al., 2014). Standard hotels use a lot of money and have a major negative impact on the climate (Alzboun et al., 2016).

Floating hotels operators must provide enough services such as potable water, food, and energy in order to support a high level of customer service. Floating hotels activities depend on non-local services and require outside involvement to provide water, food, and energy due to the size limitation and isolation of floating hotels, Furthermore, floating hotels

operators must control waste produced on these, Pollution is generated as a result of resource use and waste management, which has an effect on the environment (Park, et al., 2017).

## **2.2 GREEN PRACTICES IN FLOATING HOTELS' AND CUSTOMER SATISFACTION**

Customer satisfaction, understood as the cognitive gap between expectations and actual experience with the service (Chiu et al., 2014), is essential for firm survival in general (Pizam et al., 2016), and for the survival of hotels in particular (Ren et al., 2016).

As far as green hotels are concerned, Martinez (2015) defines green satisfaction as “a pleasure level of consumption-related fulfilling to satisfy customers’ environmental desires, sustainable expectations and green needs”. This consideration is crucial for assessing the influence of eco-friendly practices on guest satisfaction (Merli et al., 2019). In this regard, some studies have concluded that a positive perception of eco-friendly initiatives implemented by hotels makes an important contribution to tourist satisfaction (Merli et al., 2019; Verma & Chandra, 2018).

## **2.3 GREEN PRACTICES IN FLOATING HOTELS AND CUSTOMER RETENTION**

Customer retention is the act of sustaining a relationship with a business through purchasing goods and services as a customer (ÇavuGoğlu et al., 2020). Loyalty emerges as an important construct in the hospitality industry since it determines future behavioral intentions and indicates guests’ trust towards a hotel (Olya, et al 2021). The green practices (e.g., lightbulb, recycle and dispenser) had a significant positive impact on customer retention (Moise et al., 2021). Green hotels have a huge impact on customer retention. When the hotel facilities are better, as perceived by visitors is, the greater the intention (Hendarto et al., 2021).

Environmental issues are among the most pressing global concerns, as many people who support the environment have appeared in all fields, the most important of which is the hospitality industry, and interest in environmental practices has become one of the factors affecting floating hotels positively, leading to customer retention, as a result of what customers see of environmental practices applied within floating hotels (Srivastava & Singh, 2021).

## **3. METHODOLOGY**

The main purpose of research is to identify and assess the impact of floating hotels’ green practices on customers’ satisfaction and retention. The research adapted the quantitative approach in its empirical analysis. A

questionnaire used as the instrument for collecting data from a sample of customer of floating Hotels in Luxor, and the questionnaire was addressed to the people who have an account on social media sites with experiences in such platform for floating hotels, there are 11 floating hotel at Luxor governorate (Egyptian hotels association, 2022), the questionnaire consists of two parts: the first one demographic and second one dimensions of the research variables( green practices- customer satisfaction- customer retention) questionnaire was distributed from February to May 2022 . The researchers applied a stratified random sample as the research sample consist of two types of guests (local- foreigner), each stratum is randomly sampled the data is classified into multiple subgroups (strata) based on common characteristics such as age, gender, and education. A five-dimensional Likert scale was used to measure a set of key variables on the questionnaire to gauge attitudes toward the research variables, research relied on measures such as: standard deviation, mean, percentages, correlation and regression. The research assesses the impact of green practices on customer retention and satisfaction at floating hotels. As a result, they would be gathered using the following quantitative tools: The questionnaire given to customers to Luxor city's floating hotels serves as the quantitative instrument. Data collected from pilot research was calculated using the Cochren, J. formula (Cochran, 1977) to calculate the sample size of the research population as follows:

$$n = \frac{z^2 \times \hat{p}(1-\hat{p})}{\epsilon^2}$$

Where:  $n = \frac{1.96^2 \times 0.5(1-0.5)}{0.05^2} = 384.16$

**n:** appropriate sample size **Z:** standard degree (1.96 at significant level of 0.05) **p:** Sample proportion and neutral = 0.50 **e:** maximum allowed error (0.05 at a significant level of 0.05) (Ezzat and rady, 2018).

Applying these values to the Cochran reveals that the research sample size are 420 participants and received 401 questionnaires for analysis with response rate 95.5%.

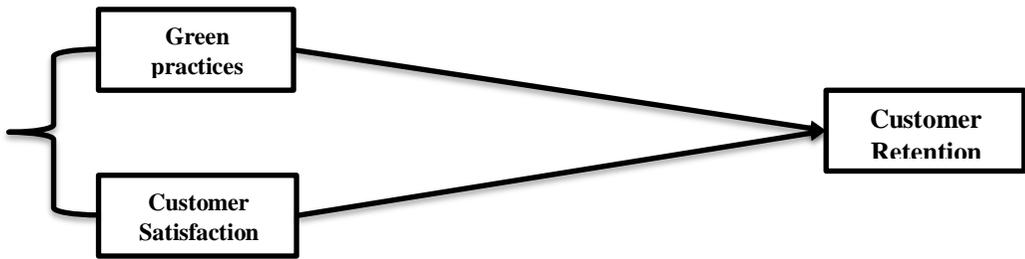
## **HYPOTHESES**

**H<sub>1</sub>:** There is statistically significant correlation between the green practices and the customer satisfaction.

**H<sub>2</sub>:** There is a significant effect of the green practices on the customer retention

**H<sub>3</sub>:** There is a significant effect of the customer satisfaction on the customer retention.

**Proposed framework of the research:**



**Figure 1: Proposed framework of the research**

**4. RESULTS AND DISCUSSION**

**4.1. RELIABILITY QUESTIONNAIRE**

**Table (1): Reliability Analysis of Study Variables**

The Axes	No. of statements	Alpha Coefficient
Green practices	13	0.955
Customers' Satisfaction	7	0.945
Customers' Retention	7	0.946
<b>The Overall Cronbach's Alpha</b>	<b>27</b>	<b>0.983</b>

According to Sürücü and Maslakçı (2020) reliability is the used measuring instrument stability and its consistency. Creswell (2014) declared Alpha Coefficient as a model of internal consistency, based on the average inter-item correlation. Gliem and Gliem (2003) pointed that Cronbach’s  $\alpha$  reliability coefficient usually ranges between 0 and 1; they also referred to the following rules: variables more than 0.9 was excellent, variables more than 0.8 was good, variables more than 0.7 was acceptable, variables more than 0.6 was questionable, variables more than 0.5 was poor, and variables less than 0.5 was unacceptable. Reliability of current study variables was tested by Cronbach's alpha coefficient; all axes were excellent. The Overall Cronbach’s Alpha exceeded 0.9 for the variables; this means that all variables were excellent and reliable. Number of statements refers to number of variables in every axis.

**4.2. PERSONAL DATA**

**Table (2): The Sample Characteristics Statistics**

<b>Variable</b>	<b>Response</b>	<b>Frequency</b>	<b>Percent</b>	<b>Rank</b>
Gender	Male	252	62.8	1
	Female	149	37.2	2
	<b>Total</b>	401	100	
Age	Less than 20 years old.	36	9.0	4
	20 to Less than 40	155	38.7	1
	40–60	136	33.9	2
	More than 60 years old.	74	18.5	3
	<b>Total</b>	401	100.0	
The primary purpose of the visit	Leisure	357	89.0	1
	Business	44	11.0	2
	Other	0	0	
	<b>Total</b>	401	100.0	
Education level	Below bachelor’s degree	90	22.4	2
	Bachelor’s degree	274	68.3	1
	Postgraduate	37	9.2	3
	<b>Total</b>	401	100.0	
Experience	First-time guest	55	13.7	3
	Occasional guest	232	57.9	1
	Regular guest	114	28.4	2
	<b>Total</b>	401	100.0	
Type of guest	Local guest	64	16.0	2
	Foreigner guest	337	84.0	1
	<b>Total</b>	401	100.0	

**4.3. VARIABLES ANALYSIS**

**4.3.1. GREEN PRACTICES**

**4.3.1.1. VALIDITY OF GREEN PRACTICES**

**Table (3): Factor Analysis of the green practices**

<b>Green practices</b>	<b>Loading</b>
1. Architectural design of the floating hotel compatible with natural environment.	.515
2. The Floating hotel uses environmental certified or green label products.	.645
3. Employees in this Floating hotel are committed to applying green practices.	.378
4. There is a non-smoking room available in the floating hotel.	.681
5. The floating hotel uses electricity system that closes after leaving room (energy saving room keys).	.723
6. The floating hotel derives electricity from renewable energy resources.	.627
7. The floating hotel uses energy saving lighting facilities.	.719
8. The floating hotel Informed guests about changing the sheets, pillowcases, towels in accordance to their request.	.705
9. The floating hotel Inform guests about water-saving at rooms.	.669
10. The floating hotel uses water-saving showers, faucets, and flush tanks.	.751
11. The floating hotel uses refillable soap and shampoo dispenser.	.708
12. The floating hotel uses recycling bins according to environmental recycling program.	.698
13. The Floating hotel uses reusable items of cloth napkins and glass cup.	.714
<b>Sums of Squared Loadings</b>	<b>65.6%</b>

According to Rady & Atia (2019) the factor analysis shown in Table (3) stated that all the statements were responsible for the Green practices except statement number three, with a percentage of (65.6%).

**4.3.1.2 GREEN PRACTICES ANALYTICS**

**Table (4): Statistics for the green practices**

<b>The green practices</b>	<b>Mean</b>	<b>SD</b>	<b>Rank</b>
Architectural design of the floating hotel compatible with natural environment	3.80	1.12	<b>9</b>
The Floating hotel uses environmental certified or green label products	3.86	1.08	<b>5</b>

There is a non-smoking room available in the floating hotel	3.98	1.11	<b>1</b>
The floating hotel uses electricity system that closes after leaving room (energy saving room keys)	3.86	1.04	<b>5</b>
The floating hotel derives electricity from renewable energy resources	3.74	1.18	10
The floating hotel uses energy saving lighting facilities.	3.95	1.08	<b>2</b>
The floating hotel Informed guests about changing the sheets, pillowcases, towels in accordance to their request	3.93	1.09	<b>3</b>
The floating hotel Inform guests about water-saving at rooms	3.86	1.10	<b>5</b>
The floating hotel uses water-saving showers, faucets, and flush tanks	3.84	1.12	<b>6</b>
The floating hotel uses refillable soap and shampoo dispenser	3.92	1.12	<b>4</b>
The floating hotel uses recycling bins according to environmental recycling program	3.83	1.17	<b>7</b>
The Floating hotel uses reusable items of cloth napkins and glass cup	3.82	1.11	<b>8</b>
<b>Overall</b>	<b>3.85</b>	<b>0.90</b>	

Table (4) viewed that concerning the green practices, the first variable was “There is a non-smoking room available in the floating hotel”, where the mean value was (3.98) and the standard deviation was (1.11). This result was agreed with the previous studies of Muharam & Asutay (2022); Kunchornsirimongkon & Ditta-Apichai (2019); and Moise, et al (2018) they assured that hotels consider environmental considerations and implement green practices provide non-smoking rooms. On the other hand, the least variable was “The floating hotel derives electricity from renewable energy resources”, where the mean value was (3.74) and the standard deviation was (1.18). The overall mean of the variables was (3.85), the standard deviation of means values was (0.90). This result was disagreed with the previous study of Abdou et al., (2020) who explained that using renewable energy sources, like solar and wind power, was the least adopted practice in of green hotels despite its importance in reducing

hotel energy consumption and the mitigation of greenhouse gas emissions as sources of clean energy.

**4.3.2. CUSTOMERS' SATISFACTION**

**4.3.2.1. VALIDITY OF CUSTOMERS' SATISFACTION**

**Table (5): Factor Analysis of the customers' satisfaction**

<b>Customers' satisfaction</b>	<b>Loading</b>
1. I feel satisfied for applying environmental practices at this floating hotel.	0.802
2. The Floating hotel is concerned with guests' opinions about environmental practices.	0.719
3. I was satisfied with decision about a hotel choice.	0.795
4. It was a good experience to stay at this floating hotel.	0.682
5. My spending increases for applying environmental practices.	0.740
6. The duration of my stay increases when applying environmental practices.	0.729
7. The floating hotel is exactly what I needed for a vacation.	0.799
<b>Sums of Squared Loadings</b>	<b>75.2%</b>

The factor analysis shown in Table (5) stated that all the all statements (7statements) were responsible for Customers' satisfaction with a percentage of (75.2%).

**4.3.2.2 CUSTOMERS' SATISFACTION ANALYTICS**

**Table (6): Statistics for the customers' satisfaction**

<b>Customers' Satisfaction</b>	<b>Mean</b>	<b>SD</b>	<b>Rank</b>
I feel satisfied for applying environmental practices at this floating hotel	3.84	1.14	<b>5</b>
The Floating hotel is concerned with guests' opinions about environmental practices	3.79	1.14	<b>6</b>
I was satisfied with decision about a hotel choice	3.92	1.11	<b>1</b>
It was a good experience to stay at this floating hotel	3.90	1.07	<b>2</b>
My spending increases for applying environmental practices	3.89	1.15	<b>3</b>

The duration of my stay increases when applying environmental practices.	3.89	1.09	<b>3</b>
The floating hotel is exactly what I needed for a vacation	3.87	1.13	<b>4</b>
<b>Overall</b>	<b>3.87</b>	<b>0.97</b>	

Table (6) viewed that concerning The Customers' Satisfaction, the first variable was "I was satisfied with decision about a hotel choice", where the mean value was (3.92) and the standard deviation was (1.11). This result was agreed with the previous study of Fauziah, et al (2017) who asserted that hotel customers are satisfied with choosing green hotels instead of non-green hotels because of their environmentally friendly attitudes and for expressing their intention in preserve the environment. On the other hand, the least variable was "The Floating hotel is concerned with guest's opinions about environmental practices", where the mean value was (3.79) and the standard deviation was (1.14). The overall mean of the variables was (3.87), the standard deviation of means values was (0.97). this result was disagreed with the previous study of Moise, et al (2018) who asserted that Hotel managers must be aware of the importance of introducing and further developing environmentally friendly practices in their establishments to enhance customer satisfaction and consequently to increase the likelihood of them returning to stay at the hotel. They pointed to hotel companies must also actively demonstrate their commitment to the environment on their websites or through informal education tools.

**4.3.3 CUSTOMERS' RETENTION**

**4.3.3.1 VALIDITY OF CUSTOMERS' RETENTION**

**Table (7): Factor Analysis of the customers' retention**

<b>Customers' retention</b>	<b>Loading</b>
1.I consider this floating hotel to be my first choice compared to other floating hotels.	0.740
2.I have a strong intention to visit this floating hotel again.	0.772
3.I consider it is correct to stay in this floating hotel because of its environmental commitment.	0.732
4.The service of this floating hotel has a great deal of personal meaning for me.	0.763
5.I would love to return to this floating hotel.	0.736
6.I am likely to follow this floating hotel's updates.	0.736
7.I always say positive things about this floating hotel to other guests (I will share my experience with others).	0.793
<b>Sums of Squared Loadings</b>	<b>75.3%</b>

Factor analysis shown in Table (7) stated that all the all statements (7statements) were responsible for Customers' satisfaction with a percentage of (75.3%).

**4.3.3.2 CUSTOMERS' RETENTION ANALYTICS**

**Table (8): Statistics for the customers' retention**

<b>Customers' Retention</b>	<b>Mean</b>	<b>SD</b>	<b>Rank</b>
1. I consider this floating hotel to be my first choice compared to other floating hotels	3.79	1.11	<b>5</b>
2. I have a strong intention to visit this floating hotel again	3.93	1.13	<b>1</b>
3. I consider it is correct to stay in this floating hotel because of its environmental commitment	3.79	1.09	<b>5</b>
4. The service of this floating hotel has a great deal of personal meaning for me	3.90	1.17	<b>2</b>
5. I would love to return to this floating hotel	3.90	1.14	2
6. I am likely to follow this floating hotel's updates	3.84	1.10	<b>4</b>
7. I always say positive things about this floating hotel to other guests (I will share my experience with others).	3.88	1.11	<b>3</b>
Overall	3.86	0.97	

Table (8) viewed that concerning Customers' Retention, the first variable was “I have a strong intention to visit this floating hotel again”, where the mean value was (3.93) and the standard deviation was (1.13). This result was agreed with the previous study of Merli et al., (2019) where they indicated that when staying at green hotel therefore, guests are more willing to return to a hotel again and to recommend it. This result also agreed with the previous study of Moise et al., (2018); where they confirmed that hotel's green practices have a significant, positive impact on guest satisfaction and revisit intention respectively. On the other hand, the least variable was “I consider it is correct to stay in this floating hotel because of its environmental commitment”, where the mean value was (3.79) and the standard deviation was (1.09). The overall mean of the variables was (3.86), the standard deviation of means values was (0.97). This result was disagreed with the previous study of Martínez et al., (2018) who emphasized that the application of green practices in hotels is one of the factors affecting guests' stay decisions.

**4.4 TEST OF THE RESEARCH HYPOTHESES**

To test the hypotheses of the research, the researchers used the correlation coefficient for the first hypothesis. According to second and third hypotheses, the linier regression coefficient was used.

**4.4.1 TEST OF THE FIRST RESEARCH HYPOTHESIS**

***H<sub>1</sub>***: *There is statistically significant correlation between the green practices and the customer satisfaction.*

**Table (9): Correlation between the green practices and the customer satisfaction**

Variables		Customer Satisfaction
Green Practices	<b>R</b>	0.966
	Sig. (2-tailed)	0.000
	N	401

Table (9) referred that there is statistically significant correlation between the green practices and the customer satisfaction, (Sig < 0.05). This result indicated that the first hypothesis of the research was accepted. This is consistent with Hendaro et al., (2021); Moise et al., (2018); and Yusof, et al., (2017) it was found that green hotel attributes have a significant effect on customer satisfaction. Furthermore, this result consistent with Preziosi et al., (2022) who emphasized that when hotels implement green practices as part of their sustainability strategy, these practices increase guest satisfaction. This means that when customers feel a positive experience with the green practices provided by a hotels management, it will create a positive feeling for them.

**4.4.2 TEST OF THE SECOND RESEARCH HYPOTHESIS**

***H<sub>2</sub>***: *There is a significant effect of the green practices on the customer retention.*

**Table (10): The influence of green practices on the customer retention**

Dependent Variable		Independent Variable
		Customer Retention
Green practices	R	0.969
	R <sup>2</sup>	0.939
	Sig.	0.000
	Constant	- 0.187
	B.	1.051

Table (10) showed that there was a strong significant correlation between green practices and customer retention (R=0.969), as well as R Square (R<sup>2</sup>) referred to the determination coefficient was (0.939). Moreover, the sig.

was (0.000) less than (0.05) suggested that there was a significant influence of the independent variable (green practices) on the dependent variable (customer retention). Furthermore, the statistical constant ( $\alpha$ ) equal - 0.187 with significance level less than 0.05, whereas (B) equal 1.051. This result indicated that the second hypothesis of the research was accepted. This is consistent with Hendarto et al. (2021); and Moise et al. (2021) they found that green hotel attributes have a significant effect on customer retention. They indicated that the better the green practices of hotel the higher the revisit intention to this hotel. Moreover, this result consistent with Merli et al. (2019) who emphasized that when staying at green hotel therefore, guests are more willing to return to a hotel and to recommend it. From the previous results, the following equation was suggested:

$$\text{Customer retention} = (1.051 * \text{Green practices}) - 0.187$$

#### 4.4.3 TEST OF THE THIRD RESEARCH HYPOTHESIS

*H<sub>3</sub>: There is a significant effect of the customer satisfaction on the customer retention.*

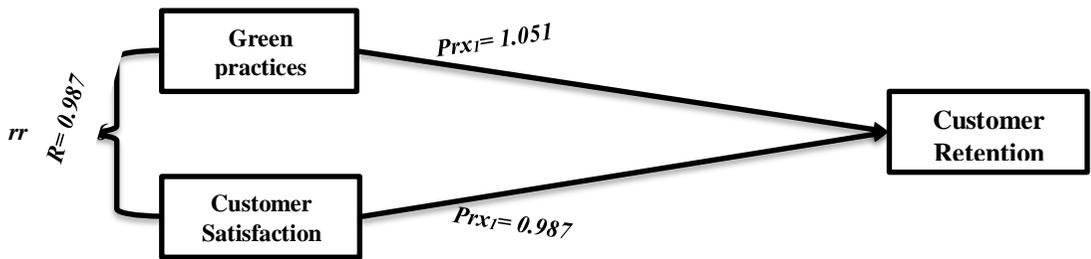
**Table (11): The influence of customer satisfaction on the customer retention**

Dependent Variable		Independent Variable
		customer retention
<b>Customer satisfaction</b>	R	0.983
	R <sup>2</sup>	0.966
	Sig.	0.000
	Constant	0.044
	B.	0.987

Table (10) showed that there was a strong significant correlation between green practices and customer retention (R=0.983), as well as R Square (R<sup>2</sup>) referred to the determination coefficient was (0.966). Moreover, the sig. was (0.000) less than (0.05) suggested that there was a significant influence of the independent variable (customer satisfaction) on the dependent variable (customer retention). Furthermore, the statistical constant ( $\alpha$ ) equal 0.044 with significance level less than 0.05, whereas (B) equal 0.987. As shown in Table (11). This result indicated that the third hypothesis of the research was accepted. This is consistent with Hendarto et al., (2021); ÇavuGoğlu et al., (2020); and Yusof et al.,(2017) they found that customer satisfaction has a significant influence on customer retention. This means that when customers are satisfied with the green practices offered by the management of hotels, it will contribute to their retention. From the previous results, the following equation was suggested:

$$\text{Customer retention} = (0.987 * \text{Customer satisfaction}) + 0.044$$

### Research Model



**Figure (2) three research hypotheses**

### 5. CONCLUSIONS

The research discussed impact of floating hotel s' green practices on customers' satisfaction and retention through A web-based questionnaire was used. This research followed a quantitative approach of 401 customer of floating Hotels in Luxor from February to May 2022 to measure the level of disagreement or agreement among customers about floating hotel green practices and their impact on customer satisfaction and retention. The Cronbach's Alpha coefficient and the factor analysis test were used to evaluate the research tool's reliability and validity. Researchers found that when customers feel a positive experience with the green practices provided by a hotels management, it will create a positive feeling for them. Researchers discovered that when customers are satisfied with the green practices offered by the management of hotels, it will contribute to their retention. The results indicated that there is statistically significant correlation between the green practices and the customer satisfaction, this result agreed with Hendarto et al., (2021); Preziosi et al., (2022). Also, there was a strong significant correlation between green practices and customer retention, this result agreed with Moise et al.,(2021) and Merli et al., (2019). In addition, customer satisfaction has a significant impact on customer retention, this result agreed with ÇavuGoğlu et al., (2020); and Yusof et al., (2017). Based on the previous results, this research has added a new literary value, which is to show the significant impact of applying green practices in floating hotels on customer satisfaction and customer retention, which contributed to overcoming the research gap. This research suggests some recommendations for floating hotels managers to maximize the Impact of floating hotel s' green practices on customers' satisfaction and retention as follows:

- The floating hotels managements should apply green practices and develop plans for their hotels in order to achieve increase customers' satisfaction and retention.
- The floating hotels managements should hold training programs for employees to raise their abilities to apply green practices.

- The floating hotels managements have to follow up the international institutions working in the environmental field to provide all what is new in this sector.
- The floating hotels managements should continue follow-up of customers' impressions and develop of performance to continuously gain customers" satisfaction.
- The floating hotels managers must be aware of the importance of introducing and further developing green practices in their establishments to enhance customer satisfaction and consequently to increase the likelihood of them returning to stay at the hotel.
- The floating hotels should utilize new technology for their kitchen, laundry services, and for other process to reduce water and power consumption, to upgrade the level of customer satisfaction.
- The floating hotels should upgrade the recycling process to reduce damage to the environment and reduce the use of plastic and polythene which will reduce their cost and will also enhance customer satisfaction.
- Floating hotels should develop the exterior in a nature-friendly way to attract and satisfy more customers.

## **6. STUDY LIMITATIONS AND FUTURE STUDIES**

This research was applied to floating hotels in the city of Luxor to measure the impact of green practices in floating hotels on customer satisfaction and retention through a sample of a group of tourists. Further studies could be conducted on the impact of floating hotels' green practices on customers' satisfaction and retention in other cities such as Cairo or Aswan, Further studies could be conducted on customer satisfaction and retention in non-green floating hotels, Further studies on the impact of floating hotels' green practices can add variables that have not been used in this study, such as service quality, motivation, Performance, or others.

## **REFERENCES**

- Abdou, A. H., Hassan, T. H., & El Dief, M. M. (2020). A description of green hotel practices and their role in achieving sustainable development. *Sustainability*, 12(22), 9624.
- Alzboun, N., Khawaldah, H., Backman, K., & Moore, D. (2016). The effect of sustainability practices on financial leakage in the hotel industry in Jordan. *Journal of Hospitality and Tourism Management*, 27, 18-26.
- Blanco, E., Rey-Maqueira, J., & Lozano, J. (2009). Economic incentives for tourism firms to undertake voluntary environmental management. *Tourism Management*, 30(1), 112-122.
- Can, A. S., Turker, N., Ozturk, S., & Alaeddinoglu, F. (2014). TOURISTS'PERCEPTION OF GREEN PRACTICES IN ECO-

- FRIENDLY HOTELS: A CASE STUDY FROM THE ANTALYA REGION OF TURKEY. *Journal of Tourism Challenges and Trends*, 7(1), 9.
- Çavuşoğlu, S., Demirağ, B., Jusuf, E., & Gunardi, A. (2020). The effect of attitudes toward green behaviors on green image, green customer satisfaction and green customer loyalty. *GeoJournal of Tourism and Geosites*, 33(4), 1513-1519.
- Chin, C. H., Chin, C. L., & Wong, W. P. M. (2018). The implementation of green marketing tools in rural tourism: the readiness of tourists? *Journal of Hospitality Marketing & Management*, 27(3), 261-280.
- Chiu, C. M., Wang, E. T., Fang, Y. H., & Huang, H. Y. (2014). Understanding customers' repeat purchase intentions in B2C e-commerce: the roles of utilitarian value, hedonic value and perceived risk. *Information systems journal*, 24(1), 85-114.
- Chou, C. J., Chen, K. S., & Wang, Y. Y. (2012). Green practices in the restaurant industry from an innovation adoption perspective: Evidence from Taiwan. *International journal of hospitality management*, 31(3), 703-711.
- CLIA. (2018). Cruise lines international association - contributions of cruise tourism of the economies of Europe 2017. Available from: <https://es.cruiseexperts.org/media/2971/2017-europe-economic-impact-report.pdf>. (Accessed 5 September 2020).
- CLIA. (2019). Cruise lines international association - contributions of cruise tourism of the economies of Europe 2018. Available from: : [https://cruising.org/news-and-research//media/CLIA/Research/CLIA %20 2019%20State%20 of%20the%20Industry.pdf](https://cruising.org/news-and-research//media/CLIA/Research/CLIA%202019%20State%20of%20the%20Industry.pdf). (Accessed 10 January 2021)
- Cochran, L. (1997). *Career counseling: A narrative approach*. Sage publications.
- Constantin, C. P., Ispas, A., & Candrea, A. N. (2013). Identifying tourists interested in eco-certified accommodation units from Brasov, Romania. *Management Dynamics in the Knowledge Economy*, 1(3), 521-542.
- Creswell, J. W. (2014). *A concise introduction to mixed methods research*. SAGE publications.
- Ezzat& rady. (2018). Exploring the usage of digital content marketing in hotels and travel agencies in Egypt. (15-Issue 2), 56-72. *Journal of the faculty of tourism and hotels (JFTH)*, ISSN:2314-7024.
- Fauziah, D., Noralisa, I., Ahmad, I., & Mohamad, I. (2017). Green practices in hotel industry: factors influencing the implementation. *Journal of Tourism, Hospitality and Culinary Arts*, 9(2), 305-316.
- Fugita, D.M., Andrade, H.F. de, (2014). *Cruises Ships: History, Evolution*

- and Typology Oriented for Hospitality Management. *Revista Acadêmica Observatório de Inovação do Turismo*, Rio de Janeiro, pp. 01–30
- Gliem, J. A., & Gliem, R. R. (2003). Calculating, interpreting, and reporting Cronbach's alpha reliability coefficient for Likert-type scales. Midwest Research-to-Practice Conference in Adult, Continuing, and Community Education.
- Granit, J., Liss Lymer, B., Olsen, S., Tengberg, A., Nommann, ~ S., Clausen, T.J., (2017). A conceptual framework for governing and managing key flows in a source-to-sea continuum. *Water Policy* 19 (4), 673–691.
- Ham, S., & Han, H. (2013). Role of perceived fit with hotels' green practices in the formation of customer loyalty: Impact of environmental concerns. *Asia Pacific Journal of Tourism Research*, 18(7), 731-748.
- Hendarto, R., Djazuli, A., & Puspaningrum, A. (2021). The influence of green hotel attributes and green hotel image on visitor loyalty with perceived value and customer satisfaction as mediation variables. *The International Journal of Social Sciences World (TIJOSSW)*, 3(1), 280-293.
- Jauhari, V., & Manaktola, K. (2007). Exploring consumer attitude and behaviour towards green practices in the lodging industry in India. *International journal of contemporary hospitality management*.
- Jones, P., Hillier, D., & Comfort, D. (2014). Sustainability in the global hotel industry. *International Journal of Contemporary Hospitality Management*, 26 (1), 5-17.
- Kang, K. H., Stein, L., Heo, C. Y., & Lee, S. (2012). Consumers' willingness to pay for green initiatives of the hotel industry. *International Journal of Hospitality Management*, 31(2), 564-572.
- Kasimu, A. B., Zaiton, S., & Hassan, H. (2012). Hotels involvement in sustainable tourism practices in Klang Valley, Malaysia. *International Journal of Economics and Management*, 6(1), 21-34.
- Kim, Y. J., Palakurthi, R., & Hancer, M. (2012). The environmentally friendly programs in hotels and customers' intention to stay: An online survey approach. *International journal of hospitality & tourism administration*, 13(3), 195-214.
- Kim, S. H., Lee, K., & Fairhurst, A. (2017). The review of "green" research in hospitality, 2000-2014. *International Journal of Contemporary Hospitality Management*. 29. 226-247.
- Kunchornsirimongkon, K., & Ditta-Apichai, M. (2019, July). consumers'attitude towards green hotels'environment friendly policies in bangkok. In international academic multidisciplinary research conference in copenhagen 2019 (pp. 142-142).

- Lanjewar, J. (2015). Green Initiative by Hotels. *Sai Om Journal of Commerce & Management. A Peer Reviewed International Journal*, 2(1), 2015.
- Leonidou, C. N., Katsikeas, C. S., & Morgan, N. A. (2013). "Greening" the marketing mix: Do firms do it and does it pay off? *Journal of the Academy of Marketing Science*, 41(2), 151-170.
- Manaktola, K., & Jauhari, V. (2007). Exploring consumer attitude and behaviour towards green practices in the lodging industry in India. *International journal of contemporary hospitality management*, 19(5), 364-377.
- Martínez García de Leaniz, P., Herrero Crespo, Á., & Gómez López, R. (2018). Customer responses to environmentally certified hotels: The moderating effect of environmental consciousness on the formation of behavioral intentions. *Journal of Sustainable Tourism*, 26(7), 1160-1177.
- Martínez, P. (2015). Customer loyalty: exploring its antecedents from a green marketing perspective. *International Journal of Contemporary Hospitality Management*, 27 (5), 896-917.
- Merli, R., Preziosi, M., Acampora, A., & Ali, F. (2019). Why should hotels go green? Insights from guests experience in green hotels. *International Journal of Hospitality Management*, 81, 169-179.
- Merli, R., Preziosi, M., Acampora, A., Lucchetti, M. C., & Ali, F. (2019). The impact of green practices in coastal tourism: An empirical investigation on an eco-labelled beach club. *International Journal of Hospitality Management*, 77, 471-482.
- Moise, M. S., Gil-Saura, I., & Ruiz-Molina, M. E. (2018). Effects of green practices on guest satisfaction and loyalty. *European Journal of Tourism Research*, 20(20), 92-104.
- Moise, M. S., Gil-Saura, I., & Ruiz Molina, M. E. (2021). The importance of green practices for hotel guests: does gender matter?. *Economic Research-Ekonomska Istraživanja*, 34(1), 3508-3529.
- Moise, M. S., Gil-Saura, I., & Ruiz-Molina, M. E. (2021). "Green" practices as antecedents of functional value, guest satisfaction and loyalty. *Journal of Hospitality and Tourism Insights*.
- Morrison, D. (2003). *E-learning strategies: how to get implementation and delivery right first time*. John Wiley & Sons.
- Muharam, I. N., & Asutay, M. (2022). Online disclosure practices of halal-friendly hotels. *Journal of Islamic Marketing*, 13(1), 119-132.
- Olya, H., Altinay, L., Farmaki, A., Kenebayeva, A., & Gursoy, D. (2021). Hotels' sustainability practices and guests' familiarity, attitudes and behaviours. *Journal of Sustainable Tourism*, 29(7), 1063-1081.
- Park, S., Song, S., & Lee, S. (2017). Corporate social responsibility and systematic risk of restaurant firms: The moderating role of

- geographical diversification. *Tourism Management*, 59, 610-620.
- Parnyakov, A. V. (2014). Innovation and design of cruise ships. *Pacific Science Review*, 16(4), 280-282.
- Pereira, T.D.S., Fernandino, G., (2019). Evaluation of solid waste management sustainability of a coastal municipality from northeastern Brazil. *Ocean Coast Manag* 179, 104839.
- Pizam, A., Shapoval, V., & Ellis, T. (2016). Customer satisfaction and its measurement in hospitality enterprises: a revisit and update. *International journal of contemporary hospitality management*.
- Preziosi, M., Acampora, A., Lucchetti, M. C., & Merli, R. (2022). Delighting hotel guests with sustainability: Revamping importance-performance analysis in the light of the three-factor theory of customer satisfaction. *Sustainability*, 14(6), 3575.
- Rady, A. (2018). Environmental and Social Practices in Luxury Hotels: Customers' Perceptions. *International Journal of Heritage, Tourism and Hospitality*, 12(1), 302-314.
- Rady, A., & Atia, M. A. (2019). Health Affairs in Universities' Cafeterias: A Case Study of Minia University. *International Journal of Heritage, Tourism and Hospitality*, 13(2), 314-324. Doi: 10.21608/IJHTH.2019.132248
- Ren, L., Qiu, H., Wang, P., & Lin, P. M. (2016). Exploring customer experience with budget hotels: Dimensionality and satisfaction. *International Journal of Hospitality Management*, 52, 13-23.
- Srivastava, S., & Singh, N. (2021). Do Corporate Social Responsibility (CSR) initiatives boost customer retention in the hotel industry? A moderation-mediation approach. *Journal of Hospitality Marketing & Management*, 30(4), 459-485.
- Sürücü, L., & MASLAKÇI, A. (2020). Validity and reliability in quantitative research. *Business & Management Studies: An International Journal*, 8(3), 2694-2726.
- Verma, V. K., & Chandra, B. (2018). An application of theory of planned behavior to predict young Indian consumers' green hotel visit intention. *Journal of cleaner production*, 172, 1152-1162.
- Wang, J., Bao, J., Wang, C., & Wu, L. (2017). The impact of different emotional appeals on the purchase intention for green products: The moderating effects of green involvement and Confucian cultures. *Sustainable cities and society*, 34, 32-42.
- Yusof, Y., Awang, Z., Jusoff, K., & Ibrahim, Y. (2017). The influence of green practices by non-green hotels on customer satisfaction and loyalty in hotel and tourism industry. *International Journal of Green Economics*, 11(1), 1-14.
- Egyptian hotels association,  
2022:<http://www.egyptianhotels.org/Home/Hotels?search=&CategoriesIDFK=5&HotelsTypesIDFK=1&CityIDFK=44>