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The effects of green practices on green customer loyalty in the hotel industry: Multi-mediating role of green perceived value and green satisfaction

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Abstract

This study aims to empirically examine the effect of hotel green practices on customer loyalty through word-of-mouth and revisit intention, as well as the mediating effect of green perceived value and green satisfaction. The model was examined using descriptive, and multivariate analysis by means of data gathered from 300 surveys completed by valid hotel guests who stayed in Department of Tourism-accredited hotels in the Philippines. The key findings of this study indicate a significant effect on green loyalty, green perceived value, and green satisfaction manifested by green practices in terms of energy conservation, water conservation, and waste management. Most of the respondents were female at 61.7% (n=185), college graduates (n= 187, 62.3%), earning Php 20,000 and below (n=98, 32.7%), mostly stayed in a five-star hotel (n=138, 46%), and their main purpose of visit in hotels is for leisure at 84% (n=252). Moreover, the research question was answered by linear regression when each green practices determinant was regressed individually resulting in ACCEPT of all alternative hypotheses. The result states that green practices dimensions significantly affect and positively influence the green perceived value, green satisfaction, and green loyalty manifested by the hotel guests. However, most hotel guests believe that the effect of green practices on green satisfaction is more important than green perceived value. While green customer loyalty is mostly demonstrated through word-of-mouth they intend to return to the hotel. This study is especially pertinent given the current reality, which is marked by increasing environmental awareness among hotel guests and corporate environmental responsibility. Additionally, in contrast to earlier studies, this study adopts the green perceived value and customer satisfaction to further improve our comprehension of hotel customer loyalty through their revisit intention and word-of-mouth.

Keywords: green practices, green customer loyalty, green perceived value, green satisfaction

The effects of green practices on green customer loyalty in the hotel industry: Multi-mediating role of green perceived value and green satisfaction

1. Introduction

Tourism is gradually expanding its activities, but because of the fierce rivalry in the hospitality sector (Assaker, 2020a), many hotels have implemented green practices as a means of enhancing the green perceived value (Chen & Chang, 2012) of the environment and the level of green satisfaction (Chen et al., 2014) achieving green customer loyalty (Çavuġoğlu et al., 2020) as the ultimate objective. Many hotels are being compelled to adopt more ecologically friendly methods as a result of the growing interest in sustainable development concepts and the pressure that follows from the media, the government, and consumer sources to improve activity levels to this extent (Abdou et al., 2020). The present study aims to first, fill the empirical gap in the existing research (Moise et al., 2021), a model that has been proposed, and tested to provide more insight into the effects of green practices on customer loyalty. Second, to determine the effect of green practices by the hotels on customer loyalty. Lastly, this study proposes a novel framework using the SOR model with green practices which incorporates the concepts of green perceived value and green satisfaction proposed by Chen and Chang (2013c) and Chen (2010), to further discuss the influence on customer loyalty. The results will give hotel managers knowledge to help them focus their efforts on the areas that will enable them to maintain solid connections with customers, ongoing assistance in the preservation of the environment, and uphold good and ethical business practices.

The goal of this study is to examine the effect of green practices on green customer loyalty with the mediating role of green perceived value and green satisfaction of guests of DOT-accredited hotels in the Philippines. This research seeks to provide answers to the following research questions: To what extent do the following green practices dimensions affect customer loyalty in terms of: energy conservation measures, water conservation measures, and waste management; What is the relationship between all variables in the research framework? The main objective of this study is to investigate the extent of the green practices' dimensions such as energy conservation measures, water conservation measures, and waste management which affect customer loyalty. And to examine the relationship of all variables in the research framework.

The author proposes that this study will examine the hotel green practices of the selected hotels that can be used as the model of other hotels toward customer loyalty. This study will be beneficial to the following: For the hotel managers. This study will help them enhance their green practices to maintain their contribution to sustainability goals and improve their green perceived to meet the tourist needs. For tourists, the result and recommendation of this study will provide insights into the changing perspective of all stakeholders in improving their green hotel practices for sustainability. For Future Researchers, this study will provide relevant information on green practices that equip them to improve their environmental development.

The scope of this study is to empirically examine the effect of hotel green practices on customer loyalty through word-of-mouth and revisit intention, as well as the mediating effect of green perceived value and green satisfaction between green practices and green customer loyalty by analyzing questionnaire responses from hotel guest in selected hotel from one to five-star hotels in the Philippines. There is no study without flaws, the current one does as well, and it suggests areas for further research. First, the research is mostly focused on green hotel practices, thus the findings cannot be applied broadly. Second, the researchers will conduct an online survey and face to face in the form of questionnaires to be given via email or Google form to the guests who have checked in DOT-accredited hotels in the Philippines. Third, the respondents are Guests from Metro Manila only.

Theoretical Framework **-** In this study, Stimulus-Organism-Response (SOR) model will be used as theoretical framework. This model, which was proposed by Mehrabian and Russell in 1974 and was based on

environmental psychology, emphasizes how environmental cues can affect emotional reactions and subsequent behaviors (Yoon,2021). They defined "environmental stimuli (S) as factors that affect an individual's cognitive or emotional activities and organisms (O) as mental or cognitive states that an individual develops in response to stimuli, including positive and negative emotions, such as delight, excitement, immersion, disgust and arousal, while response (R) is a behavioral response of approach or avoidance that is expressed through emotional and cognitive processes, including participation, buying, feedback, reviews, and nonuse" (Ye et al.,2023,p 3-4).In addition, SOR model often explores the relationship between the variables (Kaur et al.,2017).

Conceptual Framework

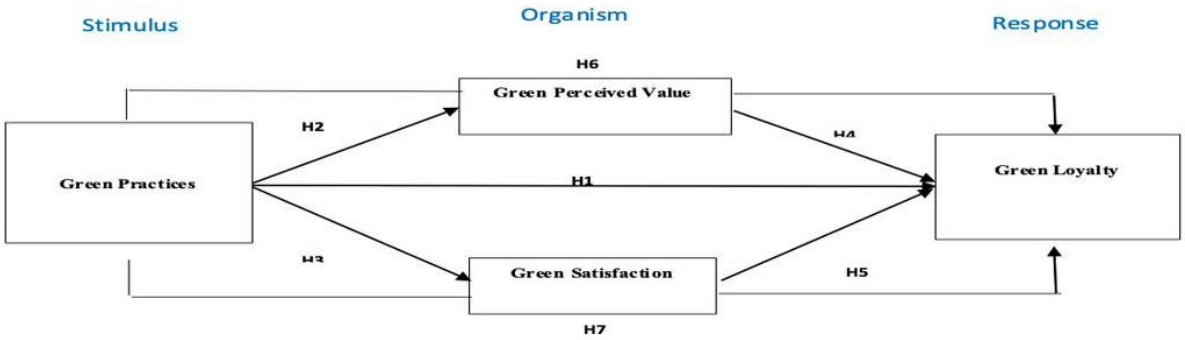

Figure 1. Conceptual Model

Figure 1 illustrates the proposed conceptual model for this study. This model is developed based on Stimulus-Organism-Response (SOR) model which explores the relationship between the variables (Kaur et al.,2017). In this study, green practices as stimulus (Hameed et al.,2021), perceived value (Goyal et al.,2021; Shah et al.,2020), and green customer satisfaction (Famiyeh et al.,2018; Wang et al.,2018; Hameed et al.,2021; Jiang,2022) as an organism, and green customer loyalty as a response (Yadav & Rahman,2018; Famiyeh et al.,2018). Green Practices have been defined as "internal efforts or activities of a hotel to implement environmentally friendly practices towards the goal of becoming a green facility" (Kim, 2005, p.9) cited by Moise (2018). According to Patterson and Spreng (1997), Green Perceived Value is "a consumer's overall appraisal of the net benefit of a product or service between what is received and what is given based on the consumer's environmental desires, sustainable expectations, and green needs". Green Satisfaction defines as "a pleasure level of consumption-related fulfillment to satisfy customers' environmental desires, sustainable expectations, and green needs." green satisfaction to be defined as the level of pleasurable fulfillment related to consumption to satisfy the environmental and health desires or expectations of a customer" (Chen, 2010, Oliver, 2010 & Zulfiqar, 2015, Román-Augusto et al., 2022). Lastly, Green loyalty is a trust that does not offer only quality products but also offers a product that will not harm the environment" (Singh et al., 2016). Green Customer Loyalty is defined as the customer's commitment to consistently repurchase or re-protect a preferred product in the future, where he or she wants to maintain a relationship with an environmentally concerned or green business. In this respect, loyal customers tend to make reliable suggestions to the people around them. (Chang & Fong, 2010).

Green satisfaction and green perceived value as mediating variables mediate the effect of green practices as the independent variable and green customer loyalty as the dependent variable. Businesses are under increasing pressure to be more responsible and environmentally friendly (Çavuġoğlu et al., 2020b). This development of new insights regarding the opportunity for firms to increase their green customer loyalty through the adoption of green practices (Rosato et al., 2021a) is the focus of this study.

Hypothesis of the Study - Therefore, we hypothesized:

H1: Green practices positively influence customer loyalty.

H2: Green practices positively influence green perceived value.

H3: Green practices positively influence green satisfaction.

H4: Green perceived value has significant effects on green customer loyalty.

H5: Green satisfaction greatly has a significant on green customer loyalty.

H6: Green satisfaction significantly mediates the relationship between green practices and green customer loyalty.

H7: Green perceived value significantly mediates the relationship between green practices and green customer loyalty.

2. Methodology

Research Design - The study's quantitative method and descriptive research design were used to ascertain green hotel practices. Actual respondents of the printed survey forms were hotel guests who stayed in one to five-star DOT-accredited hotels. The printed survey was dispersed at random by my colleagues in their separate Metro Manila-based workplaces, and the online survey was dispersed using Google Forms using online platforms such as Facebook, email, and Viber. The research was conducted without interfering with the respondents' regular workday.

Research Locale, Population and Sampling - The study were conducted in Metro Manila, where the intended respondents are based. These are hotel guests who were able to check in at hotels in the Philippines that were accredited by the DOT in the last 2 years. The total current estimated number of Department of Tourism (DOT) accredited in the Philippines is around 1020. The population is made up of travelers who have stayed in DOT-accredited hotels in the Philippines. The respondents from Metro Manila who checked into the hotels last 2 years (from 2021 to the present) would serve as the sampling. The researchers were able to gather a total number of 300 guests as respondents.

Data Collection Procedure - The research instrument used by the researchers was a survey questionnaire. The instrument was adapted from the study of Moise et al. (2021); Abdou et al. (2020); Li et al. (2022); Lammi & Tesfaye (2021); & Chrisjatmiko (2018). It was validated by two academicians and one expert in the hotel industry. The data were gathered through a survey questionnaire using the 5-point Likert scale designed through Google Forms. The study used a convenience sampling design with non-probability and convenient technique. The respondents were asked to give their consent and to completely answer the survey. A quantitative survey based on a questionnaire was used in order to investigate the extent of the green practices' dimensions such as energy conservation measures, water conservation measures, and waste management which affect customer loyalty. Likewise, to examine the relationship of all variables in the research framework. Based on the current literature, the structure of the questionnaire form was created. Previous studies were used to adapt green hotel practice statements pertaining to water conservation, energy reduction, waste management, and recycling. The declarations about sustainable development goals and accompanying targets from the 2030 Agenda for Sustainable Development, which was accepted by all UN Member States in 2015, were altered to fit the hotel business. The researcher looked at environmental SDGs (SDG 6, SDG 7, and SDG 12) that are primarily concerned with environmental sustainability.

Reliability and Validity Test - When Alpha is higher than 0.7, it is considered the scale of good internal consistency (Khan et al., 2020). The Cronbach alpha α was used in the instrument with a value of 0.976, which indicates acceptable internal consistency. No items were dropped based on reliability testing.

3. Results and discussion

Table 1

Frequencies of Demographic profile (n=300)

Levels	Counts	% of Total
Age		
Less than 20 years old	17	5.7%
21-30 years old	124	41.3%
31-40 years old	70	23.3%
41-50 years old	51	17%
51-60 year old	21	7.0%
61 years old and above	14	4.7%
Prefer not to say	3	1.0%
Sex		
Male	114	28.0%
Female	185	61.7%
Prefer not to say	1	0.3%
Education		
High school	21	7.0%
College	187	62.3%
Graduate School	53	17.7%
Postgraduate	39	13.0%
Income		
Php 20,000 and below	98	32.7%
Php 21,000 -30,000	36	12.0%
Php 31,000 -40,000	40	13.3%
Php 41,000 -50,000	37	12.3%
Php 51,000 and above	89	29.7%
Hotel Classification		
One Star	20	6.7%
Two Star	8	2.7%
Three Star	79	26.3%
Four Star	55	18.3%
Five Star	138	46.0%
Purpose of Visit		
Leisure	252	84.0%
Business	48	16.0%

The respondents were questioned about their age, sex, education level, hotel classification, and purpose for visiting. In the context of green practices of DOT-licensed hotels in the Philippines, these six items were employed in this study.

The Demographic characteristics of the respondents resulted in Age. The largest age level is 21-30 years old is 41.3%, (n= 124), followed by age 31-40 years old at 23.3%, (n=70), age 41-50 at 17% (n=51), age 51-60 years old at 7%(n=2), less than 20 years old at 5.7%(n=17), age 61 years old and above at 4.7% (n=14) and 3% of respondents prefer not to say (n=3). Sex. Most of the respondents were female at 61.7% (n=185) and male at 38% (n=114). Education. Most of the respondents are college graduates (n= 187, 62.3%), followed by graduate school (n=53, 17.7%), postgraduate (n=39,13%), and followed by the respondents as high school graduates (n=21, 7%). Income. Most of the respondents earn Php 20,000 and below (n=98, 32.7%), 51,000 and above (n= 89, 29.7%), Php 31,000-40,000 (n=40, 13.3%), Php 41,000-50,000 (37, 12.3%), and lastly respondents earning 21,000-30,000 (n=36, 12%). Hotel Classification. The majority of the respondents stayed in a five-star hotel (n=138, 46%), followed by three-star hotel (n=79, 26.3%), four-star (n=55, 18.3%), one-star (n=20, 6.7%), and two stars (n=8, 2.7%). Purpose of Visit. Most of the respondents' purposes of visited hotels for Leisure 84% (n=252) whilst for business purposes 16% (n=48).

The mean of age is 2.96 and the standard deviation, SD= 0.796 away from the mean index of 3.00. The skewness of .804 is within a normal range of -3 to +3, which means that there is a normal distribution. The kurtosis of 0.0457 is within the normal range of -1 to +1, which has no outliers. The Shapiro-Wilk p is less than

<.001, which means that there is a normal distribution. The mean of education is 2.37 and the standard deviation, SD= 1.29 away from the mean index of 3.00. The skewness is within a normal range of -3 to +3, which means that there is a normal distribution. The kurtosis of 0.338 is within the normal range of -1 to +1, which has no outliers. The Shapiro-Wilk p is less than <.001, which means that there is a normal distribution.

Table 2

Descriptive Analysis of Demographic (n=300)

	Age	Education	Income	Hotel Classification	Visit Purpose
Mean	2.96	2.37	2.94	3.94	1.16
Median	3.00	2.00	3.00	4.00	1.00
Standard Division	1.29	0.796	1.66	1.20	0.367
Skewness	0.908	0.804	0.0507	-0.928	1.86
Kurtosis	0.338	0.0457	-1.64	0.0495	1.49
Shapiro-Wilk p	<.001	<.001	<.001	<.001	<.001

The mean of income is 2.97 and the standard deviation, SD= 0.796 away from the mean index of 3.00. The skewness of 0.0507 is within a normal range of -3 to +3, which means that there is a normal distribution. The kurtosis of -1.64 is not within the normal range of -1 to +1, which means that there are outliers. The Shapiro-Wilk p is less than <.001, which means that there is a normal distribution. The mean of hotel classification is 3.94 and the standard deviation, SD= 1.20 away from the mean index of 3.00. The skewness of -0.928 is within a normal range of -3 to +3, which means that there is a normal distribution. The kurtosis of 0.0495 is within the normal range of -1 to +1, which has no outliers. The Shapiro-Wilk p is less than <.001, which means that there is a normal distribution. The mean of visit purpose is 1.16 and the standard deviation, SD= 0.367 away from the mean index of 3.00. The skewness of 1.86 is within a normal range of -3 to +3, which means that there is a normal distribution. The kurtosis of 1.49 is not within the normal range of -1 to +1, which has outliers. The Shapiro-Wilk p is less than <.001, which means that there is a normal distribution

Table 3

Correlation Matrix (n=300)

Correlation Matrix

	GPEC A	GPWC A	GPWA A	GPV A	GS A	GLWOM A	GLRI A
GPEC A	—						
GPWC A	0.641	—					
GPWA A	0.621	0.692	—				
GPV A	0.523	0.517	0.487	—			
GS A	0.588	0.547	0.589	0.661	—		
GLWOM A	0.504	0.478	0.503	0.702	0.672	—	
GLRI A	0.534	0.471	0.502	0.579	0.652	0.742	—

Correlation measures the degree of association between two variables. The coefficient of correlation lies between -1 and +1. When r=0, which means no correlation. When r is between 0 and 0.2, it indicates a very weak positive correlation. When r is between 0.2 to 0.4, it indicates a weak positive correlation. When r is between 0.4 to 0.6, it indicates a moderate positive correlation. When r is between 0.6 to 0.8, it indicates a strong positive correlation. When r is between 0.8 to 1.0, it indicates a very strong positive correlation. When r is between -1.0 and 0, indicates the corresponding negative relationship. Table 3 shows that Pearson R was used to evaluate the strength of the relationship between the variables.

An absolute value of $r < 0.3$ strength of the relationship is none or very weak., $0.3 < r < 0.5$ has weak correlations, $0.5 < r < 0.7$ moderate, and $r > 0.7$has strong correlation (Mindrila & Phoebe, 2017) . In general, an R-value of more than 0.7 indicates a strong correlation between two variables. Energy conservation (GPEC) has a

moderate positive correlation with (GPWC) water conservation (r=0.641), strong positive correlation with (GPWA) waste management (r=0.621), moderate positive correlation with (GPV) green perceived value (r=0.523), moderate positive correlation with (GS) green satisfaction (r=0.588)), moderate positive correlation with (GLWOM) word-of-mouth (r=0.504) and moderate positive correlation with (GLRI) revisit intention (r=0.534). Thus, energy conservation (GPEC) has a moderate positive relationship with other variables. Water conservation (GPWC) has a moderate positive correlation with (GPWA) waste management (r=0.692), a moderate positive relationship with (GPEC) energy conservation, a moderate positive correlation with (GPV) green perceived value (r=0.517), a moderate positive correlation with (GS) green satisfaction (r=0.547)), moderate positive correlation with (GLWOM) word-of-mouth (r=0.478) and moderate positive correlation with (GLRI) revisit intention (r=0.471). Thus, water conservation (GPWC) has a moderate positive relationship (r=0.581) with other variables.

Waste Management (GPWA) has a moderate positive relationship with (GPEC) energy consumption (r=0.641) and (GPWC) water conservation, a moderate positive correlation with (GPV) green perceived value (r=0.478), a moderate positive correlation with (GS) green satisfaction (r=0.589)), moderate positive correlation with (GLWOM) word-of-mouth (r=0.503) and moderate positive correlation with (GLRI) revisit intention (r=0.502). Thus, waste management (GPWA) has a moderate positive relationship (r=0.557) with other variables.

Green Perceived Value (GPV) has a moderate positive correlation with (GS) green satisfaction (r=0.661)), a strong positive correlation with (GLWOM) word-of-mouth (r=0.702) and a moderate positive correlation with (GLRI) revisit intention (r=0.579), (GPEC) energy consumption (r=0.523), (GPWC) water conservation (r=0.517), and weak correlation with (GPWA) waste management (r=.487). Thus, green perceived value (GPV) has a strong positive relationship with GSWOM and a moderate positive relationship with GS, GLRI, GPEC, GPWC, and a weak correlation with GPWA. Green Satisfaction (GS) has a moderate positive relationship with (GPEC) energy conservation (r= 0.588), (GPWC) water conservation (r=0.547), and (GPWA) waste management (r=0.589). While (GS) has a moderate positive with (GPV) green perceived value (r=0.661), (GLWOM) green loyalty-word-of-mouth (r=0.672) and moderate positive correlation with (GLRI) green loyalty-revisit intention (r=0.652). Thus, green satisfaction (GS) has a moderate positive relationship (r=0.618) with other variables.

Word-of-mouth (GLWOM) has a moderate positive relationship with (GPEC) energy conservation (r=0.504), (GPWC) water conservation (r=0.478), and (GPWA) waste management (r=0.503). However, (GLWOM) has a strong positive correlation with (GPV) green perceived value (r=0.702), (GS) green satisfaction (r=0.672), and (GLRI) revisit intention (r=0.742). Thus, word-of-mouth (GLWOM) has a strong positive relationship with GPV and GLRI, and a moderate positive relationship with GPEC, GPWC, GPWA, and GS. Revisit Intention (GLRI) has a weak correlation with (GPWC) water conservation (r=0.471). While moderate positive relationship with (GPEC) energy conservation (r=0.534), (GPWA) waste management (r=0.502), and (GPV) green perceived value (r=0.579), (GS) green satisfaction (r=0.652) and strong positive correlation with (GLRI) revisit intention (r=0.742).), Thus, word-of-mouth (GLWOM) has a moderate positive relationship (r=0.580) with other variables. Therefore, green practices have a weak to very strong positive correlation to all independent variables. In addition, energy conservation (GPEC) with (r=0.581), water conservation (GPWC) with (r=0.557), waste management (GPWA) with (r=0.557), green perceived value (GPV) with (r=0.578) and revisit intention (GLRI) with (r=0.580) have a moderate positive correlation to independent variables. While green satisfaction (GS) with (r=0.618) and green customer loyalty- word-of-mouth (GLWOM) with (r=0.600) have a strong positive correlation with other independent variables. Therefore, there is a moderate positive relationship (r=0.581) between all the dependent variables in the research framework.

Based on the result of linear regression (Table 4) of hypothesis 1, adjusted R squared 33.3% is more than 50%, which is a good fit model. The p-value of the overall model test is less than 5% of significance. Therefore, hypothesis 1 which states that “green practices positively influence green customer loyalty” is accepted. In addition, the Durbin-Watson test for autocorrelation is 1.91 which is within the range of 1.5 to 2.5, this means that there is no first-order autocorrelation in all variables; the VIF of all independent variables is less than 5, and

tolerance of those are bigger than 0.1, which means all independent variables have a low degree correlation with each other; and the p values of Shapiro - wilk are less than 0.01 which manifests normal distribution. Thus, all tests of assumption checks are passed.

Table 4

Linear Regression of RQ1 and H1. Green Practices to Green Customer Loyalty (GL)

Model Fit Measures

				Overall Model Test			
Model	R	R^2	Adjusted R^2	F	df1	df2	p
1	0.582	0.339	0.333	50.7	3	296	<.001

Model Coefficients - GL A

Predictor	Estimate	SE	t	p
Intercept	2.091	0.1845	11.33	<.001
GPEC A	0.241	0.0529	4.55	<.001
GPWC A	0.102	0.0604	1.69	0.092
GPWA A	0.201	0.0563	3.57	<.001

Table 5

Linear Regression of RQ1 and H2. Green Practices to Green Perceived Value (GPV)

Model Fit Measures

				Overall Model Test			
Model	R	R^2	Adjusted R^2	F	df1	df2	p
1	0.584	0.341	0.334	51.0	3	296	<.001

Model Coefficients - GPV A

Predictor	Estimate	SE	t	p
Intercept	2.025	0.1903	10.64	<.001
GPEC A	0.235	0.0545	4.30	<.001
GPWC A	0.205	0.0623	3.29	0.001
GPWA A	0.129	0.0580	2.22	0.027

Based on the result of linear regression (Table 5) of hypothesis 2, adjusted R squared 33.4% is more than 50%, which is a good fit model. The p-value of the overall model test is less than 5% of significance. Therefore, hypothesis 2 states that "green practices positively influence green perceived value" is accepted. In addition, the Durbin-Watson test for autocorrelation is 1.88 which is within the range of 1.5 to 2.5, this means that there is no first-order autocorrelation in all variables; the VIF of all independent variables is less than 5, and tolerance of those are bigger than 0.1, which means all independent variables have a low degree correlation with each other; and the p values of Shapiro - wilk are less than 0.01 which manifests normal distribution. Thus, all tests of assumption checks are passed.

Based on the result of linear regression (Table 6) of hypothesis 3, adjusted R squared 43.6% is more than 50%, which is a good fit model. The p-value of the overall model test is less than 5% of significance. Therefore, hypothesis 3 states that "green practices positively influence green satisfaction" is accepted. In addition, the Durbin-Watson test for autocorrelation is 1.92 which is within the range of 1.5 to 2.5, this means that there is no

first-order autocorrelation in all variables; the VIF of all independent variables is less than 5, and tolerance of those are bigger than 0.1, which means all independent variables have a low degree correlation with each other; and the p values of Shapiro - wilk are less than 0.01 which manifests normal distribution. Thus, all tests of assumption checks are passed.

Table 6

Linear Regression of RQ1 and H3. Green Practices to Green Satisfaction (GS)

Model Fit Measures

				Overall Model Test			
Model	R	R^2	Adjusted R^2	F	df1	df2	p
1	0.660	0.436	0.430	76.2	3	296	<.001

Model Coefficients - GS A

Predictor	Estimate	SE	t	p
Intercept	1.334	0.1929	6.92	<.001
GPEC A	0.288	0.0553	5.21	<.001
GPWC A	0.137	0.0631	2.17	0.031
GPWA A	0.273	0.0588	4.65	<.001

Table 7

Linear Regression of RQ1 and H4. Green Perceived Value (GPV) to Green Loyalty

Model Fit Measures

			Overall Model Test			
Model	R	R^2	F	df1	df2	p
1	0.682	0.465	259	1	298	<.001

Model Coefficients - GL A

Predictor	Estimate	SE	t	p
Intercept	1.429	0.1808	7.90	<.001
GPV A	0.660	0.0410	16.08	<.001

Based on the result of linear regression (Table 7) of hypothesis 4, adjusted R squared 46.5% is more than 50%, which is a good fit model. The p-value of the overall model test is less than 5% of significance. Therefore, hypothesis 4 states that “green perceived value positively influences green loyalty” is accepted. In addition, the Durbin-Watson test for autocorrelation is 1.87 which is within the range of 1.5 to 2.5, this means that there is no first-order autocorrelation in all variables; the VIF of all independent variables is less than 5, and tolerance of those are bigger than 0.1, which means all independent variables have a low degree correlation with each other; and the p values of Shapiro - wilk are less than 0.01 which manifests normal distribution. Thus, all tests of assumption checks are passed.

Based on the result of linear regression (Table 8) of hypothesis 5, adjusted R squared 43.6% is more than 50%, which is a good fit model. The p-value of the overall model test is less than 5% of significance. Therefore, hypothesis 5 states that “green practices positively influence green satisfaction” is accepted. In addition, the Durbin-Watson test for autocorrelation is 1.92 which is within the range of 1.5 to 2.5, this means that there is no

first-order autocorrelation in all variables; the VIF of all independent variables is less than 5, and tolerance of those are bigger than 0.1, which means all independent variables have a low degree correlation with each other; and the p values of Shapiro - wilk are less than 0.01 which manifests normal distribution. Thus, all tests of assumption checks are passed.

Table 8

Linear Regression of RQ1 and H5. Green Satisfaction to Green Loyalty

Model Fit Measures

			Overall Model Test			
Model	R	R^2	F	df1	df2	p
1	0.692	0.478	273	1	298	<.001

Model Coefficients - GL A

Predictor	Estimate	SE	t	p
Intercept	1.749	0.1570	11.1	<.001
GS A	0.611	0.0370	16.5	<.001

Table 9

Linear Regression of RQ1 and H6. Green Perceived Value (GPV) Mediates Green Practices and Green Loyalty

Mediation Estimates

Effect	Label	Estimate	SE	Z	p	% Mediation
Indirect	a × b	0.268	0.0334	8.02	<.001	54.2
Direct	c	0.226	0.0434	5.21	<.001	45.8
Total	c + a × b	0.494	0.0428	11.55	<.001	100.0

Path Estimates

			Label	Estimate	SE	Z	p
GP A	→	GPV A	a	0.513	0.0441	11.62	<.001
GPV A	→	GL A	b	0.523	0.0472	11.08	<.001
GP A	→	GL A	c	0.226	0.0434	5.21	<.001

To address Hypothesis 6, which states that, "Green Perceived Value mediates the relationship between green practices and green loyalty". The researcher performed a mediation analysis to assess the mediating role of (MV) green perceived value on the linkage between (IV) green practices and (DV) green loyalty. The results (see Table 9) revealed that the total effect is less than .001, which means that the overall relation of green practice on green loyalty was statistically significant. Direct paths and indirect effect have a significant p-value ($p < .001$), which show partial mediation. Therefore, Hypothesis 6 is ACCEPTED.

To address Hypothesis 7, which states that, "Green satisfaction mediates the relationship between green practices and green loyalty". The researcher performed a mediation analysis to assess the mediating role of (MV) green satisfaction on the linkage between (IV) green practices and (DV) green loyalty. The results (see Table 10) revealed that the total effect is less than .001, which means that the overall relation of green practice on green loyalty was statistically significant. Direct paths and indirect effect have a significant p-value ($p < .001$), which show partial mediation. Therefore, Hypothesis 7 is ACCEPTED.

Table 10

Linear Regression of RQ1 and H7. Green Satisfaction (GS) Mediates Green Practices and Green Loyalty

Mediation Estimates

Effect	Label	Estimate	SE	Z	p	% Mediation
Indirect	a × b	0.320	0.0374	8.58	<.001	64.8
Direct	c	0.174	0.0469	3.71	<.001	35.2
Total	c + a × b	0.494	0.0428	11.55	<.001	100.0

Path Estimates

			Label	Estimate	SE	Z	p
GP A	→	GS A	a	0.638	0.0450	14.17	<.001
GS A	→	GL A	b	0.502	0.0466	10.78	<.001
GP A	→	GL A	c	0.174	0.0469	3.71	<.001

4. Conclusions, management implications, and limitations and recommendations

The novelty of this paper primarily lies in the previous research using the same concept in another country. The study investigated the effects of green practices in the hotel industry in the Philippines on green perceived value, green customer satisfaction, and green customer loyalty. The SOR model describes the connection between stimuli of green practices that will affect an organism's green customer satisfaction and the response people have to the stimulus on customer loyalty through WOM and revisit intention. Stimulus (green practices) refers to input, which is an external factor related to the environment. The key findings of this study indicate a significant effect on green loyalty, green perceived value, and green satisfaction manifested by green practices in terms of energy conservation, water conservation, and waste management. Moreover, the research question was answered by linear regression when each green practices determinant was regressed individually resulting in ACCEPT all alternative hypotheses. The result states that green practices dimensions significantly affect and positively influence the green perceived value, green satisfaction, and green loyalty manifested by the hotel guests. However, most hotel guests believe that the effect of green practices on green satisfaction is more important than green perceived value. While green customer loyalty is mostly demonstrated through word-of-mouth they also intend to return to the hotel.

The correlation matrix result shows that green practices' three dimensions, energy conservation measures, water conservation measures, and waste management have a significant positive relationship with green perceived value, green satisfaction, and green loyalty. Similarly, the results show that green perceived value is more likely to be seen by hotel guests than its perceived value. Furthermore, hotel guests expressed their green loyalty primarily through word-of-mouth rather than their intention to revisit. As a result, hotel managers can use this result to improve their hotel products and services. Similarly, they can place a high value on word-of-mouth as a powerful tool for increasing customer loyalty.

The limitations encountered throughout the study are as follows: The respondents are from Metro Manila; however, for future research, respondents from other parts of the Philippines may be considered. This study did not test any mediating variables, so future researchers can use green perceived value and green customer satisfaction as mediating variables between green practice and green loyalty. Due to time constraints, this study cannot be generalized, but it can be improved using a longitudinal study.

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