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Consumer Perceptions of Sustainability in the Lodging Industry: Examination of Sustainable Tourism Criteria

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ABSTRACT

While the lodging industry has recognized the importance of engaging in corporate social responsibility (CSR), most hotel CSR efforts focused on sustainable development are oriented towards environmentally-oriented practices. This study examines consumer perceptions of CSR from a more holistic perspective of sustainability, utilizing the recently developed Global Sustainable Tourism Criteria. Findings reveal that while hotel green efforts impact key marketing outcomes such as satisfaction, retention, positive word of mouth, and price premiums, higher level constructs including respect for heritage and community are suggested to mediate the relationship between these green efforts and the marketing outcomes, implying a hierarchy of effects. This hierarchy of effects model is tested against a holistic CSR second order construct model. The paper suggests that hotels should implement and promote CSR efforts in a particular sequence in order to strengthen bonds with consumers.

KEYWORDS: corporate social responsibility, sustainability, loyalty, mediating effects

INTRODUCTION

While numerous studies have shown that green hotel practices contribute to guest satisfaction and loyalty (Bohdanowicz 2006; Deliotte 2008; Tsai and Tsai 2008), there has been relatively less empirical investigation of the importance which consumers attach to more holistic efforts of lodging companies to address sustainability. The objective of this current study is to fill this gap in the literature by examining the impact of a variety of sustainable hotel efforts on consumer attitudes and behavioral intentions, utilizing the newly developed Global Sustainable Tourism Criteria (GSTC) managed by the United Nations Foundation. The GSTC provides extensive coverage of sustainability through inclusion of indicators involving sustainable management, social, economic, cultural heritage as well as environmental practices.

LITERATURE REVIEW

Corporate social responsibility in the lodging industry can find much of its recent formulation in the sustainable development movement, ushered forward in the late 1980s and 1990s through conferences (e.g. United Nations Rio Summit), writings (e.g. Brundtland Report), and concepts (e.g., the Triple Bottom Line). It has also drawn upon the principles of sustainable tourism, which suggests that a balance between the economic, socio-cultural and environmental aspects of tourism development needs to be considered to achieve long-term destination sustainability (UNEP 2005). Many hotel certification programs (e.g., Green Globe, Energy Star) and accreditation schemes (e.g., ISO 14001, LEED) which help demonstrate corporate responsibility in the hotel sector are environmentally oriented. While researchers have proposed systems and indices to measure sustainability from the triple bottom line perspective (e.g., Dwyer et al. 2007; Fernandez and Rivero 2009; Ko 2003), few systems exist which have gained wide industry support in addressing a holistic view of sustainability from the hotel perspective. A noteworthy development in this area has been the Global Sustainable Tourism Criteria (GSTC), which is a set of 37 criteria organized around the United Nations identified pillars of sustainable tourism (GSTC 2009). A coalition of 32 organizations, which include three major players in the lodging sector -- AH&LA, IH&RA, and Choice Hotels – have been involved in developing baseline criteria relevant and applicable to lodging providers. An analysis was undertaken of more than 4,500 criteria from over 60 existing certification and benchmarking systems. The authors believe that these criteria have not yet been empirically validated by lodging consumers, with this study being the first to investigate the lodging consumer perspectives of the GSTC.

MODEL RATIONALE

In recent years, the hospitality industry has utilized the terminology of the triple bottom line (Elkington 1997) of people (sociocultural), planet (ecological), and profits (economic) as the basis for sustainable development in the hotel industry (Houdre 2008). It is, therefore, conceivable that a model based upon this holistic view of CSR as it relates to marketing outcomes, can help explain the relationship between consumers' perception and consumers' behavior (See Figure 1, Model A).

Given the ecological underpinning of the sustainable development movement, much of the academic and popular emphasis on sustainability is focused on the environment. Many green hotel efforts (e.g., reusing towels, turning off lights) require consumers to be collaborators in the service process and can influence the tangible aspects of the guest experience. As a result, it is likely that consumers are more aware of hotel ecological practices in which they have participated (e.g., recycling), rather than any other sustainable initiatives the hotel might have undertaken (e.g., environmentally-sound construction) which do not require consumer participation. Thus, it is equally conceivable that a model replicating the level of tangibility with respect to the entire guest experience can explain the relationship between perception and behavior (See Figure 1, Model B).

This model is supported by the *hierarchy of effects* theory used in consumer behavior (Lavidge and Steiner 1961) to explain the different stages a consumer may pass through from awareness to purchase. The *hierarchy of effects* is different in high-involvement purchase settings than low-involvement contexts, and yields two different routes of persuasion (Petty and Cacioppo 1986) helping marketers in their communications with customers. In our hypothesized Model B, we propose that consumers learn about hotel CSR initiatives in a very pragmatic way -- by staying in a hotel. This "hands-on" way of learning is consistent with the low-involvement framework of the Elaboration Likelihood Model (ELM) (Petty and Cacioppo 1986). In the low-involvement model, consumers learn by their purchasing behavior first. Their purchasing behavior leads the consumer to experience the brand/product/service and allows them to form an attitude or affect toward the purchase. In turn, the attitude toward the brand/product/service will create a belief. In our theoretical framework, providing the model holds to the data, this hypothesis would propose that consumers learn first about CSR in a "hands-on" manner by staying in a hotel with sustainable practices. Positive (and negative) guest experiences with programs such as recycling, reusing, water and energy conservation during the hotel stay would allow these consumers to later appreciate initiatives such as respect for cultural environment (building design, authentic artifacts) and ecological effort (pollution reduction).

This process would lead the consumer to a positive (negative) attitude toward the hotel property and potentially

shape their belief of the hotel brand.

METHOD AND RESULTS

This study focused on participants from Generation Y, also called the millennial generation. Born between 1977 and 1999, members of Generation Y number approximately 76 million in the United States (Nowak, Thach & Olsen, 2006). Millennials have been found to have strong concerns about sustainability and are more willing than other age groups to pay more for environmentally friendly lodging (Deliotte 2008). A survey was administered to students attending a tourism program at a private university in the northeast United States. A screening question helped determine if the respondents had stayed in a hotel within the last six months. Out of 250 surveys collected, 232 were complete or valid and included in the analysis. No significant difference in response means were found between participants who completed the survey towards the beginning versus the end of the period in which the survey was available. Approximately 67.1% of the respondents were female, and respondents were not older than 34 years old, reflecting the age demographic under study.

The survey had two complementary goals: to assess the GSTC criteria as a potential scale (each GSTC indicator was transformed into a survey question to measure respondent perception of his/her last hotel visited on a 7-point likert scale); and evaluate the link between the underlying scale and key marketing outcome measures such as satisfaction, word-of-mouth, intent to return, and intent to pay a premium for hotels perceived to be exhibiting high sustainability practices. These goals were tested on two competing theoretical models.

Evaluating the GSTC criteria as a Sustainability Scale

Responses to the 36-item questionnaire pertaining to the GSTC criteria (GSTC) were subjected to an explanatory factor analysis using maximum likelihood and Quatrimin oblique rotation to address the potentially correlated factors (Muthén and Muthén 2007).

In interpreting the rotated factors pattern, an item was said to load on a given factor if the factor loading was .40 or greater. Items that did not load uniquely on one factor were also eliminated. Using these criteria, 13 items were found to load on three distinct factors labeled Respect for Heritage, Respect for Community, and Ecology, which explained 70% of the variance in the data. The Respect for Heritage (RH) factor incorporates GSTC criteria

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from two dimensions of the original GSTC framework: sustainable management and cultural heritage. The Respect

for Community (RC) factor integrates criteria from the social/economic dimension, and the Ecology (ECO) factor

represents criteria from the environmental dimension of the GSTC framework. All loadings were found satisfactory,

and the reliability of each scale was greater than .70 (See Table 1). The Standardized Root Mean Square Residual

(SRMR) of the final 3 factor model is .026 and the Root Mean Square Error of Approximation (RMSEA) is .066

both indicating acceptable fit (Hu and Bentler 1999). The loyalty construct utilized well-known items taken from the

academic literature, and all four measures loaded on one factor with a satisfactory reliability[1] (See Table 1).

Exploratory Model testing

The two theory-based competing models were then tested. The first model hypothesized that all three

GSTC constructs were explaining a *second order* construct named sustainability, which in turn would cause loyalty

(Model A). The competing model (Model B), however, hypothesized that each GSTC construct was either preceding

or causing the other in a hierarchical chain of effects that ended in causing loyalty. The hypothesized *hierarchy of*

effects starts with the RC construct leading to RH, leading to ECO. In essence, if this hierarchy was to be

demonstrated, the model would reveal mediation effects between the constructs.

As evidenced by Table 2 model B, the *hierarchy of effects* model, resulted in better fit measures (χ^2 =

404.047, df=173; RMSEA=.076; CFI=.91; SRMR=.057) and a chi-square difference test ($\Delta\chi^2$= 29.488; Δdf=2;

p<.0001) demonstrating that the model is superior to the competing *second-order* model (Model A) . After taking

into account the suggested modification indices that showed significant covariance in the selected *hierarchy of*

effects model between some manifest variables the final model fit show a good fit to the data (χ^2 = 301.676, df=155;

RMSEA=.064; CFI=.942; TLI=.93; SRMR=.049) (See Table 3). All loadings were significant (See Table 4). Table

5 shows the structural path standardized estimates for the final model. All path are significant with the exception of

the direct path from respect of resources to footprint (γ=.168; t-value=1.409). The variance explained by the model

for the latent construct RH is 67.8%, 47.2% for the construct ECO, and 25.4% for the Loyalty construct.

The *hierarchy of effects* model is a mediated model. Several mediation effects have to be tested. Table 6

presents the different mediation path: direct, indirect, and total effect. All indirect effects are significant, and all

direct effects are non-significant indicated full mediation of the intermediary constructs. Of interest in the

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[1] Satisfaction was tested as an independent measure from the other loyalty measures (WOM, retention, and price premium); however the one factor solution was the best fitting model.

hypothesized hierarchy of effect model is the specific indirect effect: RC → RH → ECO→ Loyalty with γ=.111 and

a t-value =2.245 (CI= 0.017, 0.296); explaining all of the indirect effects between RC and Loyalty since all other

indirect effects are non-significant.

DISCUSSION

In this paper we utilize the GSTC criteria in order to construct a sustainability scale, then use the refined

scale to infer an underlying structural model in order to help explain the relationship between hotel sustainability

initiatives and key marketing outcomes.

The sustainability scale suggests that consumers view sustainability differently than popularized, existing

frameworks which describe sustainable tourism from an impact (economic, sociocultural, ecological) or triple

bottom line (people, planet, profits) perspective. In addition to attaching importance to environmental efforts,

consumers value corporate contributions to the social and economic welfare of existing communities as well as to

the area's heritage (natural and cultural). Consumers most value corporate efforts which are most recognized and

tangible to their destination experience. Therefore, consumers consider hotel environmental practices most

important to their evaluations and behavioral intentions. Hotel contributions to the area heritage follow in

importance, with contributions to the local community of tertiary importance.

Our findings suggest that the structural model favoring a mediated path better explains the data. At the core

of the theoretical explanation are consumer knowledge and attitudes towards CSR initiatives, consumer involvement

and a *hierarchy of effects* similar to low-involvement purchases (Petty and Cacioppo 1986), where consumer

behavior shapes affect and beliefs. In this sense, our hierarchical model explains that the path starting with consumer

awareness of hotel CSR initiatives – acquired during the tangible experience with hotel green initiatives such as

recycling and reusing – is most powerful in predicting consumer attitudes and behavior such as satisfaction, positive

word of mouth, intent to return, and willingness to pay. Hotel practices which compose the mediating and

intermediate constructs of Respect for Heritage and Respect for Community, do contribute to strengthening guest

satisfaction and loyalty. However, the contribution of these initiatives to key marketing outcomes is found only if

consumers have perceived that hotels are first successfully implementing "the basics" of well known and tangible

Ecological practices, which can be considered to be a prerequisite for additional CSR initiatives.

The purchase of a "green" hotel room seems to require a low level of involvement from consumers, and

the underlying *hierarchy of effects* suggests that consumer learn about CSR in a specific sequence. This sequence

follows the level of tangibility of the guest experience and tends to reflect the "green-first" implementation of hotel

CSR efforts. First, consumers learn about sustainable initiatives from what they experience in their room and the common areas of the hotel. Accordingly, they can best appreciate the Ecological orientation that hotels have with respect to their actions toward reducing pollution. Although the Respect for Heritage orientation is somewhat less tangible, hotel guests are often exposed to the natural heritage (e.g., parks, outstanding geographic features) and cultural heritage (e.g., museums, performances) of the surrounding destination, as destination heritage can be considered a critical part of the tourism experience. The Respect for Community orientation is perhaps the least tangible dimension of the visitor experience, due to limited guest interaction with the host community and knowledge of the local social and economic impacts of tourism. Accordingly, hotel initiatives on the RC dimension are suggested to be least influential on consumer evaluations and behaviors.

Managerial applications of the *hierarchy of effects* model are clear. Hotel managers, or their respective hotel brands, should first implement what is most visible and known to the consumer (i.e., energy and water conservation). Only after important ecological practices are implemented are managers suggested to implement initiatives which contribute to the natural and cultural heritage of the destination as well as to the social and economic needs of the community in which the hotel operates. CSR initiatives attempting to bypass "the basics" of green hotel practices might be detrimental to customer satisfaction and loyalty.

The findings suggest that customers appreciate higher degree sustainable initiates such as carbon reduction only when the visible green initiatives are done. In that respect hotel chains that have implemented such green initiatives since the 80's (e.g., CP hotel-Fairmont) have a definite advantage in term of consumer awareness if not trust. New concept attempting to leverage the sustainability marketing angle (e.g., One hotel) will see the threshold mush higher than legacy chains in that implementing only the green initiatives close to the customer will not directly and significantly yield any increase in the marketing outcomes. Thus, these new concept have to embrace a holistic strategy (e.g., "luxury with a conscience") significantly increasing the cost of building per room, driving return on investment to high revenue per room, and higher market positioning.

Future research should validate the scale and model with a different sample, and extend the study to different generations, possibly with attitudes more resistant to CSR as it relates to marketing outcomes. Variation within markets (i.e., brand positioning) should also be completed with variation between market with a study of the scale and model across countries.

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Constructs	Alpha	Loadings	Code	Measures/Scale items
RH - Respect for Heritage	.743	.73	A62	Design and construction of buildings and infrastructure: respecting the natural or cultural heritage surroundings in sitting, design, impact assessment, and land rights and acquisition.
		.738	A7	Information about and interpretation of the natural surroundings, local culture, and cultural heritage is provided to customers, as well as explaining appropriate behavior while visiting natural areas, living cultures, and cultural heritage sites.
		.523	C2	Historical and archeological artifacts are not sold, traded, or displayed, except as permitted by law.
RC - Respect for Community	.837	.84	B9	The activities of the hotel do not jeopardize the provision of basic services, such as water, energy, or sanitation, to neighboring communities.
		.74	B7	The hotel is equitable in hiring women and local minorities, including in management positions, while restraining child labor.
		.778	B8	The international or national legal protection of employees is respected, and employees are paid a living wage.
		.775	B6	The hotel has implemented a policy against commercial exploitation, particularly of children and adolescents, including sexual exploitation.
ECO - Ecology	.913	.751	D21	Reducing pollution: greenhouse gas emissions from all sources controlled by the hotel are measured, and procedures are implemented to reduce and offset them as a way to achieve climate neutrality.
		.911	D25	Reducing pollution: the hotel implements practices to reduce pollution from noise, light, runoff, erosion, ozone-depleting compounds, and air and soil contaminants.
		.742	D22	Reducing pollution: wastewater, including gray water, is treated effectively and reused where possible.
		.741	D24	Reducing pollution: the use of harmful substances, including pesticides, paints, swimming pool disinfectants, and cleaning materials, is minimized; substituted, when available, by innocuous products; and all chemical use is properly managed.
		.709	D31	Conserving biodiversity, ecosystems, and landscapes: wildlife species are only harvested from

			the wild, consumed, displayed, sold, or internationally traded, as part of a regulated activity that ensures that their utilization is sustainable.
	.859	D13	Conserving resources: energy consumption should be measured, sources indicated, and measures to decrease overall consumption should be adopted, while encouraging the use of renewable energy.

TABLE 2
Model Comparison

Model	χ^2	df	RMSEA	CFI	SRMR	χ^2 Difference Test
A	433.535	175	.080	.899	.063	
B	404.047	173	.076	.91	.057	29.488; df= 2 p<.0001

Note: RMSEA: root mean square error of approximation; CFI: Comparative fit index; SRMR: Standardized root mean square residual

TABLE 3
Measurement Models Fit

Model	χ^2	df	χ^2/df	RMSEA	CFI	TLI	SRMR
Base	404.047	173	2.33	.076	.91	.894	.057
Final	301.676	155	1.95	.064	.942	.930	.049
Diff	102.371	18	p<.0001				

Note: RMSEA: root mean square error of approximation; CFI: Comparative fit index; TLI: Tucker-Lewis index ; SRMR: Standardized root mean square residual

TABLE 4
*International***Measurement Model Results** *31 [2010]*

Constructs	Estimate	t-value
RH		
C2	0.523	9.149
A62	0.730	17.593
A7	0.738	18.162
RC		
B8	0.778	22.438
B6	0.775	22.198
B9	0.840	23.756
B7	0.740	21.555
ECO		
D21	0.751	23.686
D25	0.911	57.715
D31	0.709	19.763
D24	0.741	22.545
D13	0.859	41.458
D22	0.742	22.851
Loyalty		
Satisfaction	0.875	48.170
Return	0.954	82.993
Recommend	0.895	55.115
Pay More	0.609	14.083

TABLE 5
Structural Model Results

Structural Path	Coefficient	t-value
RC → RH	.831	17.348
RC → ECO	.168	1.409
RH → ECO	.549	4.539
ECO → Loyalty	.243	2.590
Covariates		
Gender → RC	.134	2.032
Country → RC	.225	3.445
Education → RH	.211	3.530
Country → RH	-.125	-2.008

TABLE 10

Variance Explained	Percentage
RH	67.8
ECO	47.2
Loyalty	25.4

Note: all results are fully standardized

TABLE 6

Levy and D... Indirect and Direct Effects ...stainability

Structural Paths	Coefficient	t-value
RH → Loyalty		
Total effect	.284	2.136
Direct effect	.15	1.00
Indirect effect	.134	2.96
RC → Loyalty		
Total effect	.452	7.874
Direct effect	.176	1.488
Indirect effect	.276	2.624
Specific indirect effects		
RC → RH → Loyalty	0.125	0.995
RC → ECO → Loyalty	0.041	1.214
RC → RH → ECO → Loyalty	0.111	2.245
RC → ECO		
Total effect	.624	12.923
Direct effect	.168	1.409
Indirect effect	.456	4.146

FIGURE 1 - Competing models

Model A: Second Order Factor of Sustainability

Model B: Hierarchy of Effects/Mediation