

**The effect of brand experience on eco-friendly behavior:**  
**An application of the Stimulus–Organism–Response framework**

A Doctoral Dissertation Presented to the  
Faculty of the  
Conrad N. Hilton College of Hotel and Restaurant Management  
University of Houston

Submitted in Partial Fulfillment  
of the Requirements for the Degree of  
Doctor of Philosophy

Jookyung Kwon  
May 2019

Signature Page

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## **Dedication**

I dedicate this dissertation with eternal love to my mother, Youngsoon Jung, and my father, Youngmo Kwon, who gave me unwavering support and encouragement to progress and no matter which road I chose. Without them, none of this would have been possible.

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## **Abstract**

Although many studies have examined the effect of informational signage for green practices on eco-friendly behavior, limited research has explored the psychological mechanism of customers' green decisions resulting from their hotel brand experience. It is important to know the effect of brand experience on customers' green decisions within the green hotel context to understand customers' subjective and behavior responses induced by brand-related stimuli. Thus, this study discusses how green hotel experiences lead customer eco-friendly behavior based on the Stimulus-Organism-Response framework.

Study 1 aims to examine the potential predictors of customers' eco-friendly behavior based on the Stimulus-Organism-Response framework. PLS-SEM was used to tests the hypotheses using a sample of 217 green hotel customers. The results reveal that brand experience and customer inspiration significantly affect eco-friendly behavior. Further, the results show customer inspiration significantly mediates the relationship between green hotel brand experience and eco-friendly behavior. This study clearly shows the relationship among green hotel brand experience, customer inspiration, and eco-friendly behavior. Thus, this article contributes to exiting hospitality studies by identifying gaps and proposing a holistic view to understand customers' eco-friendly behavior in the green hotel industry.

Study 2 examines the mediating role of customer inspiration and moderating role of Openness to experience in the relationship between brand experience and eco-friendly behavior based on Stimulus-Organism-Response framework. Structural equation modeling was used to test the hypotheses. PLS-SEM tests the hypotheses using a sample of 223 green hotel customers. The results reveal that brand experience has a significant effect on eco-friendly behavior through inspiration. Further, the results show that Openness to experience does not moderate the

relationship between green hotel brand experience and eco-friendly behavior. This study clearly shows the relationship among green hotel brand experience, customer inspiration, and eco-friendly behavior. These findings can help marketers and researchers improve their understanding of the decision-making processes of green hotel customers.

The findings of this study indicate that green hotel's brand experience considerably influences environment-friendly behavior through the mediating role of hotel guests' inspiration. Green hotel managers need to find the sources that evoke customer inspiration by utilizing diverse experiential factors, such as sensory, affective, behavioral, and intellectual. For example, practitioners can provide attractive sensory cues to increase customer inspiration. Additionally, hotel managers may imply technology devices to provide unique behavioral or intellectual experience to hotel customers while staying at hotel and increasing inspiration status. The findings of this study also suggest practitioners that personality does not have a significant relationship with customer inspiration and eco-friendly behavior. Thus, instead of focusing on customers' personality trait, hotel marketers may want to provide innovative external stimuli, such as virtual reality experiences, to increase customers' inspiration because the effect of customer experience on inspiration and green-related behavior is significant regardless of the type of an individual's personality.



## CHAPTER I

### Introduction

#### Statement of Problem

Hotels are gradually investing in environment-friendly practices to fulfill their green responsibilities and encourage guests to engage in eco-friendly activities during their hotel stays because the environment-friendly practices of guests are perceived as cost savings by hotel managers (Singal, 2014). Considering industry trends, eco-friendly initiatives have become increasingly important in hospitality academia because of the significant positive influences of green activities on hotel's cost savings (Jung, Lee, & Dalbor, 2016; Rhou, Singal, & Koh, 2016), customer's emotional attachment (Jang, Kim, & Lee, 2015), customer loyalty (Cha, Yi, & Bagozzi, 2016; Xu & Gursoy, 2015), customer satisfaction (Xu & Gursoy, 2015), customer's willingness to pay a price premium (Xu & Gursoy, 2015), brand image (Yadav, Dokania, & Pathak, 2016), word-of-mouth (WOM) advertising (Gao, Mattila, & Lee, 2016), employee's job performance (Kim, Rhou, Uysal, & Kwon, 2017), customer's behavioral intention (Kim, Song, Lee, & Lee, 2017), and repurchase intention (Su, Swanson, & Chen, 2015; Yadav et al., 2016). However, most hotels promote their sustainability strategies through online reports or in-room messages, e.g., "Meet and Be Green" (Hyatt), "Save Our Planet" (Marriott), and "A Greener Stay" (InterContinental Hotels Group) (Han & Hyun, 2018). Given the limited eco-friendly practices, existing hospitality literature is also restricted from conducting a study regarding the effect of message framing on customer attitude or behavior rather than the effects of experiential factors, such as brand experience (Barber & Deale, 2014).

The current issue in eco-friendly behavior literature in the hospitality industry is that the sustainable behavior of many travelers (e.g., saving energy, water, or amenities) are put on hold

while they stay in a hotel because being immersed in the tourist experience frequently induces indulgent consumption (Chang, Huh, & Lee, 2016; Nisa, Varum, & Botelho, 2017). In addition, to promote an individual's pro-environmental behavior, many hotel companies have traditionally adopted green messaging strategies. However, the academic literature has shown that not all green messages and reports positively affect customer intention to participate in green practices (Pope & Wæraas, 2016) due to the following reasons. First, message framing reduces the tendency of customers to participate in green activities because reading a message increases an individual's cognitive effort while decreases their self-control level, which discourages pro-environmental behavior (Laberge & Samuels, 1974). Consequently, each travelers stay still involves a high consumption of water and energy resources (Miao & Wei, 2016). Hotel guests produce an average of 13.8 kg CO<sub>2</sub> emissions by directly and indirectly consuming 272 MJ energy and 6,350 L water per hotel stay (Nisa et al., 2017). Second, recent studies have also found the negative consequences of messaging strategies because approximately 60% of American travelers have negative perceptions of green messages provided by hotels (Pope & Wæraas, 2016; Rahman, Park, & Chi, 2015). Accordingly, new green practices are necessary because message framing strategies increase customers' skepticism toward green messages and decrease their intention to participate in eco-friendly activities (Pope & Wæraas, 2016).

Therefore, the discrepancies between industry practices and customers' perception of eco-friendly activities require further research to develop more effective means of inspiring the green behavior of customers. Although many studies have examined the effect of informational signage for green practices on eco-friendly behavior (Chang et al., 2016; Blose, Mack, & Pitts, 2015; Kim & Kim, 2014; Noble, Pomeroy, & Johnson, 2014), limited research has explored the psychological mechanism of customers' green decisions resulting from their hotel brand

experience (Barber & Deale, 2014; Khan & Rahman, 2015). However, it is important to know the effect of brand experience on customers' green decisions within the green hotel context to understand customers' subjective and behavior responses induced by brand-related stimuli (Lemon & Verhoef, 2016). Thus, this study aims to test the effects of hotel brand experience as a means of inspiring customers' eco-friendly behavior. Such a concept is explained through Mehrabian and Russell (1974)'s Stimulus–Organism–Response (S-O-R) framework to extend the understanding of “why” and “how” green hotel customers are likely to join green initiatives.

Although hospitality researchers have conducted considerable research on brand experience, limited studies have explained the effect of brand experience on customer attitude or behavior with a solid theory or framework. For example, many researchers have conducted studies to examine the effect of brand experience on brand-related variables (Kang, Manthiou, Sumarjan, & Tang, 2017; Khan & Rahman, 2017), customer attitude (Ha & Perks, 2005; Manthiou, Lee, Tang, & Chiang, 2014; Khan & Rahman, 2015), and customer behavior (i.e., customer citizenship behavior) (Xie, Poon, & Zhang, 2017). However, only a few studies have been conducted to test the effect of experience using a strong framework, such as S-O-R, to explain the effect of experiential stimuli on the changes in an individual's psychological mechanisms (Choi & Kandampully, 2018). Furthermore, minimal research has been conducted to investigate the manner in which individuals' intrinsic motivations or feelings via brand experience. Thus, the current study adopts the S-O-R framework to investigate how brand experience influences the intrinsic motivation and response changes of green hotel guests.

An additional research gap is that most pro-environmental behavior literature in the hospitality industry has utilized limited theories, such as the norm activation model (NAM), value-believe-norm (VBN) theory, and theory of planned behavior (TPB). However, Bamberg

and Möser (2007) suggested that additional theories or frameworks should be adopted because individuals' eco-friendly behavior tends to vary depending on environmental stimuli and industry settings. Indeed, the current pro-environmental literature explained by the aforementioned theories provides a limited explanation for individuals' responses to eco-friendly activities in diverse settings. One method for adopting the suggestions of previous researchers is applying a new theoretical model to explain the effect of experiential stimuli (e.g., brand experience) on customers' psychological mechanism (e.g., organism) and behavior (e.g., response). Thus, the current study utilizes the S-O-R framework to explain customers' psychological mechanism to engage in green initiatives while staying in a hotel. In addition, the current study measures an individual's openness to experience and examines its moderating role in the relationship between brand experience and eco-friendly behavior because: 1) an individual's eco-friendly behavior will vary depending on his/her personality (Kvasova, 2015) and 2) an individual's characteristics, such as his/her personality, play an essential moderating role within the S-O-R framework (Mehrabian & Russell, 1974).

### **Purposes and Objectives**

The purposes of this study are (1) to comprehend the notions of green hotels' brand experience, customer inspiration to participate in green activities, and eco-friendly behavior; (2) to develop a conceptual framework that describes how green hotels' brand experience influence customer behavior while staying in the hotel; (3) to examine the mediating role of customer inspiration by investigating how brand experience generates customer inspiration, which ultimately leads to eco-friendly behavior; and (4) to examine the moderating factors that influence the suggested conceptual framework. The specific objectives of this study are as follows:

- 1) to provide a systematic review of the related literature on hotel customers' brand experience, inspiration, and eco-friendly behavior
- 2) to develop a research model that explains the mechanism of brand experience, inspiration, and eco-friendly behavior in the green hotel context by proposing the mediating role of customer inspiration
- 3) to test the moderating effect of personality on the proposed model

### **Justification of the Study**

Providing brand experiences that generate customers' internal, emotional, and motivational organisms is an essential component of a marketing strategy (Schmitt, 1999; Schmitt & Rogers, 2008). In the hotel industry, experience is particularly important in triggering customers and changing or maintaining their behavior (Barsky & Nash, 2002; Gilmore & Pine, 2002; Xiang, Schwartz, Gerdes, & Uysal, 2015). Although brand experience has been highlighted as a significant stimulus in the branding and marketing contexts (Brakus, Schmitt, & Zarantonello, 2009; Khan & Rahman, 2015; Pine & Gilmore, 1998), limited research has examined the effect of brand experience on customers' eco-friendly behavior in the context of green hotels. Thus, the current study extends the sustainable hospitality literature by regarding brand experience as a stimulus within the S-O-R framework.

The S-O-R framework has been widely used in the hospitality and sustainability literature (Chen, Jai, & Yuan, 2017). For successful green practices, inspiring hotel guests' intrinsic motivations (organism) via brand experience (stimulus) is essential to increase their willingness to support a brand's green activities (response) because energy, water, or linen usage depends heavily on a hotel guest's eco-friendly behavior (Zhang, Joglekar, & Verma, 2012). Although considerable research has investigated the positive antecedents of eco-friendly behavior, such as

beliefs (Bang, Ellinger, Hadjimarcou, & Traichal, 2000), moral norms (Han, 2015), environmental concerns (Untaru, Ispas, Candrea, Luca, & Epuran, 2016), and positive emotions (Jani & Han, 2015), minimal research has been conducted to examine the effects of brand experience and customer inspiration on eco-friendly behavior in the green hotel context. Thus, the current study explains the effect of brand experience (stimulus) on inspiration (organism), which leads to hotel guests' eco-friendly behavior (response), within the S-O-R framework.

Previous studies have suggested the potential significant positive influence of customer inspiration on eco-friendly behavior (Jeong, Jan, Day, & Ha, 2014; Lee, 2009; Wang, Zhou, & Liu, 2018). Furthermore, a systematic review of brand experience studies shows that brand experience potentially influences individuals' inspiration (Andreini, Pedeliento, Zarantonello, & Solerio, 2018; Merrilees, 2016). However, only anecdotal evidence for the relationship among brand experience (stimulus), customer inspiration (organism), and eco-friendly behavior (response) is available. Consequently, the current study explains the mediating effect of organism (i.e., customer inspiration) on the relationship between stimulus (i.e., brand experience) and response (i.e., eco-friendly behavior) by building upon the S-O-R framework. Thus, the current study suggests that a green hotel's brand experience considerably influences environment-friendly behavior through the mediating role of hotel guests' inspiration in Study 1.

For Study 2, the current research suggests personality as an important moderating factor in this research model due to following reasons. First, under the S-O-R framework, the psychological mechanism from stimulus to response and the manner in which an organism is generated by a stimulus highly depend on an individual's personal characteristics (Jani & Han 2013; Mehrabian & Russell, 1974). However, the current literature that adopts the S-O-R framework rarely measures personality as a moderator. Second, Böttger, Rudolph,

Evanschitzky, and Pfrang (2017) suggested that personal characteristics, such as personality, should be measured when studying the role of inspiration. This suggestion is followed by the original customer inspiration manuscript of Thrash and Elliott (2004). Although Böttger et al. (2017) and Thrash and Elliott (2004) pointed out the importance of utilizing personality in the customer inspiration literature, limited research has been conducted to enhance the explanation for how customer inspiration is formed by personality. Therefore, the current study measures the moderating effect of personality in Study 2 to extend the knowledge of the S-O-R framework and the customer inspiration literature. Among five personality traits, namely, Extraversion, Agreeableness, Openness to experience, Conscientiousness, and Neuroticism (Gosling, Rentfrow, & Swann, 2003), Study 2 selected Openness to experience due to the following reasons. First, Openness to experience is the only personality trait that exhibits high correlations with customer inspiration and eco-friendly behavior (Goldberg, 1993; Thrash & Elliott, 2003). Second, the current study measures Openness to experience as an individual characteristic for the integrated model of the S-O-R and customer inspiration frameworks to reduce mixed results and enhance the link between personality and each variable.

## **Hypotheses**

After conducting a critical review of hotels' brand experience, customer inspiration, and eco-friendly behavior, the following hypotheses are examined in the context of green hotels.

Hypothesis 1. Brand experience exerts a significant positive influence on hotel guests' eco-friendly behavior.

Hypothesis 2. Brand experience exerts a significant positive influence on hotel guests' inspiration.

Hypothesis 3. Inspiration exerts a significant positive influence on hotel guests' eco-friendly behavior.

Hypothesis 4. Hotel guests' inspiration mediates the relationship between brand experience and eco-friendly behavior.

Hypothesis 5. Openness to experience moderates the relationship between green hotel brand experience and eco-friendly behavior.

### **Definition of Terms**

Stimulus-Organism-Response (S-O-R) framework. This framework is the paradigm of how a stimulus's role as an antecedent affects individuals' internal organisms (i.e., emotional or motivational) and behavioral responses (Mehrabian & Russell, 1974; Jang & Namkung, 2009).

Brand experience. Brand experience refers to individuals' feelings, cognitions, and behavioral responses induced by a brand's identity, communication, and environment (Brakus et al., 2009).

Customer inspiration. Customer inspiration is an intrinsic motivational state that is positively related to experiential and rational processing, which induces individuals to translate thoughts into action (Böttger et al., 2017).

Eco-friendly behavior. Eco-friendly behavior is the act of participating in environmental initiatives and the effort of avoiding the impulsive usage of energy (Aagerup & Nilsson, 2016).

Big Five personality. Big Five personality refers to an individual's characteristics of Extraversion, Agreeableness, Openness to experience, Conscientiousness, and Neuroticism (Gosling et al., 2003).



## CHAPTER II

### **Literature Review**

This chapter provides a literature review of green hotels' brand experience, customer inspiration, eco-friendly behavior, and personality. Further explanation is provided on the relationship among brand experience, inspiration, and eco-friendly behavior based on the S-O-R framework. Lastly, this chapter also provides a literature review of the relationship between personality and other variables, such as inspiration and eco-friendly behavior.

#### **S-O-R Framework**

**Origin of the S-O-R framework.** The S-O-R framework, which was proposed by Mehrabian and Russell (1974), originated from environmental psychology. The S-O-R framework explains the paradigm of how the role of a stimulus as an antecedent affects individuals' internal organisms (i.e., emotional or motivational) and behavioral responses (i.e., engagement, well-being, and eco-friendly behavior) (Mehrabian & Russell, 1974). The S-O-R framework has three dimensions: stimulus, organism, and response (Mody, Sues, & Lehto, 2017). Stimulus comprises marketing mix and external environmental inputs that affect an individual's internal state. Organism is an intervening process between stimulus and response that consists of perceptual, physiological, feeling, and thinking activities. Response is defined as either an approach or avoidance behavior for the final decision of customers. In accordance with environmental psychology theory, an individual's response toward an experience can be identified as two separate aspects (Mehrabian & Russell, 1974): an approach response, in which the individual is likely to perform a positive behavior, and an avoidance response, in which an individual is likely to perform a negative behavior. This framework suggests that organism

(customer inspiration) provokes a response (eco-friendly behavior) based on stimuli from external experiential cues (i.e., sensory, affective, intellectual, and behavioral experiences).

**S-O-R framework within the marketing domain.** Donovan and Rossiter (1982) first applied the S-O-R framework to the business context and tested the effects of external environmental cues (stimuli) on retail shops. They verified that the S-O-R framework is acceptable for studying consumer behavior in retail store environments. Their major contribution was extending the S-O-R framework by adding customer experience as a stimulus. Following their work, many researchers in the marketing literature have conducted empirical studies to verify the significance of stimulus cues on customer internal organism and perception in the retail industry (Mosteller, Donthu, & Eroglu, 2014; Turley & Milliman, 2000). Turley and Milliman (2000) provided a critical review of the S-O-R framework that utilized atmospheric effects as stimulus and measured an individual's consumption behavior as a response. They suggested that additional theory development is necessary for the S-O-R framework to help accurately predict customer behavior. Furthermore, they suggested that external environmental stimuli cause varying consequences depending on different market segments and business context. Hence, many hospitality academic researchers have actively adopted the S-O-R framework to understand the psychological mechanism of hotel guests or travelers for environmental cues, particularly atmospheric cues. Although Turley and Milliman (2000) suggested that individual characteristics should be considered in the S-O-R framework, limited studies have examined individual characteristics, such as personality, when the S-O-R framework is applied to the hospitality literature (Jani & Han, 2013).

**S-O-R framework within the hospitality domain.** In the hospitality literature, numerous researchers have applied and extended the S-O-R framework to the restaurant context

(Heung & Gu, 2012; Hyun & Kang, 2014; Jang, Liu, & Namkung, 2011; Li, Fu, & Huang, 2015; Ryu & Jang, 2007) rather than the hotel context (Mody et al., 2017). Ryu and Jang (2007) considered external environmental factors and employees as stimuli and determined the considerable effects of atmospheric factors and employees on customer's feelings and behavioral intention. They suggested that employees should also be considered a stimulus along with atmospheric cues because customers perceive an employee as a major factor in evaluating their experience due to the characteristics of the service delivery process. Jang et al. (2011) examined the mediating roles of positive and negative emotions in the relationship between green restaurant atmospherics and customer behavioral intentions. Hueng and Gu (2012) found a significant effect of restaurant atmospheric effects on customer organism (i.e., satisfaction) and behavioral intention. Hyun and Kang (2014) examined the effect of environmental cues (e.g., spatial layout, ambient conditions) and non-environmental cues (e.g., price, location) on customer arousal in the luxury restaurant setting. They found that environmental cues exert a stronger impact on arousal than non-environmental cues. Thus, hotel brand experience, including sensory, affective, intellectual, and behavioral experiences, can be considered a stimulus within the S-O-R framework (Barakus et al., 2009; Khan & Rahman, 2017) given the characteristics of the service industry.

Although the S-O-R framework has been widely applied to the restaurant industry, its use in the hotel industry has been limited (Mody et al., 2017). As suggested by Turley and Milliman (2000), studying the S-O-R framework and the effects of external experiential stimuli within the hotel context is necessary because the effects of stimuli result in different responses depending on the context. In addition, only a few studies have considered individual characteristics while examining the research model based on the S-O-R framework (Jani & Han,

2013). However, Jani and Han (2013) stated that measuring individual characteristics within the S-O-R framework is necessary to provide a better explanation. Furthermore, previous studies have suggested the potential significant mediating role of inspiration on the relationship between brand experience (Andreini et al., 2018) and eco-friendly behavior (Jeong et al., 2014; Wang et al., 2018); however, only anecdotal evidence for the relationship among brand experience (stimulus), customer inspiration (organism), and eco-friendly behavior (response) is available. Thus, the current study applies the S-O-R framework to the green hotel industry to examine the effect of brand experience on hotel guests' eco-friendly behavior with the mediating role of customer inspiration and the moderating role of personality.

### **Stimulus: Brand Experience**

**Origin of brand experience.** Brand experience refers to customers' feelings, cognitions, and behavioral responses induced by a brand's identity, communication, and environment (Brakus et al., 2009). Brakus et al. (2009) categorized brand experience into four elements: sensory, affective, intellectual, and behavioral experiences. They developed a brand experience scale and found significant effects of brand experience on brand personality, customer satisfaction, and loyalty in the retail context. Following the study of Brakus et al (2009), subsequent empirical studies have found the significant positive effects of brand experience on the following:

- (1) Brand-related variables: Brand knowledge (Kang et al., 2017), brand personality (Kang et al., 2017; Khan & Rahman, 2017), brand attachment (Dolbec & Chebat, 2013), and brand trust (Kang et al., 2017)
- (2) Customer attitude: Customer satisfaction (Ha & Perks, 2005; Manthiou et al., 2014) and customer loyalty (Khan & Rahman, 2015)

(3) Customer behavior: Customer citizenship behavior (Xie et al., 2017)

Andreini et al. (2018) recently provided a multilevel framework of brand experience based on a critical review of the brand experience literature. They suggested that a context-based analysis of brand experience is required because the mechanism varies depending on industry settings. They also suggested a lack of research on how customers' internal psychological status (e.g., internal motivation, inspiration, emotions) is developed by brand experience. Although many studies have been conducted to examine the effect of brand experience on the retail setting (Das, Agarwal, Malhotra, & Varshneya, 2018), limited research has investigated the effect of brand experience on the green hotel setting using a strong theory or framework. Accordingly, the current study examines the effect of brand experience on customer inspiration and eco-friendly behavior to study how the internal psychology mechanism of hotel guests is developed by hotel brand experience.

**Brand experience in the hospitality literature.** Although many researchers in hospitality academia have examined the effect of various types of experiences, including “customer experience” (Huang, Yang, & Wang, 2014; Walls, Okumus, Wang, & Kwun, 2011; Walls, 2013; Xiang et al., 2015), “service experience” (Manhas & Tukamushaba, 2015), “dining experience” (Wijaya, King, Nguyen, & Morrison, 2013), “online experience” (Akincilar & Dagdeviren, 2014; Lee & Jeong, 2014), and “spa experience” (Lo, Wu, & Tsai., 2015), brand experience is one of the most important antecedents that influences a customer's motivational status (i.e., inspiration) and behavioral responses due to the intangible characteristics of the service industry (Kotler, Bowen, Makens, & Baloglu, 2017). Furthermore, Khan and Rahman (2017) indicated that brand experiences (i.e., sensory, affective, intellectual, and behavioral) are important factors that influence customers' motivations and perceptions rather than one single

atmospheric aspect in the hotel industry. For example, not only do hotel guests experience hotel atmospheric effects, such as sensory experiences, they also undergo an intellectual experience when they interact with an employee during the check-in or room-service process. In addition, hotel guests feel either positive or negative emotions when they interact with employees or use hotel amenities (i.e., affective experience). Hotel guests also undergo a behavioral experience when they join new activities or use hotel facilities, such as swimming pool, business center, or restaurant. Despite the extant studies in the hospitality literature on the effects of brand experience on customer behavior, research on customer eco-friendly behavior toward green hotel brand experience in the green hotel industry remains limited. Therefore, the current study reviews the literature related to brand experience in the hospitality industry to see how researchers have extended such literature.

Nysveen, Pedersen, and Skard (2013) found significant effects of brand experience on brand personality, customer satisfaction, and loyalty in a service organization. Manthiou, Kang, Chiang, and Tang (2016) examined the mediating roles of satisfaction and recollection in the relationship between brand experience and loyalty in the tourism context by applying script theory. Kang et al. (2017) examined how travelers' experiences with hotels influence brand-related variables; they observed significant positive relationships between brand experience and brand-related variables such as brand knowledge, brand attachment, and brand trust. Xie et al. (2017) found a significant effect of brand experience on customer citizenship behavior through the mediating role of brand relationship quality in the service industry. Khan and Rahman (2017) developed and validated a brand experience scale for the hotel context and reported significant effects of hotel brand experience on revisit intention and WOM advertising. Ahn and Back (2018) determined that brand experience considerably affects behavioral intention through

the mediating role of engagement in the integrated resort setting. However, limited studies are available to investigate the effect of brand experience on customers' intrinsic motivations, such as customer inspiration. Given that brand experience is a stimulus within the S-O-R framework because a customer's emotion or motivation can be simulated through environmental cues (i.e., sensory, affective, behavioral, and intellectual) during the experiential process, the current study examines the effect of brand experience on customer inspiration.

Recently, sustainability literature researchers have validated that a brand experience scale is appropriate within the framework of socially responsible behavior, including economic, social, and environmental (Saari, Baumgartner, & Mäkinen, 2017). They found that a brand experience measurement scale can assist companies in predicting the success of their environment-friendly initiatives at the brand level. Although anecdotal evidence on the relationship between brand experience and eco-friendly behavior is available, minimal empirical research has been conducted on this issue. Therefore, the current study empirically examines the effect of brand experience on eco-friendly behavior in the green hotel setting. Moreover, in accordance with the S-O-R framework, an individual's response to an experience can be identified as two aspects: approach and avoidance (Mehrabian & Russell, 1974). An approach response occurs when individuals are likely to perform positive behavior. For example, hotel customers who tend to exhibit positive behavior will be willing to follow the hotel's campaign (i.e., green activities) or provide good service evaluation. By contrast, an avoidance response occurs when individuals are likely to perform negative behavior. For example, hotel customers who tend to exhibit negative behavior will not be willing to follow the hotel's green campaign or will provide bad service evaluation. Thus, the current work examines how hotel brand experience influences a customer's positive response, which is established as eco-friendly behavior in this study.

Hypothesis 1. Brand experience exerts a significant positive influence on hotel guests' eco-friendly behavior.

Table 1.

*Organism and Response Consequences of Brand Experience*

<b>Consequences</b>	<b>References</b>
<b>Organism consequences</b>	
Brand attachment	Ramaseshan & Stein (2014)
Brand awareness	Cleff, Lin, & Walter (2014)
Brand commitment	Ramaseshan & Stein (2014); Das et al. (2018)
Brand distinctiveness	Roswinanto & Strutton (2014)
Brand loyalty	Nysveen et al. (2013)
Brand personality	Brakus et al. (2009); Nysveen et al. (2013)
Brand relationship quality	Francisco-Maffezzolli, Sempredon, & Prado (2014); Xie et al. (2017)
Brand trust	Rahman (2014); Kang et al. (2017)
Brand satisfaction	Nysveen et al. (2013)
Customer satisfaction	Brakus et al. (2009); Khan & Rahman (2015); Manthious et al. (2016);
Customer loyalty	Brakus et al. (2009)
Revisit intention	Khan & Rahman (2017); Ahn & Back (2018)
<b>Response consequences</b>	
Customer citizenship behavior	Xie et al. (2017)
WOM	Khan & Rahman (2017)

As shown in Table 1, most studies have been conducted to measure the effects of brand experience on brand-related variables, such as brand commitment, brand trust, brand attachment, brand awareness, and brand loyalty, rather than on an individual's organisms, such as emotions or intrinsic motivations. Notably, research on the relationship between brand experience and behavioral responses is lacking (Table 1). Although previous researchers have found significant effects of brand experience on cognitive (i.e., brand personality), attitudinal (i.e., customer loyalty), and emotional (i.e., customer satisfaction) responses, only a few researchers have examined the effect of brand experience on behavioral responses (e.g., customer citizenship



behavior, WOM). As such, the following issues should be addressed within the S-O-R framework: 1) how the internal organisms (e.g., motivation, inspiration, emotion) of individuals are influenced by a stimulus, such as brand experience, to be able to predict their behavioral responses, and 2) measuring the behavioral responses of brand experience because cognitive, attitudinal, or emotional responses are regarded as organisms within the S-O-R framework. Thus, the current study examines the effect of brand experience on inspiration as an individual's internal organism that leads to further behavioral responses that are eco-friendly behavior.

### **Organism: Customer Inspiration**

**Framework of customer inspiration.** Inspiration is defined as an intrinsic motivational state that is positively related to experiential and rational processing and that induces individuals to translate thoughts into actions (Böttger et al., 2017; Oleynick, Thrash, LeFevre, Moldovan, & Kieffaber, 2014). Two mechanisms exist under the inspiration mechanism. The first mechanism is an activation phase that is associated with stimuli or experiences; the second mechanism is an intention phase that is associated with specific reactions and behavioral outcomes (Thrash & Elliot, 2004). The activation phase (the state of “inspired by”), which is the first step of being inspired, is a process of arranging an evocative idea. For example, individuals in the activation phase may evoke strong images or thoughts to their mind via experiential processing. That is, the “inspired by” moment occurs when individuals are initially influenced by stimuli or experiential factors and then form/create images in their mind. After individuals experience the activation phase, they are ready to proceed to the next step, called the intention phase. The intention phase (the state of “inspired to”) is the second step. It is a secondary process for maintaining and fulfilling individuals' ideas created from the first phase (activation phase) by developing attitudinal intention. For example, individuals in the intention phase may develop

their intention regarding their new beliefs, experiences, or feelings that are affected by the stimuli in the first phase. That is, people in the “inspired to” stage are ready to translate their thoughts or ideas to behavioral outcomes.

Böttger et al. (2017)’s inspiration framework also supports the relationship between two mechanisms under the inspiration variable by explaining that “inspired by” and “inspired to” are causally linked between external stimuli and behavioral outcomes. Given that inspiration has not been fully explored throughout the hospitality literature, the current study examines it from the viewpoint of the marketing literature. In the marketing literature, the “inspired by” stage occurs at the moment of realization when thoughts or memories arise rapidly and unexpectedly due to a stimulus. That is, the “inspired by” stage is the moment when marketing strategies (i.e., brand experience) induce new ideas (i.e., evocation), and a transcendental movement occurs by translating customers’ beliefs, thoughts, memories, or feelings to actions. For example, customers frequently receive new information and are exposed to new experiences when marketers provide information or experience to promote their products. As a result of the “inspired by” stage, customers form a new state of mind and move to the next stage, i.e., the “inspired to” stage. The new state of mind formed in this stage is related to an individual’s intrinsic motivation of a consumption-related goal. In this phase, individuals attempt to actualize their new state of mind inspired by a previous stimulus, which also shapes their future intentions.

On the basis of this theoretical underpinning of inspiration, hotel guests are “inspired by” brand experience (stimulus) as the first phase of consideration to move their attitude and behavior forward. After the activation phase (the “inspired by” stage), hotel guests will be able to reach the “inspired to” phase, which encourages individuals’ preparation to translate their new idea or belief to future behavior. Consequently, studying the psychological mechanism between

hotel brand experience and customers' behavioral outcomes is meaningful by examining whether inspiration is generated by customers' brand experience, which motivates future behavior.

Although customer inspiration is important in measuring customer experiences and behavior throughout a customer's journey, the literature related to customer inspiration is highly limited in the fields of hospitality and tourism. Therefore, the current study explores the concept of inspiration and applies it to the green hotel concept to determine whether hotel brand experience generates customer inspiration.

**Antecedents of customer inspiration.** One dominant antecedent of customer inspiration is marketing mix components, which allow markets to present inspiring sources (Thrash & Elliott 2003, 2004). Customers are inspired by marketing mix components in the service environment, such as a green hotel's interior, on-site information provided by front desk employees, and personalized messages on the hotel's public areas (Díaz & Koutra, 2013). For example, a green hotel's diverse brand experiences deliver inspirational quotes to hotel guests and elicit customers' positive minds, thereby leading to positive rather than negative behavioral responses. Although the importance of marketing stimuli in the customer inspiration framework has been established, limited research has been conducted to extend the knowledge of customer inspiration's antecedents from the point of view of brand experience. Therefore, the current study applies four determinants of brand experiences (i.e., sensory, affective, intellectual, and behavioral experiences) as marketing stimuli and measures the effect of brand experience on customer inspiration in the green hotel context.

Table 2.

*Stimulus and Responses of Customer Inspiration*

<b>Stimulus</b>	<b>Variables</b>	<b>References</b>
Sources in the consumption environment	Print ads, interior presentations, personalized messages, interaction with employees	Thrash & Elliot (2003, 2004); Díaz & Koutra (2013)
Individual characteristics	Recipient's Openness to inspiration Hedonic motivation	Thrash & Elliot (2003); Elliot & Thrash (2010) Arnold & Reynolds (2003); Evanschitzky et al. (2014)
<b>Responses</b>	<b>Variables</b>	<b>References</b>
Behavioral	Exploration of the offering Engagement	Böttger et al. (2017) An & Youn (2018)
Emotional	Positive affect  Delight	Thrash & Elliot (2003, 2004); Thrash, Elliot, Maruskin, & Cassidy (2010); Liang, Chen, & Lei (2016) Finn (2005); Böttger et al. (2017)
Attitudinal	Brand attachment Customer satisfaction  Customer loyalty	Park, Eisingerich, & Park (2013) Ryan & Deci (2000); Park et al. (2013) Park et al. (2013); Böttger et al. (2017)

Moreover, as shown in Table 2, previous researchers have identified the stimuli of customer inspiration, including interior presentations and interaction with employees (Díaz & Koutra, 2013; Jones, Dodd, & Gruber, 2014; Thrash & Elliot, 2003, 2004). They found diverse types of stimuli by testing different sources in the consumption environment. However, customers are more likely to have a combination of different experiences in the consumption environment (Zarantonello & Schmitt, 2010). For example, hotel customers will receive a visual effect (i.e., sensory experience) upon entering the hotel lobby. They may feel emotional changes (i.e., affective experience) while interacting with front desk employees upon checking in (i.e.,

intellectual experience). Customers' sensory or affective experiences may either continue or change when they use hotel facilities, such as fitness center, business center, or restaurant (i.e., behavioral experience). Therefore, sources in the consumption environment should be measured and examined simultaneously to determine which type of sources exerts the most or least significant effect on customer inspiration (Kotler et al., 2017). Thus, the current study examines the effect of brand experiences (i.e., sensory, affective, intellectual, and behavioral experiences) on customer inspiration because individuals simultaneously receive multiple experiences in a service environment (Kotler et al., 2017).

Hypothesis 2. Brand experience exerts a significant positive influence on hotel guests' inspiration.

**Consequences of customer inspiration.** Customer inspiration has three dominant consequences: attitudinal, emotional, and behavioral consequences (Böttger et al., 2017; Liang et al., 2016) (Table 2). First, customer inspiration exerts a significant positive influence on attitudinal consequences, including customer satisfaction and loyalty (Park et al., 2013). In other words, customer's brand attachment increases when hotels offer inspiring content via enriched brand experiences. By developing a feeling of connectedness with the brand, hotels ultimately achieve their long-term goal of retaining current customers' loyalty. Second, customer inspiration leads to emotional consequences, including positive emotions and delight (Trash & Elliot, 2003; 2004). Results have consistently shown that positive emotion exhibits a strong correlation with customer inspiration in different settings (Liang et al., 2016). In addition, a high level of pleasure, such as delight, has been identified as an emotional consequence of customer inspiration. Finally, customer inspiration also exerts a positive influence on behavioral responses (i.e., engagement) (An & Youn, 2018) because customers who are inspired by brand experience

translate new idea to action. This process may result in high levels of engagement, citizenship behavior, or eco-friendly behavior. Although the inspiration factor has three dominant consequences, the current research applies only behavioral responses (i.e., eco-friendly behavior) because the S-O-R framework indicates that responses are only associated with behavioral outcomes, whereas emotional and attitudinal responses are identified as organisms under the S-O-R framework.

Hypothesis 3. Inspiration exerts a significant positive influence on hotel guests' eco-friendly behavior.

Hypothesis 4. Hotel guests' inspiration mediates the relationship between brand experience and eco-friendly behavior.

## **Response: Eco-friendly Behavior**

**Definition of eco-friendly behavior.** “Eco-friendly behavior” (Kim, Kim, Choi, & Phetvaroon, 2019) is also called “green behavior” (Baker, Davis, Pamela, & Weaver, 2014), “pro-environment behavior” (Brick, Sherman, & Kim, 2017), “environmentally friendly behavior” (Ratliff, Howell, & Redford, 2017), and “environmentally responsible behavior” (Lee, Jan, & Yang, 2013). Individuals who tend to consume green products and save natural resources are called “environmentally conscious customers” (Ottman, 1993) or “green consumers” (Elkington, Hailes, & Makower, 1990; Tanner & Kast, 2003).

The ultimate purpose of eco-friendly behavior is to improve the quality of human life by avoiding actions that are harmful to the environment because natural resources are being increasingly depleted by mass consumption resulting from economic development. A broader definition of eco-friendly behavior is “socially responsible consumption,” including environmental, economic, social, and philanthropic aspects (Durif, Boivin, Rajaobelina, &

Francois-Lecompte, 2011; Webb, Mohr, & Harris, 2008). Among the four corporate social responsibility activities, Kucukusta, Mak, and Chan (2013) found that environmental corporate social responsibility, which is characterized by green activities and eco-friendly practices, exerts the strongest positive influences on customers' intention to visit and corporate brand image, which ultimately lead to customers' eco-friendly behavior (Yadav et al., 2016).

In the hospitality industry, many hotels promote their environmental corporate social responsibility through messages and reports because this societal marketing strategy (i.e., green packaging, promotion of corporate social responsibility activities) considerably influences individuals' eco-friendly behavior tendency. Moreover, being eco-friendly individuals can be achieved by conserving natural resources (e.g., water, energy) or recycling products (e.g., reusing towels, declining turndown service) because decreasing the volume of consumption is a typical approach to becoming eco-friendly individuals. As such, in the current study, eco-friendly behavior refers to the act of participating in environmental initiatives and to the effort of avoiding the impulsive use of energy (Aagerup & Nilsson, 2016).

**Importance of environmental issues in the hospitality industry.** Jones (1999) introduced environmental issues to the hospitality and tourism industry, which have become important since then. Jones (1999) stated that the hospitality and tourism industry must ensure environmental awareness to achieve long-term competitive advantage. Following Jones' suggestions, many sectors of the hospitality and tourism industry, including hotels, restaurants, cruises, and country clubs, have become increasingly concerned about how their business influences the environment due to their considerable energy consumption (Han & Hwang, 2016; Hsiao, Chuang, Kuo, & Yu, 2014; Yadav, Balaji, & Jebarajakirthy, 2018). For example, environmental management performance is one of the key elements for assessing a manager's

performance in the Accor and Intercontinental hotel groups (Jones, 1999). In addition, hotels aim to secure green certificates, such as from the Leadership in Energy and Environmental Design (LEED), to promote their eco-friendly responsibilities. LEED standards, which were established by the U.S. Green Building Council, have become one of the indicators for “green” hotels (Butler, 2008).

In addition to green certifications, green practices are also considered an indicator of a “green” hotel. Many hotels offer green practices, such as reducing waste, reusing towels, installing low-flow showerheads, using energy-efficient lights, minimizing energy consumption, and adopting recycling practices while customers stay in a hotel (Yadav et al., 2018). For example, Ritz Carlton provides hybrid vehicles and chemical-free pools. The most common green practice in the hotel industry is in-room messages, such as “Meet and Be Green” (Hyatt), “Save Our Planet” (Marriott), and “A Greener Stay” (InterContinental Hotel). As such, the current study adopts the definition of a green hotel provided by Hsiao et al. (2014, p. 199): “Green hotels devote themselves to save energy and water and decrease solid waste, in order to minimize the impact on environment.”

Despite the increasing implementation of green practices in the hotel industry, academic researchers have not provided sufficient attention to exploring the psychological mechanism of customers’ eco-friendly behavior with strong framework evidence (Yadav et al., 2018). However, it is beneficial for the hotel management to investigate the psychological mechanism of eco-friendly behavior because encouraging hotel guests to be eco-friendly can decrease costs (e.g., energy cost, labor cost, and cleaning cost) and enhance competitive advantage (Fraj, Matute, & Melero, 2015).



**Research on eco-friendly behavior in the hospitality industry.** Eco-friendly behavior has been widely researched in the marketing and hospitality literature because environmental initiatives heavily depend on customers' eco-friendly behavior (Zhang et al., 2012; Untaru et al., 2016). With the increasing importance of environmental initiatives in the hospitality and tourism industry, numerous eco-friendly behavior studies have been conducted in the green hotel, organic restaurant, and eco-tourism settings (Kiatkawsin & Han, 2017; Yadav et al., 2018). However, researchers in the hospitality and tourism industry have conducted studies on customers' eco-friendly behavior using limited theories and frameworks, such as NAM (Han, 2015; Han, Hwang, Kim, & Jung, 2015; Han & Hyun, 2018; Han, Lee, & Hwang, 2016; Zhang, Chen, Zhang, Buhalis, & Lu, 2018), VBN theory (Choi, Jang, & Kandampully, 2015), and TPB (Han, 2015; Han & Kim, 2010; Han & Yoon, 2015; Han, Hsu, & Sheu, 2010; Yadav et al., 2018; Kim, Njite, & Hancer, 2013; Zhang et al., 2018).

The first eco-friendly behavior studies were based on customers' knowledge and attitude toward environmental issues (Kollmuss & Agyeman, 2002). However, Juvan and Dolnicar (2014) later found that this approach is ineffective for explaining customers' eco-friendly behavior. Other approaches in the eco-friendly behavior literature are based on NAM, which was presented by Schwartz (1977), and VBN theory, which was developed by Stern, Dietz, Abel, Guagnano, and Kalof (1999). Studies that used NAM or VBN theory observed that eco-friendly behavior is caused by pro-social motivation. Meanwhile, researchers who adopted motivation theory presumed that eco-friendly behavior is also motivated by rewards or outcomes because customers' eco-friendly behavior depends on an individual's self-interests (Hsu, Cai, & Li, 2010; Kaiser, Hübner, & Bogner, 2005). However, motivation theory is also insufficient for understanding customers' eco-friendly behavior (Juvan & Dolnicar, 2014).

To overcome the weakness of using limited theories in the eco-friendly behavior literature, Bamberg and Moser (2007) suggested that the integration model of pro-social motives, namely, NAM or VBN theory and self-interest theory, will be a better option for studying eco-friendly behavior. Other researchers have also combined NAM or VBN theory with goal-directed theory to explain the factors that make customers willing to participate in green practices in the hospitality and tourism settings (Han et al. 2016; Han & Yoon, 2015). In the TPB literature, researchers have also suggested incorporating TPB into other relevant theories, such as goal-directed theory, NAM, or the emotion-related framework (Kim et al., 2013; Zhang et al., 2018). However, more studies are necessary to enhance the understanding of individual's psychological mechanism of being eco-friendly (Juvan & Dolnicar, 2014).

**Direct and indirect factors of eco-friendly behavior.** In the eco-friendly behavior literature, researchers have found several direct and indirect factors that considerably influence eco-friendly behavior. Given that the direct and indirect variables of eco-friendly behavior highly depend on the theories or frameworks applied by researchers (Table 3), the current study organizes the direct and indirect factors of eco-friendly behavior on the basis of different theories used by previous researchers. Many researchers have conducted environment-friendly related studies by integrating TPB into one or more different theoretical models. For example, by incorporating the TPB model into an emotion-related framework, Kim et al. (2013) found that adding anticipated regret to the TPB model provides a better predictive value of eco-friendly behavior. In accordance with their integrated model, the original TPB model (i.e., attitude toward behavior, subjective norm, and perceived behavioral control) with an emotion-related framework (i.e., anticipated regret) functions as a direct factor of eco-friendly behavioral intention. In addition, Han (2015) integrated TPB into VBN theory and examined the direct and

indirect factors of eco-friendly behavioral intention. With the integration of these two theories, Han (2015) found that attitude toward behavior, sense of obligation to take pro-environment actions, and perceived behavioral control have significant positive and direct effects on eco-friendly behavioral intention. In his research, biosphere value, ecological worldview, adverse consequences for valued objects, subjective norm, and ascribed responsibility are identified as indirect factors of eco-friendly behavioral intention. Moreover, the goal-directed model was also integrated into TPB (Han & Yoon, 2015). The results showed that the desire toward the behavior and the frequency of past behavior exert significant direct influences on the intention to visit an environmentally responsible hotel. Han and Yoon (2015) also identified positive and negative anticipated emotions, subjective norms, and perceived control behavior as indirect factors of customer's intention to visit in the green hotel setting.

NAM suggests that moral norm exerts a significant direct impact on eco-friendly behavior among internal and external normative influences (i.e., moral, descriptive, and injunctive norms) (Han & Hyun, 2018). Han and Hyun (2018) found that affective influences, including anticipated pride and anticipated guilt, have significant positive and direct influences on eco-friendly behavior. Moreover, on the basis of the norm neutralization model, Zhang et al. (2018) found that perceived benefit indirectly influences tourists' eco-friendly behavior via direct factors, including pro-driving norm and attitude toward behavior. However, pro-environment norm was an insignificant direct factor of eco-friendly behavior in the study of Zhang et al. (2018), whereas previous researchers have found that pro-environment norm exerts a significant direct effect on eco-friendly behavior (Fritsche, Jonas, Kayser, & Koranyi, 2010).

Table 3

*Direct and Indirect Factors of Individuals' Eco-friendly Intention/Behavior*

<b>Theory</b>	<b>Indirect</b>	<b>Direct</b>	<b>References</b>
Integrated TPB and goal-directed model	Positive and negative anticipated emotions, subjective norm, perceived behavioral control	Desire toward the behavior, frequency of past behavior	Han & Yoon (2015)
TPB model with emotion-related framework		Attitude toward the behavior, subjective norm, perceived behavioral control, anticipated regret	Kim et al. (2013)
Integration model of TPB and VBN theory	Biosphere value, ecological worldview, subjective norm, ascribed responsibility	Attitude toward the behavior, sense of obligation, perceived behavioral control	Han (2015)
NAM		Moral norm, anticipated guilt, anticipated pride	Han & Hyun (2018)
Norm neutralization model	Perceived benefit	Pro-driving norm, attitude toward the behavior	Zhang et al. (2018)
Expectancy value theory	Perception of green practices	Perception of green image	Jeong, Jang, Day, & Ha (2014)
Construal level theory		Foot-in-the-door strategy, simulation strategy	Teng & Chang (2014)

Lastly, some researchers have applied other theories instead of TPB or NAM. With construal level theory, Teng and Chang (2014) found a significant positive and direct effect of the foot-in-the-door strategy on customer eco-friendly behavior in the distant future. Meanwhile, the outcome simulation strategy exerts a significant positive and direct influence on customers' eco-friendly behavior in the near future. Furthermore, on the basis of expectancy value theory, Jeong et al. (2014) determined that the perception of green practices is an indirect factor of eco-friendly attitude via green image perception, which is a significant direct factor of eco-friendly attitude in the restaurant setting. In terms of the moderating effects of eco-friendly behavior,

Han et al. (2011) found that personal characteristics (e.g., age, education, income) are less important than other variables (e.g., gender, eco-friendly attitude, and previous experience in a green hotel) in explaining customers' willingness to participate in eco-friendly practices.

**Determinants of eco-friendly behavior.** As shown in Table 4, researchers have found many positive antecedents of eco-friendly behavior, such as environmental awareness, perceived effectiveness, personal norm, desire, environmental concern, environmental belief, moral norm, subjective norm, emotions, water conservation activities at home, brand attributes, and social identification (Aagerup & Nilsson, 2016; Bonn, Cronin, & Cho, 2016; Han et al., 2015; Han & Yoon, 2015; Jiang & Kim, 2015; Untaru et al., 2016). Considering the skeptical attitude of customers toward green activities (Pope & Wæraas, 2016), researchers have studied alternative elements to enhance the eco-friendly behavior of individuals and maintain customer satisfaction.

Alternative factors that enhance pro-environment behavior include energy conservation nudging and energy-saving technologies. Chang et al. (2016) determined that energy conservation nudging inspires customers' eco-friendly behavior without any informative flyer. Susskind (2014) found that energy-saving technologies, such as using conservative lighting products, do not negatively affect customer satisfaction and exert a positive influence on customer attitude. However, experience is the key element that influences customer perception and behavior in the service encounter stage (Brakus et al., 2009; Khan & Rahman, 2015). In particular, sensory, affective, intellectual, and behavioral experiences are the prime elements of experience because customers are simultaneously involved in multiple experiences during the service procedure (Kotler et al., 2017). Although numerous researchers have investigated eco-friendly behavior in the hotel industry, limited studies have been conducted to examine the

influence of brand experience on green hotel guests' eco-friendly behavior during their hotel stays.

Table 4.

*Antecedents of Eco-friendly Behavior*

<b>Antecedents</b>	<b>References</b>
Attitude toward water conservation	Untaru et al. (2016)
Brand attributes	Huang et al. (2014); Bonn et al. (2016); Jung, Kim, & Oh (2016)
Environmental awareness	Eriksson, Garvill, & Nordlund (2006); Boztepe (2012); Rhou et al. (2016)
Perceived effectiveness	Zsóka, Szerényi, Széchy, & Kocsis, (2013); Jiang & Kim (2015)
Emotion	Robertson & Barling (2013); Han et al. (2015)
Environmental concern	Schultz & Zelezny (1999); Dietz, Stern, & Guagnano (1998); Kollmuss & Agyeman (2002); Fujii (2006); Untaru et al. (2016)
Environmental belief	Bang et al. (2000); Johnson, Bowker, & Cordell (2004)
Social identification	Aagerup & Nilsson (2016); Fritsche, Barth, Jugert, Masson, & Reese (2017)
Willingness to make sacrifices	Davis, Le, & Coy (2011)
Environmental belief	Moisander (2007); Han et al. (2015)
Personal norms (i.e., moral, ethical, or prosocial norms)	Zhang et al. (2013); Han et al. (2015)

## **Moderating Role of Personality**

**Big five personality traits (Big Five).** Wilt and Revelle (2019) stated that “personality is conceptualized as an abstraction to describe and explain patterns of affect, behavior, cognition, and desire over time and space,” whereas the American Psychological Association defined personality as “individual differences in characteristic patterns of thinking, feeling, and behaving.” Hence, personality influences an individual’s feelings, thinking, and behavioral outcomes. However, understanding and measuring personality can differ depending on how researchers define the personality variable due to the diverse definitions of personality (Ozer &

Benet-Martinez, 2006). Among diverse types of personality measurements, the Big Five of Extraversion, Agreeableness, Openness to experience, Conscientiousness, and Neuroticism is the most predominant personality scale used by researchers (Schmitt, Allik, McCrae, & Benet-Martínez, 2007). That is, Big Five measurements have been validated as a reliable scale for measuring a person's personality. Furthermore, Big Five has been demonstrated as an important predictor of numerous behaviors in the marketing and hospitality context (Hu & Kim, 2018; Jani & Han, 2014; Picazo-Vela, Chou, Melcher, & Pearson, 2010; Tan & Yang, 2014). Therefore, the current study adopts Big Five to measure how personality moderates the relationship among brand experience, inspiration, and eco-friendly behavior (Goldberg, 1990; 1993).

Extraversion, which is the opposite of introversion, refers to individuals with high levels of energy and willingness to interact with others, including strangers (Ozer & Martinez, 2006). For example, individuals who have a high extraversion level are likely to go out with others. These individuals love to meet new people because they gain energy by meeting people. By contrast, people with a low extraversion level easily get tired from interacting with people because they recharge by being alone. Some characteristics associated with extraversion include being outgoing, energetic, affectionate, and sociable, whereas introversion is associated with being quiet and thoughtful.

Agreeableness means being considerate, flexible, and tolerant (McCrae & John, 1992). For example, an individual who has a high agreeableness level tends to be cooperative with and supportive of others. This type of characteristic is important in increasing an individual's altruism and considerate attitude, which are important characters of a socially responsible individual (Graziano & Habashi, 2010; Hirsh, 2010). Individuals with a low agreeableness level

are likely to demonstrate a rude, tempered, and sarcastic attitude toward information they are provided with or during interactions with others.

Openness to experience is related to open-mindedness, imagination, creativity, and curiosity (McCrae & Costa, 1999). For example, individuals with a high level of Openness to experience are likely to enjoy new experiences and are curious about the environmental factors that surround these experiences (Yoo & Gretzel, 2011). Individuals with a low level of Openness to experience like routine daily life rather than trying or learning something new or meeting new people. Furthermore, having a broad mind toward brand experience is one of the significant factors for increasing an individual's inspiration level (Thrash & Elliot, 2004) and eco-friendly behavior (Goldberg, 1993).

Conscientiousness refers to ethical behavior and achievement based on having self-disciplined, reliable, preserving, and persistent characters (Paunonen & Ashton, 2001). For example, individuals who have a high conscientiousness level are likely to control impulsive behavior, act in more socially acceptable ways, and exhibit more ethical behavior, such as eco-friendly behavior, which is transformed from their organism (i.e., intrinsic motivation, inspiration). By contrast, an individual with a low conscientiousness level is likely to demonstrate more impulsive behavior (e.g., wasting resources or products).

Neuroticism is associated with awkwardness, pessimism, self-criticism, instability, and oversensitivity (McCrae & Costa, 1999). The level of neuroticism depends on an individual's anxiety and worry. For example, individuals with a high level of neuroticism tend to be easily angered, whereas individuals with a low level of neuroticism are more likely to be brave and confident and less likely to worry about themselves. Consequently, neuroticism does not exhibit



any correlation with customer inspiration (Thrash & Elliott, 2003) and eco-friendly behavior (Tang & Lam, 2017; Verma & Chandra, 2018).

**Big Five in the hospitality literature.** Big Five is one of the popular personality measurements used in the hospitality literature (Hu & Kim, 2018; Kim, Shin, & Swanger, 2009). Many researchers have used Big Five as an antecedent (Jani & Han, 2013; Jani & Han, 2014; Lin & Worthley, 2012; Ong & Musa, 2012) or moderator (Jani & Han, 2015; Lin, Kerstetter, Nawjin, & Mitas, 2014), depending on their research purposes. Picazo-Vela et al. (2010) examined the direct relationship between Big Five and behavioral intention. Lin and Worthley (2012) examined the direct effect of Big Five on emotions and found a significant influence of Extraversion on pleasure. Lin et al (2014) regarded personality as a moderator and observed the significant interaction effects of personality and emotions. Hu and Kim (2018) tested the moderating role of Big Five in the relationship between WOM motivations and behavior; they determined that agreeableness and conscientiousness are significant. Although the personality and sustainability literature has demonstrated that Big Five has a significant positive correlation with environment-related attitude and behavior, only a few hospitality studies have used Big Five in the sustainability research domain (Tang & Lam, 2017).

Furthermore, Big Five is used in two different points of view. The researchers from one point of view apply all five dimensions of Big Five to examine the effect of Big Five on the broader concepts of attitude and behavior because they believe that individuals are formed by multiple personalities (Jani & Han, 2013). Jani and Han (2013) examined the effect of Big Five and found that each personality of a hotel customer plays a different role in the customer's attitude (e.g., consumption emotion). They concluded that Extraversion and Agreeableness have significant positive effects on positive consumption emotion, whereas Neuroticism increases

negative consumption emotion. Interestingly, they found that Openness to experience has no significant influence on neither positive nor negative consumption emotions. By contrast, researchers from the other point of view selected and measured one or two personality traits that are directly and significantly related to a specific behavior (e.g., eco-friendly behavior) based on the previous literature (Tang & Lam, 2017). For example, Tang and Lam (2017) only used two personalities among Big Five, namely, Agreeableness and Extraversion, to measure customer's willingness to pay in the green hotel context because previous literature has stated that only Agreeableness and Extraversion are related to customer's attitude in this context. Consequently, Tang and Lam (2017) found that Agreeableness and Extraversion are highly correlated to customers' green hotel attitude and willingness to pay for green practices.

**Big Five in the inspiration literature.** The customer inspiration framework (Böttger et al., 2017), which identifies the individual characteristics of customers, such as Big Five, plays an important role in predicting the level of customer inspiration (Thrash et al., 2010). Thrash and Elliott (2003) found that customer inspiration is highly related to Openness to experience and Extraversion but unrelated to Neuroticism, Agreeableness, and Conscientiousness. That is, Openness to experience and Extraversion reflect customers' high level of willingness to accept their experience and the marketing mix components promoted by marketers (McCrae & Costa, 1999). Here, the effect of brand experience (stimulus) on inspiration may be stronger for individuals with high levels of Openness to experience and Extraversion.

**Big Five in the sustainability literature.** Although many researchers have conducted studies to explore the correlation between Big Five and eco-friendly attitude and behavior, the results are uncertain because limited studies have tested the relationship between all Big Five factors and eco-friendly attitude and behavior (Milfont & Sibley, 2012). Given the limited

literature, two schools of thought exist with regard to the relationship between Big Five and eco-friendly attitude and behavior.

One school of thought states that positive personalities, such as Extraversion, Conscientiousness, Openness to experience, and Agreeableness, are highly related to eco-friendly engagement. Borden and Francis (1978) and Pettus and Giles (1987) indicated that Extraversion and Conscientiousness are highly correlated to environmental concern and eco-friendly attitude due to the reflection of self-interest tendency. Graziano and Habashi (2010) and Hirsh (2010) strengthened Goldberg's (1993) insistence by concluding that high levels of Openness to experience and Agreeableness exert a significant positive effect on an individual's attitude toward green activities and altruism. The other school of thought states that a negative personality, such as Neuroticism, is highly related to attitude toward the conservation of resources and an individual's perceived environmental values (Wiseman & Bogner, 2003) due to the global tendency to experience anxiety over natural disasters. Thus, contradictory arguments regarding the relationship between Big Five and eco-friendly attitude and behavior are observed. To enhance the personality and sustainability literature, the current study utilizes personality as a moderator in the relationship between brand experience and eco-friendly behavior.

**Selected personality in the current study.** One of the contributions of the current study is to test the moderating role of Openness to experience as one of the Big Five personality traits in the S-O-R and customer inspiration frameworks. As shown in the previous literature review, the personality variable is correlated with individuals' eco-friendly behavior (Pettus & Giles, 1987; Milfont & Sibley, 2012). However, the results of studies that examined the relationship between personality and environmental attitude and behavior are mixed (Milfont & Sibley, 2012). For example, Verma and Chandra (2018) found that Conscientiousness is related to

customers' eco-friendly behavior in a green hotel, whereas Tang and Lam (2017) found that Extraversion and Agreeableness are closely related to attitude and behavior toward green hotels. Although Milfont and Sibley (2012) presented mixed results of the link between personality and environment-friendly behavior as a significant gap in the sustainability literature, recent studies still show diverse and mixed results. To reduce mixed results and enhance the link between personality and environmental attitude and behavior, the current study utilizes Openness to experience based on the evidence of integrating the S-O-R framework into the customer inspiration framework.

In addition, Jani and Han (2015) identified the lack of studies on the moderating role of personal characteristics within the S-O-R framework. Moreover, Böttger et al. (2017) suggested a need to study personality within the customer inspiration framework. First, although the S-O-R framework has been widely adopted in hospitality research, limited studies have examined the moderating role of individual characteristics within the S-O-R framework (Jani & Han, 2015). The lack of studies causes a limited interpretation of the research results by the S-O-R framework. Following the suggestion of Jani and Han (2015), the current study intends to enhance the S-O-R framework with the moderating role of personality. Second, the customer inspiration framework exhibits a mechanism similar to that of the S-O-R framework and indicates that individual characteristics play a significant role in changing the inspiration level (Böttger et al., 2017). Although Thrash and Elliott (2014) reported that an individual's personality is highly correlated with inspiration level, only anecdotal evidence is available due to the lack of follow-up studies (Böttger et al., 2017). Thus, the current study tested hotel guests' Openness to experience as a moderator in the S-O-R and inspiration models.

In contrast with Jani and Han (2013) and Hu and Kim (2018) who used all Big Five traits as multiple moderators of general behavior, the current study adopted Tang and Lam's (2017) method by selecting only one personality trait because I measured a specific behavior, such as eco-friendly behavior, rather than a general attitude or behavior. When previous studies investigated the relationship between Big Five and environment-friendly related variables (Chan & Wong, 2006; Kim & Han, 2010; Tang & Lam, 2017), most researchers examined hotel guests' attitudes and behavior toward green practices (Han et al., 2010). Limited studies investigated the role of Big Five in environmental engagement (Milfont & Sibley, 2012). To provide deeper insights and reduce research gaps, the current study defined hotel guests' eco-friendly behavior as environmental engagement. Thus, this study reviewed the literature on the relationship between Big Five and environmental engagement and selected one personality factor associated with both customer inspiration and eco-friendly behavior.

Among the Big Five traits, Agreeableness, Conscientiousness, and Openness to experience are the primary personality traits that are positively associated with environmental engagement (Milfont & Sibley, 2012). Milfont and Sibley (2012) verified and provided stable results by following previous studies, including Hirsh and Dolderman (2007), Hirsh (2010), and Nisbet, Zelenski, and Murphy (2009). In the customer inspiration literature (Böttger et al., 2017; Thrash & Elliott, 2003; Thrash et al., 2010), researchers insisted that customer inspiration is highly related to Openness to experience and Extraversion. However, limited studies have been conducted to verify and enhance such argument. Accordingly, the current study selected Openness to experience as a moderator of the proposed model that measures the effect of brand experience on customer inspiration and eco-friendly behavior to determine the different structural path coefficients between two groups (Openness to experience: high versus low).

Openness to experience is associated with environmental engagement and higher levels of curiosity, broad-mindedness, creativity, and intelligence, which are positively associated with inspiration. Despite several studies on customer inspiration and eco-friendly behavior, limited research tested the role of personality on such relationships. Thus, using Openness to experience as a moderator for the integration model of the S-O-R and inspiration frameworks in the current study is important and meaningful because previous studies have found that Big Five is closely associated with customer inspiration and environmental engagement (Thrash & Elliott, 2003; Milfont & Sibley, 2012).

Hypothesis 5. Openness to experience moderates the relationship between green hotel brand experience and eco-friendly behavior.

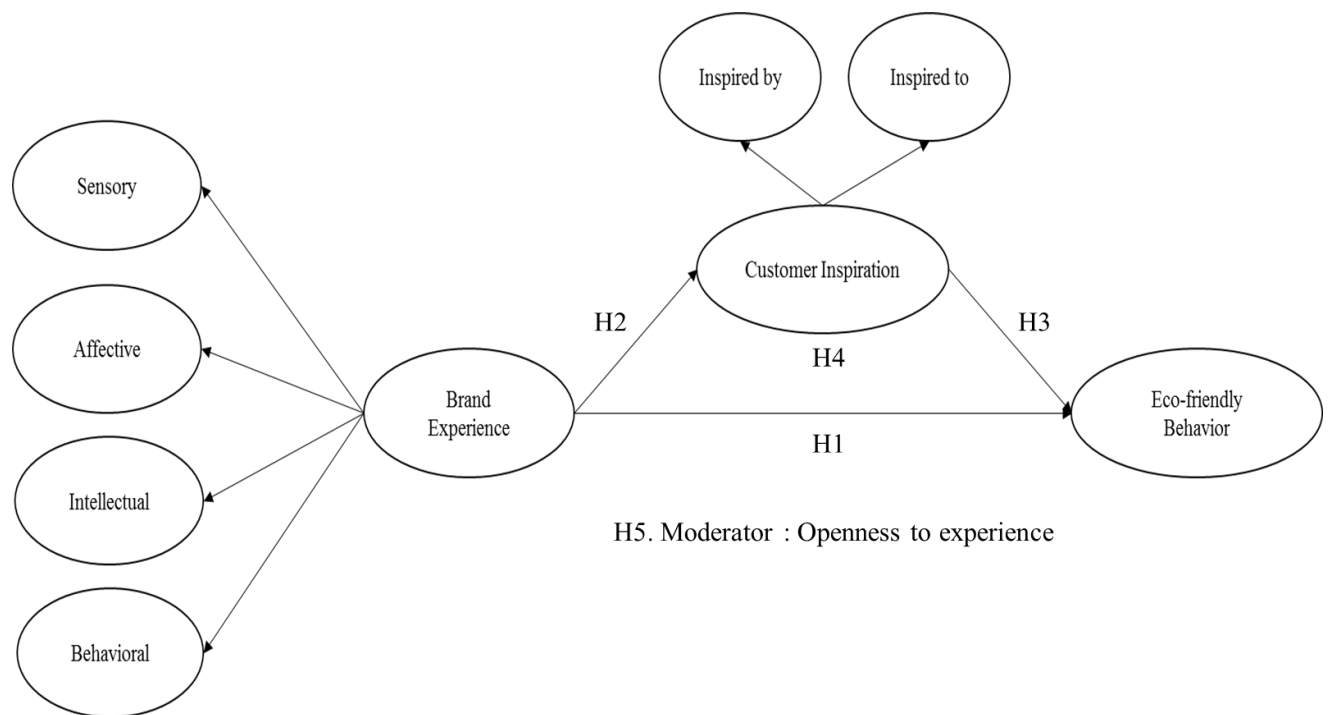


Figure 1. Conceptual framework.

## CHAPTER III

### **Methodology**

This study tests the relationship between brand experiences (stimulus) and customers' eco-friendly behavior (response) on the basis of the S-O-R framework in the green hotel context. This relationship is influenced when customers are inspired (organism) through guest experiences. Study 1 adopts the structural equation modeling (SEM) method to examine the correlations among variables, including brand experience, customer inspiration, and eco-friendly behavior. The mediating role of customer inspiration in the relationship of customers' green hotel experience and their eco-friendly behavior is also examined. To achieve the research objectives of Study 1, I determine: 1) if a significant influence exists between brand experience and eco-friendly behavior, 2) if a significant effect exists between customer brand experience and inspiration, 3) if a significant effect exists between customer inspiration and eco-friendly behavior, and 4) if customer inspiration mediates the relationship between brand experience and eco-friendly behavior. Study 2 is conducted to enhance the generality of the proposed model from Study 1 and to examine the moderating role of personality. For the moderation test, I conduct multi-group SEM (level of Openness to experience: high versus low) to examine whether Openness to experience serves as a moderator in the proposed model.

### **Participants**

A total of 700 participants aged 18 years and above who have stayed in a green hotel within last 12 months are recruited from Amazon Mechanical Turk (MTurk) for Studies 1 and 2. A total of 700 subjects are required to complete the research procedures because this study includes four variables with multiple dimensions, namely, brand experience (e.g., sensory, affective, behavioral, and intellectual), customer inspiration (e.g., inspired by and inspired to),

eco-friendly behavior, and personality (e.g., Openness to experience). To run the proposed research model, each dimension requires at least 30–50 reliable samples (Hair, Black, Babin, & Anderson, 2010). In addition, given the quality of MTurk, 700 subjects are necessary to strengthen the validity and generalizability of the study (Buhrmester, Kwang, & Gosling, 2011). Thus, this study collects 700 data to analyze Studies 1 and 2.

The total duration of an individual's participation in the survey is approximately 10 min, and participants are only involved in the study once. The duration of data collection for Study 1 is approximately 5 days from February 15 to 20, 2019. For Study 2, data are collected from March 10 to 15, 2019. Given that MTurk allows financial inducement, I pay each participant US\$0.50 for participating in the survey. After respondents read the purpose and description of the survey, they could participate in the survey once they agreed to the content of the consent form.

Screening question was used to reach customers who have an experience with the green hotels. The respondents were answered the whether they stayed in a green hotel within 12 months. The participants also needed to name the most recently visited green hotel so that researchers can validate whether participants understand the concept of green hotel. Next, the questionnaire asked to answer customers' experience with green hotel brand, and it ended with questions about sociodemographic backgrounds. After collecting the data, I screen them in several different ways: First, I conducted the cross check to validate the name of green hotel participants provided. Second, by asking the attention check questions to participants, I determine if the participants were engaged while answering the questions and screen them out. Participants who do not complete the questionnaire or who do not pass the attention check questions are excluded from the study.



## Measurements

The measurements for brand experience are adopted from Brakus et al. (2009). Four dimensions of brand experiences (i.e., sensory, affective, behavioral, and intellectual) are measured with three items each. Sensory experience includes “This brand makes a strong impression on my visual sense or other senses,” “I find this brand interesting from a sensory perspective,” and “This brand appeals to my senses.” Affective experience includes “This brand evokes feelings and sentiments,” “I do feel any strong emotion for this brand,” and “This brand is emotional.” Behavioral experience includes “I engage in physical actions and behavior when I use this brand,” “This brand results in bodily experiences,” and “This brand is action-oriented.” Intellectual experience includes “I engage in considerable thinking when I encounter this brand,” “This brand makes me think,” and “This brand stimulates my curiosity and problem-solving skills.” All the items are measured using a 7-point Likert-type scale (1: strongly disagree to 7: strongly agree). The measurement for customer inspiration is adopted from Böttger et al. (2017). A total of 10 items were measured using a 7-point Likert-type scale. The items are as follows: “My imagination was stimulated,” “I was intrigued with a new idea,” “I unexpectedly and spontaneously got new idea,” “My horizon was broadened,” “I discovered something new,” “I was inspired to save something,” “I felt a desire to save something,” “My interest to save something was increased,” “I was motivated to save something,” and “I felt an urge to save something.”

Table 5.

*Measurement*

<b>Brand Experience (Brakus et al. 2009)</b>	
Sensory	This brand makes a strong impression on my visual sense or other senses. I find this brand interesting from a sensory perspective. This brand appeals to my senses.
Affective	This brand evokes feelings and sentiments. I feel strong emotions for this brand. This brand is emotional.
Behavioral	I engage in physical actions and behavior when I use this brand. This brand results in bodily experiences. This brand is action-oriented.
Intellectual	I engage in considerable thinking when I encounter this brand. This brand makes me think. This brand stimulates my curiosity and problem-solving skills.
<b>Inspiration (Böttger et al., 2017)</b>	
Inspired by	My imagination was stimulated. I was intrigued by a new idea. I unexpectedly and spontaneously got new idea. My horizon was broadened. I discovered something new.
Inspired to	I was inspired to save something. I felt a desire to save something. My interest to save something was increased. I was motivated to save something. I felt an urge to save something.

Eco-friendly behavior is adopted from Han and Hwang (2017). Five items are measured using a 7-point Likert-type scale. The items are as follows: “I try to save water and electricity,” “I avoid using disposable products (e.g., plastic laundry bags, Styrofoam cups),” “I actively follow its environmental code of conduct,” “I expend effort on disposing garbage properly (e.g., sorting my garbage into separate containers for paper, plastic, glass, etc.),” and “I actively practice environmentally responsible activities (e.g., reducing waste, recycling, reusing towels).”

Openness to experience is adopted from Jani and Han (2015). Five items are measured using a 7-point Likert-type scale (1: strongly disagree to 7: strongly agree). These items include: “I get

excited by new ideas,” “I enjoy thinking about things,” “I enjoy hearing new ideas,” “I enjoy looking for a deeper meaning,” and “I have a vivid imagination.” All the items used in the survey are listed in Table 6.

Table 5 (Continued).

### *Measurement*

<b>Eco-friendly behavior (Su et al., 2017)</b>	
	I find it acceptable for the hotel I am staying in to inform me that it will not actively change the bed sheets and quilt covers during my stay.
	I find it acceptable for the hotel I am staying in to inform me that it will not provide bottled water.
	I find it acceptable for the hotel I am staying in to inform me of the reduction in water pressure at night.
	I find it acceptable for the hotel I am staying in to inform that it does not actively provide disposable toiletries.
	I find it acceptable for the hotel I am staying in to inform me of reusing towels, including bath towels.
<b>Personality (Jani &amp; Han, 2015)</b>	
Openness to experience	I get excited by new ideas.
	I enjoy thinking about things.
	I enjoy hearing new ideas.
	I enjoy looking for a deeper meaning.
	I have a vivid imagination.

### **Research Design**

This study aims to build upon the S-O-R framework by incorporating the effect of brand experience. To assure reliability and validity, the study uses established measures adopted from the previous literature and modifies them in accordance with the results of a pilot study, if necessary. I use 50 participants to pretest the initial questionnaire. The pretest aims to conduct an exploratory factor analysis (EFA) and to ensure survey validity by identifying minor modifications to wording and layout. For Studies 1 and 2, 700 data are collected from MTurk.

MTurk has been widely used among researchers within the marketing domain because it serves as representative samples and high-quality data for published research (Buhrmester et al., 2011).

### **Data Analysis**

SPSS Statistics (version 25) is used to test the descriptive statistics and statistical assumptions. The skewness and kurtosis of each variable are examined to ensure the normal distribution of data. The Cronbach's alpha of each scale is measured to ensure the reliability of measurement convergence (Bravo & Potvin, 1991). The estimations of factor loadings' significance and average variance extracted (AVE) are checked to confirm convergent validity. A comparison of all the correlations' coefficients with the square roots of AVEs is assessed to identify discriminant validity (Fornell & Larcker, 1981). Smart PLS (version 3.0) is used to test pathways for SEM.

**Confirmatory factor analysis (CFA).** CFA is conducted with Partial least square–structural equation modeling (PLS-SEM) to explore the reliability and validity of the measurement model. After conducting CFA, I test a structural model with composite data to answer the following questions: (a) Does brand experience exert a significant influence on customer inspiration and eco-friendly behavior? (b) Does inspiration exert a significant influence on an individual's eco-friendly behavior? (c) Does customer inspiration mediate the relationship between brand experience and eco-friendly behavior? (d) Does Openness to experience moderate the relationship between brand experience and eco-friendly behavior? The SEM approach is selected because it allows testing the latent variables of the structural and measurement models and observing these variables (Bollen, 1989; Kline, 1998). Identifying the relations among brand experience, customer inspiration, and eco-friendly behavior justifies the use of SEM.

**Second-order CFA.** For the brand experience and customer inspiration variables, second-order CFA is conducted because multiple dimensions exist under each variable. I check if the model fits from the results of the second-order CFA.

**Measurement model.** To test the proposed model, factor covariance is set to be free for estimation, and the error terms are uncorrelated.

**SEM.** For Studies 1 and 2, SEM is utilized to test the hypotheses. The structural path coefficients are estimated to check whether the hypotheses are supported.

**Multi-group SEM.** To test the moderating effect of Openness to experience in Study 2, multi-group analysis is conducted using with PLS-SEM. The structural path coefficients between the two groups (Openness to experience: high versus low) are tested to examine the hypotheses.

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## CHAPTER IV

### **Role of inspiration in green hotel setting:**

#### **Application of the stimulus–organism–response framework**

##### **Abstract**

This study aims to examine the potential predictors of customers' eco-friendly behavior based on the Stimulus-Organism-Response framework. PLS-SEM was used to test the hypotheses using a sample of 217 green hotel customers. The results reveal that brand experience and customer inspiration significantly affect eco-friendly behavior. Further, the results show customer inspiration significantly mediates the relationship between green hotel brand experience and eco-friendly behavior. This study clearly shows the relationship among green hotel brand experience, customer inspiration, and eco-friendly behavior. Thus, this article contributes to existing hospitality studies by identifying gaps and proposing a holistic view to understand customers' eco-friendly behavior in the green hotel industry.

**Keywords:** Brand experience, customer inspiration, eco-friendly behavior, S-O-R framework, green hotel.

## **Introduction**

Sustainability marketing is important for the hospitality industry because many customers are becoming increasingly concerned about environmental problems and preferring hotels that implement environmentally friendly practices (Han, Hsu, & Lee, 2009; Kim, Njite, & Hancer, 2013). Moreover, green hotels' pro-environmental initiatives reduce the operational costs and enhance the brand image of hotels by improving green performance (Jones, 1999; Fraj, Matute, & Melero, 2015; Kim, Lee, & Fairhurst, 2017). Thus, green hotel managers want to improve their competitive advantage by identifying the factors that motivate customers' participation in green initiatives (e.g., linen reuse and recycling programs; Han et al., 2009). Existing studies have found antecedents of customers' willingness to participate in eco-friendly practices of hotels (Berezan, Raab, Yoo, & Love, 2013; Chen & Peng, 2012; Han, Hsu, & Sheu, 2010; Han & Kim, 2010; Kim et al., 2017; Verma & Chandra, 2018). However, the influential motivational factors that affect green hotel customers' behavioral changes and the psychological mechanism of green hotel customers have yet to be understood (Han et al., 2010). Several studies have found that the context of green initiatives significantly influence consumers' willingness to participate in green activities because the context moderates the involvement of consumers (Han & Ryu, 2012; Perugini & Bagozzi, 2001).

Systematic reviews suggest that brand experience significantly affect eco-friendly behavior (Andreini, Pedeliento, Zarantonello, & Solerio, 2018; Merrilees, 2016). However, limited research has explored the psychological mechanism of customers' eco-friendly behavior resulting from brand experience. Moreover, previous studies have also recommended the potentially significant mediating role of inspiration on the relationship between brand experience (Andreini et al., 2018) and eco-friendly behavior (Jeong, Jang, Day, & Ha, 2014; Wang, Zhou, &

Liu, 2018). However, only few studies have examined the mediating role of customer inspiration in the relationship between brand experience and eco-friendly behavior in green hotel setting. Therefore, the current study adopted customer inspiration as an influencer (mediator) to explain green hotel customers' psychological mechanism on the relationship between brand experience and eco-friendly behavior by applying Stimulus–Organism–Response (S–O–R) framework.

Previous sustainability studies have applied limited theories to comprehend the psychological mechanism of customers' eco-friendly behavior toward green hotel setting. For example, researchers who have used the Norm-Activation Model (NAM; Schwartz, 1977) interpret that pro-social motivation is the primary factor that forms customers' behavior toward green products/services, whereas researchers who have relied on the Theory of Planned Behavior (TPB; Ajzen, 1991) believe that self-interest effectively motivates customers who use eco-friendly products/services. Researchers have then proposed integrated research model with emotion-related factors by combining different theories and models, such as model of Goal-Directed Behavior, Value–Belief–Norm (VBN) model, and TPB (Perugini & Bagozzi, 2001). However, these theories mainly focus on cognitive or affective variables and do not consider intrinsic motivations (i.e., customer inspiration) that are associated with customers' attitudes and behaviors (Thrash & Elliott, 2013, 2014). According to the inspiration framework suggested by Böttger, Rudolph, Evanschitzky, and Pfrang (2017), customer inspiration factor should be considered an important motivational factor within the consumer behavior literature because inspiration significantly affects the emotional, attitudinal, and behavioral intentions of customers.

Bamberg and Möser (2007) stated that existing sustainability studies that have applied the aforementioned theories still provide limited explanation for individuals' eco-friendly behavior

toward green hotel setting; their findings are insufficient for understanding customers' eco-friendly behavior due to limited predictors (Han et al., 2010; Manaktola & Jauhari, 2007; Robinot & Giannelloni, 2010). Bamberg and Möser (2007) also suggested that additional theories or frameworks should be adopted to understand significant motivational factors in customers' green-related behavior. On this basis, customer experience has been reported as the most important dimension for understanding customer behavior (Agapito, Valle, & Mendes, 2014; Berry, Phinney, Sam, & Vedder, 2006; Gentile, Spiller, & Noci, 2007; Liu, Sparks, & Coghlan, 2017; Pine and Gilmore, 1998). However, limited research has examined sequential relationship via S–O–R model with customers' brand experience and inspiration in the green hotel context. To fill this gap, the current study applies an integrated framework consisting of S–O–R and inspiration to provide a comprehensive understanding of customers' eco-friendly behavior toward green hotel setting. This study attempts to expand the understanding on the manner in which brand experience (stimulus) inspires hotel guest (organism) to participate in eco-friendly behaviors (response).

This study aims to examine the possible predictors of customers' eco-friendly behavior toward green hotel setting by answering the following research questions. a) Does brand experience significantly influence customer inspiration? b) Does inspiration significantly influence customers' eco-friendly behavior? c) Does customer inspiration fully or partially mediate the relationship between brand experience and eco-friendly behavior? To answer these questions, this study adopts the S–O–R framework of Mehrabian and Russell (1974), which comprises brand experience (stimulus), customer inspiration (organism), and customers' eco-friendly behavior (response). The findings of this study improve the knowledge about customers' eco-friendly behavior toward green hotel setting and emphasize the role and



importance of customer inspiration, which links the relationship between brand experience and eco-friendly behavior. The results of this study provide guidelines for green hotel managers by offering knowledge about the manner in which brand experience affects eco-friendly behavior through intrinsic motivation and customer inspiration.

## **Literature Review**

### **Green Hotel**

Green hotels refer to properties that offer various eco-friendly principles and programs (e.g., reducing waste, reusing towels, installing low-flow showerheads, using energy-efficient lights, minimizing energy consumption, and adopting recycling practices; Yadav, Balaji, & Jebarajakirthy, 2018). For example, Ritz Carlton can be considered green hotel because it provides hybrid vehicles and chemical-free pools. Green practices aim to ensure environmental responsibilities, and achieve long-term competitive advantage, and improve the effectiveness of the hotel (e.g., cost saving; Han et al., 2009; Manaktola & Jauhari, 2007). As such, the current study adopts the green hotel definition of Hsiao, Chuang, Kuo, and Yu (2014, p. 199), that is, “Green hotels devote themselves to save energy and water and decrease solid waste, in order to minimize the impact on environment.”

Despite the increasing implementation of green practices in the hotel industry, researchers have not provided sufficient attention to exploring inspiration-related antecedents that influence customer attitude and behavior (Katsikeas, Leonidou, & Zeriti, 2016). Previous studies have found many positive antecedents of customer attitude and behavior toward green hotel, such as environmental awareness, perceived effectiveness, personal norm, desire, environmental concern, environmental belief, moral norm, subjective norm, water conservation activities at home, brand attributes, and social identification (Aagerup & Nilsson, 2016; Bonn,

Cronin, & Cho, 2016; Han, Hwang, Kim, & Jung, 2015; Han & Yoon, 2015; Jiang & Kim, 2015; Untaru, Ispas, Candrea, Luca, & Epuran, 2016). Most of the aforementioned studies applied cognitive based theories or models (e.g., NAM, TPB, VBN) to determine such antecedents. Thus, the majority of the antecedents of customer attitude and behavior toward green practices are cognitive factors rather than individuals' intrinsic motivational factors. Bamberg and Möser (2007) suggested that the integration model of motivation-related factors and different frameworks is a good strategy to understand customers' eco-friendly behavior. S–O–R is a motivational framework that helps understand customers' behavior changes during their service journey (Su & Swanson, 2017; Choi & Kandampully, 2018). It explains the sequential influencing mechanism in the relationship between external stimuli and behavioral responses by examining the role of internal organism. Therefore, the current study explains the effect of influential variables (e.g., brand experience) on customers' motivation (e.g., customer inspiration) and behavioral response (e.g., eco-friendly behavior) on the basis of the S–O–R framework.

### **Customer Inspiration**

Inspiration is relatively a new construct in the hospitality industry. Thus, this section explains the general definition of inspiration. The word *inspire* comes from the Latin word *inspirare*, which means *to breathe*. According to the Oxford English Dictionary, inspiration refers to “a breathing in or infusion of some idea, purpose, etc. into the mind; the suggestion, awakening, or creation of some feeling or impulse, especially of an exalted kind.” On this basis, Thrash and Elliott (2003) created and developed the concept of customer inspiration. Although the psychology literature has extended the role of inspiration, most researchers have studied inspiration in relation to individuals' creativeness to confirm and validate the arguments of

Thrash and Elliot (2003, 2004) (An & Youn, 2018; Wartiovaara, Lahti, & Wincent, 2018).

However, the study of inspiration should be extended in relation to diverse individuals' attitude and behavior (Böttger et al., 2017) because the concept of inspiration has become an important source of enhancement for customers' sustainable behavior (Ottman, 2017). Given this research gap, the current study attempts to build and extend the role of inspiration in the hospitality and tourism literature.

Thrash and Elliott (2003) indicated that inspiration has three core characteristics, namely evocation, transcendence, and approach characteristics. Evocation is the state in which individuals are recalled or evoked by stimulus and are being inspired. Transcendence refers to the process of how inspiration brings new mind, thought, or awareness to individuals, which is better than previous thoughts. Approach motivation occurs when individuals attempt to actualize their new thoughts because they are inspired. Inspiration has three different views –to distinguish it, namely, episode, state, and trait (Thrash, Moldovan, Fuller, & Dombrowki, 2014). First, inspiration can be treated as an episode because it can happen from time to time. Second, inspiration can be considered a state because it can be evoked by external stimuli, such as external experiences, other people, ideas, or events. Third, inspiration can be a trait because individual differences exist in terms of frequency and power of experiencing of inspiration. In the current study, customer inspiration is treated as a state because it reflects as an intrinsic motivation that is evoked by brand experience (external stimulus).

Böttger et al. (2017) summarized the antecedents and consequences of customer inspiration. First, as antecedents, studies have found that sources in the consumption environment (e.g., print advertisements, interior design, personalized messages, or interaction with frontline employees) significantly influence customer inspiration (Thrash & Elliot, 2003,

2004; Díaz & Koutra, 2013). Second, as consequences, previous researchers have found that customer inspiration significantly influences emotional responses, such as positivity and delightfulness (Finn, 2005; Liang, Chen, & Lei, 2016; Thrash, Elliot, Maruskin, & Cassidy, 2010); attitudinal responses, such as brand attachment, customer satisfaction, and loyalty (Böttger et al., 2017; Park, Eisingerich, & Park, 2013); and behavioral responses, such as engagement (An & Youn, 2018). Therefore, inspiration can be viewed as the transmission process that links the stimulus (e.g., brand experience) and inspiration-related activities (e.g., eco-friendly behavior).

### **Stimulus–organism: Relationship between Brand Experience and Inspiration**

Brand experience refers to customers' feelings, cognitions, and behavioral responses stimulated by a brand's identity, communication, and environment (Brakus, Schmitt, & Zarantonello, 2009). Brakus et al. (2009) categorized brand experience into four elements, namely, sensory, intellectual, affective, and behavioral experiences. Sensory brand experience refers to the experience of humans' five senses, such as visual, auditory, olfactory, gustatory, and tactile experiences, that are provided by the brand. For example, when customers enter a green hotel, they may have simultaneous multisensory experiences that the hotel brand can trigger via interior design, background music in the lobby, scents, art, sculptures, or texture of decorations. Green hotel customers will have gustatory sensory experience when they visit the restaurant facility to order and eat during their stay. Affective brand experience indicates the emotional experience evoked by the brand. For example, green hotel customer may have positive feelings (i.e., happiness, comfort, enjoyment) or negative feelings (i.e., anxiety, sadness, depression) while staying at the green hotel due to the elements that it provides. Intellectual brand experience is mainly about the cognitive experience provided by the brand. For example, the

brand identity or environment of the hotel may encourage customers to think about something related to the stimuli. Moreover, green hotel brands may evoke customers' curiosity via brand communication strategies and messages. Behavioral brand experience refers to an action- and behavior-related experience provided by the brand. For example, hotel guests experience behavioral green brand when they are involved in specific physical acts, such as using hotel facilities or joining hotel activities that have aspects of green experience. Brakus et al. (2009) examined the empirical research model and showed that measurements of brand experience are different from the attitude, involvement, personality, and attachment of the brand. They also found that brand experience significantly influences brand personality, satisfaction, and loyalty.

Therefore, many researchers have recognized the importance of brand experience's role in the consumer behavior literature and examined the various consequences of brand experiences. For example, brand experience has a significant effect on brand attachment (Ramaseshan & Stein, 2014), brand awareness (Cleff, Lin, & Walter, 2014), brand commitment (Ramaseshan & Stein, 2014; Das, Agarwal, Malhotra, & Varshneya, 2018), brand distinctiveness (Roswinanto & Strutton, 2014), brand personality (Brakus et al., 2009; Nysveen, Pedersen, & Skard, 2013), brand relationship quality (Francisco-Maffezzolli, Semprebon, & Prado, 2014; Xie Poon, & Zhang, 2017), brand trust (Rahman, 2014; Kang, Manthiou, Sumarjan, & Tang, 2017), customer satisfaction (Brakus et al., 2009; Khan & Rahman, 2015), brand loyalty (Nysveen et al., 2013), citizenship behavior (Xie et al., 2017), and revisit intention (Khan & Rahman, 2017; Ahn & Back, 2018). Moreover, previous studies have analyzed the effect of brand experience on brand-related variables (e.g., brand relationship quality), cognitive response (e.g., brand awareness), and emotional response (e.g., customer satisfaction) rather than individuals' intrinsic motivational factors that link to their attitude and behavior (Andreini et al., 2018). The manner

in which intrinsic motivation (e.g., customer inspiration) links the relationships among brand experience, customer attitude, and behavior is important determine to enhance the comprehensive knowledge of brand experience (Andreini et al., 2018).

Customer inspiration refers to an intrinsic motivational state (Böttger, et al., 2017; Thrash & Elliot, 2004). It is positively correlated to experience and leads individuals to create and bring their thoughts into actions (Liu et al., 2017). The first phase of inspiration is activation mechanism, (the state of “inspired-by”), which refers to a process in which individuals who are evoked by external stimulus (e.g., brand experiences) form or change their mind or thoughts. By contrast, intention mechanism (the state of “inspired-to”) is the process in which individuals maintain or actualize their idea toward the action to fulfill their intrinsic motivation. Böttger et al. (2017) stated that these mechanisms (inspired-by and -to) are casually related. For example, inspired-by state generates the inspired-to state; thus, customers who are induced by brand experience actualize their motivation by presenting a typical behavior (e.g., eco-friendly behavior). In other words, green hotel brand experiences, such as sensory, affective, intellectual, and behavioral experiences, may help customers generate inspiration, which is intrinsic motivation. Therefore, customers who have sensory, affective, intellectual, and behavioral experiences may go through inspired-by and -to states before they form attitudinal and behavioral responses toward green hotel setting. Andreini et al. (2018) criticized the boundaries in the brand experience literature; however, limited research has been conducted to test the effect of brand experience on intrinsic motivation. Although previous studies have suggested a possible future research with anecdotal evidence, which indicates that brand experience may generate customer inspiration (Merrilees, 2016), limited empirical studies are available. Hence, the current study examines the effect of brand experience on customer inspiration on the basis of

anecdotal evidence (Andreini et al., 2018; Katsikeas et al., 2016; Liu et al., 2017) with the S–O–R framework to increase the level of comprehension of customer attitude and behavior evoked by brand experience. Thus, the following hypothesis was formulated.

H1. Brand experience significantly influences customer inspiration.

### **Organism–Responses: Relationship between Inspiration and Eco-friendly Behavior**

Eco-friendly behaviors are actions taken by people to participate in environmental initiatives and avoid impulsive usage of energy (Aagerup, & Nilsson, 2016). Researchers have found several positive factors of eco-friendly behavior, such as environmental awareness and perceived effectiveness (Jiang & Kim, 2015); personal norm and desire (Han, & Yoon, 2015); environmental concern (Untaru et al., 2016); moral norm, subjective norm, and emotions (Han et al., 2015); attitude toward water conservation and water conservation activity at home (Untaru et al., 2016); brand attributes, such as environment, health, and price (Bonn, Cronin, & Cho, 2016); and social identification (Aagerup & Nilsson, 2016). In addition, several studies have found other innovative antecedents of customers' attitude and behavior toward green practices. Chang, Huh, and Lee (2016) suggested an energy conservation nudge that inspires customers' eco-friendly behavior. Bloise, Mack, and Pitts (2015) highlighted the significant influence of messaging frame on customers' intention to reuse linen. Susskind (2014) found that energy saving technology does not harm customer satisfaction and positively influences customer attitude.

According to the inspiration framework suggested by Böttger et al. (2017), customer inspiration factor should be considered an important motivational factor in the consumer behavior literature because inspiration significantly affects the emotional, attitudinal, and behavioral intentions of customers. Moreover, only anecdotal evidence exists for the

relationship between inspiration and eco-friendly behavior (Jeong et al., 2014; Wang et al., 2018). Wang et al. (2018) highlighted the importance of inspiration in enhancing individual–company relationship. Jeong et al. (2014) suggested that hospitality firms should inspire customers to form positive attitudes and behaviors toward green firm setting. However, limited empirical research has been conducted on the relationship between the customer inspiration and eco-friendly behavior toward green hotel setting. Thus, the current study proposed the following hypothesis.

H2. Customer inspiration significantly influences eco-friendly behavior.

### **S–O–R: Mediating Role of Inspiration**

The current study mainly aims to assess whether brand experience generates customer inspiration and thereby enhances customers' eco-friendly behavior. This idea is mainly based on the research gaps in the brand experience and sustainability literature. Andreini et al. (2018) named some of the limitations of brand experience studies. These limitations include that the most consequences of brand experience are cognitive/affective brand-related variables, such as brand awareness and brand satisfaction, rather than customer behavioral intention or actual behavior (i.e., eco-friendly behavior). A recent study identified the possible effect of brand experience on green-related attitude and behavior, such as eco-friendly behavior (Wu, Wei, Tseng, Cheng, 2018); however, limited research has been conducted to measure the effect of brand experience and green-related variables.

Another limitation of brand experience literature is that only few studies have applied purposeful theories to investigate brand experience (Andreini et al., 2018). To fulfill this gap, the current study initially applied the S–O–R framework (Mehrabian & Russell, 1974), which has been widely adopted to extend the understanding of customer journey in the hospitality and



tourism industry (Choi & Kandampully, 2018). Given the anecdotal evidence of the relationship among brand experience, customer inspiration, and eco-friendly behavior, the current study applied the S–O–R framework to explain the psychological mechanism of these variables. Therefore, on the basis of the framework, the current study measured the sequential effect of brand experience (stimulus) on eco-friendly behavior (responses) through the mediating role of customer inspiration (organism) to explain the psychological mechanism among these variables. Thus, the following hypothesis was proposed.

H3. Customer inspiration mediates the relationship between brand experience and eco-friendly behavior.

## **Method**

### **Data Collection**

To test the proposed hypotheses, 400 participants aged above 18 who have stayed in a green hotel within last 12 months were recruited from the online survey platform Amazon Mechanical Turk. Individuals could only participate in the survey once, and the survey took approximately 10 minutes to complete. The time period of data collection for this study was from February 15 to 20, 2019. Each participant received US\$0.50 for completing the survey. After data collection, the authors went through the screening process by determining whether individual participants were engaged while answering the questions on the basis of the result of attention check questions. Thus, participants who did not complete the questionnaire or who did not answer the attention check questions correctly were removed from the study. In total, valid responses were collected from 217 respondents. Table 1 shows the demographic characteristics of the samples. The samples comprised 56.2% male and 43.8 % female, in which 50% were between 25 to 34 years old. Most of the respondents have college education (59.9%), followed

by post-graduate education (24.4%). The annual income of 61.7% of the respondents was between \$25,000 and \$99,999.

<Insert Table 1>

## **Measurements**

All constructs were measured using a seven-point Likert-type scale (1 = strongly disagree to 7 = strongly agree). All items were adopted from previous literature to ensure the content validity of the constructs. Table 2 shows the items' descriptive statistics and internal consistency measures. Brand experience was adopted from Brakus et al. (2009). Four dimensions of brand experiences (i.e., sensory, affective, behavioral, and intellectual) were measured with three items each. The measurements for customer inspiration were adopted from Böttger et al. (2017). A total of 10 items were measured using a seven-point Likert-type scale. Eco-friendly behavior measurements were also adopted from Han and Hwang (2017). Five items were measured using a seven-point Likert-type scale.

## **Data Analysis**

Partial least square–structural equation modeling (PLS–SEM) was used to test the proposed hypotheses (Hulland, Chow, & Lam, 1996). It was performed using SmartPLS 3 (Ringle, Wende, & Becker, 2015). Researchers have widely operated the PLS–SEM when the proposed model includes reflective and formative constructs (Hair, Ringle, & Sarstedt, 2011). The model comprised brand experience (i.e., sensory, affective, behavioral, and intellectual), inspiration (i.e., inspired-by and inspired-to), and eco-friendly behavior. Brand experience and inspiration dimensions were measured as second-order formative constructs on the basis of the conceptualization of previous studies (Brakus et al., 2009; Böttger et al., 2017).

## Results

The composite reliabilities of all latent variables were over 0.70. Thus, internal consistency was ensured (Jarvis, MacKenzie, & Podsakoff, 2003). All average variance extracted (AVE) exceeded 0.50. Thus, convergent validity was also confirmed (Henseler, Ringle, & Sinkovics, 2009).

<Insert Table 2>

As shown in Table 3, discriminant validity was also examined by comparing the AVE and squares of the correlation coefficient (Fornell & Larcker, 1981). Table 4 illustrates the reliability and validity of measurements for each first-order construct. For testing path analysis, bootstrapping was performed using 5,000 subsamples (Chin, 1998).

<Insert Table 3>

<Insert Table 4>

The structural coefficients for each path were tested using bootstrapping with 5,000 subsamples. The results are shown in Table 5. The path coefficients show that brand experience has a significant positive direct effect on inspiration, which supports H1 ( $\beta = 0.81, t = 24.61$ ). Inspiration shows a positive and significant direct effect on eco-friendly behavior, thereby supporting H2 ( $\beta = 0.55, t = 5.78$ ). Brand experience also has a significant positive but indirect effect on eco-friendly behavior through inspiration, thus accepting H3 ( $\beta = 0.44, t = 5.63$ ).

## Conclusion and Implications

Green practices have been an important trend because such activities help companies increase their profit by creating competitive advantage and increasing customer–brand relationship (Groening, Sarkis & Zhu, 2018). To achieve the goal of green initiatives, marketers and researchers have focused on the influential factors of customers' eco-friendly behavior

because the success of green marketing is highly dependent on customers' green activities in the hotel industry (Han et al., 2009). Although many researchers have investigated the effect of customer experience on customers attitude and behaviors (Gao, Mattila, & Lee, 2016), previous studies have frequently omitted the explanation about why and how diverse experiences positively encourage customers' eco-friendly behavior. Thus, the current study attempts to expand the understanding of the effect of brand experience on eco-friendly behavior. It investigates the motivational factor that determines customers' eco-friendly behavior toward green hotel setting.

The current study contributes to the existing hospitality literature in three ways. First, the S–O–R framework was proposed to describe the phases involved in the brand experience and customer inspiration of the eco-friendly behavior in green hotel setting. Second, the study highlighted the important role of customer inspiration in explaining why and how brand experience changes individuals' attitude and behavior in the green hotel context. Finally, the study applied an integrated framework comprising stimulus, organism, and response psychological models and customer inspiration to improve the understanding of customers' green behavior. Thus, the study attempts to enhance the comprehension of how brand experience influences customer inspiration and eco-friendly behavior in green hotel context.

### **Theoretical Contributions**

On the basis of the S–O–R framework literature on hospitality marketing, the proposed model applies the concepts of brand experience, customer inspiration, and eco-friendly behavior as stimulus, organism, and behavioral response, respectively. Previous researchers have suggested the influence of customer experiences on their behavioral intention or eco-friendly behavior in green hospitality context; however, limited studies have been conducted to examine

the process of how these experiential factors are transformed into behaviors (Gao et al., 2016).

The current study proposed a research model based on the customer inspiration and S–O–R framework to describe the phase involved in the brand experience of green hotel customers.

Furthermore, the indirect effect of brand experience on eco-friendly behavior through customer inspiration explains the important mediating role of intrinsic motivation.

The findings of current study showed the significant direct and indirect effect of brand experience on eco-friendly behavior. In other words, green hotel customers tend to have high level of inspiration when hotels provide sensory, affective, behavioral, and intellectual experiences. Green hotel customers' inspiration may be increased when customers are indulged in sensory, affective, behavioral, and intellectual experiences. Brand experience may increase the level of customers' inspiration because customers' inspiration is positively related to the external stimuli (Böttger et al., 2018).

Customer inspiration also has a significant positive effect on eco-friendly behavior. In other words, green hotel customers who are inspired by green hotel experiences are likely to participate in green initiatives. Furthermore, customer inspiration plays a significant role in increasing individuals' eco-friendly behavior tendency. Green hotel customers with high level of inspiration tend to save amenities or energy while staying in the hotel because customers' inspiration is positively related to eco-friendly behavior.

Furthermore, the proposed framework contributes to existing hospitality studies by considering the role of customer inspiration between experience and behavior. Similar to previous works (An & Youn, 2018; Thrash et al., 2010), the current study found a significant impact of stimuli on customer inspiration in the green hotel context. Similar to the findings of An and Youn (2018), the current study found that customer inspiration significantly affects

behavioral responses, which indicated eco-friendly behavior toward green hotel setting. The current study also found that customer inspiration is a consequence of brand experience at a green hotel. Thus, understanding customer inspiration is important in the green hotel context because customer inspiration is the important mediator that transforms brand experience to customers' behavioral responses. As expected, customer inspiration also significantly affects eco-friendly behavior toward green hotel setting. This result explains how customers' eco-friendly behaviors are triggered. As Böttger et al. (2017) validated, the current study also found the significant effect of inspiration on eco-friendly behavior. In turn, the findings support that customer inspiration is a significant intrinsic motivation that determines behavioral responses. Thus, this study improves the understanding of researchers in the green hospitality domain about the creation of customer inspiration for encouraging customers' eco-friendly behavior.

In addition, the current study proposed an integrated framework by combining S–O–R framework with brand experience, inspiration, and eco-friendly behavior factors. Thus, the current study contributes to the existing literature by explaining the underlying mechanism of green hotel customers' eco-friendly behavior. Researchers can apply the proposed model to examine the effect of brand experience in different hospitality and tourism settings (e.g., restaurant, resort, and airline) considering the increasing the frequency of green activities.

### **Practical Contributions**

Green hotel concept is important for sustaining competitive advantage and creating positive brand image (Han et al., 2009). Findings suggested that the sensory, affective, behavioral, and intellectual brand experiences lead to customer inspiration. For example, Westin hotel is well known for the sensory marketing by utilizing white tea scents. Like Westin hotel's sensory marketing, green hotel practitioner may be able to examine the different effect of scents

(e.g., tree, grass, ocean etc.) on individual's intention to participate in the green practices. Thus, service providers need to focus on designing attractive sensory cues, creating positive feelings, improving enjoyable services, and training employees to engage green hotel customers because those experiences are related for increasing the level of customer inspiration. Given the influence of brand experience on customer inspiration, companies should develop brand experience through various experiences that evoke customers' inspiration.

The findings support a strong positive link between customer inspiration and eco-friendly behavior. Green hotel managers need to provide marketing stimuli to strengthen positive customer inspiration and, in turn, eco-friendly behavior. Increasing the level of customer inspiration toward brand experience is the key for successful green marketing because it increases customers' eco-friendly behavior. The results also prove the important role of intrinsic motivation, especially customer inspiration, in green marketing. Customers who experience sensory, affective, behavioral, and intellectual experiences tend to have a high level of inspiration and participate in green initiatives. Thus, green hotel managers can develop brand experiences to increase the level of customer inspiration, thereby ultimately increasing customers' eco-friendly behavior.

### **Limitations and Future Research Directions**

Although the current study contributes to existing sustainable hospitality literature, it still has limitations. First, the sample was collected in the USA. Future research can replicate the proposed model with diverse samples in Asia and Europe to determine whether individuals' eco-friendly behaviors vary across culture (Kang et al., 2017). Second, this study was conducted via online survey. Thus, conducting interviews with green hotel customers may identify influential factors that possibly affect inspiration or eco-friendly behavior. Various methods may be helpful

in understanding customers' eco-friendly behavior. Third, eco-friendly behavior was measured on the basis of questionnaires that the authors provided. To identify actual behavior, future researchers can conduct a mixed method with field and experimental studies to investigate the actual effect of customer inspiration on customers' actual sustainable behavior



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## Tables

Table 1.

*Sociodemographic background of the sample (n = 217)*

Variable	Frequency (%)	Variable	Frequency (%)
Gender		Education	
Male	122(56.2%)	Below or high school graduate	5(2.3%)
Female	93 (42.9%)	Some college/Technical or vocational school	29(13.4%)
Age		Four year college	130(59.9%)
18-24	23(10.6%)	Post graduate degree	53(24.4%)
25-34	109(50.2%)	Marital status	
35-50	53(24.4%)	Single	77(35.5%)
50+	32(14.8%)	Married	113(52.1%)
Income		Divorced/Separated	9(4.1%)
Less than \$24,999	43(19.8%)	Living with a same sex partner	1(0.5%)
\$25,999 to \$49,999	60(27.6%)	Living with opposite sex partner	14 (6.5%)
\$50,000 to \$99,999	74(34.1%)	Widowed	3(1.4%)
\$100,000 to \$149,999	27(12.4%)	Ethnic	
\$150,000 to \$199,999	9(4.1%)	White/Caucasian	117(53.9%)
\$200,000 or more	4(1.8%)	Hispanic/Latino	11(5.1%)
		Asian	73(33.6%)
		Black/African-American	12(5.5%)
		Other	4(1.8%)

Table 2.

*Reliability and validity measures for first-order latent constructs*

Constructs	Mean	SD	Loading	Cronbach's Alpha	rho_A	CR	AVE
<b>Sensory experience</b>				0.841	0.843	0.841	0.638
This brand makes a strong impression on my visual sense or other senses	5.525	0.993	0.773				
I find this brand interesting in a sensory way	5.558	1.055	0.811				
This brand does appeal to my senses	5.581	1.022	0.788				
<b>Affective experience</b>				0.786	0.787	0.786	0.550
This brand induces feelings and sentiments	5.373	1.058	0.777				
I do have strong emotions for this brand	5.101	1.127	0.734				
This brand is an emotional brand	5.014	1.224	0.713				
<b>Behavioral experience</b>				0.802	0.803	0.802	0.575
I engage in physical actions and behaviors when I use this brand	4.959	1.049	0.770				
This brand results in bodily experiences	5.023	1.138	0.725				
This brand is action oriented	5.313	1.049	0.778				
<b>Intellectual experience</b>				0.840	0.840	0.840	0.636
I engage in a lot of thinking when I encounter this brand	5.046	1.102	0.793				
This brand does make me think	5.101	1.144	0.811				
This brand stimulates my curiosity and problem solving	5.074	1.066	0.788				
<b>Inspired by</b>				0.863	0.863	0.862	0.556
My imagination was stimulated	5.244	1.021	0.757				
I was intrigued by a new idea	5.230	1.066	0.741				
I unexpectedly and spontaneously got new idea	5.060	1.188	0.700				
My horizon was broadened	5.272	1.109	0.767				
I discovered something new	5.415	0.990	0.761				
<b>Inspired to</b>				0.875	0.876	0.875	0.584
I was inspired to do something	5.502	0.965	0.726				
I felt a desire to do something	5.406	1.003	0.820				
My interest to do something was increased	5.525	1.069	0.764				
I was motivated to do something	5.530	0.936	0.755				
I felt an urge to do something	5.465	0.965	0.754				

Note. CR: Composite reliability, AVE: Average variance extracted

Table 2 (Continued).

*Reliability and validity measures for first-order latent constructs*

Constructs	Mean	SD	Loading	Cronbach's Alpha	rho_A	CR	AVE
<b>Eco-friendly behavior</b>				0.869	0.872	0.868	0.569
It is acceptable for the hotel I am staying at to inform me that they will not actively change the bed sheets and quilt covers during my stay	5.419	1.092	0.696				
It is acceptable for the hotel I am staying at to inform me that it does not provide bottled water	5.406	1.169	0.766				
It is acceptable for the hotel I am staying at to inform me of the reduction of water pressure during the night	5.429	1.158	0.842				
It is acceptable for the hotel I am staying at to inform that it does not actively provide disposable toiletries	5.419	1.092	0.780				
It is acceptable for the hotel I am staying at to inform me of the reuse of towels and bath towels	5.516	1.065	0.675				

Note. CR: Composite reliability, AVE: Average variance extracted

Table 3.

*Discriminant validity of the first-order constructs using the Fornell–Larcker criterion*

	1	2	3	4	5	6	7
Sensory experience (1)	0.799						
Affective experience (2)	0.675	0.742					
Behavioral experience (3)	0.662	0.683	0.758				
Intellectual experience (4)	0.641	0.662	0.725	0.798			
Inspired by (5)	0.644	0.686	0.686	0.743	0.746		
Inspired to (6)	0.660	0.523	0.630	0.578	0.691	0.764	
Eco-friendly behavior (7)	0.623	0.424	0.493	0.488	0.528	0.688	0.754

Note: Values on the diagonal are squared root average variance extracted values, and those outside the diagonal are the correlations.

Table 4.

*Reliability and validity measures for second-order formative constructs*

Construct	Indicators	Weight	t value (p value)	VIF range
Brand experience	Sensory experience	0.38	42.85(0.00)	1.58-2.59
	Affective experience	0.40	46.06(0.00)	
	Behavioral experience	0.39	45.88(0.00)	
	Intellectual experience	0.38	46.69(0.00)	
Inspiration	Inspired by	0.14	64.85(0.00)	1.76-2.62
	Inspired to	0.13	77.53(0.00)	

Table 5.

*Results of the structural path model*

Criterion	Predictors	Hypothesis	Direct effect	t value	Indirect effect	t value
Inspiration	Brand experience	H1: supported	0.805	24.61***	-	-
Eco-friendly behavior	Inspiration	H2: supported	0.547	5.783***	-	-
	Brand experience	H3: supported	0.146	1.599	0.44	5.63***

Note. \*Significant at the  $< .05$  level; \*\*Significant at the  $< .01$  level, \*\*\*Significant at the  $< .001$  level

## Figures

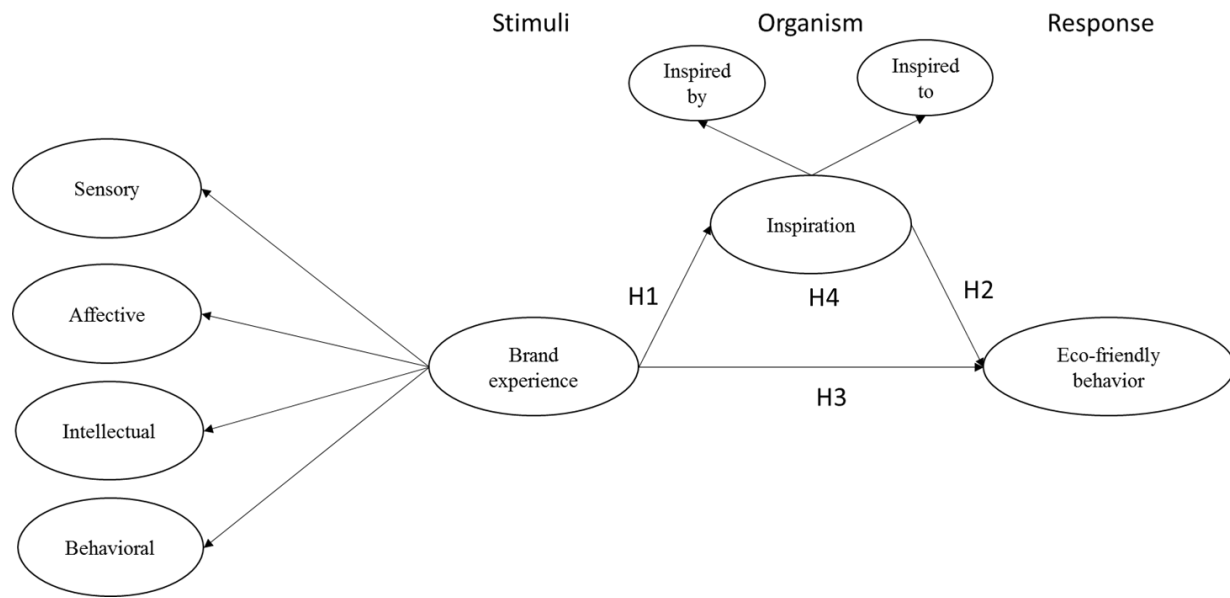


Figure 1. Proposed model



## CHAPTER V

### **Application of the stimulus–organism–response framework in green hotel setting:**

#### **Moderating role of personality**

##### **Abstract**

This study examines the mediating role of customer inspiration and moderating role of Openness to experience in the relationship between brand experience and eco-friendly behavior based on Stimulus-Organism-Response framework. Structural equation modeling was used to analyze the collected data and test the hypotheses. Partial least squares path modeling tests the hypotheses using a sample of 223 green hotel customers. The results reveal that brand experience has a significant effect on eco-friendly behavior through inspiration. Further, the results show that Openness to experience does not moderate the relationship between green hotel brand experience and eco-friendly behavior. This study clearly shows the relationship among green hotel brand experience, customer inspiration, and eco-friendly behavior. These findings can help marketers and researchers improve their understanding of the decision-making processes of green hotel customers.

**Keywords:** Brand experience, customer inspiration, eco-friendly behavior, personality, S-O-R framework.

## **Introduction**

Hotels apply environmental management as a form of initiative to reduce negative environmental influence on nature (Mensah, 2006). Environmental management has been progressively important in the hotel industry because of the increased customer awareness regarding hotels' impact on the environment. This scenario has led hotel customers to search for hotels that engage in eco-friendly practices, that is, green hotels (Lee, Hsu, Han, & Kim, 2010). Although many researchers have studied the antecedents and consequences of environmental management, limited theories have been applied to explain how customers engage psychologically in green-related behavior (Bamberg & Möser, 2007). Researchers have consistently suggested applying new models or theories in environmental management literature to enhance the understanding of customers' attitudinal and behavioral changes during the customer service journey (Andreini, Pedeliento, Zarantonello, & Solerio, 2018; Bamberg & Möser, 2007) because customers' green-related attitude and behavior vary depending on time and context (Han & Ryu, 2012; Perugini & Bagozzi, 2001). Therefore, the current study adopted Stimulus–Organism–Response (S–O–R) framework to enhance the understanding of green hotel customers' reactions evoked by external stimuli, such as brand experiences; S–O–R has been actively applied to the general hospitality domain but not to the green hotel context (Choi & Kandampully, 2018).

Experience-related constructs have been widely tested in environmental management literature to understand how experience factors influence customers' pro-environmental attitude and behavior (Weaton et al., 2016). In addition, inspiration has been highlighted as an important motivational factor in the hospitality and tourism industry (Liu, Sparks, & Coghlan 2017). Many researchers have suggested that further studies are needed to understand how to enhance

customers' inspiration via customer/tourist experience (Tung & Law, 2017). However, limited research has been conducted to measure the relationship between experience and customer inspiration. To verify the anecdotal evidence that brand experience may generate customer inspiration (Merrilees, 2016), an empirical study was conducted in the present work to measure the effect of brand experience on customer inspiration, which in turn influences pro-environmental attitude and behavior.

The S–O–R framework, which is originally from environmental psychology, has been widely applied and utilized in hospitality and tourism studies to evaluate the effect of customer experience (Mody, Suess, & Lehto, 2017). Although the result of customer experience is highly dependent on individuals' personality traits, limited studies have utilized personality in explaining the effect of experiential value on motivational and behavioral responses in hospitality settings (Jani & Han, 2013). For example, the effect of brand experience on customer inspiration and eco-friendly behavior may show different path coefficients due to different characteristics (e.g., personality) of an individual because personality is highly correlated with customer inspiration (Böttger, Rudolph, Evanschitzky, & Pfrang 2017; Thrash & Elliott, 2004) and eco-friendly behavior (Pettus & Giles, 1987; Milfont & Sibley, 2012). Nevertheless, limited research has been conducted to measure the moderating role of personality within the S–O–R framework.

Hence, the current study aims to extend the body of knowledge in the role of customer inspiration in sustainable literature, as well as the role of personality in the S–O–R framework. To achieve this goal, the possible moderating role of personality on the proposed research model (i.e., the effect of brand experience on customer inspiration and eco-friendly behavior on the basis of S–O–R framework) was examined by answering the following research questions. a)

Does brand experience significantly influence customer inspiration and eco-friendly behavior? b) Does inspiration significantly influence eco-friendly behavior? c) Does personality have a different moderating effect on the relationship among brand experience, customer inspiration, and eco-friendly behavior? To answer these research questions, this study adopted the S–O–R framework of Mehrabian and Russell (1974), which comprises brand experience (stimulus), customer inspiration (organism), and customers’ eco-friendly behavior (response), to measure the moderating role of personality through multigroup structural equation model testing. The findings of this study can improve the knowledge with regard to the S–O–R framework in green hotel setting and emphasize the important role of personality in S–O–R and customer inspiration frameworks. Moreover, this study will encourage green hotel providers to focus on the importance of customers’ individual characteristics, such as their personality.

## **Literature Review**

### **S–O–R and Inspiration Frameworks**

The S–O–R framework explains the role of stimuli and organisms in customer experience journey (Mehrabian & Russell, 1974). Stimuli refer to the external environmental or communication inputs that affect an individual’s intrinsic organism (e.g., intrinsic motivation). Organism indicates intrinsic motivational factors that mediate the intervening process between stimuli and responses. Response refers to either positive or negative behavior toward customers’ final decision. Most importantly, individual characteristics (i.e., personality) significantly influence the relationship between stimulus and organism in the S–O–R framework. Previous researchers have found that measuring the moderating role of personality can more efficiently predict customer attitude and behavior rather than using demographic information, such as age, gender, and income (Jani & Han, 2013).

Similar to the S–O–R framework, Böttger et al. (2017) developed and validated the customer inspiration framework. This conceptual framework of customer inspiration has three parts, namely, 1) antecedents of customer inspiration, 2) customer inspiration as a second-order construct, and 3) consequences of customer inspiration. First, the framework explains the antecedents of customer inspiration, including source characteristics, such as marketing mix components or experiential factors. Böttger et al. (2017) highlighted that individual characteristics, such as personality, should be considered as moderators of the relationship between source characteristics and customer inspiration. Second, customer inspiration is treated as a second-order construct in this framework because the state of inspired-by and inspired-to forms the customer inspiration variable. Third, as consequences of customer inspiration, Böttger et al. (2017) identified three different types of consequences, namely, emotional, attitudinal, and behavioral responses.

Therefore, the current study integrated two frameworks, mainly based on the S–O–R framework, and analyzed the effect of the moderating role of personality on the sequential relationship of brand experience, customer inspiration, and eco-friendly behavior. Although customer inspiration framework suggests that emotional and attitudinal consequences are a result of customer inspiration, the current study only applied behavioral consequences (e.g., eco-friendly behavior) as a response in the S–O–R framework because emotional or attitudinal responses are considered as an organism component according to the S–O–R framework. Most importantly, the current study tested the moderating role of personality in the proposed model because both frameworks emphasize the importance of the moderating role of individual characteristics.

### **Stimulus: Brand Experience**

The first component is stimulus. It is the conceptual model containing the four dimensions of brand experience. Brakus, Schmitt, and Zarantonello (2009) classified the four dimensions of brand experience as sensory, affective, behavioral, and intellectual. Sensory experience refers to the customers' experience with regard to five senses, that is, visual, auditory, olfactory, gustatory, and tactile experiences. Affective experience indicates the customers' feelings that are evoked by the brand. Behavioral experience is defined as the degree of customers' engagement in physical actions. Intellectual experience refers to the degree of customers' cognitive efforts toward the brand. Despite the importance of utilizing the four dimensions of brand experience as the hotel industry stimuli (Khan & Rahman, 2017), previous researchers have frequently measured a single atmospheric aspect as the stimulus within the S–O–R framework (Huang, Gursoy, & Xu, 2012; Jang, Liu, & Namkung, 2011; Turley & Milliman, 2000). Thus, the current study measured brand experience's four dimensions as a stimulus to examine how it affects individuals' internal organism and behavioral responses.

Many researchers have studied the effect of brand experience. Brand experience significantly influences brand-related variables (e.g., brand personality, trust, and attachment) and positive attitudes and behaviors (e.g., customer satisfaction, loyalty, word-of-mouth, and revisit intention) in the hospitality and tourism industry (Ahn & Back, 2018; Kang, Manthiou, Sumarjan, & Tang, 2017; Manthiou, Kang, Chiang, & Tang, 2016; Nysveen, Pedersen, & Skard, 2013; Xie, Poon, & Zhang, 2017). However, minimal brand experience research has been investigated with regard to individuals' intrinsic motivations, such as customer inspiration. The effect of brand experience on customer inspiration must be identified through empirical research because only anecdotal evidence exists from researchers' suggestions (Andreini et al., 2018; Liu

et al., 2017; Merrilees, 2016). On the basis of previous suggestions, the current study proposed the following hypothesis.

H1. Brand experience significantly affects customer inspiration.

### **Organism: Customer Inspiration**

Organism is the second component. The current study comprised two dimensions of customer inspiration. In the S–O–R framework, organism is defined as “internal processes and structures intervening between stimuli external to the person and the final actions, reactions or responses emitted” (Bagozzi, 1986, p. 46). In line with this definition, the current study applied customer inspiration as an organism because customer inspiration is also the component that translates thoughts into actions (Böttger et al., 2017). On the basis of the definition of Böttger et al. (2017), the current study defined customer inspiration as the intrinsic motivational state that is positively related to experiential and rational processing with two subdimensions, namely, inspired-by and inspired-to. First, inspired-by is the activation phase—the first stage of inspiration when individuals are inspired by stimuli. Through this phase, individuals create and form their mind or thoughts evoked by stimuli (e.g., brand experience). Second, inspired-to is the intention phase of the second stage of inspiration. This inspired-to intention phase is where individuals develop their attitudinal intention by maintaining and fulfilling their mind and thoughts created from first stage of inspired-by. According to the inspiration framework of Böttger et al. (2017), the two subdimensions must be measured under the customer inspiration variable because the casual relationship from inspired-by to inspired-to lead individuals’ actual behavioral responses.

Given the concept of inspiration of Thrash and Elliott (2003, 2004), multiple disciplines, such as psychology, education, and management, have examined the antecedents and

consequences of inspiration (Böttger et al., 2017). Previous researchers in different domain have found that the marketing mix components and service environment, such as interior or personalized message on public areas (Díaz & Koutra, 2013), are the dominant antecedents of customer inspiration. Therefore, the four dimensions of brand experiences (e.g., sensory, affective, behavioral, and intellectual) may affect the level of customer inspiration. As a consequence of customer inspiration, previous researchers have found that customer inspiration has a significant and positive direct effect on positive feelings, loyalty, and engagement (An & Youn, 2018; Böttger et al., 2017). However, further research is needed to extend the understanding of antecedents and consequences of customer inspiration. Moreover, limited research has been conducted with regard to customer inspiration in the hospitality and tourism literature, although the importance of customer inspiration variable has increased to predict customer–brand relationship. To reduce research gap, the current study analyzed the effect of customer inspiration on eco-friendly behavior by defining customers' eco-friendly behavior as one type of engagement (Jeong, Jang, Day, & Ha, 2014; Wang, Zhou, & Liu, 2018). Therefore, the following hypothesis was proposed.

H2. Customer inspiration significantly affects eco-friendly behavior.

### **Responses: Eco-friendly Behavior**

The third component is response. The current study involved eco-friendly behavior within the S–O–R framework. Eco-friendly behavior was measured in terms of the approach aspect of the response within the S–O–R framework. Eco-friendly behavior is defined as the active engaged action of participating in pro-environmental principles and programs (e.g., reducing waste, improving towel use frequency, installing low-flow showerheads, using energy-efficient lights, minimizing energy consumption, and adopting recycling practices; Yadav,



Balaji, & Jebarajakirthy, 2019). Numerous customers are increasingly concerned about environmental problems and prefer hotels that implement environmental practices (Han, Hsu, & Lee, 2009; Kim, Njite, & Hancer, 2013); thus, customers' eco-friendly behavior has become increasingly important in the industry and academia. Many hospitality and tourism researchers have found the numerous factors that positively affect customers' eco-friendly behavior, including environmental awareness, perceived effectiveness, environmental concern, environmental belief, emotions, and personal norms (Han Hwang, Kim, & Jung, 2015; Rhou, Singal, & Koh, 2016; Untaru et al., 2016). Despite the increasing attention toward the hotel brand experience (Khan & Rahman, 2017) and customers' behavior toward brand experience, academic researchers have not provided sufficient attention to exploring the effect of brand experience on eco-friendly behavior. Andreini et al. (2018) conceptually explained the possibility of the significant influence of brand experience on eco-friendly behavior. However, limited research has been conducted to examine such a relationship empirically. Thus, the current study proposed the following hypothesis.

H3. Brand experience significantly affects eco-friendly behavior.

Given the anecdotal evidence of the relationship between brand experience and customer inspiration (Andreini et al., 2018) and the relationship between customer inspiration and eco-friendly behavior (Jeong et al., 2014; Wang et al., 2018), the current study applied the S–O–R framework (Mehrabian & Russell, 1974) to explain the psychological mechanism of green hotel customers' attitude and behavioral changes evoked by brand experience. The current study attempts not only to measure the sequential effect of brand experience (stimulus) on eco-friendly behavior (responses) but also tests the mediating role of customer inspiration (organism) between two variables, namely, stimulus and response. Thus, the following hypothesis was proposed.

H4. Customer inspiration significantly mediates the relationship between brand experience and eco-friendly behavior.

### **Individual Characteristics: Personality**

Personality refers to the stable individual characteristics that affect cognitive, emotional, and behavioral responses (Pervin & Cervone, 2010). Among various types of personality measurements, the Big Five of personality (Big Five) has been widely tested, and the validity and reliability of the scale have been confirmed (Jani & Han, 2015). Big Five comprises five factors, namely, agreeableness, extraversion, conscientiousness, openness to experience, and neuroticism. Agreeableness indicates being flexible, tolerant, and cooperative rather than aggressive toward others. Extraversion refers to energetic, sociability, and talkativeness rather than being shy or unsociable. Conscientiousness trait includes being organized and self-disciplined rather than having an unplanned behavior. Openness to experience reflects accepting various experiences and attempting to pursue self-actualization rather than being closed-minded. Neuroticism contains negative characteristics, such as anger, anxiety, and depression.

Utilizing the Big Five as an important variable is gaining attention in the consumer behavior literature because it provides comprehensive understanding in relation to the consumer behavior. Orth, Limon, and Rose (2010) found that the effects of store interiors (e.g., environmental stimuli) on individual emotion are different from the moderating role of personality. Skandrani, Mouelhi, and Malek. (2011) also found the importance of the moderating role of personality within the S–O–R framework. Depending on the different level of personality trait, individuals tend to have diverse reactions affected by the external stimuli. Most importantly, among the Big Five, openness to experience has a significant and positive effect on customer inspiration (Thrash & Elliot, 2004) and attitude toward green practices

(Graziano & Habashi, 2010; Hirsh, 2010). Despite the importance of utilizing personality within the S–O–R framework and the significant correlations among openness to experience, inspiration, and altruism, limited research has been conducted on the effect of the moderating role of personality in the green hotel context with the application of the S–O–R framework (Jani & Han, 2013). For example, individuals with the high level of openness to experience are more likely to get inspired by the external environment while individuals with the low level of openness to experience are less likely to get inspired by the external stimuli. In addition, openness to experience are highly correlated to the eco-friendly behavior. For example, individuals with the high level of openness to experience are more likely to participate in the eco-friendly initiatives while individuals with low level of openness to experience are likely to ignore green practices and decide not to participate in green implications. Thus, the current study utilized the openness to experience as a moderating role of the sequential relationship of brand experience (stimulus)–customer inspiration (organism)–eco-friendly behavior (response) from the S–O–R framework’s perspective to enhance the understanding of customer attitude and behavior changes depending on their individual characteristics. Thus, the current study proposed the following hypothesis.

H5. Openness to experience moderates the relationship between green hotel brand experience and eco-friendly behavior.

## **Method**

### **Data Collection**

To test the proposed hypotheses, 300 participants who have stayed in green hotels were recruited from Amazon Mechanical Turk. The survey took approximately 10 minutes to finish. Data collection lasted from March 10 to 15, 2019. Each participant earned US\$0.50 for

completing the survey. Participants who did not complete the survey or who did not answer the attention check questions correctly were removed from the study. A total of 223 respondents had valid responses. Table 1 shows the demographic characteristics of samples. The samples comprised 55.6% male and 44.4 % female. Approximately 50% of the sample was between 25 and 34 years old. Most of the respondents have college education (58.7%), followed by post-graduate education (25.1%). A total of 59.7% of respondents had an annual income between \$25,000 and \$99,999.

<Insert Table 1>

## **Measurements**

All constructs were measured using a seven-point Likert-type scale (1 = strongly disagree to 7 = strongly agree). All items were adopted from previous literature to ensure the content validity of the constructs. Table 2 shows the items' descriptive statistics and internal consistency measures. Brand experience was adopted from Brakus et al. (2009). Four dimensions of brand experiences (i.e., sensory, affective, behavioral, and intellectual) were measured with three items each. The measurements for inspired-by and inspired-to were adopted from Böttger et al. (2017). A total of 10 items were measured using a seven-point Likert-type scale. Eco-friendly behavior measurements were also adopted from Han and Hwang (2016). Five items were measured using a seven-point Likert-type scale. Openness to experience was also adopted from Jani and Han (2015).

## **Data Analysis**

The composite reliabilities of all latent variables were over 0.70. Thus, internal consistency was ensured (Jarvis, MacKenzie, & Podsakoff, 2003). All average variance

extracted (AVE) exceeded 0.50. Thus, convergent validity was also confirmed (Henseler, Ringle, & Sinkovics, 2009).

<Insert Table 2>

As shown in Table 3, discriminant validity was also examined by comparing the AVE and squares of the correlation coefficient (Fornell & Larcker, 1981). Table 4 indicates the reliability and validity of measurements for each first-order construct. For testing path analysis, a bootstrapping procedure was performed using 5,000 subsamples (Chin, 1998).

<Insert Table 3>

<Insert Table 4>

Partial least square–structural equation modeling (PLS–SEM) was used to test the proposed hypotheses (Hulland, Chow, & Lam, 1996) using SmartPLS 3 (Ringle, Wende, & Becker, 2015). Researchers have applied PLS–SEM when the proposed model includes reflective and formative constructs (Hair, Ringle, & Sarstedt, 2011). In this study, the model contained brand experience (i.e., sensory, affective, behavioral, and intellectual) and inspired-by, inspired-to, and eco-friendly behaviors. Brand experience was measured as second-order formative construct based on the conceptualization of previous studies (Brakus et al., 2009; Böttger et al., 2017).

## Results

The structural coefficients for each path were tested using bootstrapping with 5,000 subsamples. The results are shown in Table 5. The path coefficients show that brand experience has a significant and positive direct effect on inspiration, which supports H1 ( $\beta = 0.84, t = 20.98$ ). Brand experience and inspiration show a positive and significant direct effect on eco-friendly behavior, thereby supporting H2 ( $\beta = 0.27, t = 2.65$ ) and H3 ( $\beta = 0.43, t = 3.72$ ). Brand

experience shows a significant indirect effect on eco-friendly behavior through customer inspiration, thereby validating H4 ( $\beta = 0.28, t = 3.65$ ). Table 5 also shows the  $R^2$  for endogenous latent variables and the explanatory power (Chin, 1998).

<Insert Table 5>

The moderating effects of the openness to experience were tested. The sample was divided into two subgroups. Table 6 shows that openness to experience has no significant effect on any of the path coefficient in the relationship among brand experience, customer inspiration, and eco-friendly behavior. Thus, H5 was rejected.

<Insert Table 6>

### **Conclusion and Implication**

This study explored factors that increase green hotel customers' eco-friendly behavioral and potential moderating effects of personality trait in green hotel context. Conceptual framework was developed based on the S–O–R and customer inspiration frameworks. Consistent with the result of previous studies (An & Youn, 2018), customer inspiration significantly mediates the relationship between brand experience and eco-friendly behavior. As Böttger et al. (2017) suggested, the effect of inspired-by on inspired-to status was validated. When green hotel customers become inspired by green hotel brand experience, their intention to save something is formed, which leads to inspired-to status. The inspired-to status ultimately enhances customers' eco-friendly behavior. Lastly, the moderating effect of openness to experience was examined because openness to experience is highly related to customer inspiration and eco-friendly behavior. However, different from previous studies (Thrash & Elliot, 2004; Jani & Han, 2015), the current work did not find any significant moderating effect

of openness to experience on any path relationship. These findings provide theoretical and practical implications, which will be discussed in the following sections.

### **Theoretical Implication**

Although many researchers have investigated sustainable hotel marketing, few studies have examined the motivational factors that evoke customers' eco-friendly behavior in the green hotel context (Gao, Mattila, & Lee, 2016). Similar to previous studies (An & Youn, 2018), the findings of the current work support the mediating role of customer inspiration in the relationship between stimuli and behavioral responses. That is, customers who experience pleasurable sensory cues, positive emotions, behavioral activities, or interaction with employees while staying at green hotel tend to participate in green activities because those experiences enhance their inspiration which, in turn, becomes eco-friendly behavior. In line with previous hospitality and tourism literature who applied the S–O–R framework (Choi & Choi, 2018), the findings of this work indicate that the brand experience is related to customers' inspiration toward green hotel experience. Therefore, the advantages of developing memorable and pleasurable experience and increasing customer inspiration are also applicable to green marketing in the sustainable hospitality industry.

Furthermore, as Böttger et al. (2017) suggested, the relationship between two mechanisms under the inspiration variable are causally linked between external stimuli and behavioral outcomes. The current findings indicate that the inspired-by status lead inspired-to status within the customer inspiration framework. They also suggest that the inspired-by phase is highly related to the inspired-to status. In other words, as a result of the inspired-by stage, green hotel customers form a new state of mind to save energy or amenities and move to the

inspired-to stage. Then, green hotel customers attempt to actualize a new state of mind, which leads to eco-friendly behavior.

Different from previous research (Jani & Han, 2015), the current study did not find any significant moderating role of personality trait in the relationship among brand experience, customer inspiration, and eco-friendly behavior. On the basis of previous studies, extraversion and openness to experience are highly related to customer inspiration (Thrash & Elliot, 2004). They suggested that individuals with high level of openness to experience are likely to be inspired by external stimuli. However, the current study found that green hotel customers are highly inspired by green hotel brand experience if they have high or low level of openness to experience. In addition, different the study of Jani and Han (2015) who stated that openness to experience is significantly related to customers' environmentally friendly behavior, the findings of the current study showed that openness to experience does not have any significant correlation with eco-friendly behavior. One possible explanation of this result would be that the personality trait may be a significant moderation but not Big Five. Different personality measurements may show a significant moderating effect rather than the Big Five because personality has diverse constructs. In addition, the lack of variability of participants' level of openness would not lead to the significant moderating effect of personality trait. For example, most of the participants of Study 2 tend to show high level of openness.

### **Practical Implication**

The current findings imply that customer inspiration is an important motivational factor that enhances eco-friendly behavior in green hotel setting. Hotel marketers need to find the sources that evoke customer inspiration by utilizing diverse experiential factors, such as sensory, affective, behavioral, and intellectual. Practitioners should provide attractive sensory cues to



increase customer inspiration. Additionally, hotel managers may imply technology devices to provide unique behavioral or intellectual experience to hotel customers while staying at hotel and increasing inspiration status. For example, hotel managers may apply the robot butlers to enhance the level of customer inspiration by letting individuals actively interact with robots.

The findings of this study also suggested practitioners that personality does not have a significant relationship with customer inspiration and eco-friendly behavior. Thus, instead of focusing on customers' personality trait, hotel marketers may want to provide innovative external stimuli, such as virtual reality experiences, to increase customers' inspiration because the effect of customer experience on inspiration and green-related behavior is significant regardless of the type of personality individuals have.

### **Limitations and Future Research**

Although the current study provides valuable implications for researchers and practitioners, several limitations must be considered. First, this study focused on the temporal behavior of green hotel customers. Therefore, a longitudinal study in the future could determine how customer inspiration positively affects long-term customer relationship. Second, this study was conducted in a green hotel setting. The conceptual model should be extended to different hospitality and tourism settings, such as restaurants or green tourism. Third, this study was examined based on the structural equation model. Future research could be conducted as an experimental design to examine the casual relationship between experience and inspiration.

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## Tables

Table 1.

*Sociodemographic background of the sample (n = 223)*

Variable	Frequency (%)	Variable	Frequency (%)
Gender		Education	
Male	124(55.6%)	Below or high school graduate	7 (3.1%)
Female	99 (44.4%)	Some college/Technical or vocational school	29 (13.0%)
Age		Four year college	131 (58.7%)
18-24	23(10.3%)	Post graduate degree	56 (25.1%)
25-34	99(44.4%)	Marital status	
35-50	66(29.6%)	Single	77(35.5%)
50+	35(15.7%)	Married	113(52.1%)
Income		Divorced/Separated	9(4.1%)
Less than \$24,999	46 (20.6%)	Living with a same sex partner	1(0.5%)
\$25,999 to \$49,999	61 (27.4%)	Living with opposite sex partner	14 (6.5%)
\$50,000 to \$99,999	72 (32.3%)	Widowed	3(1.4%)
\$100,000 to \$149,999	30 (13.5%)	Ethnic	
\$150,000 to \$199,999	8 (3.6%)	White/Caucasian	121 (54.3%)
\$200,000 or more	6 (2.7%)	Hispanic/Latino	13 (5.8%)
		Asian	71 (31.8%)
		Black/African-American	15 (6.7%)
		Other	3 (1.3%)

Table 2.

*Reliability and validity measures for first-order latent constructs*

Constructs	Mean	SD	Loading	Cronbach's Alpha	rho_A	CR	AVE
<b>Sensory experience</b>				0.845	0.850	0.906	0.763
This brand makes a strong impression on my visual sense or other senses	5.64	.928	0.864				
I find this brand interesting in a sensory way	5.64	1.012	0.887				
This brand does appeal to my senses	5.66	1.008	0.869				
<b>Affective experience</b>				0.822	0.822	0.894	0.737
This brand induces feelings and sentiments	5.42	1.083	0.833				
I do have strong emotions for this brand	5.09	1.172	0.872				
This brand is an emotional brand	5.08	1.228	0.871				
<b>Behavioral experience</b>				0.754	0.754	0.859	0.670
I engage in physical actions and behaviors when I use this brand	4.97	1.013	0.819				
This brand results in bodily experiences	5.02	1.135	0.831				
This brand is action oriented	5.30	1.085	0.806				
<b>Intellectual experience</b>				0.840	0.840	0.904	0.757
I engage in a lot of thinking when I encounter this brand	5.02	1.155	0.891				
This brand does make me think	5.06	1.182	0.868				
This brand stimulates my curiosity and problem solving	5.01	1.133	0.852				
<b>Inspired by</b>				0.884	0.885	0.915	0.682
My imagination was stimulated	5.27	1.083	0.822				
I was intrigued by a new idea	5.22	1.102	0.824				
I unexpectedly and spontaneously got new idea	5.00	1.223	0.821				
My horizon was broadened	5.22	1.152	0.838				
I discovered something new	5.40	1.098	0.824				
<b>Inspired to</b>				0.913	0.915	0.935	0.743
I was inspired to do something	5.48	1.052	0.860				
I felt a desire to do something	5.41	1.074	0.880				
My interest to do something was increased	5.51	1.130	0.830				
I was motivated to do something	5.49	1.073	0.886				
I felt an urge to do something	5.41	1.069	0.853				

Note. CR: Composite reliability, AVE: Average variance extracted

Table 2 (Continued).

*Reliability and validity measures for first-order latent constructs*

Constructs	Mean	SD	Loading	Cronbach's Alpha	rho_A	CR	AVE
<b>Eco-friendly behavior</b>				0.836	0.841	0.884	0.604
It is acceptable for the hotel I am staying at to inform me that they will not actively change the bed sheets and quilt covers during my stay	5.61	.966	0.755				
It is acceptable for the hotel I am staying at to inform me that it does not provide bottled water	5.40	1.265	0.827				
It is acceptable for the hotel I am staying at to inform me of the reduction of water pressure during the night	5.44	1.165	0.783				
It is acceptable for the hotel I am staying at to inform that it does not actively provide disposable toiletries	5.39	1.191	0.729				
It is acceptable for the hotel I am staying at to inform me of the reuse of towels and bath towels	5.62	1.045	0.788				
<b>Openness to experience</b>				0.857	0.864	0.897	0.636
I get excited by new ideas	5.77	.873	0.822				
I enjoy thinking about things	5.85	.937	0.828				
I enjoy hearing new ideas	5.85	.949	0.808				
I enjoy looking for a deeper meaning	5.70	.974	0.746				
I have a vivid imagination	5.74	.913	0.780				

Note. CR: Composite reliability, AVE: Average variance extracted

Table 3.

*Discriminant validity of the first-order constructs using the Fornell–Larcker criterion*

	1	2	3	4	5	6	7	8
Sensory experience (1)	0.873							
Affective experience (2)	0.648	0.859						
Behavioral experience (3)	0.580	0.610	0.819					
Intellectual experience (4)	0.528	0.647	0.645	0.870				
Inspired by (5)	0.552	0.626	0.633	0.740	0.826			
Inspired to (6)	0.512	0.506	0.476	0.556	0.684	0.862		
Eco-friendly behavior (7)	0.522	0.381	0.436	0.342	0.406	0.547	0.777	
Openness to experience (8)	0.631	0.422	0.518	0.432	0.549	0.578	0.797	0.798

Note: Values on the diagonal are squared root average variance extracted values, and those outside the diagonal are the correlations.

Table 4.

*Reliability and validity measures for second-order formative constructs*

Construct	Indicators	Weight	t value (p value)	VIF range
Brand experience	Sensory experience	0.36	32.59 (0.00)	1.43-2.58
	Affective experience	0.38	27.69 (0.00)	
	Behavioral experience	0.39	21.01 (0.00)	
	Intellectual experience	0.38	36.46 (0.00)	

Table 5.

*Results of the structural path model*

Criterion	Predictors	Direct effect	t value	Indirect effect	t value	R <sup>2</sup>
<i>Direct effect</i>						
Inspired by	Brand experience	0.843	20.981***	-	-	0.713
Inspired to	Inspired by	0.759	14.962***			0.574
Eco-friendly behavior	Inspired to	0.439	3.723***	-	-	0.426
	Brand experience	0.276	2.652**	-	-	
<i>Indirect effect</i>						
Brand experience → Inspired by → Inspired to → eco-friendly behavior	-	-	-	0.281	3.652***	

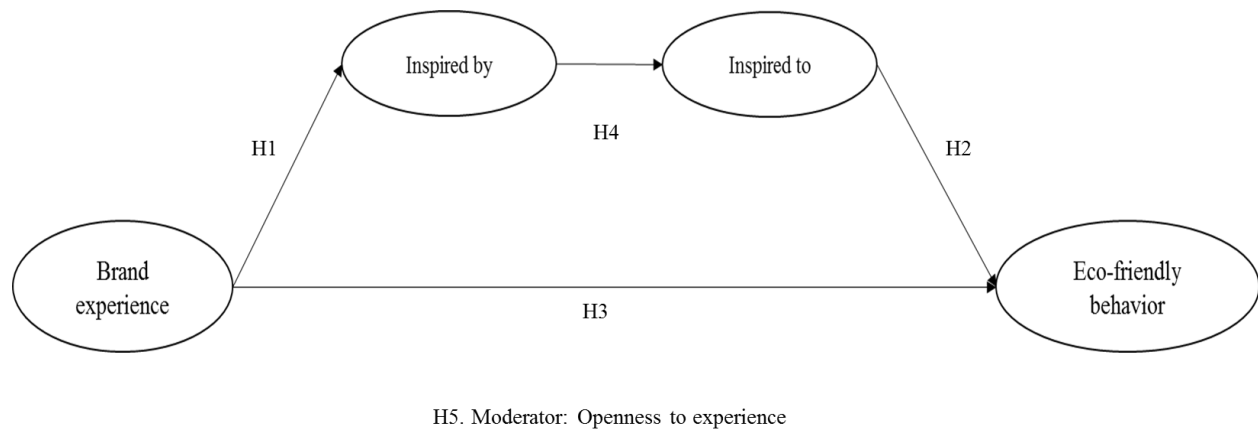
Table 6.

*Multi-group analysis (openness to experience)*

Structural path	Low		High		MGA	
	Coefficient	t-value	Coefficient	t-value	Coefficient	p-value
Brand experience → Inspired-by	0.697	11.07	0.767	17.869	0.07	0.179
Inspired-by → Inspired-to	0.608	7.33	0.633	9.51	0.025	0.408
Inspired-to → Eco-friendly behavior	0.341	2.452	0.352	3.413	0.011	0.471
Brand experience → Eco-friendly behavior	0.335	2.617	0.197	2.15	0.139	0.806

Note. MGA: Multi Group Analysis.

## Figures



*Figure 1.* Proposed model



## CHAPTER VI

### **Summary and Conclusions**

The hospitality and tourism industry has widely adopted Green marketing because it improves company's profit and brand image (Gao, Mattila, & Lee, 2016). Green marketing refers to the marketing mix strategy that shows the company's goal of decreasing negative environmental impact (Groening, Sarkis & Zhu, 2018). Researchers and practitioners have recognized the importance of providing green marketing because (1) many travelers are increasingly concerned about the natural environment, and (2) many travelers prefer to stay at hotels that provide green initiatives (Han & Kim, 2010).

Sustainable hospitality and tourism researchers have actively studied customers' eco-friendly behavior (Groening et al., 2018). Recently, many researchers have explored the new antecedents of eco-friendly behavior. Chang, Huh, and Lee (2016) examined the relationship between nudge and eco-friendly behavior in a green hotel setting. Lee and Oh (2014) tested how message framing transforms customers' behavior while staying at the hotel. Yadav, Balaji, and Jebarajakirthy (2018) investigated the effect of installing energy-saving light on customer satisfaction and behavior. These studies have identified the importance of knowing the antecedents of customers' behavioral responses of green marketing. However, few studies have applied brand experience as an antecedent of eco-friendly behavior. To measure the effect of hotel customers' green hotel brand experience, this study adopted the brand experience concept from Brakus, Schmitt, and Zarantonello, (2009), including sensory, affective, behavioral, and intellectual experiences. Green hotel customers may experience sensory, affective, behavioral, and intellectual experiences while they stay at the hotel, which may be related to customers' intrinsic motivation and eco-friendly behavior.

The current study aims to (1) provide a critical review of green hotel brand experience, customer inspiration, and eco-friendly behavior studies; (2) measure the effect of brand experience on eco-friendly behavior in green hotel setting; (3) examine the indirect effect of brand experience on eco-friendly behavior through customer inspiration; and (4) test the moderating role of individual characteristics on the relationship among brand experience, customer inspiration, and eco-friendly behavior. To achieve these objectives and examine relationships among constructs, the current study collected the survey responses from online platform and performed PLS–SEM.

### **Major Findings**

To test the proposed model and identify the effect of brand experience on customer inspiration and eco-friendly behavior in green hotel setting, Hypotheses 1–5 were examined using PLS–SEM.

Hypothesis 1 (Supported). Brand experience exerts a significant positive influence on hotel guests' eco-friendly behavior.

Hypothesis 2 (Supported). Brand experience exerts a significant positive influence on hotel guests' inspiration.

Hypothesis 3 (Supported). Inspiration exerts a significant positive influence on hotel guests' eco-friendly behavior.

Hypothesis 4 (Supported). Hotel guests' inspiration mediates the relationship between brand experience and eco-friendly behavior.

Hypothesis 5 (Rejected). Openness to experience moderates the relationship between green hotel brand experience and eco-friendly behavior.

The findings from Studies 1 and 2 indicate the important information about the relationship among brand experience, customer inspiration, and eco-friendly behavior. PLS-SEM supports that brand experience had relative significant effect on customer inspiration. Hypothesis 1 was confirmed because brand experience significantly affects eco-friendly behavior. Hypothesis 2 was also supported because a significant effect was estimated from the brand experience on customer inspiration. Customer inspiration significantly influences eco-friendly behavior. Thus, Hypothesis 3 was accepted. The results of indirect effect also support the significant effect of brand experience on eco-friendly behavior through customer inspiration. Thus, Hypothesis 4 was supported. The findings did not show any significant moderating effect of openness on the relationship among construct variables. Therefore, Hypothesis 5 was rejected.

## **Discussions and Conclusion**

The findings of the current study contribute to the sustainable hospitality literature by proposing customer inspiration as a significant mediator that transforms brand experience to eco-friendly behavior. By identifying why and how brand experience influences eco-friendly behavior toward customer inspiration in green hotel context, this study found that inspiration can also be an important intrinsic motivation of eco-friendly behavior, which agrees with Böttger, Rudolph, Evanschitzky, and Pfrang's (2018) study. The current empirical findings support that customer inspiration is the key driver that transforms brand experience into customers' eco-friendly behavior.

The major contributions of this study are as follows. First, brand experience influences customers' eco-friendly behavior in green hotel context. Hence, customers who gain sensory,

affective, behavioral, and intellectual experiences will likely save energy or attempt to reduce the usage of towel when they stay in a green hotel.

Second, customer inspiration is a significant mediator in the relationship between brand experience and eco-friendly behavior. Particularly, customers' inspired-by phase, which is affected by brand experience, is significantly related to the inspired-to phase, which directly influences customers' eco-friendly behavior. These results can be explained by the framework of customer inspiration developed by Böttger et al. (2017). When individuals become inspired by stimuli (brand experience), their organism system transfer their inspired-by status to inspired-to, which leads to individuals' attitudinal, emotional, and behavioral responses.

Third, the proposed research model is robust from two studies. By finding the significant effect of brand experience on eco-friendly behavior, as well as the significant mediating role of inspiration between brand experience and eco-friendly behavior, the consistent result of this study answers the call for research on brand experience on eco-friendly behavior and extends customer inspiration framework.

Fourth, the results also show that personality cannot be a significant moderator in the relationship among brand experience, inspiration, and eco-friendly behavior. One possible explanation would be that the personality trait may be a significant moderation but not Big Five. Different personality measurements should be adopted rather than the Big Five because personality has diverse constructs. Other possible explanation is that individuals present multiple personality traits (Jani & Han, 2015). Therefore, utilizing only one personality trait as a moderator does not have a significant correlation between intrinsic motivation and behavioral responses.

## **Limitations and Future Studies**

Although the findings of this study contribute to the sustainability within hospitality, it has several limitations that can be considered for future research. First, the results of this study can only provide evidence for green hotel experience. Thus, this model must be tested in different settings, such as resort, restaurant, tourism, cruise, or casino. Future research can also include the role of customer inspiration in eco-friendly behavior. Second, the conceptual model was developed based on S–O–R and customer inspiration frameworks. However, other key drivers of customer inspiration or eco-friendly behavior can be examined through different theoretical aspects. Thus, future researchers can measure other consequences, such as co-creation attitude and behaviors based on different theories or frameworks. Third, the customer inspiration scale in this study was adopted from the marketing domain. Thus, future research can develop the customer inspiration scale specifically for the hospitality and tourism domain. Fourth, this study utilized only one personality trait as a moderator and did not find the significant moderating role. Thus, future research can apply multiple personality traits and investigate the differences among groups.

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## Appendix A.1- Approval of Institutional Review Boards



### DIVISION OF RESEARCH Institutional Review Boards

#### APPROVAL OF SUBMISSION

October 25, 2018

Jookyung Kwon

[jkwon@uh.edu](mailto:jkwon@uh.edu)

Dear Jookyung Kwon:

On October 25, 2018, the IRB reviewed the following submission:

Type of Review:	Initial Study
Title of Study:	The effect of brand experience on eco-friendly behavior: Mediating role of customer inspiration and moderating role of personality.
Investigator:	Jookyung Kwon
IRB ID:	STUDY00001281
Funding/ Proposed Funding:	Name: Unfunded
Award ID:	
Award Title:	
IND, IDE, or HDE:	None
Documents Reviewed:	<ul style="list-style-type: none"><li>• Consent, Category: Consent Form;</li><li>• Protocol, Category: IRB Protocol;</li><li>• qualtrics view, Category: Study tools (ex: surveys, interview/focus group questions, data collection forms, etc.);</li><li>• Recruitment, Category: Recruitment Materials</li></ul>
Review Category:	Exempt
Committee Name:	Not Applicable
IRB Coordinator:	<u>Sandra Arntz</u>



The IRB approved the study from October 25, 2018 to October 24, 2023, inclusive.

To ensure continuous approval for studies with a review category of “Committee Review” in the above table, you must submit a continuing review with required explanations by the deadline for the September 2023 meeting. These deadlines may be found on the compliance website (<http://www.uh.edu/research/compliance/>). You can submit a continuing review by navigating to the active study and clicking “Create Modification/CR.”

For expedited and exempt studies, a continuing review should be submitted no later than 30 days prior to study closure.

If continuing review approval is not granted on or before October 24, 2023, approval of this study expires and all research (including but not limited to recruitment, consent, study procedures, and analysis of identifiable data) must stop. If the study expires and you believe the welfare of the subjects to be at risk if research procedures are discontinued, please contact the IRB office immediately.

Unless a waiver has been granted by the IRB, use the stamped consent form approved by the IRB to document consent. The approved version may be downloaded from the documents tab. Attached are stamped approved consent documents. Use copies of these documents to document consent.

In conducting this study, you are required to follow the requirements listed in the Investigator Manual (HRP-103), which can be found by navigating to the IRB Library within the IRB system.

If your study meets the NIH or FDA definitions of clinical trial, or may be published in an ICMJE journal, registration at [ClinicalTrials.gov](http://ClinicalTrials.gov) is required. See the UH [ClinicalTrials.gov](http://ClinicalTrials.gov) webpage for guidance and instructions.

Sincerely,

Research Integrity and Oversight (RIO) Office  
University of Houston, Division of Research  
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<http://www.uh.edu/research/compliance/irb-cp>