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## **FACTORS THAT AFFECT CUSTOMER INTENTION TO REVISIT GREEN HOTELS: THE CASE OF ABU DHABI**

Abdulaziz Faisal Ali Alremeithi

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United Arab Emirates University  
College of Business and Economics

**FACTORS THAT AFFECT CUSTOMER INTENTION TO REVISIT  
GREEN HOTELS: THE CASE OF ABU DHABI**

Abdulaziz Faisal Ali Alremeithi

This dissertation is submitted in partial fulfilment of the requirements for the degree  
of Doctorate of Business Administration

Under the Supervision of Professor Riyadh Eid

November 2021

### Declaration of Original Work

I, Abdulaziz Faisal Ali Alremeithi, the undersigned, a graduate student at the United Arab Emirates University (UAEU), and the author of this dissertation entitled “*Factors that Affect Customer Intention to Revisit Green Hotels: The Case of Abu Dhabi*”, hereby, solemnly declare that this dissertation is my own original research work that has been done and prepared by me under the supervision of Professor Riyadh Eid, in the College of Business and Economics at UAEU. This work has not previously been presented or published, or formed the basis for the award of any academic degree, diploma or a similar title at this or any other university. Any materials borrowed from other sources (whether published or unpublished) and relied upon or included in my dissertation have been properly cited and acknowledged in accordance with appropriate academic conventions. I further declare that there is no potential conflict of interest with respect to the research, data collection, authorship, presentation and/or publication of this dissertation.

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11. 11. 2021

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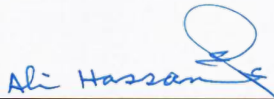
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## Abstract

Given the Abu Dhabi 2008 Estidama sustainability initiative and the Abu Dhabi Economic Vision 2030, hospitality is one of the sectors that can contribute most significantly to the long-term economic growth of Abu Dhabi and have the greatest impact on its environmental and natural resources. The results of this study will enable decision makers to understand why consumers choose green hotels over conventional hotels. The purpose is to expand existing knowledge by investigating the factors that influence customer intention to revisit green hotels from four perspectives: the self-perspective, the prosocial perspective, the business-to-business marketing perspective, and the consumer-to-consumer marketing perspective. The purpose is achieved by developing and testing a framework that integrates the theory of planned behavior (TPB) in an extended form, value belief norm (VBN) theory, corporate identity mix theory (CIMT), and intention to spread word-of-mouth (WOM).

This study adopts a positivist research philosophy and uses a quantitative approach to validate the 30 hypotheses empirically. The measurement instrument is a questionnaire distributed to individuals over the age of 18 who have visited an environmentally responsible hotel during the past three years. Data collected from 316 respondents are analyzed using the structural equation modeling package AMOS 28. The results indicate that the integrated framework has good predictive power for consumer intention to revisit green hotels.

Environmental concerns, willingness to make a sacrifice for the environment, and willingness to pay more for green hotels are found to have an influence on the TPB constructs, with willingness to pay more having the greatest impact. Attitude toward green hotels was the key driver behind consumer intention to revisit green hotels in Abu Dhabi, followed by intention to spread WOM about green hotels, perceived behavioral control toward green hotels, subjective norms toward green hotels, a sense of obligation toward green hotels, and hotel corporate image, in that order. These findings contribute to research in the context of the hospitality sector from a green marketing perspective.



**Keywords:** Abu Dhabi, green hotel, revisit intention, theory of planned behavior (TPB), value belief norm (VBN) theory, corporate identity mix theory (CIMT), intention to spread word-of-mouth

## Title and Abstract (in Arabic)

### تأثير استخدام التسويق الأخضر على نية العميل لإعادة زيارة الفنادق الخضراء: دراسة حالة في امارة أبو ظبي

#### الملخص

أستنادا إلى مبادرة استدامة أبوظبي 2008 ورؤية أبوظبي الاقتصادية 2030 ، فإن الضيافة هي أحد القطاعات التي يمكن أن تساهم بشكل كبير في النمو الاقتصادي طويل الأجل لإمارة أبوظبي ولها أكبر تأثير على مواردها البيئية والطبيعية ، ستمكّن نتائج هذه الدراسة صانعي القرار من فهم سبب اختيار المستهلكين الإقامة في الفنادق الخضراء بدلا من الفنادق التقليدية ، والذي بدوره سيؤدي الى توسيع المعرفة الحالية من خلال التحقيق في العوامل التي تؤثر على نية العميل لإعادة زيارة الفنادق الخضراء من أربع مناهير مختلفه وهي المنظور الذاتي والمنظور الاجتماعي الإيجابي ومنظور التسويق بين الأعمال التجارية ومنظور التسويق من المستهلك إلى المستهلك ، وتمت دراسة هذه المناظير من خلال تطوير واختبار إطار عمل يدمج نظرية السلوك المخطط في شكلها الممتد ونظرية المعيار والإيمان والقيم ونظرية مزيج هوية الشركة ونية نشر الكلام الشفهي.

تتبنى هذه الدراسة فلسفة البحث الوضعي وتستخدم نهجًا كميًا للتحقق من صحة الفرضيات الـ30 تجريبياً ، وأداة القياس عبارة عن استبيان تم توزيعه على الأفراد الذين تزيد أعمارهم عن 18 عامًا والذين زاروا فندقًا مسؤولاً بيئيًا خلال السنوات الثلاث الماضية ، وقد تم تحليل البيانات التي تم جمعها من 316 مستجيبًا باستخدام النمذجة بالمعادلة البنائية بأستعمال برنامج الأموس (AMOS- 28) ، وتشير النتائج إلى أن الإطار المتكامل لديه قوة تنبؤية جيدة لنية المستهلك لإعادة زيارة الفنادق الخضراء.

وقد وجد أن للمخاوف البيئية والاستعداد للتضحية من أجل البيئة والاستعداد لدفع المزيد من أجل الفنادق الخضراء لها تأثير كبير على إنشاءات نظرية السلوك المخطط ، إلا أن الاستعداد لدفع المزيد من أجل الفنادق الخضراء له التأثير الأكبر على إنشاءات نظرية السلوك المخطط ، وإضافه لذلك ، كان الموقف من الفنادق الخضراء هو الدافع الرئيسي وراء نية المستهلك لإعادة زيارة الفنادق الخضراء في أبوظبي تليها نية نشر كلمه اجابيه حول الفنادق الخضراء ومن ثم التحكم السلوكي المتصور تجاه الفنادق الخضراء وتليها المعايير الذاتية تجاه الفنادق الخضراء و



من ثم الشعور بالالتزام تجاه الفنادق الخضراء وأخيرا الصورة الكلية للفندق ، وتساهم هذه النتائج في الابحاث المتعلقة في سياق قطاع الضيافة من منظور التسويق الأخضر.

**مفاهيم البحث الرئيسية:** أبوظبي ، فندق أخضر ، نية إعادة النظر ، نظرية السلوك المخطط (TPB) ، نظرية معيار الإيمان بالقيمة (VBN) ، نظرية مزيج هوية الشركة (CMT) ، والنية لنشر الكلام الشفهي

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## **Dedication**

*To my beloved mother who inspired me to continually seek knowledge and my father who instilled in me the virtues of hard work and to my family for their support and encouragement*

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## List of Abbreviations

AGFI	Adjusted Goodness-of-fit index
AMOS	Analysis of Moment Structures
AVE	Average Variance Extracted
B2B	Business-to-Business
B2C	Business-to-Consumer
C2B	Consumer-to-Business
C2C	Consumer-to-Consumer
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
CIMT	Corporate Identity Mix Theory
CLF	Common Latent Factor
CMV	Common Method Variance
CR	Composite Reliability
CSR	Corporate social responsibility
GCC	Gulf Cooperation Council
GFI	Goodness-of-fit index
KMO	Kaiser-Meyer-Olkin
MSA	Measurement of Sample Adequacy
NFI	Normed Fit Index
PCA	Principal Component Analysis
RMR	Root Mean Square Residual
RMSEA	Root mean square residual
SEM-MLE	Structural Equation Modeling with Maximum Likelihood Estimation

SPSS	Statistical Package for the Social Sciences
TPB	Theory of Planned Behavior
UAE	United Arab Emirates
UAEU	United Arab Emirates University
VBN	Value Belief Norm

## **Chapter 1: Introduction**

### **1.1 Overview**

This chapter is organized as follows. The background to the problem will be explained, and the research problem and research objectives will be set out. On this basis, the research questions will be presented. The motivation of the researcher, the significance and contributions of the research, and its assumptions and limitations will then be discussed.

### **1.2 Background to the Problem**

The hospitality sector has a negative impact on the environment in terms of increasing consumption of water and energy and producing waste (Gössling, Hall, & Scott, 2015; Hall et al., 2016; Hall & Gössling, 2013; Kasim, Gursoy, Okumus, & Wong, 2014; Reid, Johnston, & Patiar, 2017; Stefan, 2010). Moving toward sustainability is therefore vital for the hospitality industry (Jones, Hillier, & Comfort, 2014), and green customer behavior has become a new paradigm in marketing research (Lai & Cheng, 2016). In the tourism sector, in particular, green issues have received considerable attention (Han, Meng, & Kim, 2017; Morren & Grinstein, 2016).

Accommodation has the biggest negative effects on the environment (Bohdanowicz, 2006; Hobson & Essex, 2001; Kasim, 2009), especially hotels, which consume large amounts of natural resources and produce significant quantities of greenhouse gases (Alzboun, Khawaldah, Backman, & Moore, 2016). Many hotels have implemented sustainability programs with the aim of increasing consumer revisit intention (Han, 2015). These hotels have made efforts to reduce their impact on the

environment (Kasavana, 2008; Kim & Han, 2010), and this has led to the emergence of the concept of green hotels: hotels that are committed to various environmental initiatives in order to protect the environment (Han & Yoon, 2015; Rahman & Reynolds, 2016). Awareness of green consumption has seen remarkable growth among consumers (Ko, Hwang, & Kim, 2013; Lee, Hsu, Han, & Kim, 2010; Line & Hanks, 2016; Paul, Modi, & Patel, 2016; Yadav, Dokania, & Pathak, 2016a) and among businesses (Paul et al., 2016; Tang & Lam, 2017; Yadav et al., 2016a).

A rapidly increasing number of consumers prefer to visit green hotels (Chen & Tung, 2014; Han, 2015; Han, Hsu, & Sheu, 2010). During recent decades, hotels have been remarkably active in terms of environmentally responsible development (Singh, Cranage, & Lee, 2014; Trang, Lee, & Han, 2019), and their efforts are particularly evident in the fields of waste reduction and water conservation (Goldstein, 2009; Han & Hyun, 2018b; Singh et al., 2014; Untaru, Ispas, Candrea, Luca, & Epuran, 2016). Accordingly, green hotels have become one of the keys to the success of the accommodation industry (Jauhari & Manaktola, 2007; SW Chan, 2013).

In recent years, the hospitality industry has been increasingly involved in corporate social responsibility (CSR) activities. Numerous CSR initiatives have been implemented in many hotels (Bohdanowicz & Zientara, 2009; Lee & Heo, 2009). Nevertheless, the operational costs of complying with environmental regulations (Kang, Stein, Heo, & Lee, 2012; Leonidou, Leonidou, Fotiadis, & Aykol, 2015) and of appealing to green travelers (Chan & Hawkins, 2012) pose considerable challenges for hotels. Competitive advantage is related positively to hotel performance (Wang, Font, & Liu, 2019). At the same time, green hotels can lower their operational costs, thereby improving their image and helping to attract green consumers (Chen & Peng, 2012; Chen & Tung, 2014; Chou, Chen, & Wang, 2012; Farrington, Curran, Gori,

O’Gorman, & Queenan, 2017; Jones, Hillier, & Comfort, 2016; Kim, Lee, & Fairhurst, 2017; Nicholls & Kang, 2012; Tang & Lam, 2017) and securing a competitive advantage (Erdem & Tetik, 2013; Fotiadis, Vassiliadis, & Piper, 2014). Thus, lack of green knowledge (Chan, 2008, 2011; Lay, Ahmad, & Ming, 2017), lack of green awareness (Lay et al., 2017), and lack of customer experience are barriers to the adoption of greener practices in hotels (Chan, Okumus, & Chan, 2020).

The environmental impacts of the hotel industry include food waste, cooking oil waste, cans, plastics, and other garbage, all of which contribute to greenhouse gas emissions (Singh et al., 2014; Wyngaard & De Lange, 2013). Compared to other facilities in the commercial sector, hotels produce approximately 45% as much solid waste (Bacot, McCoy, & Plagman-Galvin, 2002), and their options for reducing their environmental impact include changes to materials, product design and packaging, and disposal (Chen, Lai, & Wen, 2006; Chiou, Chan, Lettice, & Chung, 2011). Environmental protection and economic benefits are achievable through effective waste reduction management and a move toward greener practices (Bohdanowicz, 2009; Bonilla Priego, Najera, & Font, 2011; Chiou et al., 2011; Eiadat, Kelly, Roche, & Eyadat, 2008; Singh et al., 2014). Green hotels have in some cases recorded stronger performance than hotels that have not yet implemented green practices (Segarra Oña, Peiró Signes, & Verma, 2011).

In recent years, consumer preferences have tended toward green products and practices aimed at saving the environment (Han, Hsu, & Lee, 2009; Han et al., 2010; Han & Yoon, 2015; Chan, 2013). Interest in purchasing eco-friendly products and services is driving consumers away from traditional hotels and toward green hotels (Chan, 2013), and the majority of hotels are aware of the advantages of green practices such as LED lighting, occupancy detectors, and in-room smart key systems for

controlling electricity use (Chan, Okumus, & Chan, 2017). Hotels with a strong green reputation can increase revisit intention from environmentally sensitive consumers (Pereira-Moliner et al., 2015; Chan, 2013). Environmental concerns (Lee, Kim, Kim, & Choi, 2014; Onwezen, Antonides, & Bartels, 2013; Van der Werff, Steg, & Keizer, 2013a; Zimmer, Stafford, & Stafford, 1994) and environmental awareness (Hurst, Dittmar, Bond, & Kasser, 2013; Onwezen et al., 2013; Van der Werff et al., 2013a) are essential components of pro-environmental decisions and behaviors. Sustainability concerns are linked to green marketing (Sima, 2013), which is the marketing of products that are assumed to be environmentally friendly (Polonsky, 1999) in order to reduce waste, as well as the reinvention of product concepts (Pride et al., 2006). In this connection, there is increasing interest in consumers' green behaviors.

The damage to the natural environment caused by human activities is substantial (Gardner & Stern, 2002; Steg & Vlek, 2009). In some instances, the harmful impact can be perceived, as in the case of oil spills, exhaust fumes, or litter in the street. More often, however, the human impact on the environment is less easily perceived. People usually do not see the smoke from oil that is burned to generate the electricity that powers cities, or the impact of deforestation on wild animals. Thus, solving environmental problems requires a level of understanding that can motivate changes to human behavior. In the context of hotels, however, relatively little effort has been made to identify the factors that influence purchase decisions regarding green hotels, and this is a necessary first step in building consumers' positive intention to visit and revisit green hotels (Han & Back, 2008).



### **1.3 Statement of the Problem**

The research problem to be explored here is the identification of the factors that affect customer intention to revisit green hotels in the Abu Dhabi context. It is necessary to address this problem both for purposes of academic research and for the practical implications. With the rapid development of Abu Dhabi, more and more visitors and residents are using hotels for recreation and lodging; if they choose green hotels, this will have a positive impact on the environment. Unfortunately, very few studies have investigated consumer revisit intentions toward green hotels in the Abu Dhabi context. Therefore, this study empirically assesses the effect of the self-perspective, the prosocial perspective, the firm marketing perspective, and the consumer marketing perspective on consumer intention to revisit green hotels.

### **1.4 Research Objectives**

This research has the following primary objectives:

- To present a novel integrated model that predicts the influence of the self-perspective, the prosocial perspective, the firm marketing perspective, and the consumer marketing perspective on consumer intention to revisit green hotels;
- To identify the key impact factors for promoting consumer intention to revisit green hotels;
- To contribute to green research by studying the concept of green in the context of the hospitality industry from the green marketing perspective;
- To use an extension of TPB with five antecedents, VBN, CIMT, and intention to spread WOM to provide a better response to the research question than previous research (which has focused on either TPB or VBN);

- To provide useful implications for policy makers in the hotel industry, in the form of insight into the core factors that promote green revisit intention, and to support them in leveraging their firms' capabilities and resources and generating competitive advantage;
- To clarify the complex relationships among environmental concerns, environmental awareness, willingness to pay more for green hotels, willingness to make a sacrifice for the environment, frequency of staying at green hotels, and attitude, subjective norms, and perceived behavioral control toward green hotels when generating green hotel revisit intentions;
- To test the applicability of the extended TPB framework;
- To assess the factors that contribute to consumer intentions toward green hotels;
- To establish how hotels can secure a sustained competitive advantage from the adoption of green practices;
- To explore effective strategies for improving corporate hotel image on the basis of the empirical results; and
- To bridge the research gap by examining the different consumer needs that lead to positive intention to revisit green hotels.

### **1.5 Research Questions**

This research assesses the effectiveness of adopting the self-perspective, the prosocial perspective, the firm marketing perspective, and the consumer marketing perspective in relation to consumer intention to revisit green hotels. A literature review was performed to formulate the research questions set out in Table 1.

Table 1: Research questions

#	Research Questions
	Research question related to the factors that affect customer intention to revisit green hotels in the Abu Dhabi context
<b>RQ1</b>	To what extent do the self-perspective, the prosocial perspective, the B2C marketing perspective, and the C2C marketing perspective affect consumer intention to revisit green hotels?
	Research questions related to the self-perspective
<b>RQ2</b>	What self-perspective factors affect consumer intention to revisit green hotels?
<b>RQ2.1</b>	To what extent does consumer attitude toward green hotels affect intention to revisit green hotels?
<b>RQ2.2</b>	To what extent do consumer subjective norms toward green hotels affect intention to revisit green hotels?
<b>RQ2.3</b>	To what extent does consumer perceived behavioral control toward green hotels affect intention to revisit green hotels?
<b>RQ2.4</b>	To what extent do environmental concerns, environmental awareness, willingness to pay more for green hotels, willingness to make a sacrifice for the environment, and frequency of staying at green hotels affect consumer attitudes toward green hotels?
<b>RQ2.5</b>	To what extent do environmental concerns, environmental awareness, willingness to pay more for green hotels, willingness to make a sacrifice for the environment, and frequency of staying at green hotels affect consumer subjective norms toward green hotels?
<b>RQ2.6</b>	To what extent do environmental concerns, environmental awareness, willingness to pay more for green hotels, willingness to make a sacrifice for the environment, and frequency of staying at green hotels affect consumer perceived behavioral control toward green hotels?

Table 1: Research questions (Continued)

#	Research Questions
Research questions related to the prosocial perspective	
<b>RQ3</b>	What prosocial factors affect consumer intention to revisit green hotels?
<b>RQ3.1</b>	To what extent does a sense of obligation to take pro-environmental action in relation to green hotels affect consumer intention to revisit green hotels?
<b>RQ3.2</b>	To what extent do consumer values toward green hotels affect the consumer's sense of obligation to take a pro-environmental action?
<b>RQ3.3</b>	To what extent does awareness of the consequences of using hotels affect consumer intention to revisit green hotels?
Research questions related to the B2C marketing perspective	
<b>RQ4</b>	What green hotel B2C marketing perspective factors affect consumer intention to revisit green hotels?
<b>RQ4.1</b>	To what extent does hotel corporate image affect consumer intention to revisit green hotels?
<b>RQ4.2</b>	To what extent do green hotel green activities, green hotel green communication, and green hotel green image affect hotel corporate image?
Research question related to the C2C marketing perspective	
<b>RQ5</b>	To what extent does intention to spread word-of-mouth about green hotels affect consumer intention to revisit green hotels?

### 1.6 Motivation of the Researcher

Improving consumer intention toward hotels is a major goal in the hospitality sector (Han, 2013; Jani & Han, 2013, 2014; McCall & Voorhees, 2010; Tanford, Raab, & Kim, 2012). Although previous studies have examined human intention to revisit green hotels from the self-perspective and/or the prosocial perspective, there is a scarcity of research in the marketing context. According to Armstrong, Adam, Denize,

and Kotler (2014), consumer intention can be investigated from four perspectives: the self-perspective, the prosocial perspective, the firm marketing perspective, and the consumer marketing perspective. Some researchers have used the VBN theory to investigate consumer intention to revisit green hotels generally (Stern, Dietz, Abel, Guagnano, & Kalof, 1999), under the hypothesis that environmentally responsible intentions are stimulated by prosocial motives. Other researchers have used TPB (Ajzen, 1991) to hypothesize green intention as a self-interest motive. However, the influence of green hotel marketing on consumer intention to revisit green hotels has received little attention. Moreover, the direct relationship between consumer intention to spread positive WOM about green hotels and green hotel revisit intention has almost never been investigated. To date, there has been no investigation of consumer intention to revisit green hotels from all four perspectives taken together (self-perspective, prosocial perspective, firm marketing perspective, and consumer marketing perspective).

### **1.7 Significance and Contributions**

Choosing to visit a hotel that is green will have positive impacts on the environment. Unfortunately, almost no studies of consumer revisit intention toward green hotels in the Abu Dhabi context have been conducted. Although previous studies have examined consumer intention to revisit green hotels from the self-perspective and the prosocial perspective, there is a lack of research that adopts all four perspectives (namely, the self-perspective, the prosocial perspective, the firm marketing perspective, and the consumer marketing perspective) (Armstrong et al., 2014).

The present study adopts a distinctive approach to investigating the factors that affect consumer intention to revisit green hotels; it includes multiple perspectives, and

it develops a comprehensive framework and tests it empirically. Since, to the best of the researcher's knowledge, this has not been attempted before, this study adds to the current literature. In particular, it makes four main contributions to the tourism and hospitality literature: (a) It develops a robust framework that predicts the influence of the self-perspective, the prosocial perspective, the firm marketing perspective, and the consumer marketing perspective on consumer intention to revisit green hotels; (b) It measures and tests relationships that have not been measured or tested in previous studies, thereby providing new insights into intention to revisit and opening the door for future studies that explore such relationships further; (c) It clarifies the role of the study variables in consumer intention to revisit green hotels; (d) It answers the question of what factors affect customer intention to revisit green hotels in the case of Abu Dhabi.

This research will make a novel contribution to the literature by providing an integrated model that predicts the influence of the self-perspective, the prosocial perspective, the firm marketing perspective, and the consumer marketing perspective on consumer intention to revisit green hotels. Although previous studies have examined consumer intention to revisit green hotels from the self-perspective and/or prosocial perspective, there has been a lack of research from a marketing perspective, especially in the context of the Gulf Cooperation Council (GCC).

This study seeks to clarify the effect of green marketing on customer intention to revisit green hotels. The findings will benefit the lodging sector by generating a better understanding of consumer intention to revisit green hotels. Marketing is an important aspect of the lodging business, and this study provides important information in respect of green marketing and hospitality. It increases our understanding of how to develop strategies that shift consumer intention away from

traditional hotels and toward hotels that implement green practices to help the environment. The value of the study is therefore that it enables the development of marketing tools that are likely to provide a better return on investment for green hotels. Choi, Jang, and Kandampully (2015) noted the lack of studies seeking to understand the factors that underlie green purchase decisions. The principal aim of the present research is therefore to offer a better account of consumers' decision-making process in relation to pro-environmental behaviors.

A majority of studies aiming to predict consumer environmental behaviors have used TPB (Choi et al., 2015). However, Rahman and Reynolds (2016) have emphasized that environmental behaviors are not always driven by rational self-interest. Therefore, there is a need to integrate novel theories in order to have a range of perspectives from which to systematically explain consumer intentions to revisit green hotels. Integration of psychological factors (such as subjective norms, perceived behavioral control, and attitude) and specific attitude factors (such as environmental concerns, environmental awareness, willingness to pay more for green hotels, willingness to make a sacrifice for the environment, and frequency of staying at green hotels) will make it possible to explain the inconsistencies that characterize previous hospitality and tourism studies on green hotel revisit intention.

According to Myung, McClaren, and Li (2012), a major gap in the hospitality literature is a thorough understanding of consumers' eco-friendly behavior. Likewise, there has been a lack of exploration of values, particularly altruistic values, in relation to green hotels (Teng, Wu, & Liu, 2015). This study is one of the first attempts to integrate TPB, VBN theory, CIMT, and consumer marketing perspectives to determine the factors that influence consumer intention to revisit green hotels in the Abu Dhabi context.

## 1.8 Definition of Terms

The conceptual definitions in Table 2 are provided to inform the reader of the meanings given to the key terms in the present study. It should be noted that all the definitions have been developed and customized to serve the purposes of the research.

Table 2: Definitions of research terms

<b>Term</b>	<b>Definition</b>
<b>Altruistic values</b>	Altruism is the willingness to do things that bring advantages to others without expecting self-advantages in return (Piliavin & Charng, 1990; Rushton, 1980; Stern, Dietz, & Kalof, 1993; Teng et al., 2015; Wuthnow, 1993).
<b>Attitude toward green hotels</b>	An attitude is an individual's favorable or unfavorable evaluation that arises when engaging in certain behaviors (Ajzen, 1991; Aman, Harun, & Hussein, 2012; Chen & Tung, 2014; Han et al., 2009; Tonglet, Phillips, & Read, 2004).
<b>Awareness of consequences of using hotels</b>	Awareness of the consequences of using hotels is the extent to which someone is aware of the adverse consequences of not acting pro-socially when using hotels (Steg & De Groot, 2010, p. 725).
<b>Belief</b>	Belief is "the feeling of being certain that something exists or is true" (Cambridge Dictionary, 2021a).



Table 2: Definitions of research terms (Continued)

<b>Term</b>	<b>Definition</b>
<b>Biospheric values</b>	Biospheric values reflect individual concerns about the biosphere and the environment (De Groot & Steg, 2007, 2008; Han, 2015; Stern, 2000; Stern et al., 1999; Van Riper & Kyle, 2014). Biospheric values can be described as the belief that one of the important goals of life is to protect the environment (Boomsma & Steg, 2014).
<b>Consumer behavior</b>	Kardes, Cline, and Cronley (2011, p. 7) defined consumer behavior as “all activities associated with the purchase, use and disposal of goods and services, including the consumer’s emotional, mental and behavioral responses that precede or follow these activities.” According to the American Marketing Association, consumer behavior is “the dynamic interaction of affect and cognition, behavior, and environmental events by which human beings conduct the exchange aspects of their lives” (Olson, 2005, p. 5). For Kardes et al. (2011), consumer behavior includes all activities related to a purchase, in addition to the consumer’s emotional, mental, and behavioral responses.
<b>Consumer intention</b>	Behavioral intention is commonly defined as an indication of an individual’s readiness to perform a given behavior (Ajzen, 1985, 1991; Han et al., 2010; Oliver Richard, 1997; Oliver, 2014; Zeithaml, Berry, & Parasuraman, 1996). This definition is expanded here to include the

Table 2: Definitions of research terms (Continued)

<b>Term</b>	<b>Definition</b>
	willingness to repurchase services or products after a certain experience, to recommend a positive experience to others, or to pay more (Han & Back, 2008; Namkung & Jang, 2007; Zeithaml et al., 1996).
<b>Environmental awareness</b>	Environmental awareness is a consumer's ability to recognize environmental symbols, concepts, and behavior (Laroche, Bergeron, & Barbaro-Forleo, 2001) and their ability to identify the hazardous impact and consequences of human behavior on the environment (Kollmuss & Agyeman, 2002). Do PacO and Raposo (2009); Kim and Han (2010) define environmental awareness as consumers' worries about environmental problems.
<b>Egoistic values</b>	According to Oxford Learner's Dictionaries (2021), egoism is "thinking that you are better or more important than anyone else." Egoistic values reflect a key concern for the self rather than for others (De Groot & Steg, 2007, 2008; Stern, 2000; Stern et al., 1999; Stern et al., 1993). Accordingly, egoistic values concern the maximization of personal well-being (self-welfare) and one's own outcomes. Therefore, consumers with egoistic values will evaluate green behaviors on the basis of perceived personal costs and benefits.

Table 2: Definitions of research terms (Continued)

<b>Term</b>	<b>Definition</b>
<b>Environmental concerns</b>	Environmental concerns have been defined as an individual's conscious level of evaluation of problems regarding the environment (Do PacO & Raposo, 2009; Fransson & Gärling, 1999; Hu, Parsa, & Self, 2010; Milfont & Gouveia, 2006; Schwartz, 1977; Weigel & Weigel, 1978) and their willingness to expend effort and give support in order to solve those problems (Hu et al., 2010).
<b>Frequency of staying at green hotels</b>	As the number of past experiences increases, the degree of their influence on consumer behavior increases. Hence, this research investigates the impact of the increasing number of green hotel past experiences and their influence on the TPB constructs, which in turn influence green hotel revisit intention.
<b>Green</b>	Green is interpreted by Wolfe and Shanklin (2001) as referring to actions, such as recycling and eco-purchasing, that lead to a decrease in harmful impacts on the environment.
<b>Green consumer</b>	Green consumers are consumers who avoid consuming products that are harmful to health or that have a high impact on the environment throughout their production and commercialization (Hailes, Elkington, & Makower, 1993).

Table 2: Definitions of research terms (Continued)

<b>Term</b>	<b>Definition</b>
<b>Green consumption</b>	Green consumption is the practice of using environmentally friendly products that do not cause risk to human health and do not threaten the diversity of natural ecosystems (Urban, Bahník, & Kohlová, 2019).
<b>Green hotel</b>	According to Millar and Baloglu (2011) and Rahman and Reynolds (2016), the definition of a hotel as a green hotel is based on its degree of implementation of environmental practices, such as saving energy and water and reducing waste (Rahman & Reynolds, 2016).
<b>Green hotel green activities</b>	Green hotel green activities are the environmentally friendly ways in which a hotel and its employees act, such as providing green services, using certified green-label products, increasing the use of green services, and conserving energy.
<b>Green hotel identity</b>	Green hotel identity is the sum of the ways a green hotel chooses to identify itself to all its publics.
<b>Green hotel green communication</b>	Green hotel green communication is everything that individuals receive through green hotel communication channels, including advertisements (on television, online, and in print), public relations activities, sales promotions, and sponsorship activities.
<b>Green hotel green image</b>	Green hotel green image is what individuals see in terms of a green hotel's green image from different aspects, such as whether the hotel is professional, successful, trustworthy,

Table 2: Definitions of research terms (Continued)

<b>Term</b>	<b>Definition</b>
	and concerned for consumers in its green practices, and whether it has a good reputation for implementing those practices.
<b>Green marketing</b>	Green marketing refers to an organization's efforts to design, promote, price, and distribute products that have no bad effect on the environment (Pride et al., 2006).
<b>Green product</b>	Green products are products with low environmental impacts.
<b>Green service</b>	Green services are services that benefit the environment or conserve natural resources.
<b>Hotel corporate image</b>	Hotel corporate image is what comes to the minds of individuals when they see or hear about a green hotel.
<b>Intention to spread word-of-mouth about green hotels</b>	Intention to spread word-of-mouth about green hotels is the willingness of an individual to recommend and say positive things about green hotels.
<b>Perceived behavioral control toward green hotels</b>	Perceived behavioral control is defined as the perception of how well an individual performs a specific behavior in terms of ease or difficulty (Ajzen, 1991; Fishbein & Ajzen, 1980; Huchting, Lac, & LaBrie, 2008).
<b>Prosocial perspective</b>	Prosocial behavior is "voluntary behavior intended to benefit another" (Eisenberg & Mussen, 1989, p. 3).
<b>Revisit</b>	Revisit means to visit again.
<b>Self-interest</b>	Self-interest is the individual's concern about his/her own advantage and well-being.

Table 2: Definitions of research terms (Continued)

<b>Term</b>	<b>Definition</b>
<b>Sense of obligation toward green hotels</b>	A sense of obligation to take pro-environmental action can be defined “as feelings of strong moral obligation to engage in altruistic or green behavior” (Schwartz, 1977).
<b>Subjective norms toward green hotels</b>	Subjective norms are a form of social pressure on an individual to engage or not engage in a particular behavior (Ajzen, 1991; Fishbein & Ajzen, 1980; Han & Kim, 2010; Kim & Han, 2010; Tonglet et al., 2004).
<b>Sustainability</b>	According to the United Nations (1987, p. 41), sustainability entails “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”
<b>Value</b>	According to Schwartz (1994, p. 21), a value is “a desirable trans-situational goal varying in importance, which serves as a guiding principle in the life of a person or other social entity.”
<b>Willingness to make sacrifices for the environment</b>	According to Davis, Le, and Coy (2011), willingness to make sacrifices for the environment entails the expense of immediate self-interest, effort, or cost in order to benefit the environment.
<b>Willingness to pay more for green hotels</b>	Willingness to pay more for green hotels is the consumer’s readiness to pay an additional amount to stay at a green hotel compared to the cost of staying at a conventional hotel.

## **1.9 Dissertation outline**

Chapter 1, the introduction, explains the background to the problem of consumer intention to revisit green hotels and develops the statement of the research problem. The purpose of the study and the research questions are then presented, along with the motivation of the researcher, the significance and contributions of the study, the definitions of key terms, and the assumptions and limitations to note. Chapter 2, the literature review, discusses the elements of consumer eco-friendly behavior, the appropriate theories for answering the research questions of this study, and the research framework. Chapter 3, the methodology section, discusses in detail the research paradigm used to address the research questions, explaining the design of the questionnaire, the sampling strategy adopted, and the ethical considerations. Chapter 4, the purification of measures and descriptive analysis section, sets out the process of data screening, descriptive analysis, reliability analysis, and validity analysis. Chapter 5, the model and hypothesis testing section, discusses the measurement model and tests the hypotheses. Chapter 6, the discussion, implications, and recommendations section, summarizes the statistical results and explains how they answer the research questions. It also sets out the implications of the present study, considers its limitations, and makes recommendations for future research. Chapter 7, the conclusion, summarizes the research questions and the findings.

## **1.10 Chapter 1 Summary**

In Chapter 1, the background to the problem has been explained, the key terms have been defined, and the research problem has been stated and discussed; the objectives, questions, motivation, significance, and contributions of the research have also been presented.

## **Chapter 2: Literature Review**

### **2.1 Overview**

According to Webster and Watson (2002), the objectives of a literature review are to develop a theoretical framework and define key terms. This literature review is organized as follows. First, the research framework will be developed and the research conceptual framework set out. Then, the research conceptual framework components will be investigated by discussing in detail and applying the theory of planned behavior (TPB), value belief norm (VBN) theory, corporate identity mix theory (CIMT), and consumer marketing from the self-perspective. The research constructs will then be presented and the relationships among them established, allowing the hypotheses to be developed and the framework to be built and finalized.

### **2.2 Development of Research Conceptual Framework**

#### **2.2.1 Overview**

The purpose of a conceptual framework is to identify the research variables and to clarify the relationships among these variables. As mentioned earlier in the statement of the problem, the purpose of this research is to identify the factors that influence the intention of consumers in revisiting a green hotel. Accordingly, in this section, the research framework will be developed by extracting the elements that influence consumer behavior from three aspects: consumer behavior, characteristics affecting consumer behavior, and the buyer decision process (as addressed by Armstrong et al., 2014). The concept of sustainability in the hospitality sector will then be presented, green hotels will be linked to the elements that influence consumer behavior, and green behavior and green hotel revisit intention will be defined. Finally,



the research conceptual framework will be finalized by proposing suitable constructs and selecting theories that are applicable to the research context.

### **2.2.2 Consumer Behavior**

A key challenge for marketers is understanding purchasing and consumption behavior. Consumer behavior is an important subdiscipline within marketing. Numerous numbers of marketing researchers are interesting in understanding the consumer behaviors. Accordingly, a rebound happened in the marketing discipline from research perspective and theory development (Schivinski, 2019). The term consumer can refer to a person or a group who intends to purchase products or services. Kardes et al. (2011, p. 7) defines consumer behavior as “all activities associated with the purchase, use and disposal of goods and services, including the consumer’s emotional, mental and behavioral responses that precede or follow these activities.” According to the American Marketing Association, consumer behavior is “the dynamic interaction of affect and cognition, behavior, and environmental events by which human beings conduct the exchange aspects of their lives” (Olson, 2005, p. 5). For Kardes et al. (2011), consumer behavior includes all activities related to a purchase, in addition to the consumer’s emotional, mental and behavioral responses.

### **2.2.3 Characteristics Affecting Consumer Behavior**

According to Armstrong et al. (2014), factors influencing consumer behavior are strongly influenced by cultural, social, personal and psychological influences, as shown in Figure 1. Culture has an influence on consumer wants and behavior. The consumer learns basic values, perceptions, wants, and behaviors from the family and other important institutions. Peers, family, friends, neighbors, and fellow workers can act as a reference for the consumer, and they have influence on the consumer’s

purchase decisions; hence, consumer behavior is influenced by social factors. Personal factors such as age and life-cycle stage, occupation, economic situation, lifestyle, personality, and self-concept can also shape a consumer's attitude and influence purchase decision. In terms of psychological factors, consumer buying choices are influenced by motivation, perception, learning, and beliefs and attitudes. A belief is a descriptive thought that a person has about something, such as awareness of consequences. An attitude describes a person's relatively consistent evaluations, feelings, and tendencies toward an object or idea; for example, consumers have attitudes regarding religion, politics, clothes, music, and food.

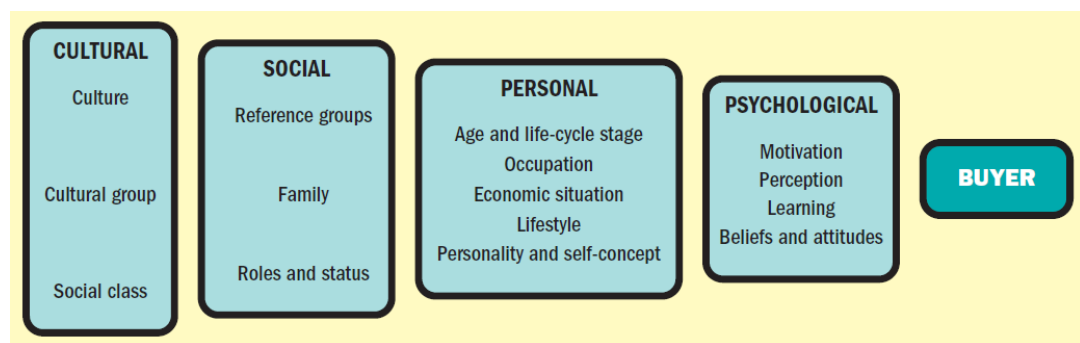


Figure 1: Factors influencing consumer behavior (Armstrong et al., 2014)

#### 2.2.4 The Buyer Decision Process

The buyer decision process model is one of the most common models of the consumer decision-making process. It involves five stages, as shown in Figure 2: recognition of a need or problem, information search, comparing the alternatives, purchase, and post-purchase evaluation. The model's core focus on motivational factors helps to understand the reasons behind a purchasing decision (Blackwell, Engel, & Miniard, 2006).



Figure 2: Buyer decision process (Armstrong et al., 2014)

The first stage of the model is recognition of a need or problem, and the strength of that need drives the entire decision process (Armstrong, 1991). A problem arises for a consumer when he or she recognizes a difference between the current state and the desired state (Brunner, Nelen, Breakefield, Ropers, & Van Oost, 1993). Accordingly, in order to recognize a need or problem, the consumer must have some level of awareness and interest (or concerns) about the product or service that will drive the realization of that difference. A range of situations and circumstances, personal and professional, can influence the recognition of a need or problem and these situations or circumstances (Quester et al., 2007).

The second stage of the model is information search. The consumer is likely to search for more product-related information after recognizing the need and before directly making a purchase decision. There are different channels for obtaining the necessary information, including experience, knowledge, awareness, and company advertising. In addition, colleagues, peers, friends, and family members are an important source of information (Kahle & Close, 2011).

The third stage of the model is evaluation of alternatives. When the consumer has the information, he or she can start analyzing, comparing, and evaluating it in order to make the right choice between the products and services available. At this stage, the consumer will consider various aspects of the product, such as size, quality, brand, convenience and price. In addition, the consumer will evaluate his or her own

willingness to pay more, and perhaps make sacrifices, for a specific product or service. If the consumer feels some kind of obligation, this will definitely impact the evaluation.

The fourth stage of the model is purchase. Once the information search and evaluation processes are complete, the consumer makes the purchasing decision. The fifth and final stage of the consumer decision making process is post-purchase behavior. At this stage, the consumer has an experience of purchasing a product or service that will influence future purchase decision processes (Foxall, 2005; Gilly & Gelb, 1982), as the consumer will examine and compare product features in light of certain expectations (Gupta, Su, & Walter, 2004). According to Ofir and Simonson (2007), the consumer decision-making process is a repetitive action. Therefore, a consumer with a positive experience will purchase again, creating a pattern of behavior. The opinions of peers, friends, and family members will also influence the outcome of post-purchase evaluation (Perrey & Spillecke, 2011).

### **2.2.5 Consumer Behavior Elements**

For any product or service, consumer behavior can be influenced by the elements extracted from the characteristics affecting consumer behavior and the buyer decision process, as summarized in Table 3.

Table 3: Identifying consumer behavior elements

Consumer behavior element	Extracted from
<b>Attitude</b>	<p><b>Characteristics affecting consumer behavior</b> Personal factors: Personal factors can shape a consumer's attitude and influence purchase decisions.</p> <p><b>Characteristics affecting consumer behavior</b> Psychological factors: Consumers have attitudes regarding, for example, religion, politics, clothes, music, and food. An attitude describes a person's relatively consistent evaluations, feelings and tendencies toward an object or idea.</p>
<b>Awareness of consequences</b>	<p><b>Characteristics affecting consumer behavior</b> Psychological factors: A belief is a descriptive thought that a person has about something, such as awareness of consequences.</p>
<b>Awareness of the problem</b>	<p><b>Buyer decision process</b> Recognition of a need or problem: The consumer has some level of awareness and interest (concerns) about the product or service that will drive a realization of the difference between the current state and the desired state.</p> <p><b>Buyer decision process</b> Information search: The consumer is likely to search for more product-related information after recognizing the need and before directly making a purchase decision. There are different channels for obtaining information, including experience, knowledge, awareness, and</p>

Table 3: Identifying consumer behavior elements (Continued)

Consumer behavior element	Extracted from
	company advertising. In addition, colleagues, peers, friends, and family members are an important source of information.
<b>Basic values</b>	<p><b>Characteristics affecting consumer behavior</b>            Culture: Cultural factors have an influence on a consumer wants and behavior. From the family and other important institutions, the consumer learns basic values, perceptions, wants and behaviors.</p>
<b>Firm marketing</b>	<p><b>Characteristics affecting consumer behavior</b>            Psychological factors: motivation, perception, and learning</p> <p><b>Buyer decision process</b>            Information search: The consumer is likely to search for more product-related information after recognizing the need and before directly making a purchase decision. There are different channels for obtaining information, including experience, knowledge, awareness, and company advertising.</p>
<b>Frequency of past behavior</b>	<p><b>Characteristics affecting consumer behavior</b>            Psychological factors: learning</p> <p><b>Buyer decision process</b>            Information search: The consumer is likely to search for more product-related information after recognizing the need and before directly making a purchase decision. There are different channels for obtaining information, including</p>

Table 3: Identifying consumer behavior elements (Continued)

<b>Consumer behavior element</b>	<b>Extracted from</b>
	<p>experience, knowledge, awareness, and company advertising.</p> <p><b>Buyer decision process</b></p> <p>Post-purchase behavior: At this stage, the consumer has an experience of purchasing a product or service, and this experience will influence future purchase decision processes. Accordingly, a consumer with a positive experience will purchase again, thus creating a pattern of behavior.</p>
<b>Interest (concerns) about the problem</b>	<p><b>Buyer decision process</b></p> <p>Recognition of a need or problem: The consumer has some level of awareness and interest (concerns) about the product or service that will drive a realization of the difference between the current state and the desired state.</p>
<b>Obligation</b>	<p><b>Buyer decision process</b></p> <p>Evaluation of alternatives: If the consumer feels some kind of obligation, this will impact the evaluation.</p>
<b>Spread of information</b>	<p><b>Buyer decision process</b></p> <p>Colleagues, peers, friends, and family members are an important source of information.</p>
<b>Subjective norms</b>	<p><b>Characteristics affecting consumer behavior</b></p> <p>Social factors: Peers, family, friends, neighbors, and colleagues can act as a reference for the consumer and influence the purchase decision.</p>

Table 3: Identifying consumer behavior elements (Continued)

Consumer behavior element	Extracted from
	<p><b>Buyer decision process</b></p> <p>Information search: The consumer is likely to search for more product-related information after recognizing the need and before directly making a purchase decision. There are different channels for obtaining information, including experience, knowledge, awareness and company advertising. In addition, colleagues, peers, friends, and family members are an important source of information.</p> <p><b>Buyer decision process</b></p> <p>Post-purchase behavior: Opinions of peers, friends, and family members will influence the outcome of post-purchase evaluation.</p>
<b>Willingness to make a sacrifice</b>	<p><b>Buyer decision process</b></p> <p>Evaluation of alternatives: The consumer during this process may evaluate his or her willingness to make a sacrifice for a specific product or service.</p>
<b>Willingness to pay more</b>	<p><b>Buyer decision process</b></p> <p>Evaluation of alternatives: The consumer at this stage will evaluate his or her willingness to pay more for a specific product or service.</p>

### 2.2.6 Sustainability in the Hospitality Sector

Sustainability aims to maintain current natural resources for the coming generations (Gladwin, Kennelly, & Krause, 1995). According to the United Nations (1987, p. 41), sustainability entails “development that meets the needs of the present



without compromising the ability of future generations to meet their own needs.” Sustainability focuses on three areas of performance: economic, social, and environmental (Carter & Easton, 2011; Carter & Rogers, 2008; United Nations General Assembly, 2005). The environmental perspective aims to reduce pollution and gas emissions (Jaillon, Poon, & Chiang, 2009), decrease water usage (Shrestha, 2016; Zhang, Shen, & Wu, 2011) and encourage the use of eco-friendly materials (Hassan, 2006).

In 2008, the Abu Dhabi Urban Planning Council initiated Estidama, the first sustainable construction practice in the Middle East region (Madden, 2015). Estidama is the Arabic word for sustainability and a pillar of Abu Dhabi Vision 2030 (Alobaidi, Rahim, Mohammed, & Baqutayan, 2015). Estidama aims to improve local construction practices to achieve greener building standards (Alobaidi et al., 2015) and preserve the environmental assets and natural resources of Abu Dhabi (Madden, 2015) by reducing energy and water consumption and building green residential areas.

### **2.2.7 Green Hotels**

There is a scholarly consensus that terms such as environmentally responsible, eco-friendly, environmentally friendly, sustainable, and environmentally oriented are alternative terms for green (Han, 2015; Han et al., 2009; Jauhari & Manaktola, 2007; Kalafatis, Pollard, East, & Tsogas, 1999; Laroche et al., 2001; Pizam, 2009; Roberts, 1996). Green is interpreted by Wolfe and Shanklin (2001) as referring to actions, such as recycling and eco-purchasing, that lead to a decrease in harmful impacts on the environment. The term is widely used in the literature in the context of, for example, green products, green services, green houses, green hotels, green cities, green consumers, green practices, and green cars. According to DiPietro and Gregory (2012, p. 2), going green means “being environmentally responsible and utilizing practices

that minimize the damage done to the environment”. Green consumers are defined as consumers who do not consume products that are harmful to health or that have a high impact on the environment throughout their production and commercialization (Hailes et al., 1993). In addition, green consumers do not support products derived from endangered resources (Chan, 2001; Moisander, 2007). According to Steg and Vlek (2009), green consumer behavior is consumption behavior that harms the environment as little as possible, or even benefits it.

Green hotels use environmental certification to strengthen consumer confidence in their environmental performance (Darnall, Henriques, & Sadorsky, 2008; King, Lenox, & Terlaak, 2005), such as Leadership in Energy and Environmental Design (LEED), Ecotel, Green Globe Standards, Earth Check, Green Key, Green Seal, and ISO 14001. In the early stages of green hotel development, Watkins (1994) defined green hotels as those with a commitment to environmental practices in order to demonstrate their environmental concerns. More recently, according to Millar and Baloglu (2011), the definition is based on the degree of implantation of environmental practices, such as saving energy and water and reducing waste (Rahman & Reynolds, 2016). Nevertheless, there are as yet no universal standards that define a hotel as a green hotel, and the definition remains unclear (Huang, 2016; Pizam, 2009).

However, Bastič and Gojčič (2012) have argued that hotels can be classified as green on the basis of their implementation of eco-friendly equipment, saving energy and water, the eco-friendly behavior of staff, and the availability of organic food. The Green Hotel Association (2019) and a number of scholars (Han, 2015; Han et al., 2009; Han et al., 2010; Kalafatis et al., 1999; Laroche et al., 2001) have defined a green hotel as lodging accommodation that follows and implements environmentally friendly

guidelines, including saving water and energy, engages in eco-friendly practices, especially in purchasing, uses environmental management practices, aims and commits to reducing the negative impact on the environment, and demonstrates that commitment by displaying eco-labels or the green globe logo. In the words of Tourism Council Australia (1998), a green hotel is a natural tourist lodging developed and managed in environment-sensitive ways to maintain its business environment and provide guests with green products, green services, of heating, cooling, lighting, ventilation, cleaning, laundering, etc.

Green practices aim to reduce harm to the environment by optimizing use of resources and using recyclable products, effective recycling processes, and eco-friendly chemical products (DiPietro & Gregory, 2012; Robinot & Giannelloni, 2010; Schubert, Kandampully, Solnet, & Kralj, 2010). There is no specific minimum number of green practices for a hotel to be classed as green (Jiang & Kim, 2015). However, green hotels are characterized by pro-environmental innovations and effective green practices for reducing solid waste, saving resources, and recycling and reusing (Chen & Tung, 2014; Ernst & Young, 2008; Ham & Han, 2013; Han, Hsu, Lee, & Sheu, 2011; Han et al., 2010; Kasavana, 2008; Lee et al., 2010; The Green Hotel Association, 2019; Verma & Chandra, 2018b).

A thorough review of the literature indicates that widely implemented green practices that are highly relevant to customers' attitudes and behavioral intentions are energy-efficient light bulbs, water-saving toilets, key cards that turn power on and off, occupancy sensors that control lighting, and recycling bins (Baker, Davis, & Weaver, 2014; Dimara, Manganari, & Skuras, 2017; Gustin & Weaver, 1996; Hu et al., 2010; Jauhari & Manaktola, 2007; Millar & Baloglu, 2008, 2011; Smith, Choy, Chong, & Verma, 2015). According to Baker et al. (2014), the green practices at a green hotel

are the strongest predictor of intention to revisit. Green hotel strategies focus on water conservation and waste reduction management (Goldstein, 2009; Singh et al., 2014; Wyngaard & De Lange, 2013) and energy management (Mbasera, Du Plessis, Saayman, & Kruger, 2016; Ogbeide, 2012; Rahman, Reynolds, & Svaren, 2012).

Water is an essential natural resource in hotels (Gabarda-Mallorquí, Garcia, & Ribas, 2017; Han & Hyun, 2018b), and water consumption increase in a steady manner as the number of hotel guests increases (Chan & Lam, 2001). Water consumption per hotel guest per day greatly exceeds residents' consumption (European Environment Agency, 2015; Gössling et al., 2015). In hotels, water consumption is linked to customer hygiene behaviors, such as changing towels and bed linen and using high-pressure showers (Kirk, 1995; Page, Essex, & Causevic, 2014). However, green consumption by consumers is achievable by reducing the negative impact of their activities on the environment (Robinot & Giannelloni, 2010). In particular, effective water conservation management is significant in the classifying of a hotel as green (Baker et al., 2014; Mensah & Dei Mensah, 2013; Millar & Baloglu, 2011).

Hotels consume energy intensively (Al-Aomar & Hussain, 2017; Hall et al., 2016), and this is a major concern (Mensah, 2006). The adoption of new green practices helps to save energy, reduce carbon emissions, prevent and control pollution, increase recycling, encourage the design and marketing of green products, manage the company's environment (Chen et al., 2006; Green Jr, Zelbst, Meacham, & Bhadauria, 2012; Porter & Kramer, 2011), improve environmental performance and increase the diversification and value of products and services. In turn, this makes it possible for a green hotel to enhance recognition and consumption by customers (Chen et al., 2006), meet social expectations regarding environmental protection and develop sustainable business operations (Porter & Van Der Linde, 1995).

Hotel guests produce twice as much waste as local residents (Styles, Schönberger, & Galvez Martos, 2013) in different forms such as disposable shower amenities (Bobbett, 2010), uneaten food (Kirk, 1995), lack of recycling (Bohdanowicz, 2005), and using non-refillable shampoo and conditioner units (Bobbett, 2010). Minimizing this waste is therefore an important concern in the hospitality sector (Han, Nguyen, et al., 2018).

### **2.2.8 Motivations for Hotel Transformation**

Consumers' green needs are the main stimulus for the greening of hotels (Kasim, 2004b). These needs encourage hotel operators to green their operations (Han et al., 2009; Han & Kim, 2010; Jauhari & Manaktola, 2007; Wolfe & Shanklin, 2001) and structures, thus significantly reducing their environmental damage (Han & Kim, 2010; Lee et al., 2010). Consumers prefer green hotels, and hotels that fail to implement green practices or to be effective in taking the green initiative may lose consumers (Butler, 2008). It is therefore essential for hotels to be aware of consumer needs, but as Myung et al. (2012) observed, understanding of consumer behavior in the environment-related literature in the hospitality sector remains poor.

Moreover, there is a range of incentives for hotels to be green, including competitiveness, legitimation, and ecological responsibility (Bansal & Roth, 2000; Gan, 2006; Juholin, 2004). Competitiveness targets improve profitability (Butler, 2008). Legitimation is compliance with environmental regulations in order to avoid being sanctioned by government. Ecological responsibility is the duty of hotels to ensure their operations are conducted in a way that protects the environment.

Improving environmental performance will reduce production costs, increase productivity, improve corporate image, and attract environmentally conscious customers (Eiadat et al., 2008; Porter & Kramer, 2011). Green practices have a positive

impact on consumers' intention to visit hotels (Chen & Tung, 2014; Han et al., 2010; Han & Kim, 2010; Kim, Ham, Yang, & Choi, 2013). According to Schubert et al. (2010), committing to green practices attracts consumer attention to the business, reduces operational costs (Chan & Wong, 2006; First, 2008; Jauhari & Manaktola, 2007; Schubert et al., 2010; Susskind, 2014), enhances competitive advantage (Chen, Legrand, & Sloan, 2005; Chen, 2008; Chen & Chang, 2013; Molina-Azorín, Tarí, Pereira-Moliner, Lopez-Gamero, & Pertusa-Ortega, 2015), has a positive effect on the sustainability of natural environments (Dutta, Umashankar, Choi, & Parsa, 2008; Joshi & Rahman, 2015), improves corporate image (Hu et al., 2010; Ko et al., 2013; Namkung & Jang, 2013; Peiró-Signes, Segarra-Oña, Verma, Mondéjar-Jiménez, & Vargas-Vargas, 2014), increases consumer purchase and word-of-mouth (WOM) intentions (Barber & Deale, 2014; Jauhari & Manaktola, 2007; Vieregge, Scanlon, & Huss, 2007) and fosters a company's long-term financial success (Singal, 2014).

### **2.2.9 The Emirate of Abu Dhabi**

Abu Dhabi is located in the western region of the United Arab Emirates. It has a population approaching 2.9 million in 2016 (Statistic Centre Abu Dhabi, 2019), and its climate is subtropical. In summer, temperatures are well above 40°C and humidity is very high. In winter, rainfall is scarce and temperatures are around 25°C (Visit Abu Dhabi, 2021). With the rapid development of Abu Dhabi, visitors and residents are visiting its hotels for recreation and lodging. There are 168 hotels in Abu Dhabi, providing almost 33,000 rooms (Department of Culture and Tourism - Abu Dhabi, 2019). In 2019, there were around 5 million hotel guests, and hotel revenues were approximately AED 5.8 billion. About 30% of this income was from in-country tourism by UAE nationals. The other 70% was mainly from visitors from India, China, UK, USA, Egypt, Philippines, KSA, Germany, Jordan and Pakistan. Abu Dhabi hotels

are classified into nine categories: hotel, hotel apartment, resort, airport hotel, boutique hotel, convention hotel, family hotel, luxury hotel (5-star plus), and eco-friendly/sustainable hotel (Department of Culture and Tourism – Abu Dhabi, 2007). With the exception of luxury hotels, a rating from one to five stars is applied. Each category contains hotels with a commitment to environmental practices, and they implement environmentally friendly guidelines such as saving water and energy, engaging in eco-friendly practices in purchasing, applying environmental management practices, aiming and committing to reduce negative impact on the environment and showing that commitment by displaying eco-labels or the green globe logo. In January 2015, the UAE Cabinet approved the UAE Green Agenda 2030 to achieve a low-carbon green economy in order to enhance competitiveness and sustainability (UAE National Committee on SDGs, 2017).

#### **2.2.10 Green Behavior**

Ecological behavior, environmentally responsible behavior, environmentally significant behavior, environment-protective behavior, sustainable behavior, environmentally friendly behavior, and conservation behavior are commonly recognized alternative terms for pro-environmental behavior (Axelrod & Lehman, 1993; Chiu, Lee, & Chen, 2014a; Clayton & Myers, 2015; Cone & Hayes, 1980; Dolnicar & Grün, 2009; Dwyer, Leeming, Cobern, Porter, & Jackson, 1993; Geller, 1986, 1987, 1992, 1994; Hedlund-de Witt, De Boer, & Boersema, 2014; Imran, Alam, & Beaumont, 2014; Jacobs & Harms, 2014; Kaiser, Hübner, & Bogner, 2005; Kaiser, Ranney, Hartig, & Bowler, 1999; Koenig-Lewis, Palmer, Dermody, & Urbye, 2014; Lokhorst, Werner, Staats, van Dijk, & Gale, 2013; Marinho, do Socorro Gonçalves, & Kiperstok, 2014; McKenzie-Mohr, 2011; Morrison & Lockwood, 2014; Schultz, 2011; Stern, 2000; Stern et al., 1993). Pro-environmental behavior is a term used to describe

behaviors that aim to reduce damage to the environment (Larson, Stedman, Cooper, & Decker, 2015). This research adopts the term green behavior to refer to such behavior. Bamberg and Möser (2007, p. 15) noted that “pro-environmental behavior is probably best viewed as a mixture of self-interest and of concerns for other people, the next generation, other species, or whole ecosystems.” Likewise, Kollmuss and Agyeman (2002, p. 240) defined pro-environmental behavior as “behavior that consciously seeks to minimize the negative impacts of one’s actions on the natural and built world.” Positive green behaviors reduce damage to the environment by adopting protective practices and promoting benefits for the environment (Kollmuss & Agyeman, 2002; Steg & Vlek, 2009).

#### **2.2.11 Intention to Revisit Green Hotels**

According to the theory of reasoned action, behavioral intention is the most accurate predictor of actual behavior when examining individuals’ decision-making processes (Ajzen, 1985, 1991; Fishbein & Ajzen, 1977; Lam & Hsu, 2004) and the best predictor of behavior overall (Chen & Tung, 2014; Paul et al., 2016). Behavioral intention is commonly defined as an indication of an individual’s readiness to perform a given behavior (Ajzen, 1985, 1991; Han et al., 2010; Oliver Richard, 1997; Oliver, 2014; Zeithaml et al., 1996). This definition has been expanded to include the willingness to repurchase services or products after a certain experience, to recommend a positive experience to others, and to pay more (Han & Back, 2008; Namkung & Jang, 2007; Zeithaml et al., 1996).

Many researchers have studied the benefits of customers’ positive behavioral intentions (Bowen & Shoemaker, 1998; Han & Back, 2008; Namkung & Jang, 2007; Zeithaml et al., 1996). Ajzen (1991) noted that there is a positive relationship between an individual’s intention to conduct a certain behavior and willingness to perform the



behavior. Accordingly, positive intentions will contribute to increasing customer retention rates and profits (Chambers & Lewis, 1989; Han & Back, 2008; Yesawich, 1997). Consumer behavior is how individual customers make decisions to select, buy or use consumption-related items to satisfy their needs (Schiffman, Kanuk, & Wisenblit, 2010; Solomon, Russell-Bennett, & Previte, 2012).

Behavioral intention is considered the best predictor of actual behavior (Chen & Tung, 2014; Fishbein & Ajzen, 1977; Paul et al., 2016) and many researchers have confirmed the high reliability of behavioral intention in predicting the relationship between the general purchase behavior and the green purchase behavior of a consumer (Han et al., 2011; Han et al., 2010; Paul et al., 2016; Rezai, Teng, Mohamed, & Shamsudin, 2012; Teng, Rezai, Mohamed, & Shamsudin, 2011). Many studies have adopted behavioral intention as a representative measure of behavior (Nonis & Swift, 2001; Phillips & Jang, 2012; Sparks & Pan, 2009; Wang & Ritchie, 2012, 2013). According to Kaiser and Wilson (2004), the intention behind an act is more important than the behavior's apparent face value. Similarly, Phillips and Jang (2012); Teng et al. (2015) observed that, it is easier to measure the antecedents of behavioral intentions than to measure behaviors. In the hospitality sector in particular, promoting consumers' positive intentions is an important element in ensuring revisit intention (Han & Back, 2008; Namkung & Jang, 2007). Hence, in this research, behavioral intention (instead of the actual behaviors) will be used as the dependent variable. Accordingly, individuals' intention to revisit green hotels is taken as a proxy measure of likely behavior, and this research will investigate green hotel revisit intention rather than the behavior itself. Thus, an individual will be regarded as having some desire to revisit a green hotel even if the reservation has not yet been made.

### **2.2.12 Research Conceptual Framework**

In order to ensure appropriate links between the research construct and the consumer behavior elements identified in Table 3, it is necessary to explain those elements from the research context.

Specifically, awareness of the problem indicates that the consumer is aware of the consequences of unavailability of environmental protection. For example, the consumer will know the extent to which pollution affects public health or the impact of environmental harm on endangered species. In this research, this construct will be called “environmental awareness.”

Interest (concerns) about the problem indicates that the consumer is concerned about the environment itself. For example, the consumer will be concerned about the balance of nature or the impact of human interference in nature. In this research, this construct will be called “environmental concerns.”

Awareness of consequences indicates that the consumer is aware of the damage that hotels cause to the environment. For example, the consumer will know that the hotel industry causes pollution, climate change, and exhaustion of natural resources. In this research, this construct will be called “awareness of the consequences of using hotels.”

Willingness to pay more indicates that the consumer is willing to pay more to visit a green hotel. For example, the consumer will be prepared to pay more for a hotel that engages in green practices. In this research, this construct will be called “willingness to pay more for green hotels.”

Willingness to make a sacrifice indicates that the consumer is willing to make sacrifices for the environment. For example, the consumer is willing to give up activities that he or she likes doing if those activities harm the natural environment. In

this research, this construct will be called “willingness to make a sacrifice for the environment.”

Obligation indicates that the consumer is under an obligation to visit green hotels. For example, the consumer will feel morally obliged to visit green hotels instead of conventional hotels. In this research, this construct will be called “sense of obligation toward green hotels.”

Frequency of past behavior indicates how often the consumer visited an environmentally responsible hotel during the past three years. In this research, this construct will be called “frequency of staying at green hotels.”

Subjective norms indicate that influences from other people are important for the consumer in the decision to revisit a green hotel. In this research, this construct will be called “subjective norms toward green hotels.”

Attitude indicates that the consumer has a favorable evaluation that arises when he or she engages in green hotel revisit intention. In this research, this construct will be called “attitude toward green hotels.”

Basic values indicate that the consumer has a firm belief that facilitates the decision to revisit a green hotel. In this research, this construct will identify the value/s based on the literature review.

There are four major business models: business-to-business (B2B), business-to-consumer (B2C), consumer-to-consumer (C2C), and consumer-to-business (C2B). In the B2B model, businesses exchange products or services without involving customers; a business acts as seller, and another business acts as buyer. In the B2C model, businesses sell products or services to customers directly; a business acts as seller, and a customer acts as buyer. In the C2C model, customers exchange products or services; a customer acts as seller, and another customer acts as buyer. In the C2B

model, customers sell products or services to businesses directly; a customer acts as seller, and a business acts as buyer. Each of these business models has its own form of marketing (referred to here as B2B marketing, B2C marketing, C2C marketing and C2B marketing).

This research is interested in the factors that influence consumers to revisit green hotels. As the measurement instrument will be a cross-sectional survey, the questionnaires will only be distributed to customers of green hotels. Therefore, B2B marketing and C2B marketing are excluded from consideration, as the research is designed to target consumers who have visited a green hotel (rather than entities who conduct business with green hotels). Consequently, the two marketing models that are appropriate for this research are B2C marketing and C2C marketing. A B2C marketing perspective can explain the influence of the green hotel identity in consumer revisit intention, and green hotel identity can be represented by green hotel corporate image. A C2C marketing perspective can explain the influence of green hotel consumers (or those with experience and knowledge) on other individuals to influence them to revisit a green hotel. In this research, therefore, C2C marketing will represent consumer intention in marketing green hotels, which can be measured as consumer intention to spread positive WOM about green hotels. Therefore, the research will focus on two segments of marketing, namely B2C marketing from the hotel perspective and C2C marketing from the consumer himself (whose intention to revisit the green hotel is under study).

Specifically, “firm marketing” indicates that the green hotel will engage in marketing in order to influence the consumer intention to revisit. In this research, this construct will be used to represent the B2C marketing. Similarly, “spread of information” will indicate that the consumer has the intention to spread positive WOM

about the green hotel. In this research, this construct will be called “intention to spread word-of-mouth about green hotels.”

Thus, by linking the consumer behavior elements that were extracted from the buyer decision process and the characteristics affecting consumer behavior with the research context (intention to revisit green hotels), the consumer behavior elements summarized in Table 4 can be taken as the research constructs and the research conceptual framework finalized.

Table 4: Links between consumer behavior elements and research constructs

<b>Consumer behavior element</b>	<b>Research construct</b>
<b>Attitude</b>	Attitude toward green hotels
<b>Awareness of consequences</b>	Awareness of the consequences of using hotels
<b>Awareness of the problem</b>	Environmental awareness
<b>Basic values</b>	(to be identified in terms of individual values)
<b>Firm marketing</b>	(to be identified in terms of B2C marketing)
<b>Frequency of past behavior</b>	Frequency of staying at green hotels
<b>Interest (concerns) about the problem</b>	Environmental concerns
<b>Obligation</b>	Sense of obligation toward green hotels
<b>Spread information</b>	Intention to spread word-of-mouth about green hotels
<b>Subjective norms</b>	Subjective norms toward green hotels
<b>Willingness to make a sacrifice</b>	Willingness to make a sacrifice for the environment
<b>Willingness to pay more</b>	Willingness to pay more for green hotels

With the aim of identifying suitable theories, the constructs will be grouped into four perspectives according to relevant common aspects: the self-perspective, the

prosocial perspective, the green hotel marketing perspective, and the consumer marketing perspective. Table 5 shows each perspective and the constructs within it.

Table 5: Research constructs in four perspectives

<b>Perspective</b>	<b>Research construct</b>
<b>Self-perspective</b>	<ul style="list-style-type: none"> <li>• Environmental awareness</li> <li>• Environmental concerns</li> <li>• Willingness to pay more for green hotels</li> <li>• Willingness to make a sacrifice for the environment</li> <li>• Frequency of staying at green hotels</li> <li>• Subjective norms toward green hotels</li> <li>• Attitude toward green hotels</li> </ul>
<b>Prosocial perspective</b>	<ul style="list-style-type: none"> <li>• Sense of obligation towards green hotels</li> <li>• Basic values</li> <li>• Awareness of the consequences of using hotels</li> </ul>
<b>Firm marketing perspective</b>	<ul style="list-style-type: none"> <li>• B2C marketing</li> </ul>
<b>Consumer marketing perspective</b>	<ul style="list-style-type: none"> <li>• Intention to spread word-of-mouth about green hotels</li> </ul>

TPB will be used to investigate the self-perspective influences and will be extended to cover the other constructs that relate to the self-perspective group. VBN theory will be used to investigate the prosocial perspective influences. CIMT will be used to investigate the firm marketing perspective in terms of B2C marketing influence. Intention to spread WOM about green hotels will be used to investigate C2C marketing influence. Figure 3 sets out this initial research framework.

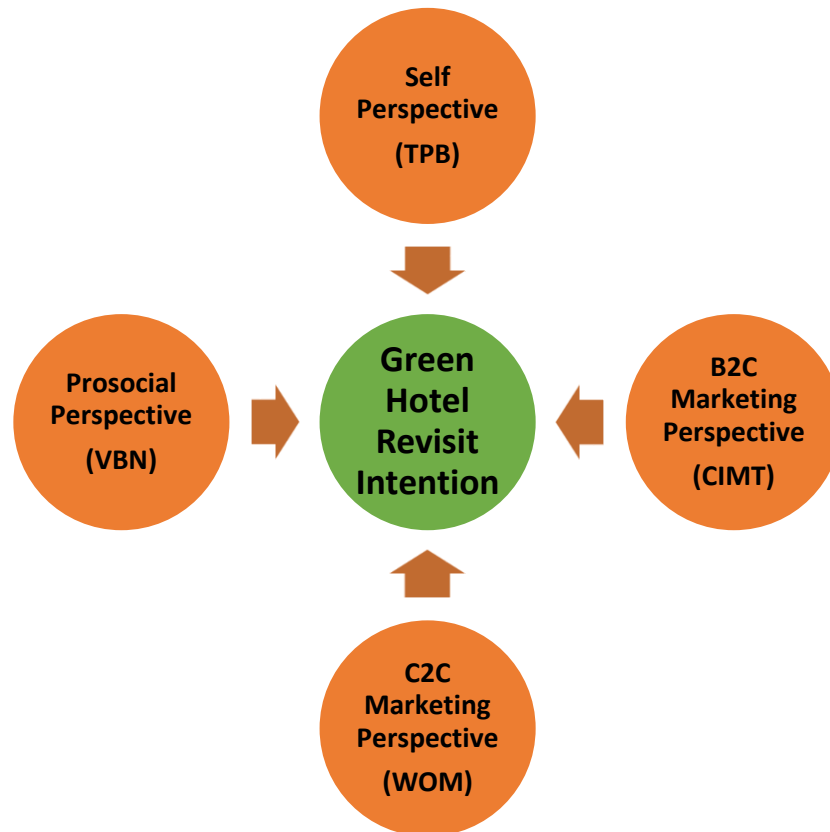


Figure 3: Research conceptual framework

## 2.3 Theory of Planned Behavior (TPB)

### 2.3.1 Overview

According to Bamberg and Möser (2007), TPB is based on a self-interest model of human beings. This suggests that TPB will be suitable for investigating consumer intention to revisit a green hotel from the self-perspective. This section therefore introduces TPB and theory of reasoned action (TRA) then demonstrates the suitability of TPB for this research.

### 2.3.2 Introduction to the Theory of Reasoned Action (TRA)

In health education, many theories try to understand and predict how and why people behave the way they do. In the late 1960s, Martin Fishbein introduced TRA to

explain the relationship between attitudes and behavior. In the 1970s and 1980s, Fishbein and Icek Ajzen developed and extended TRA in order to understand human behaviors in decision processes (Ajzen, 1985; Fishbein & Ajzen, 1980; Fishbein & Ajzen, 1977). The TRA model is based on the premise that individuals make logical decisions to engage in specific behaviors by evaluating the available information to them (Fishbein & Ajzen, 1977). It should be noted that TRA was designed to predict only those human behaviors that are under complete volitional control.

TRA assumes that people are rational, as it derives behavioral intention from reasoning only, and excludes the elements of fear or irrational thought. Intention is the core concept of TRA, and in the TRA model, an individual's behavior can be determined by measuring control of volition and intention (Fishbein & Ajzen, 1980). Ajzen (1985) described intention as an individual's motivation in the decision to exert an effort in performing a specific behavior; in other words, intention indicates an individual's readiness or willingness to engage in a particular behavior. On this view, most human behaviors are predictable, as they are under a high degree of volitional and intention control, which leads individuals to make reasoned choices among alternatives (Fishbein & Ajzen, 1980). Accordingly, behavioral intentions have been studied widely in consumer psychology domains (Cronin Jr, Brady, & Hult, 2000) and applied to predict consumer intentions and behaviors (Lam & Hsu, 2004; Lee, 2005; Sheppard, Hartwick, & Warshaw, 1988).

According to TRA, behavioral intention is a function of the attitude toward performing the behavior and subjective norms (Fishbein & Ajzen, 1980; Fishbein & Ajzen, 1977; Han & Kim, 2010), as shown in Figure 4. Attitude can be defined as individual's favorable or unfavorable evaluation that arises when engaging in certain behaviors (Ajzen, 1991; Aman et al., 2012; Chen & Tung, 2014). Subjective norms



refer to the social pressure on an individual to decide whether to engage in a particular behavior (Ajzen, 1991; Fishbein & Ajzen, 1980; Han & Kim, 2010; Kim & Han, 2010; Tonglet et al., 2004).

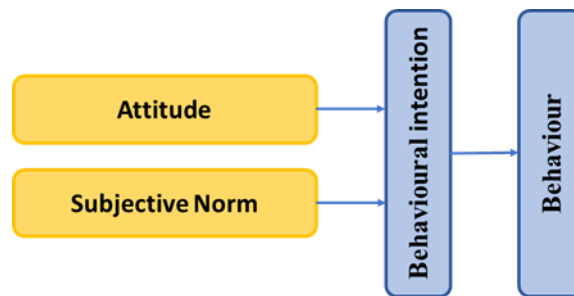


Figure 4: Theory of reasoned action model

### 2.3.3 Introduction to TPB

Researchers have raised questions regarding the adequacy of TRA after finding that it predicts an individual's behavior only when the specific behavior is completely under volitional control (Han et al., 2010; Huchting et al., 2008; Lee & Back, 2007; Oh & Hsu, 2001). An individual who has a high degree of volitional control will choose more reasonable purchase behaviors among a range of alternatives. However, an individual's behavior can involve nonvolitional factors (Ajzen, 1985; Park, 2003), and in such circumstances TRA is not sufficient to predict the individual's intention. For instance, an individual will not have the intention to visit a museum when in a city that has no museums, even if he or she has a positive attitude and positive subjective norms toward visiting museums.

The TPB model improves on TRA by introducing nonvolitional factors that are due to perceived constraints (Paul et al., 2016), in the recognition that most human behaviors depend to some degree on such factors. Ajzen (1985) proposed TPB as an extension of the TRA model to include a new construct associated with nonvolitional control, which he called perceived behavioral control. Perceived behavioral control is

a belief factor concerning availability of the resources and opportunities for the purpose of performing a specific behavior (Madden, Ellen, & Ajzen, 1992).

In the 1990s, Fishbein and Ajzen's TPB was one of the most influential theories for determining significant beliefs that have an influence on intention and behavior, as it predicts an individual's intention to engage in a behavior (Ajzen, 1991; De Leeuw, Valois, Ajzen, & Schmidt, 2015). TPB shows that individual behavior is driven by behavioral intentions. As Fishbein and Ajzen (2011) established, human behavior is shaped by three types of salient beliefs: behavioral, normative, and control beliefs. Behavioral beliefs are about the benefits or concerns of performing the behavior (in TPB, this is called attitude). Normative beliefs are about the normative expectations and actions of others (in TPB, these are called subjective norms). Control beliefs are about the presence of factors that may support or prevent the performance of the behavior (in TPB, this is called perceived behavioral control). These three salient beliefs lead to the formation of the intention (Ajzen, 1991).

Individuals are likely to engage in a behavior if they believe that it will lead to particular outcomes that they value (attitude), if they believe that people whose views they value think they should carry out the behavior (subjective norms), and if they feel that they have the necessary resources and opportunities to perform the behavior (perceived behavioral control) (Ajzen, 1985, 1991; Lam & Hsu, 2006). For example, an individual with positive attitudes about exercise, who also perceives that his family thinks he should exercise, and who has easy access to a place where he can exercise, is likely to do so. In this way, behavioral intentions are a function of the three determinants of attitude, subjective norms, and perceived behavioral control, as shown in Figure 5.

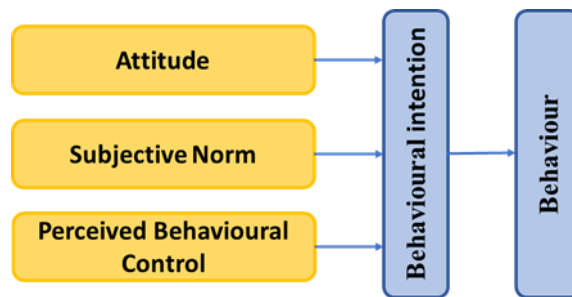


Figure 5: Theory of planned behavior model

### 2.3.4 Suitability of TPB for This Research

TPB has been applied, verified, and validated in various domains of environmental behavior, such as recycling (De Leeuw et al., 2015; White & Hyde, 2012), green consumer behavior (Han et al., 2010; Paul et al., 2016; Tsai, 2010; Yadav & Pathak, 2016), energy saving (Chen, 2016), using public transportation (Bamberg, Hunecke, & Blöbaum, 2007), purchasing green products (Chan & Tsang, 2011; Chan & Lau, 2002; Chen & Tung, 2014; Chiou, 1998; Han et al., 2010; Han & Yoon, 2015; Levine & Strube, 2012; Paul et al., 2016; Rezai et al., 2012; Tarkiainen & Sundqvist, 2005; Zhou, Thøgersen, Ruan, & Huang, 2013), paying comparable regular hotel prices for a green hotel (Kim & Han, 2010), choosing a green restaurant (Jang, Chung, & Kim, 2015), visiting green hotels (Chang, Tsai, & Yeh, 2014; Chen & Peng, 2012; Chen & Tung, 2014; Han, 2015; Han et al., 2010; Han & Kim, 2010; Han & Yoon, 2015; Teng et al., 2015), and the behaviors of green hotel guests (Line & Hanks, 2016; Teng, Lu, & Huang, 2018). Moreover, TPB has been used to investigate the relationship between consumer green purchase attitudes and intentions (Aman et al., 2012; Chen & Tung, 2014; Han et al., 2010; Han & Yoon, 2015; Levine & Strube, 2012; Paul et al., 2016; Rezai et al., 2012; Zhou et al., 2013) and to predict consumer purchase intention (Aman et al., 2012; Chen & Tung, 2014; Paul et al., 2016).

Numerous studies have used TPB to investigate guest intention to visit green hotels (Chang et al., 2014; Chen & Peng, 2012; Chen & Tung, 2014; Han, 2015; Han et al., 2010; Han & Kim, 2010; Han & Yoon, 2015; Jiang & Gao, 2019; Kim & Han, 2010; Muniandy, Rahim, Ahmi, & Rahman, 2019; Nezakati et al., 2015; Nimri, 2018; Nimri, Patiar, & Kensbock, 2017; Nimri, Patiar, Kensbock, & Jin, 2020; Olya, Bagheri, & Tümer, 2019; Sukhu, Choi, Bujisic, & Bilgihan, 2019; Suki & Suki, 2015; Teng et al., 2018; Teng et al., 2015; Verma & Chandra, 2018a; Wang, Wang, Wang, Li, & Zhao, 2018; Wang, Wong, & Narayanan, 2020; Yadav, Balaji, & Jebarajakirthy, 2019; Yeh, Ma, & Huan, 2016). DiPietro, Gregory, and Jackson (2013) used TPB to examine the relationship between guests' personal green behaviors and their perceptions of a restaurant's green practices and their intentions to revisit the restaurant. Sotiriadis, Apostolakis, Tilikidou, and Delistavrou (2015) used it to investigate the factors that affect ethical tourism. Hwang, Baloglu, and Tanford (2019) used it to determine the impact of brand attachment and loyalty intention on perceptions of fairness and loyalty outcomes.

Han and Hwang (2016) used TPB in the green cruise context to explore travelers' green decision-making process. Yadav and Pathak (2016) used it to investigate the intentions of young consumers to buy green products. Chin, Chin, and Wong (2018) used it to investigate the relationship between green marketing tools and green purchasing behavior. A number of scholars have used it to study the intention to purchase green products (Chaudhary & Bisai, 2018; Chin et al., 2018; Kalafatis et al., 1999; Mohiuddin, Al Mamun, Syed, Mehedi Masud, & Su, 2018). Wang (2016) used it to study the green behaviors of restaurant employees. Ottenbacher, Kuechle, Harrington, and Kim (2019) used it to investigate consumers' willingness to pay more

for green efforts. Shurrab, Hussain, and Khan (2019) used it to investigate the factors that influence construction companies to adopt green construction practices.

Bamberg (2003) used TPB to study the relationship between environmental concerns and environmental related behaviors. López-Mosquera and Sánchez (2012) used it to study the relationship between the green behavior of park visitors and their willingness to pay for park conservation. Kim and Han (2010) used it to investigate people's intention to pay conventional hotel prices at a green. hotel. Finally, several studies have used it specifically to investigate consumers' green purchase intention in the context of green hotel selection (Han et al., 2010; Kim, Palakurthi, & Hancer, 2012; Mas'od & Chin, 2014; Wang, Wong, Narayanan, & Chee, 2019).

Some researchers have gone on to apply a solid scientific theory to explain the proposed conceptual model (Olya & Gavilyan, 2017), but TPB is still the most popular predictor of consumer purchase behavioral intentions (Aman et al., 2012; Chen & Tung, 2014; Han et al., 2010; Paul et al., 2016; Rezai et al., 2012). Under these circumstances, it is clear that TPB is an appropriate choice for predicting consumer intention to revisit green hotels from the perspective of self-interest motives.

## **2.4 TPB Constructs**

### **2.4.1 Overview**

According to TPB, attitude, subjective norms, and perceived behavioral control are the predictors of behavioral intention. This section explains these three concepts in greater detail before presenting hypotheses and building the theoretical framework using TPB constructs.

## **2.4.2 Attitude toward Green Hotels**

### **2.4.2.1 Overview**

Customer attitude toward green hotels is an important factor influencing green hotel revisit intention (Baker et al., 2014; Chou et al., 2012). According to TPB, attitude is the first predictor of behavioral intention. This section will therefore define the concept of attitude, first in general, then from the TPB perspective, and then from a green hotel revisit intention perspective, before explaining its role in previous research. Finally, the relationship between consumer attitude toward green hotels and intention to revisit will be discussed in light of previous research findings.

### **2.4.2.2 Definition of Attitude**

Attitude can be defined as an individual's favorable or unfavorable evaluation that arises when engaging in certain behaviors (Ajzen, 1991; Aman et al., 2012; Chen & Tung, 2014; Han et al., 2009; Tonglet et al., 2004). Attitude also includes overall evaluation of the given behavior (Ajzen, 1991; Han & Kim, 2010; Tonglet et al., 2004) and whether or not the individual wants to execute the behavior (Paul et al., 2016). Accordingly, green purchase attitude can be defined as a person's value judgment about the importance of green products (Lee, 2008).

In TPB, behavioral beliefs and outcome evaluation are the two constructs that work closely to form attitude (Ajzen, 1991; Fishbein & Ajzen, 1980). Behavioral beliefs are beliefs about the consequences of engaging in a certain behavior, and outcome evaluation is the corresponding favorable or unfavorable judgment about the possible consequences of the behavior (Eagly & Chaiken, 1993; Fishbein & Ajzen, 1980). According to Ajzen (1991) and Fishbein and Ajzen (1980), attitude can be estimated by multiplying the strength of each behavioral belief by the outcome

evaluation related to the same behavioral belief: attitude = behavioral belief (BB<sub>i</sub>) × evaluation outcome (EO<sub>i</sub>).

Previous studies have distinguished two forms of green attitudes, general and specific. General attitudes have no substantive relationship to the behavior or relate only to a single element (Fishbein & Ajzen, 1980). In contrast, specific attitudes predict specific behavior (Iversen & Rundmo, 2002). They can be described as the individual evaluation of certain types of green products or behaviors, such as green hotel revisits, and they are particularly apparent in pro-environmental behavior (Chen & Peng, 2012; Ha & Janda, 2012; Han & Kim, 2010; Hines, Hungerford, & Tomera, 1987; Mainieri, Barnett, Valdero, Unipan, & Oskamp, 1997; Tanner & Wölfing Kast, 2003). Accordingly, this research considers attitudes and behaviors that are specific (the individual's attitude toward green hotels and the individual's intention to revisit a green hotel). However, general attitudes, such as environmental concerns, environmental awareness, willingness to make sacrifices for the environment, willingness to pay more for green hotels, and frequency of past behavior, also play a role, as Section 2.6 will demonstrate.

There is a positive relationship between attitude and behavioral intention. An individual with a high positive attitude toward a certain behavior will have a high positive behavioral intention to perform that behavior (Chen & Tung, 2014; Fishbein & Ajzen, 1980; Han et al., 2010). A consumer's attitude toward a behavior will affect how likely he or she is to perform that behavior. If the consumer believes that the behavior will make a positive difference in life, then he or she is more likely to perform the behavior. Accordingly, this research supposes that the consumer will revisit a green hotel to support the environment. If the consumer believes that the green hotel improves the chances of supporting the environment, then he or she is likely to have a

positive evaluation of the behavior (revisiting green hotels). If the consumer thinks that visiting the green hotel will not support the environment, then he or she will be more likely to have a negative evaluation of the green hotel. Therefore, in this study, attitude toward green hotel is used to answer two questions: What does the consumer think about revisiting green hotels? Does the consumer have favorable judgments about the possible consequences of visiting green hotels?

### **2.4.2.3 Attitude in Previous Research**

Many studies have investigated the relationship between attitude and behavioral intention in various contexts. In the field of social science marketing, there is a significant positive relationship between consumer attitude and intention (Coleman, Bahnan, Kelkar, & Curry, 2011; Han et al., 2010; Han & Yoon, 2015; Paul et al., 2016; Vazifehdoust, Taleghani, Esmaeilpour, & Nazari, 2013; Zakersalehi & Zakersalehi, 2012). The same relationship has been observed in the context of green marketing (Aman et al., 2012; Chen & Tung, 2014; Chen & Chai, 2010; Han et al., 2010; Lee, 2008; Levine & Strube, 2012; Mohamad, Arifin, Samsuri, & Munir, 2014; Paul et al., 2016; Sinnappan & Rahman, 2011; Vazifehdoust et al., 2013; Zhou et al., 2013). TRA (Vazifehdoust et al., 2013) and TPB (Chaudhary & Bisai, 2018; Chin et al., 2018; Ha & Janda, 2012; Kim & Han, 2010; Mohiuddin et al., 2018; Wang et al., 2020; Yadav & Pathak, 2016) have been used to study the influence of consumer attitudes toward green products on intention to purchase green products. Numerous other scholars have used TPB specifically to study the relationship between consumers' attitudes toward green hotels and their intentions to revisit (Chang et al., 2014; Chen & Peng, 2012; Chen & Tung, 2014; Gustin & Weaver, 1996; Han, 2015; Han et al., 2010; Han, Hwang, Kim, & Jung, 2015; Han & Kim, 2010; Han & Yoon, 2015; Jiang & Gao, 2019; Muniandy et al., 2019; Nimri, 2018; Nimri et al., 2020; Olya



et al., 2019; Suki & Suki, 2015; Teng et al., 2015; Verma & Chandra, 2018a; Verma, Chandra, & Kumar, 2019; Wang, Wong, et al., 2019; Yadav et al., 2019).

#### **2.4.2.4 Relationship between Consumer Attitudes toward Green Hotels and Intention to Revisit**

Previous studies have observed that hotels customers' green attitudes positively influence their intention to revisit green hotels (Chen & Peng, 2012; Han et al., 2011; Han & Kim, 2010; Kang et al., 2012; Lee et al., 2010). Chen and Peng (2012) studied the decision-making behavior of Chinese tourists in terms of visiting green hotels and found that, when the consumers participated in tourism activities, there was a significant relationship between their attitudes and intention to stay at green hotels. Wang et al. (2020); Wang, Wang, et al. (2019) investigated consumers' green purchase intention toward green hotel selection and found that green purchase attitude positively and significantly influenced green purchase intention. Kim and Han (2010) investigated consumer intention to pay conventional hotel prices at a green hotel and found that their attitude toward the behavior had a positive impact on their intention to pay conventional hotel prices. Chaudhary and Bisai (2018); Chin et al. (2018) found that consumer attitude significantly predicted green product purchase intention. In the context of young consumers, Tan, Ojo, and Thurasamy (2019) investigated the relationship between attitude toward the environment and green product buying decisions; they found that attitude toward the environment was not positively associated with decisions to buy green products. However, when Yadav and Pathak (2016) used TPB to study the intentions of young consumers toward buying green products, they found that attitude toward green products significantly influenced intention to purchase green products.

Numerous studies of green hotel revisit intention have observed a positive influence of consumer attitude on revisit intention (Chang et al., 2014; Chen & Tung, 2014; Han, 2015; Han et al., 2010; Han et al., 2015; Han & Kim, 2010; Han & Yoon, 2015; Muniandy et al., 2019; Nimri, 2018; Nimri et al., 2020; Olya et al., 2019; Suki & Suki, 2015; Teng et al., 2015; Verma & Chandra, 2018a; Verma et al., 2019; Yadav et al., 2019). According to Han et al. (2010); Paul et al. (2016), the effect of consumer attitude to green hotels is the strongest predictor of green hotel revisit intention. In contrast to these findings, however, Jiang and Gao (2019) found that customer attitude toward green hotels had no positive influence on revisit intention.

### **2.4.3 Subjective Norms toward Green Hotels**

#### **2.4.3.1 Overview**

The importance of subjective norms as a determinant variable of behavioral intention has been well documented in various contexts in marketing and consumer behavior (Cheng, Lam, & Hsu, 2006; East, 2000; Laroche et al., 2001; Lee, 2005; White Baker, Al-Gahtani, & Hubona, 2007). According to TPB, subjective norms is the second predictor of behavioral intention. This section will first define the concept of subject norms in general and then from the TPB and green hotel revisit intention perspectives, before explaining its role in previous research. The relationship between consumer subjective norms toward green hotels and intention to revisit will then be discussed in light of previous research findings.

#### **2.4.3.2 Definition of Subjective Norms**

Subjective norms are a form of social pressure on an individual to engage in a particular behavior or not (Ajzen, 1991; Fishbein & Ajzen, 1980; Han & Kim, 2010; Kim & Han, 2010; Tonglet et al., 2004). Social pressure can originate from family,

friends, and colleagues who are identified as individuals' salient referents (Han et al., 2010; Han & Kim, 2010; Kim & Han, 2010) and who influence the individual to modify his or her behavior (Göckeritz et al., 2010) in response to social pressure. According to Ajzen and Driver (1992), subjective norms are social in nature. Park (2000); Paul et al. (2016) highlighted the importance of the influence on behavioral intention of others who are close to the individual, such as close friends, relatives, colleagues, or business partners. The degree of influence from friends, family, and colleagues is high (Park, 2000; Paul et al., 2016) and can drive the individual decision-making process (Chen & Tung, 2014). Researchers agree that social consciousness has a strong influence on consumer purchase intention (Domina & Koch, 2002; Jansson, Marell, & Nordlund, 2010; Ogle, Hyllegard, & Dunbar, 2004).

Subjective norms include two constructs that work closely together to form subjective norms: normative beliefs and motivation to comply (Ajzen, 1991; Fishbein & Ajzen, 1980). Normative beliefs are defined as an individual's beliefs about how other people whom the individual considers important, such as family and friends, would like the individual to behave (Chen & Tung, 2014; Eagly & Chaiken, 1993; Fishbein & Ajzen, 1980; Park, 2000; Ravis & Sheeran, 2003). Motivation to comply is defined as the motivation of an individual to align his or her behavior with the judgments of people who are significant referents (Fishbein & Ajzen, 1980). Subjective norms can therefore be estimated by multiplying the strength of each normative belief by the motivation to comply with the same normative belief, and then summing the products (Ajzen, 1991; Fishbein & Ajzen, 1980): subjective norms = normative belief (NB<sub>i</sub>) × motivation to comply (MC<sub>i</sub>).

Subjective norms look at what others in a consumer's social circle (that is, the people the consumer interacts with) think about the behavior. A consumer's behavior

is to some extent shaped by what others believe, particularly those who are close. Accordingly, this research supposes that a consumer's friends, peers, family, or important others have a preference that the consumer should stay at a green hotel. The consumer is more likely to visit a green hotel if there is a motivation to comply with the judgments of significant referents in this connection. Therefore, in this study, subjective norms are used to answer two questions: What are the opinions of others who are important to the consumer about revisiting green hotels? Does the consumer have a motivation to comply with their opinions?

#### **2.4.3.3 Subjective Norms in Previous Research**

The importance of subjective norms has been well recognized in various contexts in studies of green marketing (Chen, 2013; Chen & Tung, 2014; Chen & Chai, 2010; Coleman et al., 2011; Han et al., 2010; Han & Yoon, 2015; Paul et al., 2016; Rezai et al., 2012; Sinnappan & Rahman, 2011). According to Lee (2008), subjective norms are the most important predictor of green purchase behavior, and they are also the most important predictor of green hotel revisit intention (Han et al., 2010; Lien, Huang, & Chang, 2012). A number of studies have focused on the influence of subjective norms toward green products on intention to purchase green products (Chaudhary & Bisai, 2018; Sinnappan & Rahman, 2011; Tarkiainen & Sundqvist, 2005; Vazifehdoust et al., 2013). Some studies have used TPB to examine the influence of consumers' subjective norms toward green products on their intention to purchase (Chin et al., 2018; Ha & Janda, 2012; Kim & Han, 2010; Yadav & Pathak, 2016). Other studies have used TPB to study the relationship between subjective norms toward green hotels and green hotel revisit intention (Chang et al., 2014; Chen & Peng, 2012; Chen & Tung, 2014; Gustin & Weaver, 1996; Han, 2015; Han et al., 2010; Han et al., 2015; Han & Kim, 2010; Han & Yoon, 2015; Muniandy et al., 2019; Nimri,

2018; Olya et al., 2019; Suki & Suki, 2015; Teng et al., 2015; Verma & Chandra, 2018a; L. Wang et al., 2019; Yadav et al., 2019). However, Choi et al. (2015) used VBN to investigate consumers' intentions to visit green hotels and found that subjective norms did not explain their decision-making processes for visiting green hotels.

There is also evidence of a significant causal path from subjective norms to attitudes in the general decision-making of consumers (Chang, 1998; Ryu & Jang, 2006; Shepherd & O'keefe, 1984; Tarkiainen & Sundqvist, 2005; Vallerand, Deshaies, Cuerrier, Pelletier, & Mongeau, 1992) and in green purchase decision-making (Chen & Chai, 2010; Han et al., 2010). There is a positive relationship between subjective norms and an individual's attitude toward green hotels (Chen & Peng, 2012; Han & Kim, 2010; Lien et al., 2012; Sinnappan & Rahman, 2011; Teng et al., 2015). Studies have also found that attitude has a mediating role in the relationship between subjective norms and green hotel revisit intention (Han et al., 2010; Muniandy et al., 2019; Teng et al., 2015; L. Wang et al., 2019).

#### **2.4.3.4 Relationship between Subjective Norms toward Green Hotels and Intention to Revisit**

Previous studies have disclosed a complicated, unclear relationship between subjective norms, attitude, and intention in green marketing (Chen, 2013; Chen & Tung, 2014; Chen & Chai, 2010; Coleman et al., 2011; Han et al., 2010; Han & Yoon, 2015; Paul et al., 2016; Rezai et al., 2012; Sinnappan & Rahman, 2011). Many researchers have confirmed that there is a positive significant relationship between subjective norms and green purchase intention (Chen & Tung, 2014; Han & Yoon, 2015; Lee, 2008; Ryu & Jang, 2006; Sinnappan & Rahman, 2011). Some have studied the influence of subjective norms toward green products on consumer intention to

purchase green products (Chen & Peng, 2012; Han & Kim, 2010; Sinnappan & Rahman, 2011; Tarkiainen & Sundqvist, 2005; Vazifehdoust et al., 2013). They found that subjective norms toward green products had a positive impact on intention to purchase green products. Others have used TPB to study the influence of subjective norms toward green products on their intention to purchase (Chin et al., 2018; Ha & Janda, 2012; Kim & Han, 2010; Yadav & Pathak, 2016). They found that consumers' subjective norms toward green products had a positive impact on their intention to purchase green products.

Using TPB to study the relationship between subjective norms toward green hotels and green hotel revisit intention, researchers have found a positive influence (Chang et al., 2014; Chen & Peng, 2012; Chen & Tung, 2014; Gustin & Weaver, 1996; Han, 2015; Han et al., 2010; Han et al., 2015; Han & Kim, 2010; Han and Yoon 2015; Muniandy et al., 2019; Olya et al., 2019; Teng et al., 2015; Verma & Chandra, 2018a). In addition, Chen and Peng (2012) examined the factors that contribute to Chinese tourists' choice of green hotels when visiting Europe. They found that subjective norms had a higher influence on intention compared to attitude and perceived behavioral control.

Using VBN theory, Choi et al. (2015) found that subjective norms did not explain consumers' decision-making processes regarding their intentions to revisit a green hotel. Likewise, using VBN, Chaudhary and Bisai (2018) found that subjective norms toward green products had no significant relationship with intention to purchase the green products. Other studies have observed a nonsignificant relationship between subjective norms and green purchase intention (Chan & Tsang, 2011; Leonidou, Leonidou, & Kvasova, 2010; Paul et al., 2016; Sinnappan & Rahman, 2011;

Tarkiainen & Sundqvist, 2005). Using TPB, Wang, Wang, et al. (2019) also found that subjective norms had no significant influence on green purchase intention.

Similarly, Suki and Suki (2015) used TPB to study green hotel revisit intention and found that subjective norms had no positive influence on customer intention to visit a green hotel. Yadav et al. (2019), who also used TPB, found that subjective norms did not significantly positively influence travelers' behavioral intentions toward green hotels. Nimri (2018) found that subjective norms had a low influence on intention to revisit a green hotel. Using VBN, Choi et al. (2015) found that subjective norms did not explain consumers' decision-making processes in terms of intention to visit a green hotel.

#### **2.4.3.5 Relationship between Subjective Norms toward Green Hotels and Intention to Revisit with Attitude toward Green Hotels as Mediator**

A substantial stream of research has concluded that subjective norms have a significant relationship with behavioral intention only when attitude plays a mediating role in the relationship (Chang, 1998; Chen & Chai, 2010; Han et al., 2010; Shepherd & O'keefe, 1984; Tarkiainen & Sundqvist, 2005; Vallerand et al., 1992). Han et al. (2010) and Ryu and Jang (2006) are among those who found a positive relationship between subjective norms and attitude (Tsai, 2010; Wu & Lin, 2007). According to Chang (1998), Han et al. (2010) and Ryu and Jang (2006), the fit of the TPB model is significantly improved when it is modified by adding a path from subjective norms to attitude. The proposed relationship can therefore be interpreted as follows: individual perceived social pressure from salient referents to engage in a certain behavior induces favorable/unfavorable evaluation of a behavior.

According to some researchers, there is a significant path from subjective norms to attitudes in consumers' general decision-making (Chang, 1998; Chen & Chai,

2010; Han et al., 2010; Shepherd & O'keefe, 1984; Tarkiainen & Sundqvist, 2005; Vallerand et al., 1992). Han and Kim (2010) used TPB to study green hotel revisit intention and found a positive influence of subjective norms on attitude. Wang, Wang, et al. (2019) used TPB to investigate consumers' green purchase intention toward green hotel selection and found a positive relationship between subjective norms and green purchase attitude toward green hotel selection. Han et al. (2010) also used TPB to study green hotel revisit intention, and they found that subjective norms had a positive influence on visit intention and positively affected visit intention through attitude. Again using TPB, Teng et al. (2015) found that subjective norms had a positive influence on customer intention to visit a green hotel; they also observed a significant relationship between consumers' subjective norms and attitudes to patronize a green hotel. Muniandy et al. (2019) used TPB to study green hotel revisit intention and found a positive relationship between the subjective norms and attitudes of visitors who chose to visit a green hotel.

#### **2.4.4 Perceived Behavioral Control toward Green Hotels**

##### **2.4.4.1 Overview**

Inclusion of perceived behavioral control in TPB significantly improves its predictive ability in relation to individual behaviors (Ajzen & Driver, 1991; Han et al., 2010; Oh & Hsu, 2001). According to TPB, perceived behavioral control is the third predictor of behavioral intention. This section will therefore define the concept of perceived behavioral control, first in general, then from the TPB perspective, and then from the perspective of this research, before explaining its role in previous research. Finally, the relationship between consumers' perceived behavioral control toward green hotels and intention to revisit green hotels will be discussed in light of the findings of previous research.



#### **2.4.4.2 Definition of Perceived Behavioral Control**

Perceived behavioral control is defined as the perception of how well an individual performs a specific behavior in terms of ease or difficulty (Ajzen, 1991; Fishbein & Ajzen, 1980; Huchting et al., 2008). According to Ajzen (1991, p. 183), perceived behavioral control is “the perceived ease or difficulty of performing the behavior.” Perceived behavioral control includes two constructs that work closely together: control beliefs and perceived power (Ajzen & Madden, 1986; Chang, 1998; Paul et al., 2016; Zhou et al., 2013). Control beliefs are an individual’s perception of the availability of resources and opportunities that are important for performing a specific behavior, such as time, money, and skills (Ajzen & Madden, 1986; Chang, 1998; Han et al., 2010; Madden et al., 1992). The more an individual has control over the available resources and opportunities that he or she perceives as important for performing the specific behavior, the more likely the individual is to engage in that behavior (Chen & Tung, 2014; Madden et al., 1992; Zhou et al., 2013). For green hotels, relevant control beliefs concern price, time, effort, and location (Han et al., 2010; Han & Kim, 2010).

Perceived power is defined as an individual’s evaluation of how easy or difficult it is to utilize the available resources and opportunities to carry out a specific behavior (Ajzen, 1991; Ajzen & Madden, 1986; Chang, 1998; Chen & Tung, 2014; Huchting et al., 2008; Lam & Hsu, 2006; Paul et al., 2016). In other words, it is a form of self-confidence in the ability to conduct the behavior (Ajzen, 1991; Taylor & Todd, 1995). Researchers have found that self-confidence has a positive relationship with intention to perform a behavior (Cheng et al., 2006; Conner & Abraham, 2001; Taylor & Todd, 1995; White Baker et al., 2007). Previous experiences and expected hindrances can shape the perception of power (Paul et al., 2016). According to Ajzen

(1991) and Fishbein and Ajzen (1980), perceived behavioral control can be estimated by multiplying the strength of each control belief by the perceived power that relates to the same control belief: perceived behavioral control = control belief (CB<sub>i</sub>) × perceived power (PP<sub>i</sub>).

When a consumer perceives the ability, resources, opportunities, or chances to perform a behavior, he or she is likely to have a strong intention to do so (Madden et al., 1992; Zhou et al., 2013). Accordingly, this research supposes that if a consumer thinks that the green hotel is far from the area of the planned visit, then the consumer is less likely to visit the hotel; the same applies if the consumer perceives the cost of the green hotel as unaffordable. Therefore, in this study, perceived behavioral controls are used to answer one question: Can the person visit the green hotel?

#### **2.4.4.3 Perceived Behavioral Control in Previous Research**

In various research contexts, a number of studies have demonstrated that green purchase intention is positively influenced by perceived behavioral control (Albayrak, Aksoy, & Caber, 2013; Chan & Tsang, 2011; Chen & Tung, 2014; Han et al., 2010; Moser, 2015; Paul et al., 2016; Zhou et al., 2013). Perceived behavioral control has been observed to influence a customer's actual purchasing decision about environmentally friendly products (Jauhari & Manaktola, 2007) and to significantly influence behavioral intention to stay at a green hotel (Chen & Peng, 2012; Lien et al., 2012). Chan and Tsang (2011) found that perceived behavioral control toward healthy eating was the most important factor in predicting an adolescent's intention to eat healthily. Using TPB, Zhou et al. (2013) found that perceived behavioral control had a strong impact on the intention to buy organic foods. Consumers' perceived behavioral control also significantly predicts green product purchase intention (Chin et al., 2018). Yadav and Pathak (2016) used TPB to study young consumers' intention

toward buying green products and found that perceived behavioral control significantly influenced green purchase intention.

Using VBN to understand green buying behavior, Chaudhary and Bisai (2018) found that perceived behavioral control related positively to green purchase intention. López-Mosquera and Sánchez (2012) studied visitors' willingness to pay for the conservation of parks and observed that perceived behavioral control was the strongest determinant. Similarly, Lee and Jan (2018) found that perceived behavioral control had positive impacts on ecotourism behavior among nature-based tourists. Kim and Han (2010) used TPB to investigate intention to pay conventional hotel prices at a green hotel and found that perceived behavioral control had a positive impact. Chen and Peng (2012) used TPB to study the decision-making behavior of Chinese tourists visiting green hotels; when individuals participated in tourism activities, there was a significant relationship between the intention to stay at green hotels and perceived behavioral control. In a TPB study of green hotel revisit intention, Nimri (2018) found that perceived behavioral control was the factor with the strongest predictive ability for intention to revisit.

#### **2.4.4.4 Relationship between Perceived Behavioral Control toward Green Hotels and Intention to Revisit**

Numerous studies have used TPB to determine the relationship between perceived behavioral control toward green hotels and green hotel revisit intention (Chang et al., 2014; Chen & Peng, 2012; Chen & Tung, 2014; Han, 2015; Han et al., 2010; Han & Kim, 2010; Lien et al., 2012; Muniandy et al., 2019; Nimri, 2018; Nimri et al., 2020; Olya et al., 2019; Suki & Suki, 2015; Teng et al., 2015; Verma & Chandra, 2018a; Wang, Wang, et al., 2019; Yadav et al., 2019). They found a positive influence of perceived behavioral control toward green hotels on green hotel revisit intention.

### 2.4.5 Hypotheses

In light of the above considerations, the following hypotheses are proposed:

**Hypothesis 1 - (H1):** There is a positive relationship between consumers' attitude toward green hotels and their intention to revisit green hotels.

**Hypothesis 2 - (H2):** There is a positive relationship between consumers' subjective norms toward green hotels and their intention to revisit green hotels.

**Hypothesis 3 - (H3):** There is a positive relationship between consumers' subjective norms toward green hotels and their attitude toward green hotels.

**Hypothesis 4 - (H4):** There is a positive relationship between consumers' perceived behavioral control toward green hotels and their intention to revisit green hotels.

### 2.4.6 Theoretical Framework Using TPB

Figure 6 shows the theoretical framework using TPB.

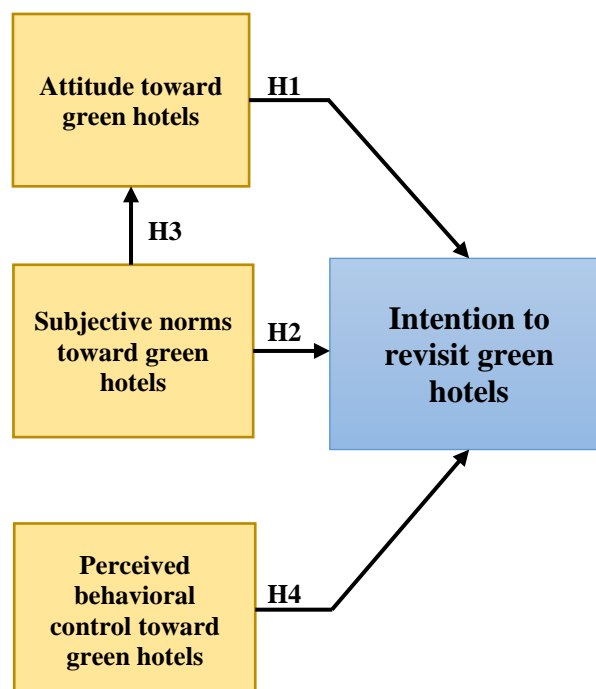


Figure 6: Theoretical framework using TPB

## **2.5 Extension of TPB**

### **2.5.1 Overview**

The ability to predict consumer purchase intention can be improved by extending TPB (Paul et al., 2016). In this section, therefore, affective components will be added into the TPB model in order to increase its predictive power in relation to individual intention to revisit green hotels. The section starts by explaining the TPB extension and its application in previous research, before showing the suitability of the extended version of TPB for studying different green contexts and green hotel revisit intention in particular.

### **2.5.2 Extending TPB**

In general, researchers agree that a considerable increase in the predictive power of a model for explaining customer pro-environmental decision is achievable by incorporating affective component/s into the model (Kim, Njite, & Hancer, 2013; Onwezen et al., 2013). According to Ajzen (1991), in order to cover a higher proportion of the variance in individual intention, TPB can be modified by including additional predictors and changing specific paths; this modification makes the theory broader and deeper (Perugini & Bagozzi, 2001). TPB has been revised in various contexts (Bansal & Taylor, 1999; Chang, 1998; Han, 2014, 2015; Han et al., 2010; Hsu & Huang, 2012; Kiatkawsin & Han, 2017; Kim & Han, 2010; Lee & Back, 2007; López-Mosquera & Sánchez, 2012; Oh & Hsu, 2001; Perugini & Bagozzi, 2001; Ryu & Jang, 2006). In addition, researchers have modified the paths of TPB or included new constructs to provide a better understanding of a wider range of human behaviors (Bansal & Taylor, 1999; Chang, 1998; Dahiya & Gayatri, 2017; Han, 2015; Han et al., 2010; Hsu & Huang, 2012; Kiatkawsin & Han, 2017; López-Mosquera & Sánchez,

2012; Oliver & Bearden, 1985; Ryu & Jang, 2006; Taylor & Todd, 1995; Vallerand et al., 1992).

### **2.5.3 Extending TPB: Previous Research**

Many scholars have extended, modified, and/or merged TPB to provide a sound theoretical justification for their proposed conceptual models (Goh, Ritchie, & Wang, 2017; Han, 2014, 2015; Hsu & Huang, 2012; Kiatkawsin & Han, 2017; Kim & Han, 2010; López-Mosquera & Sánchez, 2012; Ryu & Jang, 2006). Hsu and Huang (2012) added tourists' motivation to visit a destination and their actual behavior. Botetzagias, Dima, and Malesios (2015) added moral norms to help predict recycling intention. Other researchers have added service quality, customer satisfaction, overall image, and frequency of past behavior in order to investigate post-purchasing decisions (Barsky, 1992; Han & Kim, 2010; Han & Ryu, 2007; Morgan & Hunt, 1994; Oh & Hsu, 2001). Similarly, Teng et al. (2015) added altruism to obtain deeper predictability of intention behavior. Kim and Han (2010) included behavior, normative and control beliefs, and environmental concession behaviors to better predict guests' willingness to pay conventional hotel prices. TPB has also been extended by adding constructs in relation to image and past behavior (Bansal & Taylor, 1999; Han et al., 2010; Lee & Back, 2008; Oh & Hsu, 2001; Perugini & Bagozzi, 2001).

Han et al. (2010) added environmentally friendly activities to predict consumers' intention to revisit a green hotel, whereas Verma and Chandra (2018a) included moral reflectiveness and conscientiousness, and Chen and Tung (2014) included perceived moral obligation and environmental concerns. Kim and Han (2010) added environmental concerns to investigate willingness to pay conventional hotel prices at green hotels. To examine the intention of young consumers toward buying green products, Yadav and Pathak (2016) added environmental concerns and

environmental knowledge. Han and Kim (2010) studied customers' intention to revisit green hotels by adding service quality, customer satisfaction, overall image, and frequency of past behavior.

## **2.6 TPB Extension Constructs**

### **2.6.1 Overview**

One of the limitations of TPB is that it does not account for variables that are factors in behavioral intention and motivation, such as fear, threat, mood, or past experience. A number of studies have observed a residual effect of past behavior on the target behavior (Albarracin, Johnson, Fishbein, & Muellerleile, 2001; Reinecke, Schmidt, & Ajzen, 1996; Rhodes & Courneya, 2003; Yzer et al., 2004). To overcome this limitation, frequency of past behavior will be used here to extend TPB.

Another limitation of TPB is that it does not take into account environmental or economic factors that may influence a consumer's intention to perform a behavior. Accordingly, here TPB will be extended by integrating environmental concerns, environmental awareness, willingness to make sacrifices for the environment, willingness to pay more for green hotels, and frequency of staying at green hotels. These five constructs will be predictors of attitude toward green hotels, subjective norms toward green hotels, and perceived behavioral control toward green hotels, which are themselves predictors of intention to revisit green hotels. This section considers the five constructs in turn.

### **2.6.2 Environmental Concerns**

#### **2.6.2.1 Overview**

In the last few decades, concerns related to the environment have come to the fore (Chan & Lam, 2002; Han et al., 2010; Han & Kim, 2010; Kalafatis et al., 1999;

Laroche et al., 2001), making clear the extent of the challenges for the marketplace (Brown, 1996; Han et al., 2010; Kalafatis et al., 1999; Kirk, 1995; Roberts, 1996). Gilmore and Simmons (2007) and Han (2015) noted that environmental concerns have been raised since the 1970s. In the hospitality sector, environmental concerns focus on the need to reduce environmental harm (Jones et al., 2014). Environmental concerns are a significant predictor of green behavior (Chen & Hung, 2016; Choi, Parsa, Sigala, & Putrevu, 2009; Do PacO & Raposo, 2009; Jain & Kaur, 2004; Lee et al., 2010; Martinez Garcia de Leaniz, Herrero Crespo, & Gómez López, 2018; Ong & Musa, 2012; Paul et al., 2016; Verma & Chandra, 2016). According to Han (2015) and Han et al. (2011), hotel consumers are increasingly conscious of the environmental effects of the hotel industry. Therefore, it is necessary for hotel management to align with society's environmental concerns (Jauhari & Manaktola, 2007).

This section starts by defining the concept of environmental concerns and explaining its role in previous research. The relationship between consumers' environmental concerns and their attitude toward green hotels will then be clarified, along with the relationship between environmental concerns and subjective norms toward green hotels. Finally, the relationship between environmental concerns and perceived behavioral control toward green hotels will be discussed.

#### **2.6.2.2 Definition of Environmental Concerns**

Environmental concerns have been defined as individuals' conscious level of evaluation of problems regarding the environment (Do PacO & Raposo, 2009; Fransson & Gärling, 1999; Hu et al., 2010; Milfont & Gouveia, 2006; Schwartz, 1977; Weigel & Weigel, 1978) and their willingness to expend effort and give support to solve those problems (Hu et al., 2010). Environmental concerns can be motivated by care for nature itself or because it is considered as a human resource (Thompson &



Barton, 1994). A person's environmental values have a significant influence on their environmental concerns (Bamberg, 2003), which therefore have a considerable impact on their environmental intentions (Fransson & Gärling, 1999; Sexton & Sexton, 2014). According to Han et al. (2009) and Hu et al. (2010), environmental concerns represent the extent to which individuals are aware of environmental problems and participate in attempts to solve them. Similarly, Chan and Lau (2000) and Milfont and Gouveia (2006) defined environmental concerns as the degree of emotionality that a person attaches to environmental issues. Environmental concerns have also been defined as individuals' feelings of worry in relation to green issues (Zimmer et al., 1994) or as a strong attitude for protecting the environment (Crosby, Gill, & Taylor, 1981).

### **2.6.2.3 Environmental Concerns: Previous Research**

Saving the environment is an ongoing focus of public attention (Chan & Wong, 2006). Environmental concerns play an important role in changing consumer buying behaviors and attitudes (D'souza & Taghian, 2005; Environmentally Friendly Hotels, 2008; Follows & Jobber, 2000; Nath, Kumar, Agrawal, Gautam, & Sharma, 2013). In hospitality and tourism, environmental concerns have a strong influence on consumers' intention formation (Chan, Hon, Chan, & Okumus, 2014; Han & Hwang, 2015; Han & Yoon, 2015; Steg & De Groot, 2010). Consumers with a high degree of environmental concerns prefer to make green purchases (Jauhari & Manaktola, 2007). According to Jauhari and Manaktola (2007), Kalafatis et al. (1999) and Laroche et al. (2001), there is a positive relationship between consumers' environmental concerns and their green buying behaviors. In particular, environmental beliefs have an influence on consumers' attitudes toward green hotels and intention to revisit green hotels (Line & Hanks, 2016). The level of consumers' concerns about the environment is the core driver of their green decisions and behavior (Akehurst, Afonso, & Martins

Gonçalves, 2012; Chan et al., 2014; Clark, Kotchen, & Moore, 2003; Corraliza & Berenguer, 2000; H. Han, J. Hwang, & M. J. Lee, 2017a; Hedlund, 2011; Lind, Nordfjærn, Jørgensen, & Rundmo, 2015; Mobley, Vagias, & DeWard, 2010; Schultz et al., 2005). Environmental concerns are often considered as a major factor in consumers' pro-environmental decision-making process (Chan et al., 2014; Diamantopoulos, Schlegelmilch, Sinkovics, & Bohlen, 2003; Han et al., 2015; Han, Lee, Trang, & Kim, 2018; Han & Yoon, 2015; Hu et al., 2010; Onwezen et al., 2013; Van der Werff et al., 2013a). Consequently, environmental concerns are recognized as an important predictor of green behavioral decisions (Chen & Hung, 2016; Hu et al., 2010; Jain & Kaur, 2004; Jauhari & Manaktola, 2007; Kalafatis et al., 1999; Laroche et al., 2001; Lee et al., 2014; Ong & Musa, 2012; Paul et al., 2016; Verma & Chandra, 2016; Zimmer et al., 1994).

Some previous studies have found that environmental concerns impact purchase intention directly (Barber, 2014; Jauhari & Manaktola, 2007). However, other studies have argued that environmentally concerned consumers do not necessarily repurchase green hotel products (Han et al., 2009). Chaudhary and Bisai (2018) incorporated environmental concerns into the VBN model to understand green buying behavior, and they found that environmental concerns were insufficiently positively related to green purchase intention. However, Yadav and Pathak (2016) incorporated environmental concerns into the TPB model to study the intention of young consumers toward buying green products, and they found that environmental concerns among young people significantly influenced their intention to purchase green products. Using a TPB model that incorporated environmental concerns to investigate consumer willingness to pay conventional hotel prices at a green hotel, Kim and Han (2010) found that environmental concerns had a positive impact on

willingness to pay conventional hotel prices. Taking a similar model, Wang, Fan, Zhao, Yang, and Fu (2016) found that environmental concerns had a positive impact on consumers' intentions to adopt hybrid electric vehicles. According to Chin et al. (2018), environmental concerns significantly predict consumers' intention to purchase green products.

In the context of green hotels, Verma et al. (2019) found that environmental concerns significantly and positively influenced consumers' revisit intention. Environmental concerns have also been found to positively influence attitudes toward visiting green hotels, subjective norms, and perceived behavioral control which in turn positively influence the intention to visit green hotels (Chen & Tung, 2014). Therefore, environmental concerns play an important role in forming green intentions (Han, Chua, & Hyun, 2020), and scholars have added environmental concerns to the TPB model to improve its predictive power (Chen & Tung, 2014; Line & Hanks, 2016).

#### **2.6.2.4 Relationship between Environmental Concern and Attitude toward Green Hotels**

Specific attitudes predict specific behavior (Iversen & Rundmo, 2002), and environmental concerns have a significant impact on consumers' attitudes toward green products (Aman et al., 2012; Chen & Hung, 2016; Han et al., 2009; Hartmann & Apaolaza-Ibañez, 2012; Kassirjian, 1971; Yadav & Pathak, 2016). Accordingly, in this research, attitude is defined as consumer attitude toward green hotels, which is a tendency to act favorably or unfavorably toward intention to revisit. Environmental concerns are a general attitude toward environmental protection (Dunlap & Van Liere, 1978; Fransson & Gärling, 1999; Weigel & Weigel, 1978) and an important determinant of green behavior (Bamberg, 2003; Dunlap & Van Liere, 1978; Fransson & Gärling, 1999; Hansla, Gamble, Juliusson, & Gärling, 2008; Weigel & Weigel,

1978). Hence, environmental concerns take into account both a positive or negative attitude and the individual's mental state toward green hotel revisit intention (Dagher & Itani, 2012). Accordingly, environmental concerns are defined here as consumer environmental concerns toward a real-world phenomenon, namely the tendency to act favorably or unfavorably in relation to intention to revisit green hotels. Therefore, environmental concerns are included in the model as a separate predictor of behavioral intention toward green hotels through attitude toward green hotels.

Consumers with environmental concerns are motivated to buy green products (Henion & II, 1976; Rahman, Park, & Chi, 2015). Consumers prefer to achieve their personal values that align with the desired end state by knowing the consequences (Judica & Steven Perkins, 1992). According to Schultz, Shriver, Tabanico, and Khazian (2004, p. 31), environmental attitude is "the collection of beliefs, affect, and behavioral intentions a person holds regarding environmentally related activities or issues." Therefore, environmental concerns and attitude are predictors of environmental behavior (Hines et al., 1987; Kaiser, Oerke, & Bogner, 2007; Kaiser, Wölfing, & Fuhrer, 1999; Park, Jeong Kim, & McCleary, 2014). In the context of green hotels, green consumer behavior is predicted accurately by environmental concerns, attitudes, and intentions (Barber, 2014), and consumers' intentions toward green hotels are influenced by attitudes and environmental awareness (Gao, Mattila, & Lee, 2016).

Environmental concerns often trigger anticipatory feelings of pride or guilt in relation to engaging in or not engaging in green actions (Han & Hyun, 2017; Stern, 2000), and environmental behavioral decisions can be predicted from environmental concerns (Chen & Hung, 2016; Jain & Kaur, 2004; Ong & Musa, 2012; Paul et al., 2016; Verma & Chandra, 2016). Consumers with a high level of environmental

concerns are more likely to assess the consequences of their purchasing habits on the environment (Follows & Jobber, 2000; Nath et al., 2013), more likely to have purchase intention (Barber, 2014; Jauhari & Manaktola, 2007), more likely to participate in green purchase behaviors (Han & Yoon, 2015), and will have a more positive attitude to revisiting green hotels (Aman et al., 2012; Han et al., 2009; Hartmann & Apaolaza-Ibáñez, 2012; Kim & Han, 2010; Yadav & Pathak, 2016).

Environmental concerns significantly predict consumer attitudes toward the purchase of green products (Chin et al., 2018). There is a positive relationship between consumers' environmental concerns and their green attitudes toward intention to purchase green products (Han et al., 2009; Jauhari & Manaktola, 2007; Laroche et al., 2001; Mostafa, 2006). Chaudhary and Bisai (2018) used VBN to understand green buying behavior, and they found that environmental concerns relate positively to attitude. Using TPB, Yadav and Pathak (2016) found that environmental concerns among young consumers significantly influenced their attitudes toward buying green products. In a study of green hotel revisit intention, Verma et al. (2019) found that environmental concerns significantly and positively influenced consumers' attitudes toward green hotels. Using an extended version of TPB, Chen and Tung (2014) showed that environmental concerns positively influence attitude toward visiting green hotels. Jiang and Gao (2019) observed that environmental concerns positively influence consumers' attitudes toward green hotels and their intention to revisit. However, when Kim and Han (2010) used TPB to investigate consumers' willingness to pay conventional hotel prices at a green hotel, they found that environmental concerns had an insufficiently positive impact on attitudes toward the behavior.

### **2.6.2.5 Relationship between Environmental Concerns and Subjective Norms toward Green Hotels**

Environmental concerns significantly predict consumers' subjective norms toward the purchase of green products (Chin et al., 2018). Chaudhary and Bisai (2018) used VBN to understand green buying behavior, and they found that environmental concerns related positively to subjective norms. Chen and Tung (2014) used an extended TPB to show that environmental concerns positively influence subjective norms toward visiting green hotels.

### **2.6.2.6 Relationship between Environmental Concerns and Perceived Behavioral Control toward Green Hotels**

Using VBN to understand green buying behavior, Chaudhary and Bisai (2018) found that environmental concerns relate positively to perceived behavioral control. Environmental concerns significantly predict consumers' perceived behavioral control toward purchasing green products (Chin et al., 2018), and Chen and Tung (2014) used an extended TPB to show that environmental concerns positively influence perceived behavioral control toward visiting green hotels.

## **2.6.3 Environmental Awareness**

### **2.6.3.1 Overview**

In recent decades, levels of environmental awareness have increased dramatically (Han et al., 2009; Han et al., 2011; Kalafatis et al., 1999; Paul et al., 2016; Tang & Lam, 2017; Yadav & Pathak, 2017). Consequently, green consumption has become an important factor for both consumers and businesses (Kim & Choi, 2005; Rahman & Reynolds, 2016). Consumers' level of awareness about the environment is the core driver of their green decisions and behavior (Akehurst et al., 2012; Chan et al., 2014; Clark et al., 2003; Corraliza & Berenguer, 2000; Han, Hwang, et al., 2017a;

Hedlund, 2011; Lind et al., 2015; Mobley et al., 2010; Onwezen et al., 2013; Schultz et al., 2005; Stern, 2000; Van der Werff et al., 2013a).

This section begins by defining the concept of environmental awareness and explaining its role in previous research. The relationship between consumers' environmental awareness and their attitude toward green hotels will then be explored, along with the relationship between their environmental awareness and their subjective norms toward green hotels. Finally, the relationship between consumers' environmental awareness and their perceived behavioral control toward green hotels will be discussed.

#### **2.6.3.2 Definition of Environmental Awareness**

Protecting the environment is a major concern in our society (Easterling, Kenworthy, & Nemzoff, 1996). Consumers generally claim to be aware of environmental issues (Levine & Strube, 2012), and their awareness is increasing (Chen & Tung, 2014; Jauhari & Manaktola, 2007; Vazifehdoust et al., 2013). Environmental awareness is a consumer's ability to recognize environmental symbols, concepts, and behavior (Laroche et al., 2001) and their ability to identify the hazardous impact and consequences of human behavior on the environment (Kollmuss & Agyeman, 2002). Do PacO and Raposo (2009); Kim and Han (2010) define environmental awareness as consumers' worry about environmental problems.

Environmental awareness often triggers anticipatory feelings of pride or guilt regarding engaging or not engaging in green actions (Han & Hyun, 2017; Stern, 2000). Consumers continue to be keen on environmental protection (Chan & Wong, 2006) and are becoming more aware of the damage caused to the environment by various business activities (Jauhari & Manaktola, 2007) . Consequently, they encourage environmentally responsible management in the hotel industry (Jauhari & Manaktola,

2007; Wolfe & Shanklin, 2001). Increasing environmental awareness causes consumers to be more concerned about the environment (Chan et al., 2014; Kirk, 1995), and their buying behaviors and attitudes change accordingly (D'souza & Taghian, 2005; Environmentally Friendly Hotels, 2009; Laroche et al., 2001). These changes drive them to purchase green products and services, to prefer green firms (Chiu, Lee, & Chen, 2014b; Han et al., 2010; Hurst et al., 2013; Kalafatis et al., 1999; Kim & Han, 2010; Laroche et al., 2001; Onwezen et al., 2013; Roberts, 1996; Ryan & Spash, 2008), and to adopt eco-conscious behaviors (Do PacO & Raposo, 2009).

### **2.6.3.3 Environmental Awareness: Previous Research**

Environmental awareness has influenced a growing number of consumers to engage in green behavior (Do PacO & Raposo, 2009; Kalafatis et al., 1999; Laroche et al., 2001) and is an important precondition for green consumer behavior (Chiu et al., 2014b; Han et al., 2010; Kim & Han, 2010; Roberts, 1996; Ryan & Spash, 2008). It is also an important determinant of green intention (Akehurst et al., 2012; Chan et al., 2014; Do PacO & Raposo, 2009; Roberts, 1996). Kim and Han (2010) used TPB to investigate consumers' willingness to pay conventional hotel prices at green hotels, and they found that environmentally conscious behaviors had a positive impact. Tan et al. (2019) investigated the relationship among young consumers between environmental awareness and green product buying decisions, and they found that environmental awareness was positively associated with decisions to buy green products. However, according to Kollmuss and Agyeman (2002) and Lee et al. (2010) environmental awareness does not always predict consumers' purchasing behaviors.

Environmental awareness influences customers' attitudes toward products (Murray & Schlacter, 1990), which leads them to take action to protect the environment (Han et al., 2011; Han et al., 2010; Kalafatis et al., 1999; Kim & Han,



2010; Roberts, 1996; Vazifehdoust et al., 2013). Yadav and Pathak (2016) used TPB to study the intention of young consumers toward buying green products, and they found that environmental knowledge significantly influenced their intention to purchase green products. To improve the predictive power of TPB, scholars have therefore added environmental awareness to the model (Do PacO & Raposo, 2009; Han et al., 2010; Kalafatis et al., 1999; Laroche et al., 2001; Roberts, 1996; Straughan & Roberts, 1999; Vlosky, Ozanne, & Fontenot, 1999a).

#### **2.6.3.4 Relationship between Environmental Awareness and Attitude toward Green Hotels**

This relationship has not been measured or tested in previous research.

#### **2.6.3.5 Relationship between Environmental Awareness and Subjective Norms toward Green Hotels**

This relationship has not been measured or tested in previous research.

#### **2.6.3.6 Relationship between Environmental Awareness and Perceived Behavioral Control toward Green Hotels**

This relationship has not been measured or tested in any previous research.

### **2.6.4 Willingness to Make Sacrifices for the Environment**

#### **2.6.4.1 Overview**

Willingness to make sacrifices is a significant driver of environmentally responsible intentions (Han & Hyun, 2017; Iwata, 2002; Rahman & Reynolds, 2016; Thøgersen, 2000). This section begins by defining the concept of willingness to make sacrifices for the environment and explaining its role in previous research. The relationship between willingness to make sacrifices for the environment and attitudes toward green hotels is then considered, along with the relationship between willingness to make sacrifices for the environment and subjective norms toward green hotels.

Finally, the relationship between willingness to make sacrifices for the environment and perceived behavioral control toward green hotels will be discussed.

#### **2.6.4.2 Definition of Willingness to Make Sacrifices**

According to Weinstein (2014, p. 154), willingness to make sacrifices involves “foregoing one’s own immediate self-interests to promote the well-being of the partner or relationship.” This can take the form of financial sacrifice, such as paying more, or it may reflect a compromise in terms of the convenience, quality, or level of luxury offered by a hotel. The construct has been operationalized in two ways: commitment toward the environment (Van Lange, Agnew, Harinck, & Steemers, 1997) and economic or financial considerations linked to environmental perspectives (Stern, 2000; Stern & Dietz, 1994; Stern et al., 1993). This research embraces both approaches by including willingness to make a sacrifice for environment and willingness to pay more for green hotels.

According to Davis et al. (2011), willingness to make sacrifices for the environment entails the expense of immediate self-interest, effort, or costs in order to benefit the environment. There are different types of sacrifices in the context of green hotels, including compromises in terms of convenience, quality, or level of luxury. Many consumers have a perception that nongreen products are superior in status than green products (Bhate, 2002; Peattie, 2001). In relation to green hotels, consumers perceive lower comfort levels, greater inconvenience, and high price premiums (Chan, 2013). Green hotel consumers are to some extent willing to make sacrifices for the environment by compromising on quality (Han & Chan, 2013; Heung, Fei, & Hu, 2006), but this can be a barrier to revisiting green hotels. Ottman and Books (1998) found that more than 40% of consumers were unwilling to buy green products because

of the perceived lower quality. Similarly, consumers may not be willing to revisit green hotels because of perceived lower quality (Heung et al., 2006; Kirk, 1995).

#### **2.6.4.3 Willingness to Make Sacrifices: Previous Research**

Consumers are ready to make sacrifices by giving things up that they like doing in order to save the environment (Han & Hyun, 2017), including by compromising on convenience (Davis et al., 2011; Rahman & Reynolds, 2016). Almost every green hotel employs some sort of towel or linen reuse program whereby towels and linens are washed on demand rather than on a daily basis. Although participation in such programs is voluntary, it can cause inconvenience for the consumer. Similarly, common green practices such as the use of low-flow faucets, showerheads, and urinals can generate inconvenience. Consumers' willingness to make sacrifices for the environment is associated with commitment to the environment (Coy, Farrell, Gilson, Davis, & Le, 2013; Davis et al., 2011; Van Lange et al., 1997), environmental concerns (Hedlund, 2011; Oreg & Katz-Gerro, 2006), and eco-labeled products (Thøgersen, 2000). Similarly, Rahman and Reynolds (2016) found a positive relationship between consumers' willingness to make sacrifices for the environment and their green hotel revisit intentions. Consumers may show greater environmentally significant behavior if they also exhibit greater willingness to make sacrifices for the environment (Iwata, 2002).

#### **2.6.4.4 Relationship between Willingness to Make Sacrifices for the Environment and Attitude toward Green Hotels**

This relationship has not been measured or tested in any previous research.

#### **2.6.4.5 Relationship between Willingness to Make Sacrifices for the Environment and Subjective Norms toward Green Hotels**

This relationship has not been measured or tested in any previous research.

#### **2.6.4.6 Relationship between Willingness to Make Sacrifices for the Environment and Perceived Behavioral Control toward Green Hotels**

This relationship has not been measured or tested in any previous research.

### **2.6.5 Willingness to Pay More for Green Hotels**

#### **2.6.5.1 Overview**

The availability of financial resources and the economic circumstances of consumers play an important role in their intention to adopt green behavior (Ertz, Karakas, & Sarigöllü, 2016). Accordingly, price is one of the most important barriers to green consumption (Gadenne, Sharma, Kerr, & Smith, 2011; Gleim, Smith, Andrews, & Cronin Jr, 2013; Nasir & Karakaya, 2014), and understanding consumers' willingness to pay more is of great importance for green hotels (Gleim et al., 2013). This section therefore defines the concept of willingness to pay more for green hotels and explains its role in previous research. The relationship between consumers' willingness to pay more for green hotels and their attitude toward green hotels will then be examined, along with the relationship between willingness to pay more and subjective norms toward green hotels. Finally, the relationship between willingness to pay more and perceived behavioral control toward green hotels will be discussed.

#### **2.6.5.2 Definition of Willingness to Pay More**

In most cases, consumers have an idea regarding the price of a product or service that they take as their reference price. Accordingly, they evaluate the actual price of products or services against the reference in order to judge whether they will proceed to purchase. According to Buil, De Chernatony, and Montaner (2013), Mazumdar, Raj, and Sinha (2005), McKechnie, Devlin, Ennew, and Smith (2012) and Roy, Rabbanee, and Sharma (2016), the reference price is a standard used for evaluating an offer price. Thus, reference prices are an important determinant in the

marketing discipline (Kalyanaram & Winer, 1995; Mazumdar et al., 2005). When consumers find that the price of a product or service is higher than the reference price, the excess amount is known as a price premium (Fuerst & McAllister, 2011; Rao & Bergen, 1992; Vlosky, Ozanne, & Fontenot, 1999b).

### **2.6.5.3 Willingness to Pay More: Previous Research**

Consumers may show a willingness to pay more for green products and services (DiPietro et al., 2013; Han et al., 2009; Kang et al., 2012; Kelly, Haider, Williams, & Englund, 2007; Kim, Yoon, & Shin, 2015; Laroche et al., 2001; Lee et al., 2010; Masau & Prideaux, 2003; Shen, 2012; Sigala, 2014; Susskind, 2014). According to Slye (2009), about 30% of consumers are willing to pay more for environmentally responsible hotels. A number of researchers have found that customers are willing to pay more to stay at green hotels (Chang, Hsiao, Nuryyev, & Huang, 2015; Han et al., 2011; Han & Hyun, 2018a; Kang et al., 2012; Kim, Li, Han, & Kim, 2017). Among young consumers, Tan et al. (2019) found that low price-sensitivity was positively associated with the decision to buy green products.

Some consumers are prepared to pay more for green-certified hotels (Fairweather, Maslin, & Simmons, 2005; Laroche et al., 2001), just as some are willing to pay a premium for green products in general (Biswas & Roy, 2015; Ling, 2013; Prakash & Pathak, 2017; Roberts, 1996; Sheehan & Atkinson, 2012; Stern, 2000; Suki & Suki, 2015; Vandermerwe & Oliff, 1990; Yadav & Pathak, 2017) or for green food products (Tung, Shih, Wei, & Chen, 2012). Bohdanowicz (2003) found that 25% of hotel guests were willing to pay a premium for green hotels. Fairweather et al. (2005) and Lee and Gan (2007) also found that consumers were willing to pay premiums. Kuminoff, Zhang, and Rudi (2010) found that for a standard room in a green hotel, consumers were willing to pay a premium of USD 9–26.

Normally, consumers perceive green hotels as expensive compared to conventional hotels (Han et al., 2009; Jauhari & Manaktola, 2007; Kasim, 2004b). According to Fuerst and McAllister (2009a, 2009b, 2011), the rent for green office buildings is 8% higher than for conventional office buildings. In Tokyo, green residential apartment rents are higher than those for conventional residential apartments by 10.3% (Yoshida & Sugiura, 2015). Accordingly, there is hesitation on the part of consumers to pay more for green products (Choi & Parsa, 2007). Although consumers have concerns about the environment, they are not necessarily willing to pay more for green hotels (Jauhari & Manaktola, 2007), as Kasim (2004a) and Millar and Baloglu (2011) established. Thus, it is important to understand consumers' behaviors in order to influence their purchasing choice in relation to green hotels (Han et al., 2010).

Consumer incomes have a substantial influence on their intention to adopt green behaviors (Ertz et al., 2016). Green consumers are willing to pay more for green food (Fillion & Arazi, 2002); nevertheless, the higher prices are the main obstacle in the decision process (Connell, 2010; Hughner, McDonagh, Prothero, Shultz, & Stanton, 2007). In some areas, green consumers are willing to pay more, including for green services (Kang et al., 2012), eco-friendly appliances and furniture (Shen, 2012), and eco-labeled goods (Essoussi & Linton, 2010). Accordingly, investigating the willingness of consumers to pay more is of key importance for understanding the intention to visit green hotels (Gleim et al., 2013), and the contradictory findings make it imperative to determine the influence of willingness to pay more on green hotel revisit intention. In this connection, consumers' green attitudes have a positive relationship with their willingness to pay more for green products (Han et al., 2009;

Laroche et al., 2001; Ojea & Loureiro, 2007) , and this has also been found in the context of green hotels (Han et al., 2011; Kang et al., 2012).

A majority of US consumers are willing to pay more for green hotels (Guadalupe-Fajardo, 2002). Likewise, in Taiwan, tourists are willing to pay more to stay at green hotels (Lee & Gan, 2007). Eco-friendly consumers are also willing to pay more for green hotels (Kang et al., 2012; Khan, 2003). However, this may be because they prefer to pay less for conventional hotels rather than because they prefer to pay more for green hotels (Kasim, 2004a), and it appears that a majority of consumers in general are not willing to pay more to stay at green hotels (Millar & Baloglu, 2011).

#### **2.6.5.4 Relationship between Willingness to Pay More for Green Hotels and Attitude toward Green Hotels**

This relationship has not been measured or tested in any previous research.

#### **2.6.5.5 Relationship between Willingness to Pay More for Green Hotels and Subjective Norms toward Green Hotels**

This relationship has not been measured or tested in any previous research.

#### **2.6.5.6 Relationship between Willingness to Pay More for Green Hotels and Perceived Behavioral Control toward Green Hotels**

This relationship has not been measured or tested in any previous research.

### **2.6.6 Frequency of Staying at Green Hotels**

#### **2.6.6.1 Overview**

In post-purchase decision-making processes, past behavior is an important construct (Ajzen, 1991; Bansal & Taylor, 1999; Han et al., 2009; Han & Ryu, 2007; Lee & Back, 2008; Oh & Hsu, 2001; Perugini & Bagozzi, 2001; Taylor & Baker, 1994). For tourists in particular, past experiences have an effect on decision-making processes (Kim, Ritchie, & Tung, 2010), and past experience is a significant predictor

of intention (Otto & Ritchie, 1995; Ramires, Brandao, & Sousa, 2018; Sommer, 2011). This section therefore begins by defining the concept of frequency of staying at green hotels and explaining its role in previous research. The relationship between consumers' frequency of staying at green hotels and their attitude toward green hotels will then be examined, along with the relationship between frequency of staying and subjective norms toward green hotels. Finally, the relationship between frequency of staying and perceived behavioral control toward green hotels will be discussed.

#### **2.6.6.2 Definition of Frequency of Staying at Green Hotels**

Previous research has often discussed past behavior (Han et al., 2010; Perugini & Bagozzi, 2001; Sommer, 2011; Song, Lee, Kang, & Boo, 2012), and frequency of past behavior has in many cases been used instead of past behavior (Carrus, Passafaro, & Bonnes, 2008; Han et al., 2010; Ouellette & Wood, 1998; Perugini & Bagozzi, 2001; Song et al., 2012). Past experience is defined as the knowledge and skill that consumers have gained through doing something for a period of time (Oxford Learner's Dictionaries, 2021). Ajzen (2002) and Sommer (2011) characterized past behavior as the recurrence of individuals' behavior. According to Dixit (2020, p. 316), it is "a consumer experience positively remembered and recalled after the event has occurred." A consumer experience is constructed from consumers' assessment of their visits (Otto & Ritchie, 1996), including the memorable cognitive and affective benefits that they are concerned about (Zhang, Wu, & Buhalis, 2018) and which can influence behavioral intentions (Hoch & Deighton, 1989). Accordingly, as the number of past experiences increases to produce more experience, the degree of their influence on consumer behavior will increase. Hence, this research investigates the impact of the increasing number of green hotel past experiences and their influence on the TPB constructs, which in turn influence green hotel revisit intention.



### **2.6.6.3 Frequency of Staying at Green Hotels: Previous Research**

Previous research has carefully documented the impact of frequency of past behavior on intention (Carrus et al., 2008; Ouellette & Wood, 1998; Perugini & Bagozzi, 2001; Song et al., 2012). The frequency of past green behavior plays a critical role in generating environmentally responsible intention (Carrus et al., 2008; Han et al., 2015). Although past behavior has insufficient positive influence on green hotel revisit intention, in an environmentally responsible cruise context, Han and Hwang (2016) found that the frequency of past behavior positively affected behavioral intention. Indeed, it is easier for consumers to evaluate the quality of services after having direct experience of them (O'Connor, 2010; Yang, Mueller, & Croes, 2016).

Frequency of past behavior is an important determinant of intention and behavior (Lee & Back, 2008; Oh & Hsu, 2001; Ouellette & Wood, 1998; Perugini & Bagozzi, 2001; Ryu & Jang, 2006). Numerous researchers have identified the need to include this factor in TPB to predict intention (Lee & Back, 2007; Oh & Hsu, 2001; Ouellette & Wood, 1998; Perugini & Bagozzi, 2001). Lee and Back (2008) extended TPB to include past behavior, and they found that past behavior was an important determinant of intention. Perugini and Bagozzi (2001) developed a modified TPB model to examine purposive behavior, and they found that frequency of past behavior played a significant role in decision-making processes, along with other additional constructs. Ajzen (1991) also extended TPB by adding frequency of past behavior to help predict decision-making, as did Lee and Back (2008), Oh and Hsu (2001), Perugini and Bagozzi (2001) and Ryu and Jang (2006). Frequency of past behavior has thus been established as a significant predictor in purchase decision-making processes (Ajzen, 1991; Bansal & Taylor, 1999; Han et al., 2009; Han & Ryu, 2007; Lam & Hsu, 2006; Lee & Back, 2008; Lee & Choi, 2009; Oh & Hsu, 2001; Perugini

& Bagozzi, 2001; Taylor & Baker, 1994). Perceived behavioral control also encompasses previous experiences and expected hindrances (Paul et al., 2016), such as the availability of green resources that consumers are willing to use during their stay in a green hotel. Han et al. (2010) found that frequency of past behavior had a significant influence on consumers' intention to visit green hotels.

#### **2.6.6.4 Relationship between Frequency of Staying at Green Hotels and Attitude toward Green Hotels**

This relationship has not been measured or tested in any previous research.

#### **2.6.6.5 Relationship between Frequency of Staying at Green Hotels and Subjective Norms toward Green Hotels**

This relationship has not been measured or tested in any previous research.

#### **2.6.6.6 Relationship between Frequency of Staying at Green Hotels and Perceived Behavioral Control toward Green Hotels**

This relationship has not been measured or tested in any previous research.

### **2.6.7 Hypotheses**

In light of the above considerations, the following hypotheses are proposed:

**Hypothesis 5 (H5):** There is a positive relationship between consumers' environmental concerns and their attitude toward green hotels.

**Hypothesis 6 (H6):** There is a positive relationship between consumers' environmental concerns and their subjective norms toward green hotels.

**Hypothesis 7 (H7):** There is a positive relationship between consumers' environmental concerns and their perceived behavioral control toward green hotels.

Some relationships have not been measured or tested in any previous research. Therefore, this research introduces the following relationships to be tested for the first time. This procedure may result in insights useful for enhancing the intention to revisit

the green hotels, opening the door for future studies to explore such relationships. Accordingly, the following novel hypotheses are proposed:

**Hypothesis 8 (H8):** There is a positive relationship between consumers' environmental awareness and their attitude toward green hotels.

**Hypothesis 9 (H9):** There is a positive relationship between consumers' environmental awareness and their subjective norms toward green hotels.

**Hypothesis 10 (H10):** There is a positive relationship between consumers' environmental awareness and their perceived behavioral control toward green hotels.

**Hypothesis 11 (H11):** There is a positive relationship between consumers' willingness to make sacrifices for the environment and their attitude toward green hotels.

**Hypothesis 12 (H12):** There is a positive relationship between consumers' willingness to make sacrifices for the environment and their subjective norms toward green hotels.

**Hypothesis 13 (H13):** There is a positive relationship between consumers' willingness to make sacrifices for the environment and their perceived behavioral control toward green hotels.

**Hypothesis 14 (H14):** There is a positive relationship between consumers' willingness to pay more for green hotels and their attitude toward green hotels.

**Hypothesis 15 (H15):** There is a positive relationship between consumers' willingness to pay more for green hotels and their subjective norms toward green hotels.

**Hypothesis 16 (H16):** There is a positive relationship between consumers' willingness to pay more for green hotels and their perceived behavioral control toward green hotels.

**Hypothesis 17 (H17):** There is a positive relationship between consumers' frequency of staying at green hotels and their attitude toward green hotels.

**Hypothesis 18 (H18):** There is a positive relationship between consumers' frequency of staying at green hotels and their subjective norms toward green hotels.

**Hypothesis 19 (H19):** There is a positive relationship between consumers' frequency of staying at green hotels and their perceived behavioral control toward green hotels.

### 2.6.8 Theoretical Framework Obtained by Extending the TPB Model

Figure 7 shows the updated theoretical framework obtained by extending the TPB model.

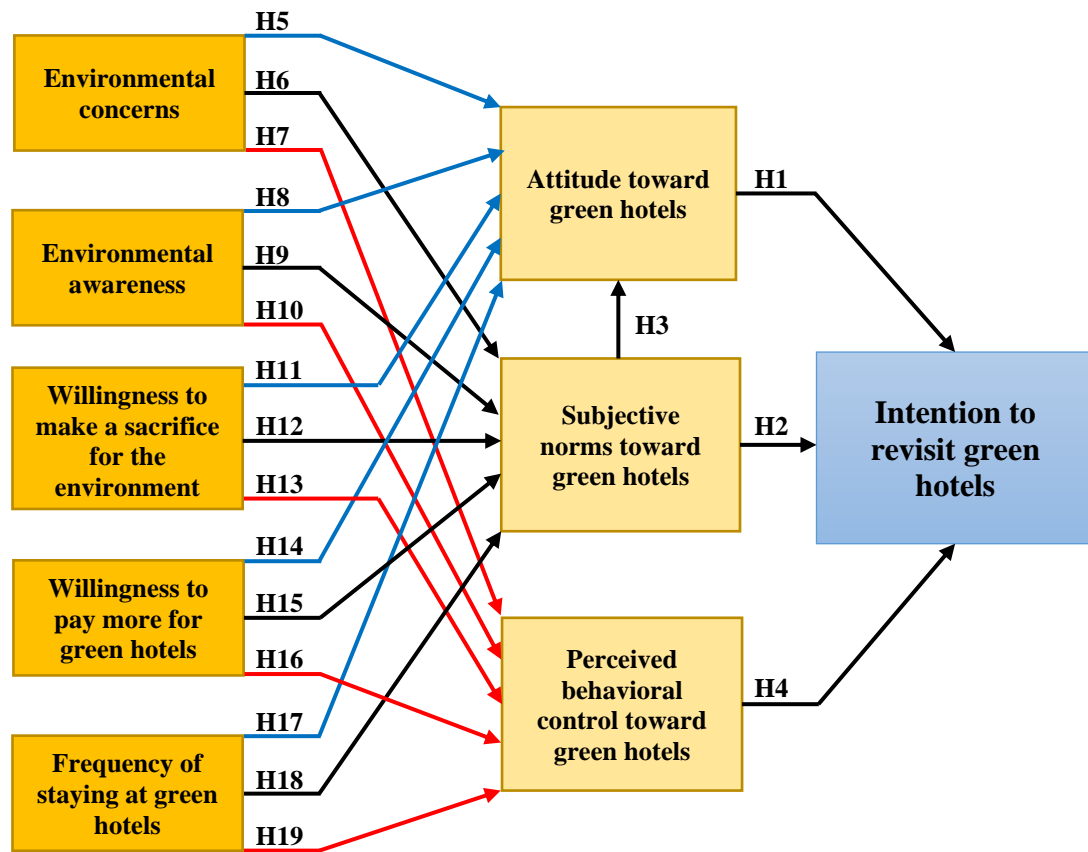


Figure 7: Updated theoretical framework obtained by extending TPB

## **2.7 Value Belief Norm Theory (VBN)**

### **2.7.1 Overview**

Air pollution has negative effects on human health (Bobak, 2000; Ritz et al., 2002; Šrám, Binková, Dejmek, & Bobak, 2005). Accordingly, burning less fuel will benefit both present-day humans (Pope III & Dockery, 2006) and future generations of humans in terms of facing less pollution and less global climate disruption. Nonhuman nature will also benefit through less damage to plant life and less depletion of essential nutrients from the soil (Cape, 1993). People consider pro-environmental behavior as a way to help the environment (Nolan, Kenefick, & Schultz, 2011; Nolan, Schultz, Cialdini, Goldstein, & Griskevicius, 2008). BatSon (1998) notes that, according to traditional definitions of prosocial behavior, at least one other person should receive the benefits. Thus, the test of whether pro-environmental behavior is prosocial is that others should benefit from it and that individuals should intend this to be the case. Stern (2000) developed VBN theory to explain behavior related to environmental protection from the perspectives of both self-interest and altruism (Henry & Dietz, 2012). The self-perspective is already accounted for in TPB and its extension. Therefore, this research will use VBN theory to investigate consumer intention to revisit green hotels from a prosocial perspective. This section therefore introduces VBN theory and demonstrates its suitability for this research.

### **2.7.2 Introduction to VBN Theory**

Stern et al. (1999) established VBN theory as an extension of the norm activation model (NAM) of prosocial behavior (Schwartz, 1977), value theory (Schwartz & Bilsky, 1987), and the new environmental paradigm (Dunlap, Van Liere, Mertig, & Jones, 2000). NAM is based on prosocial behaviors associated with morality

(Schwartz, 1977). Prosocial behaviors are actions that are beneficial to others, which can take the form of sharing, helping, and cooperating (BatSon, 1998). Pro-environmental behaviors can thus be considered as a type of prosocial behavior (De Groot & Steg, 2010), as they involve actions that are of benefit to others, usually without any tangible benefits for the actors (De Groot & Steg, 2010). According to NAM, there are causal relationships between awareness of consequences, ascription of responsibility, and personal norms, as shown in Figure 8.

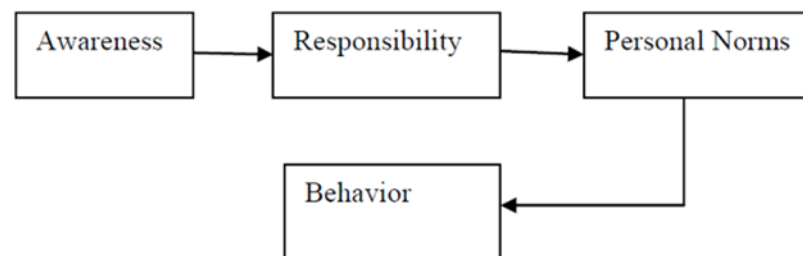


Figure 8: Norm activation model (NAM)

Schwartz and Bilsky (1987) emphasized that values theory was designed to anticipate human attitudes and behaviors from solid and changeable beliefs. According to Stern and Dietz (1994), pro-environmental attitudes and behavior can result from fundamentally different underlying values. Thus, NAM was designed to anticipate altruistic behavior originating from a moral obligation to prevent harm to a valued object (Schwartz, 1977). Originally developed to investigate altruistic intention and behavior in a prosocial context, it was constructed from three elements: awareness of consequences, ascription of responsibility, and personal norms (Schwartz, 1977). NAM has been used in connection with a range of environmental issues (Cordano, Welcomer, Scherer, Pradenas, & Parada, 2011; De Groot & Steg, 2009; Guagnano, Stern, & Dietz, 1995; Schultz & Zelezny, 1999; Wiidegren, 1998). It posits that

helping behavior (determined by personal norms) is more likely to occur when a person is aware of a harmful consequence (determined by awareness of consequences) to a valued other, and when the individual ascribes to himself or herself the responsibility for reducing this harm (determined by ascription of responsibility) (Schwartz, 1977). Thus, NAM views personal norms as a key factor in determining environmental behaviors (De Groot & Steg, 2009). According to Stern and Dietz (1994), pro-environmental attitudes and behavior can result from fundamentally different underlying values. Therefore, starting from this premise, VBN theory identifies three types of values: egoistic, altruistic, and biospheric values. VBN theory considers values, beliefs, and personal norms as significant influences on pro-environmental behaviors (Han et al., 2015; Kollmuss & Agyeman, 2002; Oreg & Katz-Gerro, 2006; Stern, 2000).

VBN theory regards the decision-making process as causal and hierarchical (Stern et al., 1999), in that a causal chain links values to awareness of consequences, links awareness of consequences to ascription of responsibility, and links ascription of responsibility to personal norms (Aguilar-Luzón, García-Martínez, Calvo-Salguero, & Salinas, 2012). Ultimately, personal norms predict pro-environmental behaviors (Valle, Rebelo, Reis, & Menezes, 2005; Wynveen, Wynveen, & Sutton, 2015).

Individuals' environmentally responsible decision-making processes and behaviors are formed from their values, environmental worldview, awareness of consequences, ascription of responsibility, and personal norms (De Groot, Steg, & Dicke, 2007; Klöckner, 2013; Stern, 2000; Stern et al., 1999), as shown in Figure 9. In other words, according to VBN theory, pro-environmental behaviors are the result of the activation of personal moral norms by beliefs about awareness of consequences, ascribed responsibility to act, and environmental concerns in relation to oneself

(egoistic concerns), others (social altruism) and nonhuman organisms (biospheric values) (Hansla, 2011; Onur, Sahin, & Tekkaya, 2012; Silvas, 2013; Stern et al., 1999; Stern, Dietz, & Guagnano, 1995; Stern et al., 1993). Individuals' awareness of harmful consequences for the environment and their ascribed responsibility for this harm will prompt personal norms to engage or not engage in a particular behavior (Schwartz, 1977); an ecological worldview indicates "the propensity to take actions with pro-environmental intent" (Stern, 2000, p. 411); and value refers to "a desirable trans-situational goal varying in importance, which serves as a guiding principle in the life of a person or other social entity" (Schwartz, 1992, p. 21). Value is thus a form of social cognition that facilitates an individual's adaptation of the environment (Homer & Kahle, 1988). The role of value is delineated by biospheric, altruistic, and egoistic values (Stern, 2000). Biospheric and altruistic values are likely to sustain the environmental worldview, whereas egoistic values are likely to threaten it (Klößner, 2013; Stern, 2000). A biospheric value orientation indicates "values emphasizing the environment and the biosphere itself" (De Groot & Steg, 2007, p. 320).

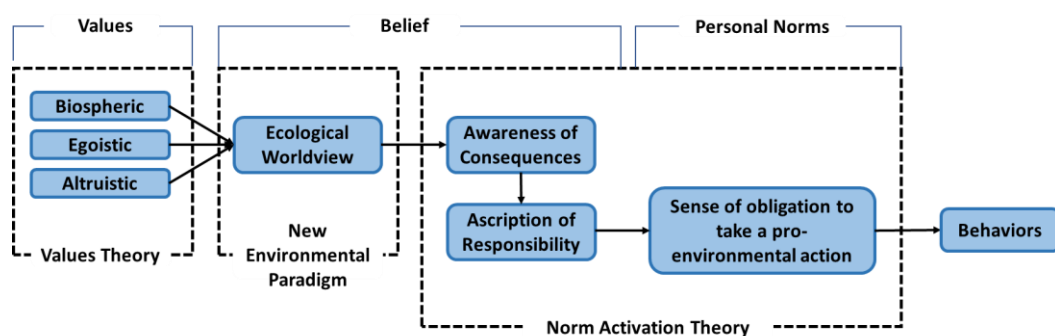


Figure 9: Value belief norm theory model



### **2.7.3 Suitability of VBN Theory for This Research**

According to Maslow, Frager, Fadiman, McReynolds, and Cox (1970), self-actualization ranks highest in the hierarchy of needs, and consumers' green behaviors relate to self-actualization (Slevitch, Mathe, Karpova, & Scott-Halsell, 2013). Accordingly, to achieve self-actualization, consumers act for the benefit of society. In this research context, self-actualization arises when consumers realize how their purchase decisions impact the environment, which is the particular case addressed by VBN theory (Stern, 2000).

Most previous studies have sought to explain consumers' intentions to visit green hotels in terms of TPB (Han et al., 2010). Although VBN theory is known to explain a wide variety of consumer green behaviors, it has seldom been used to explain intentions to revisit green hotels (Jakovcevic & Steg, 2013; Kilbourne & Pickett, 2008; Stern et al., 1999), as it was developed to predict actual significant environmental behaviors (Stern, 2000). However, VBN has been used to explore behavioral intention (Han, 2015; Hansla et al., 2008), examining green behavior by including several essential elements of environmentalism (Stern, 2000). Moreover, it has proved effective in addressing consumers' prosocial motives (De Groot & Steg, 2009, 2010; Han, 2015; Kim & Han, 2010). In this research, therefore, VBN theory will be used to explain individual intention to revisit green hotels from a prosocial behavioral perspective.

To date, researchers have tested both the full model and partial models derived from VBN theory (Kaiser et al., 2005; Nordlund & Garvill, 2003; Raymond, Brown, & Robinson, 2011; Stern, 2000; Stern et al., 1999; Van Riper & Kyle, 2014; Wynveen, Kyle, & Tarrant, 2012; Wynveen & Sutton, 2017). Studies of the VBN framework have met with reasonable success (Hansla et al., 2008; Jansson, Marell, & Nordlund,

2011; Kaiser et al., 2005; Steg, Dreijerink, & Abrahamse, 2005; Stern et al., 1999) and it has been applied effectively to a variety of pro-environmental behaviors (Nordlund & Garvill, 2003; Osterhus, 1997), such as the environmental context (Corraliza & Berenguer, 2000; Ford, Williams, Bishop, & Webb, 2009; Hansla et al., 2008; Menzel & Bögeholz, 2010; Nordlund & Garvill, 2003; Steg et al., 2005; Stern et al., 1999), the tourism context (Han, 2015; Kiatkawsin & Han, 2017; Van Riper & Kyle, 2014), the sustainable tourism context (Han, Hwang, et al., 2017a; Han, Hwang, & Lee, 2017b; Landon, Woosnam, & Boley, 2018), the green buying behavior context (Chaudhary & Bisai, 2018), and the green hotel revisit intention context (Choi et al., 2015; Han, 2015).

## **2.8 VBN Constructs**

### **2.8.1 Overview**

Previous research has focused on the full VBN model or parts thereof (Kaiser et al., 2005; Nordlund & Garvill, 2003), with few attempts to extend the model. Hence, in order to enhance its ability to predict green behavior and to capture greater variance in that behavior, this study will use a partial VBN model. VBN theory demonstrates that a causal chain links norms, beliefs, values, and behaviors. According to Stern (2000), in VBN theory, environmental behaviors are stimulated primarily by personal norms. Personal norms are influenced by beliefs that are ascriptions of responsibility and awareness of consequences (Ibtissem, 2010). In this research context, such beliefs concern one's thoughts about the natural environment and human behavior (Schwartz, 1977; Ture & Ganesh, 2014). The beliefs are also created by values that are biospheric, altruistic, and egoistic. According to Bamberg (2003) and Steg et al. (2005), values are a significant factor in explaining environmentally friendly behaviors, and there is a

direct relationship between values and behaviors (Steg et al., 2005). However, to ensure a stronger relationship, Stern (2000) suggested adding personal norms and beliefs as mediating variables between values and behavior (Nordlund & Garvill, 2003; Poortinga, Steg, & Vlek, 2004). This research therefore employs the following elements of VBN theory: the sense of obligation to take pro-environmental action, biospheric values, egoistic values, altruistic values, and awareness of consequences.

Here, behavior will be treated as the intention to revisit green hotels. Therefore, VBN constructs will be reworded as a sense of obligation toward green hotels, biospheric values, egoistic values, altruistic values, and awareness of the consequences of using hotels (rather than the more familiar terms of sense of obligation to take a pro-environmental action, biospheric values, egoistic values, altruistic values, and awareness of consequences, respectively). Accordingly, this section continues by explaining the concepts of sense of obligation toward green hotels, values, and beliefs, and then goes on to formulate the relevant hypotheses. Finally, the theoretical framework obtained by integrating the VBN model into the extended TPB model will be set out.

## **2.8.2 Sense of Obligation toward Green Hotels**

### **2.8.2.1 Overview**

The sense of obligation to take pro-environmental action is a key construct in explaining consumers' environmentally responsible decisions (Bertoldo & Castro, 2016; Fornara, Pattitoni, Mura, & Strazzera, 2016; Han & Hwang, 2017; Han, Hwang, et al., 2017a; Onwezen et al., 2013; Schwartz, 1992; Stern, 2000). According to VBN theory, a sense of obligation toward green hotels is a direct predictor of green hotel revisit intention. This section therefore defines the concept of sense of obligation toward green hotels and explains its role in previous research. The relationship

between consumers' sense of obligation toward green hotels and their intention to revisit will then be explored.

### **2.8.2.2 Definition of Sense of Obligation toward Green Hotels**

A sense of obligation to take pro-environmental action can be defined as “a personal decision to participate in a specific collective action based on the belief that this is what should be done” (Vilas & Sabucedo, 2012, p. 371); moral norms and personal norms are two alternative terms (Stern, 2000). Personal norms have been defined by Schwartz (1977) as an individual's feeling of moral obligation directing him or her to carry out a specific action linked to self-concept in a particular situation. Accordingly, personal norms can be defined as the reflection of what an individual feels morally obliged to do in a certain situation based on the individual's value system. Therefore, a feeling of moral obligation will be activated by individual values on the basis of the interaction with the individual's interpretation of the situation, contribution to and responsibility for it, and freedom of action within it. Personal norms from a green perspective are thus a moral obligation to engage in pro-environmental action (Ture & Ganesh, 2014). Hence, in this research, personal norms are defined in terms of an individual feeling morally obliged to use environmentally friendly modes of accommodation when staying at a hotel.

A sense of obligation to take pro-environmental action can be formed from a consumer's motivation to comply with green behavioral requirements (Schwartz, 1992), as personal norms include an intrinsic factor that motivates consumers to do so (Schwartz, 1992). This intrinsic factor is of key importance in explaining environmentally responsible behaviors (Bertoldo & Castro, 2016; Han & Hyun, 2017).

### **2.8.2.3 Sense of Obligation toward Green Hotels: Previous Research**

According to Jansson (2011), a sense of obligation to take pro-environmental action is positively related to green purchase intention (see also Jansson, 2011; Prakash & Pathak, 2017). A sense of obligation to take pro-environmental action results from an individual's positive and negative anticipated feelings (Bamberg & Möser, 2007; Han & Hyun, 2017; Harth, Leach, & Kessler, 2013); in the tourism context, moral obligation can be identified as an individual's sense of obligation to take eco-friendly action (Han, Hwang, et al., 2017a). According to Han and Hwang (2017) and Van Riper and Kyle (2014), there is a direct relationship between a sense of obligation to take pro-environmental action and green decisions/behaviors.

The influence of personal norms on green behaviors has been studied within environmental psychology (Bamberg et al., 2007; Han et al., 2015). A sense of obligation to take pro-environmental actions has been found to be a strong predictor of green behaviors. (Klöckner, 2013; Thøgersen & Grunert-Beckmann, 1997; Zhang, Zhang, Zhang, & Cheng, 2014). The inclusion of a sense of obligation to take pro-environmental actions also improves the predictability of the TPB model in relation to altruistic behaviors (Arvola et al., 2008; Bamberg & Schmidt, 2003; Brown, Ham, & Hughes, 2010; Conner, Smith, & McMillan, 2003; Corbett, 2005; García Mira et al., 2003; Thøgersen, 2002; Vermeir & Verbeke, 2008).

### **2.8.2.4 Relationship between Consumers' Sense of Obligation toward Green Hotels and Intention to Revisit**

According to Bamberg and Schmidt (2003), Harland, Staats, and Wilke (2007) and Steg et al. (2005), there is a positive relationship between individuals' sense of obligation to be green and green behaviors. Thus, there is an influence of consumers'

sense of obligation toward green hotels on their decision to stay in green hotels (Choi et al., 2015; Han et al., 2015; Jakovcevic & Steg, 2013; Van Riper & Kyle, 2014).

### **2.8.3 Values**

#### **2.8.3.1 Overview**

According to VBN theory, values are the predictor of behavioral intention with the mediation of beliefs and personal norms. Schultz (2001) and Stern and Dietz (1994) found that egoistic, altruistic, and biospheric motives underlie pro-environmental behavior. Egoistic motives arise when individuals are more strongly motivated out of concern for themselves. Altruistic motives arise when individuals are more strongly motivated out of concerns for social responsibility or a desire to benefit future generations. Biospheric motives arise when individuals are more strongly motivated by the inherent value of nature, regardless of its benefits for themselves or for other humans. These motivational bases are often described as values. Accordingly, this section begins by defining the concept of values and explaining its role in previous research, before going on to examine biospheric, egoistic, and altruistic values.

#### **2.8.3.2 Definition of Values**

A value is a firm belief supporting the individual in the selection of behavior (Rokeach, 1973) and leading to desirable end states (Schwartz & Bilsky, 1990). According to Schwartz (1994, p. 21), a value can be defined as “a desirable trans-situational goal varying in importance, which serves as a guiding principle in the life of a person or other social entity”. Human values are a guiding principle in the lives of individuals (Schwartz, 1994; Stern, 2000), and they act as planning principles (Olson & Zanna, 1993). Values can detect and explain similarities and differences between persons, groups, nations, and cultures (Rokeach, 1973).

### **2.8.3.3 Values: Previous Research**

A consumer seeks to achieve his desired values by deciding to purchase a certain product or service (Henri & Turner, 1986; Huber, Herrmann, & Morgan, 2001; Olson & Reynolds, 1983). Consequently, consumer values are an important element in investigating the factors that affect purchasing decisions (Mora & Moscarola, 2010; Rahman, Stumpf, & Reynolds, 2014), and they play an important role in purchase decisions (Henri & Turner, 1986). Accordingly, values can influence the decision-making process to engage in pro-environmental behaviors (Axelrod, 1994; Clark et al., 2003; De Groot & Steg, 2008; Stern, 2000). Values influence the purchase of green products (Han, 2015) and are a significant factor in explaining green behaviors (Bamberg, 2003; Steg et al., 2005). Previous studies have attempted to determine the values that have an influence on environmental attitudes and behaviors (Karp, 1996; McCarty & Shrum, 1994; Stern et al., 1999).

Pro-environmental behavior is shaped by a three-dimensional values orientation that consists of egoistic, altruistic, and biospheric values (De Groot, 2008; De Groot & Steg, 2007; Nordlund & Garvill, 2002; Schultz, 2000, 2001; Snelgar, 2006; Steg et al., 2005; Stern, 2000; Stern & Dietz, 1994; Stern, Dietz, et al., 1995; Stern, Dietz, & Guagnano, 1998; Stern et al., 1993). Altruistic values are concerned with the welfare of others, egoistic values with personal benefits, and biospheric values with the benefits to nature and the biosphere (De Groot & Steg, 2008). Values increase the individual's environmental concerns, norms, and attitude, which in turn has a positive effect on their environmental behavior (Choi et al., 2015; Han, 2015; Jakovcevic & Steg, 2013; Van Riper & Kyle, 2014). On the other hand, environmental values affect an individual's beliefs, which in turn influence personal norms, which in

turn produce pro-environmental behaviors (Reser & Bentrupperbäumer, 2005; Stern, 2000).

Values are considered the fundamental elements of attitudes and behaviors (Chrysohoidis & Krystallis, 2005; De Groot & Steg, 2008; Homer & Kahle, 1988; Kamakura & Mazzon, 1991; Rohan, 2000; Rokeach, 1973; Wedel, Ter Hofstede, & Steenkamp, 1998). Values are a form of social knowledge that supports the individual in acclimatizing to the environment (Homer & Kahle, 1988). There are causal links between values, attitudes, and behavior, flowing from values to attitudes to more specific behaviors (Homer & Kahle, 1988). Values are often seen as more stable than attitudes (Homer & Kahle, 1988). Behavioral intention is the best and most direct predictor of actual behavior (Fishbein & Ajzen, 1977; Li & Cai, 2012; Vaske & Donnelly, 1999). Accordingly, there are causal links between values, attitudes, behavioral intention, and behavior. Therefore, values are an antecedent for behavioral intentions (Han, 2015; Pinto, Nique, Añaña, & Herter, 2011; Stern, 2000; Stern & Dietz, 1994).

According to Steg et al. (2005), the relationship between values and behaviors can be directly established without any mediator. However, the addition of mediating variables between values and behaviors will strengthen the relationship between them (Stern, 2000). These mediator variables could be specific beliefs or personal norms (Nordlund & Garvill, 2003; Poortinga et al., 2004). Accordingly, this research proceeds on the basis that there are relationships between biospheric, egoistic, and altruistic values and green hotel revisit intention, and that personal norms mediate these relationships.



### **2.8.3.4 Biospheric Values**

#### **2.8.3.4.1 Overview**

According to VBN theory, biospheric values come first in the model, and previous researchers have focused on biospheric values (Aoyagi-Usui, Vinken, & Kuribayashi, 2003; Bardi & Schwartz, 2003; Clayton, 2012; Corraliza & Berenguer, 2000; García Mira et al., 2003; Karp, 1996; McCarty & Shrum, 1994; Nilsson, von Borgstede, & Biel, 2004; Nordlund & Garvill, 2002; Schwartz, 1992; Schwartz & Sagiv, 1995; Stern & Dietz, 1994; Stern et al., 1998). Accordingly, this section starts by defining the concept of biospheric values and explaining their role in previous research. The relationship between consumers' biospheric values and their sense of obligation toward green hotels will then be examined.

#### **2.8.3.4.2 Definition of Biospheric Values**

Biospheric values reflect individual concerns about the biosphere and the environment (De Groot & Steg, 2007, 2008; Han, 2015; Stern, 2000; Stern et al., 1999; Van Riper & Kyle, 2014). Biospheric values can be described as the belief that one of the important goals of life is to protect the environment (Boomsma & Steg, 2014). Biospheric values take different forms, including intentions and attitudes toward green behavior (Clayton, 2012). They are typically linked to selection of organic food (Soyez, 2012) and other green options (Haws, Winterich, & Naylor, 2014).

According to Stern et al. (1993), the concerns towards the biosphere can be simulated by biospheric values. Moreover, biospheric values can assure on the environmental from individual perspective (Clayton, 2012). Stern and Dietz (1994, p. 70) defined value orientation as “people judging phenomena on the basis of costs or benefits to ecosystems or the biosphere.” The biospheric value orientation is inherent

in an individual's beliefs about the value of nature. Individuals with biospheric values have been found to adopt green behavior in the interests of nonhuman aspects (Stern, Dietz, et al., 1995; Wynveen et al., 2012) such as the perceived costs and benefits to biosphere (De Groot & Steg, 2008). In other words, individuals are more likely to engage in pro-environmental behaviors if the perceived benefits to the biosphere exceed the perceived costs. Individuals who hold biospheric values tend to be concerned about the consequences for plants, animals, and the biosphere, and these concerns motivate them to protect the environment. It is because such individuals value nature for its own sake and intrinsic value that they seek to protect it (Thompson & Barton, 1994).

#### **2.8.3.4.3 Biospheric Values: Previous Research**

Pro-environmental decision formation is influenced by biospheric values (Onwezen et al., 2013; Rahman & Reynolds, 2016; Reser & Bentrupperbäumer, 2005; Stern, 2000; Stern et al., 1999; Van der Werff et al., 2013a). Values act as beliefs for evaluating actions (Schwartz & Bilsky, 1990), and personal values influence the purchase of green products (Han, 2015). According to Schwartz (1992), people's behaviors can be predicted by their values, and there is evidence that biospheric values can be particularly effective in explaining pro-environmental behaviors (Clayton, 2012). Butt et al. (2017) have argued that consumers are likely to develop trust toward environmentally friendly organizations because of their ability to satisfy their personal values. Green customers tend to be more aware of and knowledgeable about the pro-environmental behaviors of hotels (Tortosa-Edo, López-Navarro, Llorens-Monzonís, & Rodríguez-Artola, 2014).

Biospheric values have the ability to influence pro-environmental behavior (Clayton, 2012; Cleveland, Kalamas, & Laroche, 2005; Jakovcevic & Steg, 2013;

Katz-Gerro, Greenspan, Handy, & Lee, 2017; Nordlund & Garvill, 2002; Steg, Bolderdijk, Keizer, & Perlaviciute, 2014). Previous research indicates that biospheric values are positively related to pro-environmental behavior (Clayton, 2012; Hahnel, Ortmann, Korcaj, & Spada, 2014; Verplanken & Holland, 2002). Individuals have key concerns with the quality of nature, and they evaluate the costs and benefits in their green behavioral decisions on that basis (Steg et al., 2014). Relatedly, biospheric values have multiple motivations for green behavior and can predict green intentions (Steg, De Groot, Dreijerink, Abrahamse, & Siero, 2011).

Consumers with strong biospheric values will have high intentions to purchase green products; there is a positive relationship between biospheric values and green purchase behavior (Clayton, 2012). In the green hotel context, biospheric values influence consumers' revisit intention, and this relationship is mediated by their willingness to make sacrifices for the environment (Lee & Oh, 2014; Rahman & Reynolds, 2016). Landon et al. (2018) used VBN theory to study tourists' green behavioral intentions, and they found that biospheric values influenced behavioral intentions and that this relationship was mediated by VBN model constructs.

Similarly, biospheric values influence consumers' willingness to make sacrifices for the environment (Rahman & Reynolds, 2016). Sometimes, consumers compromise on quality and/or convenience when they select a green product. For example, in order to save water, customers may reuse the same hotel towels, and this has an impact on the degree of convenience or luxury offered by the hotel. At the same time, inconvenience and decreased luxury can be barriers to staying at a green hotel (Baker et al., 2014). Rahman and Reynolds (2016) studied consumers' green hotel revisit intentions, and they found that biospheric values influenced consumers'

willingness to make a sacrifice for the environment, which in turn affected their green hotel revisit intentions.

Biospheric values also influence consumers' willingness to pay more, and this relationship is mediated by their willingness to make sacrifices for the environment (Rahman & Reynolds, 2016). Consumers with biospheric values are more likely to pay more for green products (Perlaviciute & Steg, 2014; Perlaviciute & Steg, 2015; Van der Werff, Steg, & Keizer, 2013b). Consumers with high levels of biospheric values are also more likely to select green products and services and are prepared to pay more for them (Van der Werff et al., 2013b), in particular for green energy (Perlaviciute & Steg, 2014; Perlaviciute & Steg, 2015).

Biospheric values are an important factor for predicting environmental attitudes (Dietz, Stern, & Guagnano, 1998; Lee, Park, & Han, 2013); through consumer attitudes, they significantly influence consumer intention to buy green products (Nguyen, Lobo, & Greenland, 2016) and consumer attitude toward consumption of local products (Steenkamp, De Jong, & Baumgartner, 2010). Biospheric values also have a significant positive impact on consumer attitudes associated with intention to purchase organic food (Soyez, 2012). In a study of green hotel revisit intentions, Verma et al. (2019) found that biospheric values significantly and positively influenced consumers' general environmental concerns. Thus, biospheric values can be a strong predictor of attitudes toward green behavior (Clayton, 2012).

Through consumer subjective norms, biospheric values significantly influence consumer intention to buy green products and consumer intention to buy energy-efficient products (Nguyen et al., 2016). Similarly, there is a significant positive impact of biospheric values on consumers' subjective norms associated with organic food

purchase intention (Soyez, 2012). Biospheric values through consumer perceived inconvenience also have a significant influence on consumer intention to buy green products (Nguyen et al., 2016).

#### **2.8.3.4.4 Relationship between Biospheric Values and Sense of Obligation toward Green Hotels**

According to Roos and Hahn (2019) and Stern et al. (1999), an individual's biospheric values have a positive influence on the sense of obligation to take pro-environmental action. Landon et al. (2018) used VBN theory to study tourists' green behavioral intention, and they found that biospheric values influenced behavioral intention mediated by VBN model constructs. When Choi et al. (2015) used VBN to investigate consumers' intentions to visit a green hotel, they found that biospheric values had a positive effect on awareness of consequences, that awareness of consequences had a positive effect on the ascription of responsibility, that ascription of responsibility had a positive effect on personal norms, and that personal norms had a positive effect on the intention to visit a green hotel.

#### **2.8.3.5 Egoistic Values**

##### **2.8.3.5.1 Overview**

According to VBN theory, egoistic values are the second value in the model. Therefore, this section defines the concept of egoistic values and explains its role in previous research. The relationship between consumers' egoistic values and their sense of obligation toward green hotels will then be examined.

##### **2.8.3.5.2 Definition of Egoistic Values**

According to Oxford Learner's Dictionaries (2021), egoism is "thinking that you are better or more important than anyone else." Egoistic values reflect a key

concern for the self rather than for others (De Groot & Steg, 2007, 2008; Stern, 2000; Stern et al., 1999; Stern et al., 1993). Accordingly, egoistic values concern the maximization of personal well-being (self-welfare) and one's own outcomes. Therefore, consumers with high egoistic values will evaluate green behaviors on the basis of perceived personal costs and benefits.

#### **2.8.3.5.3 Egoistic Values: Previous Research**

From a pro-environmental perspective, individuals who hold egoistic values are motivated to protect the environment by the perceived consequences for their own health and well-being (De Groot & Steg, 2008). Egoistic values are based on values related to human concerns; they influence consumers' green attitudes (Ojea & Loureiro, 2007) and have a positive effect on environmental behavior (Stern, Dietz, et al., 1995; Stern et al., 1993).

#### **2.8.3.5.4 Relationship between Egoistic Values and Sense of Obligation toward Green Hotels**

Generally, egoistic values have a negative relationship with environmental protection. Consumers who have a high degree of egoistic values tend to avoid the cost of recycling if it is not economic. Consumers' beliefs about awareness of consequences are targeted toward protection of the environment or reduction of environmental degradation (Stern, Dietz, et al., 1995; Stern et al., 1993). Thus, according to Roos and Hahn (2019) and Stern et al. (1999), consumers' egoistic values have a negative influence on the sense of obligation to take pro-environmental action.

### **2.8.3.6 Altruistic Values**

#### **2.8.3.6.1 Overview**

According to VBN theory, altruistic values are the third type of value in the model. Helping is defined as “an action that has the consequence of providing some benefit to or improving the well-being of another person,” whereas altruism is a “specific kind of helping” motivated by concerns for others that “asks for nothing in return” (Schroeder, Penner, Dovidio, & Piliavin, 1995, p. 18). According to Stern (2000), helping is an impact-focused behavior and altruism is an intention-focused behavior. Impact-focused behavior is defined by “the extent to which it changes the availability of materials or energy from the environment or alters the structure and dynamics of ecosystems or the biosphere” (Stern, 2000, p. 408). Altruism in general is demonstrated through prosocial behaviors, such as helping, comforting, sharing, cooperation, philanthropy, and community service (Batra & Ahtola, 1991; Batson, 2012; Krebs, 1991; Piliavin & Charng, 1990; Ross & Ajzen, 2010). Therefore, this section defines the concept of altruistic values and explains their role in previous research. The relationship between consumers’ altruistic values and their sense of obligation toward green hotels will then be demonstrated.

#### **2.8.3.6.2 Definition of Altruistic Values**

Altruism is a personal value that can influence human behavior (C. Batson & J. Coke, 1981; Chaisamrej, 2006; Schwartz & Bilsky, 1987; Stern, Dietz, et al., 1995; Straughan & Roberts, 1999; Suandi, 1991). Altruism may be inherited and reflects human concerns about the well-being of society (Stern, 2000; Stern et al., 1993; Van Riper & Kyle, 2014). Altruism involves willingness to do things that bring advantages to others without expecting self-advantages in return (Piliavin & Charng, 1990;

Rushton, 1980; Stern et al., 1993; Teng et al., 2015; Wuthnow, 1993); it has also been postulated as an antecedent to attitude (C. Batson & J. Coke, 1981a). According to the International Encyclopedia of the Social Sciences, psychological altruism is “a motivational state with the goal of increasing another’s welfare” (Darity, 2008, p. 88).

The word altruism was first used in 1851 by the French philosopher Auguste Comte (Wilson, 2015) in the context of ancient Greek philosophy and drama, where altruism is identified as a form of self-sacrifice. During the 1970s, scientific interest in altruism increased, particularly in the field of sociobiology (Fennell, 2006; Wilson, 1975). Altruistic values are an alternative term for self-transcendence values (Bardi & Schwartz, 2003; De Groot & Steg, 2007).

There are two types of altruism: true altruism and reciprocal altruism (Trivers, 1971). True altruism arises when an individual buys product for both personal benefits and environmental protection. Reciprocal altruism arises when an individual buys product for the public interest only. This research considers altruism in general, including either or both types.

Altruistic values are based on values related to human concerns. Consumers who hold altruistic values are concerned about the consequences of their actions for their children, community, country, and future generations, and those concerns motivate them to protect the environment. Green altruistic values focus on helping others by protecting the environment in the form of purchasing and consuming green products (Bhattacharya, Korschun, & Sen, 2009), thereby generating benefits for other people (Batson, 1995).

#### **2.8.3.6.3 Altruistic Values: Previous Research**

Altruistic values are important for environmental behavior in terms of being a public good (Heberlein, 1972). Individuals who are involved in pro-environmental



initiatives have a high degree of altruistic values (Dietz et al., 1998; Karp, 1996; Stern, 2000; Stern & Dietz, 1994; Stern, Dietz, et al., 1995), and the benefit to other people is important to them (Heberlein, 1972; Stern, 2000). Accordingly, there is a positive relationship between altruism and environmentally responsible consumer behavior (Corbett, 2005; Heberlein, 1972; Nguyen, Lobo, & Greenland, 2017; Stern, 2000; Straughan & Roberts, 1999; Teng et al., 2015). Environmentally concerned consumer behavior shows that altruism is correlated with awareness of consequences (Schwartz, 1973, 1977). The altruism construct can be used to predict green hotel revisit intention (Teng et al., 2015) and may be an antecedent of green attitudes (Batson & Coke, 1981b). Altruistic values influence consumers to purchase green energy products (Nguyen et al., 2017); thus, altruism has a positive relationship with green consumer behavior (Straughan & Roberts, 1999) and a significant and positive impact on customers' intention to visit green hotels (Teng et al., 2015).

According to Ayuso (2006), Corbett (2005) and Rivera and De Leon (2005) there is a positive relationship between altruism and the intention to be environmentally responsible. On the other hand, an individual will act altruistically if aware of the consequences of the behavior (Guagnano et al., 1995). Individuals who participate in pro-environmental initiatives have a high degree of altruistic values (Dietz et al., 1998; Karp, 1996; Stern, 2000; Stern & Dietz, 1994; Stern, Dietz, et al., 1995).

#### **2.8.3.6.4 Relationship between Altruistic Values and Sense of Obligation toward Green Hotels**

According to Roos and Hahn (2019) and Stern et al. (1999), individuals' altruistic values have a positive influence on their sense of obligation to take pro-environmental action.

## **2.8.4 Beliefs**

### **2.8.4.1 Overview**

According to VBN theory, there are three types of beliefs: ecological worldview, awareness of consequences, and perceived ability to reduce threat. Accordingly, this section defines the concept of belief and explains its role in previous research. Ecological worldview, awareness of consequences, and perceived ability to reduce threat are then examined, and the question of why only adverse consequences for valued objects are applicable to this research is addressed.

### **2.8.4.2 Definition of Belief**

Belief is the feeling of being certain that something exists or is true (Cambridge Dictionary, 2021a). According to Ture and Ganesh (2014), a belief can be one's thoughts about the natural environment and human behavior.

### **2.8.4.3 Beliefs: Previous Research**

In order to maintain and enhance the quality of human life, individuals have a belief that the environment should be protected (Thompson & Barton, 1994). Beliefs about protecting the environment have a positive influence on consumer intention to revisit green hotels (Lee & Oh, 2014). As Stern (2000) observed, there are three types of beliefs: ecological worldview, awareness of consequences, and ascription of responsibility.

#### **2.8.4.3.1 Ecological Worldview**

According to Dunlap et al. (2000), in VBN theory the ecological worldview is measured using the new environmental paradigm scale. In addition, previous researchers have used an abbreviated version of the new environmental paradigm scale modified to reflect environmental concerns (Coelho, Pereira, Cruz, Simões, & Barata,

2017; Hartmann & Apaolaza-Ibáñez, 2012; Lee et al., 2014). Environmental concerns are the degree to which people are concerned about environmental problems (Dunlap & Jones, 2002; Rhead, Elliot, & Upham, 2015).

Environmental concerns have a significant impact on consumer attitudes toward green products (Aman et al., 2012; Chen & Hung, 2016; Han et al., 2009; Hartmann & Apaolaza-Ibáñez, 2012; Kassarijian, 1971; Yadav & Pathak, 2016). Specific attitudes predict specific behaviors (Iversen & Rundmo, 2002). Accordingly, in this research, consumer attitude toward green hotels is taken as a tendency to act favorably or unfavorably toward intention to revisit green hotels. However, environmental concerns are a general attitude toward environmental protection (Dunlap & Van Liere, 1978; Fransson & Gärling, 1999; Weigel & Weigel, 1978). Hence, the concept of environmental concerns covers both positive and negative attitudes and the mental state toward green hotel revisit intention (Dagher & Itani, 2012). Accordingly, in this research, environmental concerns are defined as consumer environmental concerns toward a real-world phenomenon, namely a tendency to act favorably or unfavorably toward the intention to revisit green hotels. Thus, environmental concerns are included in the model as a separate predictor of behavioral intention toward green hotels through consumers' attitude toward green hotels. Accordingly, this research will consider the ecological worldview in terms of environmental concerns and will link it to TPB rather than to VBN theory.

#### **2.8.4.3.2 Awareness of the Consequences of Using Hotels**

##### **2.8.4.3.2.1 Overview**

According to VBN theory, awareness of consequences is a predictor of behavioral intention, and personal norms act as a mediator in this relationship. Therefore, this section defines the concept of the awareness of the consequences of

using hotels and explains its role in previous research. The relationship between consumers' awareness of those consequences and their altruistic values will then be demonstrated.

#### **2.8.4.3.2.2 Definition of Awareness of the Consequences of Using Hotels**

According to Steg et al. (2005), awareness of consequences refers to perceived beliefs about an environmental quality. Steg and De Groot (2010, p. 725) defined awareness of consequences as “the extent to which someone is aware of the adverse consequences of not acting pro-socially for others or for other things over values.” Environmental awareness is therefore the individual's worry about environmental problems (Do PacO & Raposo, 2009; Kim & Han, 2010). Environmental awareness often triggers anticipatory feelings of pride or guilt regarding engaging or not engaging in green actions (Han & Hyun, 2017; Stern, 2000). Therefore, in this research, awareness of the consequences of using hotels will be considered as a special case of environmental awareness in relation to hotels rather than to the environment as a whole.

According to Chen and Peng (2012) and Fryxell and Lo (2003), awareness of green hotels is linked to consumers' knowledge about how hotels support green and environmental practices. Consumers' activities in hotels have a significant impact on the environment, most of which results from large-scale use of nondurable products, electricity, and water (Bohdanowicz, 2009). As the number of hotel visitors increases, the associated power consumption and carbon dioxide emissions increase (Tsai, Lin, Hwang, & Huang, 2014). Consumers are the key influence on hotels to be green (Bohdanowicz, 2005; Rahman et al., 2012), and they are increasingly interested in the environmental appeal of lodging facilities (Chan & Wong, 2006; Han et al., 2011; Han & Kim, 2010; Jauhari & Manaktola, 2007; Rahman et al., 2014). Although,

environmental awareness plays an important role in forming green intentions (Han et al., 2020), hotel guests have no way to differentiate the levels of environmental commitment of different hotels (Gil-Soto, Armas-Cruz, Morini-Marrero, & Ramos-Henríquez, 2019).

#### **2.8.4.3.2.3 Awareness of the Consequences of Using Hotels: Previous Research**

Awareness of consequences has a significant influence on the ascription of responsibility (Aguilar-Luzón et al., 2012; Han et al., 2015). Accordingly, when individuals are aware of the adverse consequences of their behavior for the environment, they tend to exhibit strong responsibility for environmental problems (Chen, 2015). Individuals become aware of the adverse consequences of environmental issues when they are concerned about environmental issues (Steg et al., 2005; Stern et al., 1999).

#### **2.8.4.3.2.4 Relationship between Awareness of the Consequences of Using Hotels and Altruistic Values**

Individuals are usually guided by a value orientation to select and believe in information that is congruent with their values and to reject information that is not congruent. VBN theory posits that beliefs in relation to awareness of consequences are a combination of beliefs related to biospheric values, egoistic values, and altruistic values (Stern, 2000; Stern et al., 1999).

Stern et al. (1993) found difficulties in achieving acceptable levels of reliability when measuring awareness of consequences due to a lack of items (three only) for each construct. Gärling, Fujii, Gärling, and Jakobsson (2003) improved the reliability levels for awareness of consequences by removing one item from each scale. In contrast, Joireman, Lasane, Bennett, Richards, and Solaimani (2001) increased the

number of items to four or five per scale in order to improve the reliability levels; nevertheless, they achieved only low-to-moderate reliability.

According to Schwartz (1992) value structure, beliefs about awareness of consequences related to the egoistic values scale should be negatively correlated with the awareness of consequences beliefs related to the biospheric values scale, or awareness of consequences beliefs should be related to the altruistic values scale, or both. However, Stern, Kalof, Dietz, and Guagnano (1995) found that awareness of consequences beliefs related to egoistic values were positively correlated with the social-altruistic–biospheric value orientation and with the other awareness of consequences scales, which is the opposite of the pattern observed by Schwartz (1992). Furthermore, Schultz' (2001) egoistic environmental concerns scale was negatively correlated with self-transcendence values, which is again the opposite of the pattern observed in earlier work (Schwartz, 1992).

Therefore, there is evidence of low validity caused by positive correlations between the three awareness of consequences scales. Thus, in this research, awareness of consequences beliefs related to biospheric values is measured through environmental awareness. Awareness of consequences beliefs related to egoistic values will not be investigated here. Awareness of consequences beliefs related to altruistic values will be investigated as awareness of the consequences of using hotels. The path will also be changed in order to omit awareness of consequences beliefs related to altruistic values construct if the reliability and/or validity are low.

#### **2.8.4.3.3 Perceived Ability to Reduce Threat (Ascription of Responsibility)**

The Cambridge Dictionary (2021b) defines responsibility as the individual ability to have “good judgment and the ability to act correctly and make decisions on his own.” Individuals are considered responsible for their behavior if they are free to

choose between different alternatives (Schrader, 2007). Therefore, ascription of responsibility can be defined as a belief that an individual's actions can prevent or promote potentially undesirable consequences (Kiatkawsin & Han, 2017; Stern et al., 1999) or minimize negative environmental consequences (Choi et al., 2015) in the form of "feelings of responsibility for the negative consequences of not acting pro-socially" (Steg & De Groot, 2010, p. 725).

Most previous research has focused on the effect of ascribed responsibility on behavioral intention through the mediation of personal norm or a sense of obligation toward pro-environmental action (Choi et al., 2015; De Groot, 2008; Han, 2015; Han et al., 2015; Jakovcevic & Steg, 2013; Van Riper & Kyle, 2014). No previous study has considered ascribed responsibility as a direct antecedent of attitude that may lead to pro-environmental behavior.

Willingness to make sacrifices for the environment reflects a level of personal responsibility toward the environment. An environmentally responsible individual has the perceived ability to reduce threats toward the environment; accepting the likelihood of personal loss, that individual is prepared to make a sacrifice. Accordingly, in this research, ascribed responsibility will be considered as a direct antecedent of attitude toward green hotels. As willingness to make sacrifices is conceptually similar to ascription of responsibility to self, in this research, willingness to make sacrifices will be adopted instead of ascription of responsibility.

### **2.8.5 Hypotheses**

In light of the above considerations, the following hypotheses are proposed:

**Hypothesis 20 (H20):** There is a positive relationship between consumers' sense of obligation toward green hotels and their green hotel revisit intention.

**Hypothesis 21 (H21):** There is a positive relationship between consumers' biospheric values and their sense of obligation toward green hotels.

**Hypothesis 22 (H22):** There is a negative relationship between consumers' egoistic values and their sense of obligation toward green hotels.

**Hypothesis 23 (H23):** There is a positive relationship between consumers' altruistic value and their sense of obligation toward green hotels.

**Hypothesis 24 (H24):** There is a positive relationship between consumers' awareness of the consequences of using hotels and their altruistic values.

### **2.8.6 Theoretical Framework Obtained by Integrating the VBN model into the Extended TPB Model**

Figure 10 shows the updated theoretical framework obtained by integrating the VBN model into the extended TPB model.



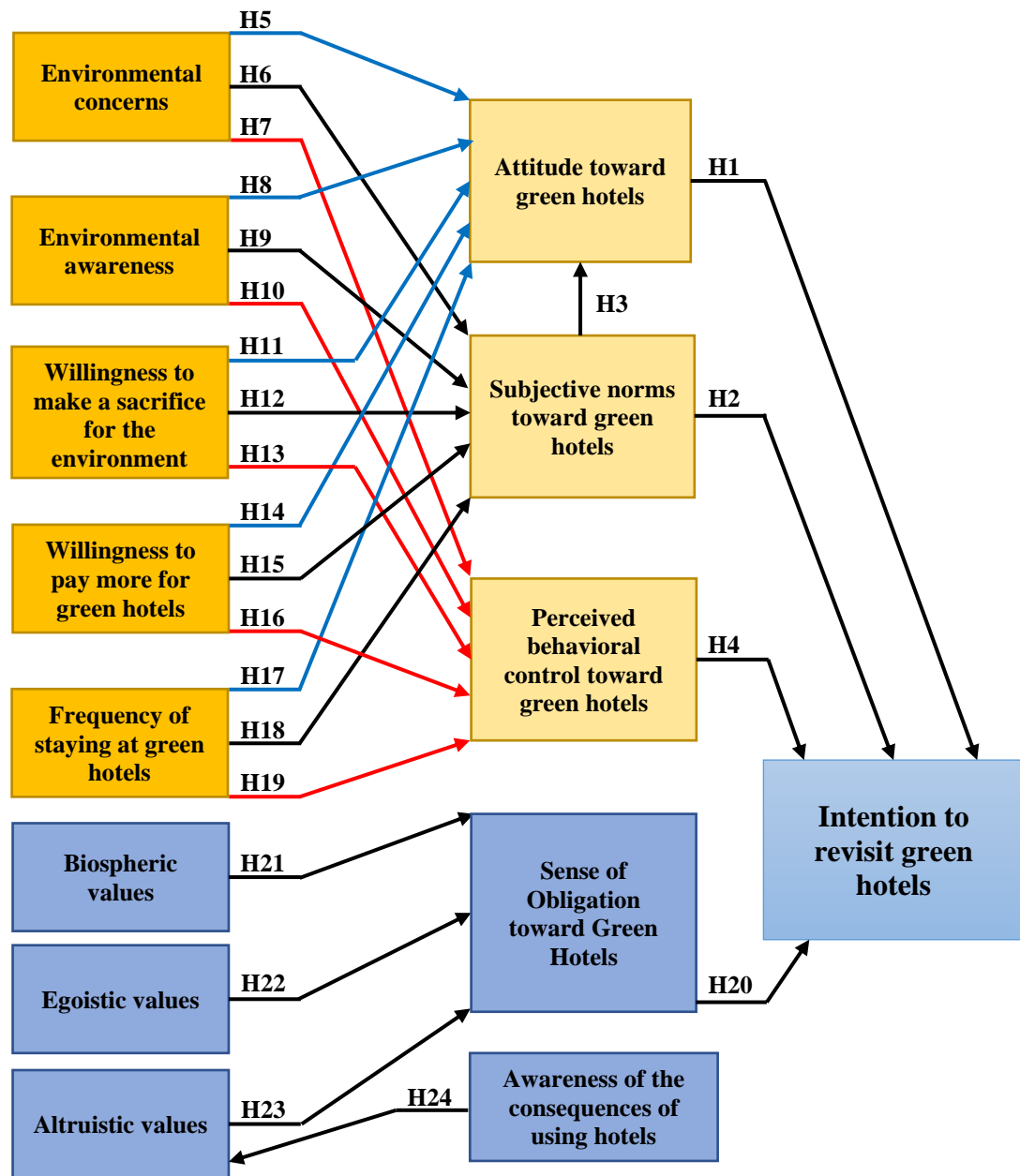


Figure 10: Updated theoretical framework integrating the VBN model into the extended TPB model

## **2.9 Corporate Identity Mix Theory (CIMT)**

### **2.9.1 Overview**

B2C marketing consists of the strategies by which businesses promote their products and services directly to consumers who intend to buy those products or services for personal purposes. In the late 1980s, the concept of green marketing was introduced (Dennis, Harris, Peattie, & Crane, 2005), and recognition of its importance led to a great deal of research (Hartmann, Ibáñez, & Sainz, 2005; Peattie, 1995). Green marketing aims to promote organizations who aim to save the environment (Ferrell & Pride, 1993). According to Peattie and Charter (1992, p. 727) green marketing is the “holistic management process responsible for identifying, anticipating and satisfying the needs of customers and society, in a profitable and sustainable way.”

In B2C marketing, green hotels aim to promote themselves as green in order to encourage consumers to revisit. In this research, CIMT will be used to investigate consumer intention to revisit from the perspective of the hotels. Accordingly, this section introduces the concept of CIMT and demonstrates its suitability for this research.

### **2.9.2 Introduction to CIMT**

Corporate marketing has been a focus of considerable attention during the last decade (Balmer & Greyser, 2009; Balmer, Mukherjee, Greyser, & Jenster, 2006; Balmer & Powell, 2011). According to the American Marketing Association, marketing is “the activity, set of institutions, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large” (Gundlach & Wilkie, 2009, p. 260). Following Doyle (2000, p. 83), it can be further defined as “the management process that seeks

to maximize returns to shareholders by developing relationships with valued customers and creating a competitive advantage.” In the late 1980s, when the concept of green marketing was introduced (Dennis et al., 2005), many hotels adopted green marketing strategies (Chan, 2013). Green marketing refers to an organization’s efforts to design, promote, price, and distribute products that have no bad effect on the environment (Pride et al., 2006). Environmental marketing strategy, green service quality, green service management (Gummesson, 1994), strategic green marketing (McDaniel & Rylander, 1993), and the greening of the services matrix (Grove, Fisk, Pickett, & Kangun, 1996) are five alternative terms for green marketing (Dennis et al., 2005). Green marketing consists of four elements: green partnerships, green products, green services, and credibility of green promotion (Chan, 2014).

Birkigt and Stadler’s CIMT emphasizes the relationship between identity and image, and Figure 11 shows how image is a reflection of identity. Corporate identity consists of behavior, communication, and symbolism, and at the core of these three constructs lies the personality of the firm. According to Birkigt, Stadler, and Funck (1998, p. 23), the image of an organization “reflects the identity of the organization on the external stakeholders, and can be adjusted by means of three instruments (communication, symbols and behavior)” with which an organization conveys its personality; thus, the self-awareness of a company manifests itself in its personality and is presented through the company’s behavior, communication, and symbolism. Corporate image is thus a combination of various factors that reflect and convey an organization’s identity (Karaosmanoglu & Melewar, 2006; Moon, 2007).

In this research, the company is the hotel. Therefore, the CIMT constructs will be reworded as hotel corporate image, green hotel identity, green hotel green activities, green hotel green communication, and green hotel green image (instead of the more

familiar company image, company identity, company behavior, company communication, and company symbols, respectively).

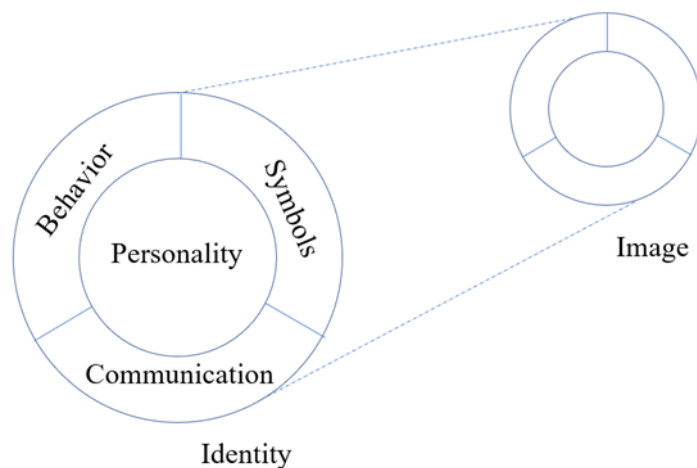


Figure 11: Corporate identity mix model

### 2.9.3 Suitability of CIMT for This Research

For green hotels, marketing is an important means of encouraging consumers to revisit. B2C marketing refers to the various strategies, techniques, and tools with which a company promotes its products and services to consumers. B2C marketing is vital for green hotels to promote themselves as green and to attract consumers. It relies on various communication channels to reach green hotel guests: email marketing; mobile marketing through websites, apps, SMS, MMS, and social media; web push marketing to deliver messages about sales, discounts, and offers to consumers in real-time when they visit a website; social media marketing (SMM) like Facebook, Instagram, and Twitter to promote goods or services directly to consumers; and paid search advertising. Accordingly, hotels invest in their corporate image as a way of promoting themselves to their consumers, and green hotels can use green marketing to influence revisit intention.

## **2.10 Constructs of CIMT**

### **2.10.1 Overview**

According to CIMT, hotel corporate image is a reflection of green hotel identity. This section therefore begins by explaining the concepts of hotel corporate image and green hotel identity before formulating the relevant hypotheses. The theoretical framework that results from integrating the CIMT model, the VBN model, and the extended TPB model will then be set out.

### **2.10.2 Hotel Corporate Image**

#### **2.10.2.1 Overview**

Corporate image is highly influential in tourism and hospitality research (Lee et al., 2010). The relationship between individuals and a particular object is formed from mental images that are based on individual thoughts, beliefs, and impressions regarding that object (Kotler, 1994). Corporate image is a mix of various interactions, including experiences, impressions, beliefs, feelings, and knowledge (Balmer, van Riel, Markwick, & Fill, 1997; Bernstein, 1984; Furman, 2010; Kotler, 1994; Melewar, 2003; Wan & Schell, 2007), and it plays a critical role in customers' decision-making processes (Baloglu & McCleary, 1999; Bloemer & De Ruyter, 1998; Chen & Tsai, 2007; Lin, Morais, Kerstetter, & Hou, 2007; Prendergast & Man, 2002a; Ryu, Han, & Kim, 2008). This section begins by defining the concept of hotel corporate image and explaining its role in previous research. The relationship between consumers' hotel corporate image and their intention to revisit green hotels will then be explored.

#### **2.10.2.2 Definition of Hotel Corporate Image**

Corporate image is what comes to the minds of individuals when they see or hear about a firm (Gray & Balmer, 1998; Mazursky & Jacoby, 1986; Zimmer &

Golden, 1988). Also known as organizational image or overall image, in this research it will be called hotel corporate image. According to Kang and Yang (2010) and Keh and Xie (2009), the terms corporate image and corporate reputation are same. Corporate image is the factor that forms and communicates the organizational identity (Karaosmanoglu & Melewar, 2006; Moon, 2007). Evaluation of organizational identity takes place through personal beliefs, emotions, and feelings (Dowling, 2000), and corporate image is how consumers perceive a firm's prominent attributes (Assael, 1984; Bloemer & De Ruyter, 1998; Gray & Balmer, 1998; Gronroos, 1984).

Worcester (2009, p. 573) defined corporate image as “the net result of all experiences, impressions, beliefs, feelings, and knowledge people have about a company.” Keller (1993, p. 3) defined it as “perceptions about a brand as reflected by the brand associations held in consumer memory.” Similarly, Assael (1984) framed it in terms of a consumer's total perceptions of a firm shaped by processing information from different sources. The information that consumers need to process the perception of the green hotel image therefore derives from the green hotel identity elements. Hence, this research will consider what comes into consumers' minds when they see or hear about different aspects of hotels (in general, not only green hotels), such as whether they are well managed, involved in community activities, responsive to consumer needs, and leave a good impression on visitors.

### **2.10.2.3 Hotel Corporate Image: Previous Research**

Numerous researchers have investigated the influence of corporate image on consumers' decision-making processes (Baloglu & McCleary, 1999; Bloemer & De Ruyter, 1998; Chen & Tsai, 2007; Han et al., 2009; Jeong, Jang, Day, & Ha, 2014; Lee et al., 2010; Lin et al., 2007; Martinez Garcia de Leaniz et al., 2018; Martínez, 2015; Ryu et al., 2008; Ryu, Lee, & Kim, 2012). Overall image has a significant influence

on customers' decision-making processes (Han et al., 2009; Lin et al., 2007; Martínez, 2015; Prendergast & Man, 2002a; G. Prendergast & Man, 2002b; Ryu et al., 2008; Ryu et al., 2012), which makes it a critical driving force in intention (Brunner, Stöcklin, & Opwis, 2008; Lee et al., 2010; Prendergast & Man, 2002a; Prendergast & Man, 2002b). Moreover, overall image has an impact on repurchase intention (Brunner et al., 2008; Cronin Jr et al., 2000; Flavián, Guinaliu, & Torres, 2005; Kang & Yang, 2010; Ko et al., 2013; Lee et al., 2010) and purchase behavior (David, Kline, & Dai, 2005; Herbig & Milewicz, 1995; Kang & Yang, 2010; Keh & Xie, 2009; Lee et al., 2010; Miles & Covin, 2000). For hotels, a positive overall image increases customers' willingness to revisit (Ryu et al., 2008), and green hotel overall image is positively associated with consumer intention to buy a green hotel product (Han et al., 2009). Many researchers have observed a positive relationship between corporate image and behavioral intention (David et al., 2005; Kang & Yang, 2010; Keh & Xie, 2009; Ko et al., 2013; Lee et al., 2010; Miles & Covin, 2000).

Corporate image and frequency of past behavior are significant predictors in purchase decision-making processes (Ajzen, 1991; Bansal & Taylor, 1999; Han et al., 2009; Han & Ryu, 2007; Lam & Hsu, 2006; Lee & Back, 2008; Lee & Choi, 2009; Oh & Hsu, 2001; Perugini & Bagozzi, 2001; Taylor & Baker, 1994), and these predictors have been taken into account in some previous studies (Bansal & Taylor, 1999; Han & Kim, 2010; Lee & Back, 2008; Oh & Hsu, 2001; Perugini & Bagozzi, 2001).

#### **2.10.2.4 Relationship between Hotel Corporate Image and Intention to Revisit**

It is important for a company to build a favorable image in order to generate positive attitudes toward its product and services (Brown & Dacin, 1997). Corporate image has a significant positive relationship with purchase intention (Flavián et al., 2005; Herbig & Milewicz, 1995; Kang & Yang, 2010; Ko et al., 2013; Lee et al.,

2010). This relationship has been confirmed in the hospitality sector in the form of a positive relationship between corporate image and revisit intention (Han et al., 2010; Han & Kim, 2010; Lee et al., 2010). A hotel having a green reputation positively influences guests' revisit intention (Drumwright, 1994). Han et al. (2009) investigated hotel customers' green decision-making processes and found that corporate image had a positive influence on green hotel revisit intention. Likewise, Yadav, Dokania, and Pathak (2016b) found that corporate image positively influenced consumers' intention to revisit green hotels. According to Lita, Surya, Ma'Ruf, and Syahrul (2014), corporate image has a significant influence on green hotel revisit intention.

### **2.10.3 Green Hotel Identity**

#### **2.10.3.1 Overview**

This section introduces the concept of green hotel identity and explains its component constructs.

#### **2.10.3.2 Introduction to Green Hotel Identity**

According to Margulies (1977, p. 68), identity is "the sum of all the ways a company chooses to identify itself to all its publics." Identity is how the firm represents itself (van Gemert-Pijnen & Woudstra, 2000), showing what the firm is like, what it does, and what it stands for (Melewar & Cornelius, 1970; Selame & Selame, 1975). Accordingly, corporate identity is the visual image that presents the firm to customers and stakeholders (Balmer, Christensen, & Askegaard, 2001; Van Riel & Fombrun, 2007). The visual image can be in the form of logos, brand images, or any other visual aspect of the firm (Selame & Selame, 1975). Hence, corporate identity is seen to be of strategic importance and marketing-based (Balmer & Wilkinson, 1991).



Corporate identity reflects the real personality of the company (Olins, 1978). and is generated by symbolism, communication (Van Riel & Fombrun, 2007), and behaviors in order to distinguish the firm from other firms (Birkigt et al., 1998; Holtzhausen & Fourie, 2008) Birkigt and Stadler (1986) developed the concept of identity mix, a set of attributes that stakeholders use to describe the firm (Van Riel, 1992; Van Riel & Fombrun, 2007). Their identity mix model (further developed in Birkigt and Stadler (1986); Birkigt et al. (1998)) shows how the personality of a firm is expressed by means of communication, behavior, and symbolism (Cornelissen & Elving, 2003; Melewar & Storrie, 2001; Van Riel, 1992; Van Riel & Fombrun, 2007). Thus, corporate identity mix has to do with the self-presentation of an organization; it consists of the cues which an organization offers about itself via the behavior, communication, and symbolism which are its forms of expression (Rekom, Riel, & Wierenga, 1991). It is the way in which an organization's identity is revealed through behavior (and) communications, as well as through symbolism to internal and external audiences (Balmer & Van Riel, 1997).

Corporate personality is the way a firm acts: "the manifestation of the company's self-perception" (Birkigt et al., 1998, p. 20). Personality includes mission, achievements, general objectives, culture, and structure. Corporate behavior summarizes the ways in which a firm shows its personality through actions (Otubanjo, Amujo, & Cornelius, 2010). Behavior is the most important construct of the model, as it provides a practical demonstration of the personality that the firm claims through its communication and symbolism. Behavior includes the activities of employees, the firm's production or services, its activities, and corporate social responsibility. Corporate communication is the sum of verbal and visual messages from a company. Corporate symbolism is the visual way in which a firm presents itself through its name,

symbol, logo, typography, color, slogan, and other graphic elements. As mentioned earlier, company behavior company communication, and company symbols will be reworded as green hotel green activities, green hotel green communication, and green hotel green image, respectively, in line with the specific research context.

### **2.10.3.3 Green Hotel Identity Constructs**

#### **2.10.3.3.1 Overview**

This section explains the concepts of green hotel green activities, green hotel green communication, and green hotel green image.

#### **2.10.3.3.2 Green Hotel Green Activities**

##### **2.10.3.3.2.1 Overview**

According to CIMT, green hotel green activities are the first predictor of hotel corporate image. This section therefore begins by defining the concept of green hotel green activities and explaining its role in previous research. The relationship between green hotel green activities and hotel corporate image will then be explored.

##### **2.10.3.3.2.2 Definition of Green Hotel Green Activities**

Green activities are an important determinant of corporate image, and they create a better positive image about a firm among consumers (Flavián et al., 2005; Ko et al., 2013; Mendleson & Polonsky, 1995; Ward & Lewandowska, 2008). Green activities reflect a firm's concern for ethical issues and the well-being of society (Flavián et al., 2005; Ko et al., 2013; Ward & Lewandowska, 2008). Firms build and improve their corporate image by investing in various CSR activities (Chang, 2009; Chen, 2008; Virvilaitė & Daubaraitė, 2011; Yadav et al., 2016b), including eco-friendly activities (Chang, 2009; Chen et al., 2006), with green activities being one of the most common CSR activities (Berens, Van Riel, & Van Bruggen, 2005). Green

activities have a positive influence on corporate image (Berens et al., 2005; Yadav et al., 2016b) and demonstrate a firm's concerns for the environment (Fraj-Andrés, López-Pérez, Melero-Polo, & Vázquez-Carrasco, 2012). This is regarded as favorable for the well-being of society (Flavián et al., 2005; Lindgreen & Swaen, 2010; Ward & Lewandowska, 2008) and contributes to a better image for the firm (Chen, 2008).

The overall image of a hotel is improved by having environmental certification from an independent body (Chan, 2009; Geerts, 2014). Eco-labels are a tool for stimulating environmental concerns by providing reliable environmental information to the consumer in order to have a positive influence on choices of goods and services (Bohdanowicz, Simanic, & Martinac, 2004). Eco-labels can be an indicator of firm's environmental performance (Chekima, Wafa, Igau, & Chekima, 2015), and eco-certification plays an important role in hotel competitiveness (Peiró-Signes et al., 2014). Firm behavior includes the ways in which both the organization itself and its employees act. Hence, this research will consider the impact of hotel green activities through these channels, such as green services, certified green-label products, increased use of green services, and involvement in energy conservation.

#### **2.10.3.3.2.3 Green Hotel Green Activities: Previous Research**

Competitive advantage can be created for green hotels by implementing green practices (Chan & Wong, 2006; Claver-Cortés, Molina-Azorín, & Pereira-Moliner, 2007; Jauhari & Manaktola, 2007; Wolfe & Shanklin, 2001), which in return will improve profits (Chan & Wong, 2006; Jauhari & Manaktola, 2007). The green attitude of hotel guests is influenced by green practices implemented by hotels (Han et al., 2011; Jauhari & Manaktola, 2007; Vazifehdoust et al., 2013). Hotel guests are keen on protecting the environment (Watkins, 1994); they recognize the seriousness of environmental problems (Donaton & Fitch, 1992; Hume, Strand, Fisher, Fitzgerald, &

Freeman, 1989; Jauhari & Manaktola, 2007), and they feel positive when they participate in protecting the environment (Kalafatis et al., 1999; Laroche et al., 2001; Vazifehdoust et al., 2013). These factors drive them to adopt more environmentally friendly buying behaviors (Jauhari & Manaktola, 2007; Kalafatis et al., 1999; Laroche et al., 2001).

According to David et al. (2005), CSR activities has a significant effect on corporate identity, resulting in a positive attitude toward the company (Jeong, 2006; Sen, Bhattacharya, & Korschun, 2006; Yoon & Suh, 2003). In addition, green CSR activities have a positive influence on purchasing behavior (Creyer, 1997; Forte & Lamont, 1998; Mason, 2000; Simon, 1995). Therefore, advertising CSR activities is an important element in improving the corporate identity of green hotels.

#### **2.10.3.3.2.4 Relationship between Green Hotel Green Activities and Corporate Image**

The green initiatives of environmentally certified hotels are an important factor in promoting their green image (Boiral, 2011; Heikkurinen, 2010; Jeong et al., 2014; Ritchie & Crouch, 2003). Ritchie and Crouch (2003) demonstrated that green firm image can be created by implementing environmental systems. Moreover, the green image of a firm can be developed by participation in environmental certification schemes (Boiral, 2011). Thus, in order to attract more customers, many hotels have adopted the green hotel label (Pizam, 2009).

Green practices as part of CSR have a positive influence on purchasing behavior (Creyer, 1997; Forte & Lamont, 1998; Mason, 2000; Simon, 1995), and green/eco-friendly activities impact strongly on consumer ascriptions of corporate image (Berens et al., 2005; Ellen, Webb, & Mohr, 2006). Yadav et al. (2016b) studied consumer intention to revisit green hotels, and they found that green/eco-friendly

activities positively influenced the corporate image of the firm. According to Han et al. (2015), green activities have a positive influence on green hotel revisit intention. In a study of intention to revisit green hotels, however, Yadav et al. (2016b) found that communication about green/eco-friendly initiatives had no significant influence on corporate image.

### **2.10.3.3.3 Green Hotel Green Communication**

#### **2.10.3.3.3.1 Overview**

Advertising is an effective tool for communicating corporate identity (Alden, Steenkamp, & Batra, 1999; Keller, 2009). Green advertising reflects corporate green image (Banerjee, Gulas, & Iyer, 1995; Kumar, 2017), and thus, green advertising can improve the brand image of green products (Chekima et al., 2015). According to CIMT, green hotel green communication is the second predictor of hotel corporate image. This section therefore defines the concept of green hotel green communication and explains its role in previous research. The relationship between green hotel green communication and hotel corporate image will then be examined.

#### **2.10.3.3.3.2 Definition of Green Hotel Green Communication**

According to Van Riel (1995), corporate communication includes all types of communication used to establish a favorable basis for the relationship with stakeholders. In addition, corporate communication is used to establish and maintain a positive corporate image with stakeholder groups (Cornelissen, 2020). Firms maintain and improve their image by implementing corporate communications (Javalgi, Traylor, Gross, & Lampman, 1994; Yadav et al., 2016b), which are the sum of their verbal and visual messages. Hence, this research will consider what green hotel green communication individuals receive through green hotel communication

channels including advertisements (TV, online, and print), public relations activities, sales promotions, and sponsorship activities.

#### **2.10.3.3.3 Green Hotel Green Communication: Previous Research**

Green communication through green advertisements is a form of influence on consumers' purchase behavior toward green products (Ansar, 2013; Chekima et al., 2015; Rahbar & Wahid, 2011). According to Javalgi et al. (1994), communication is the best tool for a firm to make and maintain its corporate image. In addition, green advertisements improve consumers' environmental awareness of products (Akehurst et al., 2012; Bagheri, 2014). In the tourism context, there is positive influence of corporate communication on corporate image through implementing green practices (Yadav et al., 2016b). Accordingly, in order to improve their green image, firms use advertising as a communication tool (Davis, 1994; Iyer, Banerjee, & Gulas, 1994). Moreover, effective communication of the green attributes of products or services can lead to success at the commercial level (Pickett, Kangun, & Grove, 1995). Investing in communication about CSR activities enhances corporate image for consumers (Burchell & Cook, 2006; Morsing & Schultz, 2006; Pérez & Del Bosque, 2012), who learn about the value system of the organization through its green initiatives (Lee, Park, Moon, Yang, & Kim, 2009; Sen & Bhattacharya, 2001). Promoting green hotel policies also has a positive influence on brand value (Chen, 2019).

#### **2.10.3.3.4 Relationship between Green Hotel Green Communication and Corporate Image**

Tan et al. (2019) investigated the relationship among young consumers between green advertising and green product buying decisions and found that consumer perception of green advertising was positively associated with deciding to buy green products. Corporate image is also positively influenced by corporate

communication of green practices (Burchell & Cook, 2006; Morsing & Schultz, 2006; Yadav et al., 2016b).

#### **2.10.3.3.4 Green Hotel Green Image**

##### **2.10.3.3.4.1 Overview**

Green image is an important determinant of corporate image (Mayer, Ryley, & Gillingwater, 2012; Wu, Ai, & Cheng, 2016). According to CIMT, green hotel green image is the third predictor of hotel corporate image. This section therefore defines the concept of green hotel green image and explains its role in previous research before considering the relationship between green hotel green image and hotel corporate image.

##### **2.10.3.3.4.2 Definition of Green Hotel Green Image**

Image is the consumers' total perceptions of the salient attributes of a firm (Assael, 1984; Bloemer & De Ruyter, 1998), and it is shaped by different information sources (Assael, 1984). Numerous researchers across various fields have identified image as a driving force in customers' decision-making processes (Baloglu & McCleary, 1999; Bloemer & De Ruyter, 1998; Chen & Tsai, 2007; Han et al., 2009; Lin et al., 2007; Prendergast & Man, 2002b; Ryu et al., 2008). An image is a set of perceptions of products and services in a consumer's mind (Rein, Kotler, & Haider, 1993), and that image becomes green when it is linked to environmental concerns and commitment (Chen, 2010). In order to enhance their green image, hotels can adopt eco-friendly activities and secure membership of environmental organizations (Munshi & Kurian, 2005). Organizational commitment toward the environment plays a significant role in creating a green image (Mayer et al., 2012).

Company symbolism is the ways in which an organization expresses its personality visually, such as logos, colors, shapes, photography, illustrations and typography. Hence, this research will consider what individuals see in terms of green hotel green image from different aspects, such as whether the hotel is professional, successful, trustworthy and concerned for consumers in its green practices, and whether it has a good reputation for implementing those practices.

#### **2.10.3.3.4.3 Green Hotel Green Image: Previous Research**

Green image is an important factor for green hotels (Robin, Pedroche, & Astorga, 2017), and it has a positive influence on consumer intention to revisit green hotels (Han et al., 2009; Lee et al., 2010). Green firm green image also has an impact on a firm's corporate image (Mayer et al., 2012). In the context of the Chinese green hotel industry, Wang, Wang, Xue, Wang, and Li (2018) found that the green image of green hotels strongly influences consumer green satisfaction and green trust. In addition, they found that both consumer green satisfaction and green trust were positively related to the intention to recommend green hotels to individuals around them.

#### **2.10.3.3.4.4 Relationship between Green Hotel Green Image and Corporate Image**

In their study of the relationship between eco-labeling and green product buying decisions among young consumers, Tan et al. (2019) found that eco-labeling of products was positively associated with decisions to buy green products. According to Corrigan (1996), Lynes and Dredge (2006) and Yadav et al. (2016b) there is also a positive relationship between the green image of an organization and its corporate image.



#### **2.10.4 Hypotheses**

In light of the above considerations, the following hypotheses are proposed:

**Hypothesis 25 (H25):** There is a positive relationship between hotel corporate image and consumers' intention to revisit green hotels.

**Hypothesis 26 (H26):** There is a positive relationship between green hotel green activities and hotel corporate image.

**Hypothesis 27 (H27):** There is a positive relationship between green hotel green communication and hotel corporate image.

**Hypothesis 28 (H28):** There is a positive relationship between green hotel green image and hotel corporate image.

#### **2.10.5 Theoretical Framework Integrating the CIMT, VBN, and Extended TPB Models**

Figure 12 shows the updated theoretical framework obtained by integrating the CIMT model into the VBN model and the extended TPB model.

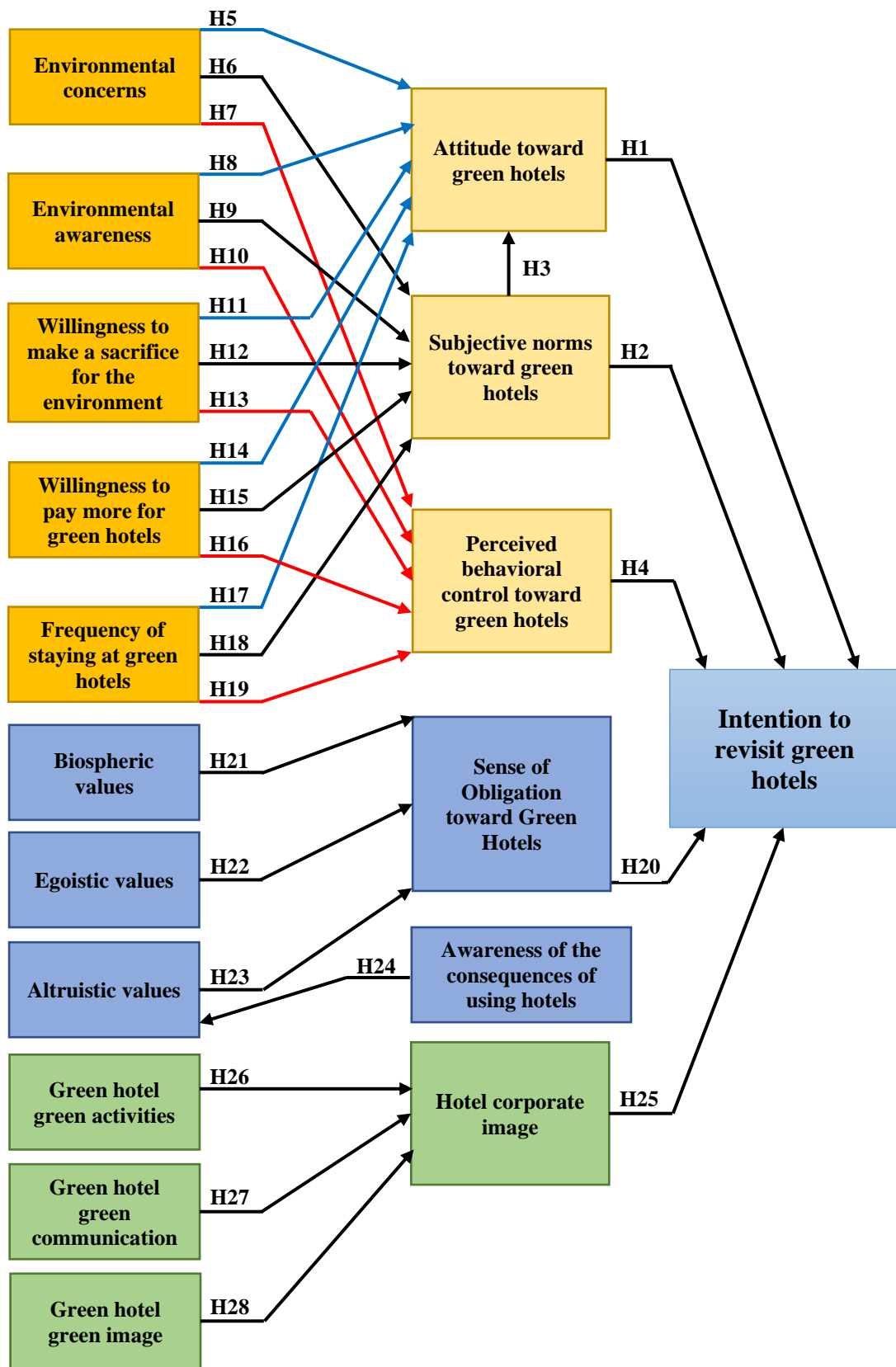


Figure 12: Updated theoretical framework integrating the CIMT model into the VBN model and extended TPB model

## **2.11 Intention to Spread Word-of-Mouth about Green Hotels**

### **2.11.1 Overview**

In this research, intention to spread WOM will be used to investigate the intention to revisit green hotels from the C2C marketing perspective. This section introduces the concept of C2C marketing and demonstrates its suitability for this research. Intention to spread WOM is then defined and its role in previous research clarified. Then, the relationship between intention to spread WOM about green hotels and intention to revisit green hotels and hotel corporate image is discussed.

### **2.11.2 C2C Marketing**

C2C marketing consists of communications between individuals who have experience or knowledge about products or services and other individuals, either through WOM or electronic word-of-mouth (E-WOM), to promote products or services. E-WOM is spread through email, mobile services, websites, apps, SMS, MMS, and social media such as Facebook, Instagram, and Twitter. WOM can be spread to specific people only, such as friends, family, and colleagues, or it can be open to the public. For green hotels, WOM and/or E-WOM involves recommending a green hotel, saying positive things about green hotels, or encouraging friends, family, and colleagues to select green hotels for their travels.

### **2.11.3 Suitability of C2C Marketing for This Research**

C2C marketing can influence the individual's intention to revisit green hotels. There are three pillars of marketing: the product or services, the consumer, and the marketer. For this research, the product and services are the green hotel, the consumer is the individual whose intention to revisit the green hotel is under study, and the marketer is either the influence of others on the individual as measured using the

subjective norm constructs or the intention of the consumer to do the marketing. Accordingly, C2C marketing is defined here as the intention of the individual to spread positive WOM about green hotels.

#### **2.11.4 Definition of Intention to Spread Word-of-Mouth**

WOM is a marketing method that relies on casual social interactions to promote a product, and it is a factor in increasing hotel profits and customer loyalty (Chambers & Lewis, 1989; Yesawich, 1997). Arndt (1967b) and East, Hammond, and Lomax (2008), defined WOM in terms of conversations between consumers about a product. Since the 1960s, WOM has been studied in the context of marketing (Arndt, 1967b; Engel, Kegerreis, & Blackwell, 1969), and it can be categorized as one-to-one, one-to-many, and many-to-many (Litvin, Goldsmith, & Pan, 2008). One-to-one WOM is produced when one person privately communicates to another person (Chen, Dwyer, & Firth, 2014; Litvin et al., 2008). One-to-many WOM is generated when one person communicates to many people at the same time. Many-to-many WOM takes place when the communications are public and everyone can communicate with everyone else (as in E-WOM). WOM can also be defined as individual-to-individual noncommercial communication (Arndt, 1967a; Brown, Broderick, & Lee, 2007; Brown & Reingen, 1987; Buttle, 1998; Harrison-Walker, 2001; Kotler, Makens, Bowen, & Baloglu, 2018). In this research, WOM intention is defined as the willingness of an individual to recommend and say positive things about green hotels and to encourage others to select green hotels for their travels.

E-WOM is possible because of the new communication technologies. Today, there are a great many communication methods, including conversations on Facebook, Instagram, WhatsApp, phone messenger services, email, and instant messages. E-WOM is the spread of information through network information technology (Lee &

Hu, 2005). Hennig-Thurau, Gwinner, Walsh, and Gremler (2004, p. 39) defined E-WOM as “any positive or negative statement made by potential, actual, or former customers about a product or company, which is made available to a multitude of people and institutions via the Internet.” E-WOM can take the form of consumer evaluation and comments about products or services in phone applications from a consumer with previous experience to present or potential consumers (Hennig-Thurau et al., 2004).

Consumers generate WOM for different reasons, such as concern for others and the desire to help people to make better purchase decisions (Engel, Blackwell, & Miniard, 1993; Hennig-Thurau et al., 2004; Sundaram, Mitra, & Webster, 1998). Concern for others is a major driver of WOM (Hennig-Thurau et al., 2004). In addition, consumers generate WOM because of a desire to help a business and to enable others to have the same positive experience (or protect them from a negative experience) (Sundaram et al., 1998). Through WOM, consumers exchange their consumption experiences with other people (Anderson, 1998; Westbrook, 1987), and every day, billions of new conversations about brands (Keller & Libai, 2009) are made possible by the new communication technology (Bickart & Schindler, 2001; Goldsmith & Horowitz, 2006).

Following a purchase, consumers experience a confirmation or disconfirmation of their pre-purchase expectations. Consumer satisfaction with a consumption experience is the common antecedent for providing WOM (Mangold, Miller, & Brockway, 1999; Oliver Richard, 1997; Oliver, 1980; Yi, 1990). Social media are used for social communication (Murphy, Gil, & Schegg, 2010), and consumers with experience about a product are a credible source of information (Engel et al., 1969; Gruen, Osmonbekov, & Czaplewski, 2006; Katz & Lazarsfeld, 1966).

According to Liu (2006), WOM communications among consumers are generally considered reliable (see also Gruen et al. (2006) and Liu (2006)). Thus, WOM has a strong influence on purchase intention. Compared with firm marketing, WOM from experienced customers may have a greater influence on other customers (Bickart & Schindler, 2001).

In the tourism context, positive WOM has an influence on travelers' destination selections (Díaz-Martín, Iglesias, Vazquez, & Ruiz, 2000; Litvin et al., 2008; Shanka, Ali-Knight, & Pope, 2002), and Booking.com and TripAdvisor.com may influence individuals' hotel selections. On these websites, experienced tourists provide comments and reviews about hotels. Much research has investigated the relationship between WOM and product sales (Büschken, 2007; Hogan, Lemon, & Libai, 2004; Rosengren & Dahlén, 2015). For instance, WOM appears to influence book sales (Chevalier & Mayzlin, 2006), movie box-office sales (Dellarocas, Zhang, & Awad, 2007; Liu, 2006), and TV program viewing figures (Romaniuk & Hartnett, 2017). WOM can accelerate product sales and encourage new customers to purchase (Libai, Muller, & Peres, 2013). Positive WOM has a higher influence in acquiring new customers than radio and print advertising (Katz & Lazarsfeld, 1966; Sheth, 1971; Villanueva, Yoo, & Hanssens, 2008). In the hotel industry, too, consumers' intentions promote a positive recommendation of products or services to others (Han & Back, 2008; Namkung & Jang, 2007; Zeithaml et al., 1996).

#### **2.11.5 Intention to Spread Word-of-Mouth: Previous Research**

In the literature, revisit intention and WOM have been used as constructs to measure customer loyalty to hotels (Back & Parks, 2003; Clemes, Gan, & Ren, 2011; García de Leaniz & Rodríguez Del Bosque Rodríguez, 2015; Gracia, Bakker, & Grau, 2011; Hansen, Deitz, & Morgan, 2010; Huang & Chen, 2010; Lee & Back, 2010; Liat,

Mansori, & Huei, 2014; Mattila, 2006; Skogland & Siguaw, 2004). E-WOM in the form of customer online reviews has been shown to have a strong influence on how customers reach booking decisions on hospitality products and services (Ballew, Omoto, & Winter, 2015; Chen & Xie, 2008; Sparks, So, & Bradley, 2016; Wei, Miao, & Huang, 2013; Zhao, Wang, Guo, & Law, 2015). Accordingly, positive WOM is a powerful marketing tool with the power to influence purchase decisions (Lee & Blum, 2015; Lee, Jai, & Li, 2016; Parsa & Cobanoglu, 2011). According to Han et al. (2009), Prendergast and Man (2002b) and Ryu et al. (2008), WOM also has a positive influence on revisit intention. Likewise, Lee et al. (2010) and Suki (2013), observed a positive relationship between a green hotel's image and consumers' intention to spread positive WOM.

#### **2.11.6 Relationship between Intention to Spread Word-of-Mouth about Green Hotels and Hotel Corporate Image**

According to Lee et al. (2010), hotel corporate image is strongly linked to intention to spread positive WOM.

#### **2.11.7 Relationship between Intention to Spread Word-of-Mouth about Green Hotels and Intention to Revisit**

Many researchers have investigated the influence of WOM on consumer purchase intentions (Baber et al., 2016; Chen, Chen, & Chen, 2014; Erkan & Evans, 2016; Mortazavi, Esfidani, & Barzoki, 2014; Sharifpour, Sukati, & Alikhan, 2016; Wu & Wang, 2011; Yu & Natalia, 2013).

#### **2.11.8 Hypotheses**

In light of the above considerations, the following hypotheses are proposed:

**Hypothesis 29 (H29):** There is a positive relationship between consumers' intention to spread word-of-mouth about green hotels and hotel corporate image.

**Hypothesis 30 (H30):** There is a positive relationship between consumers' intention to spread word-of-mouth about green hotels and their intention to revisit green hotels.

### **2.11.9 Theoretical Framework Obtained by Integrating Word-of-Mouth**

Figure 13 shows the updated theoretical framework obtained by integrating WOM into the CIMT, VBN, and extended TPB model.



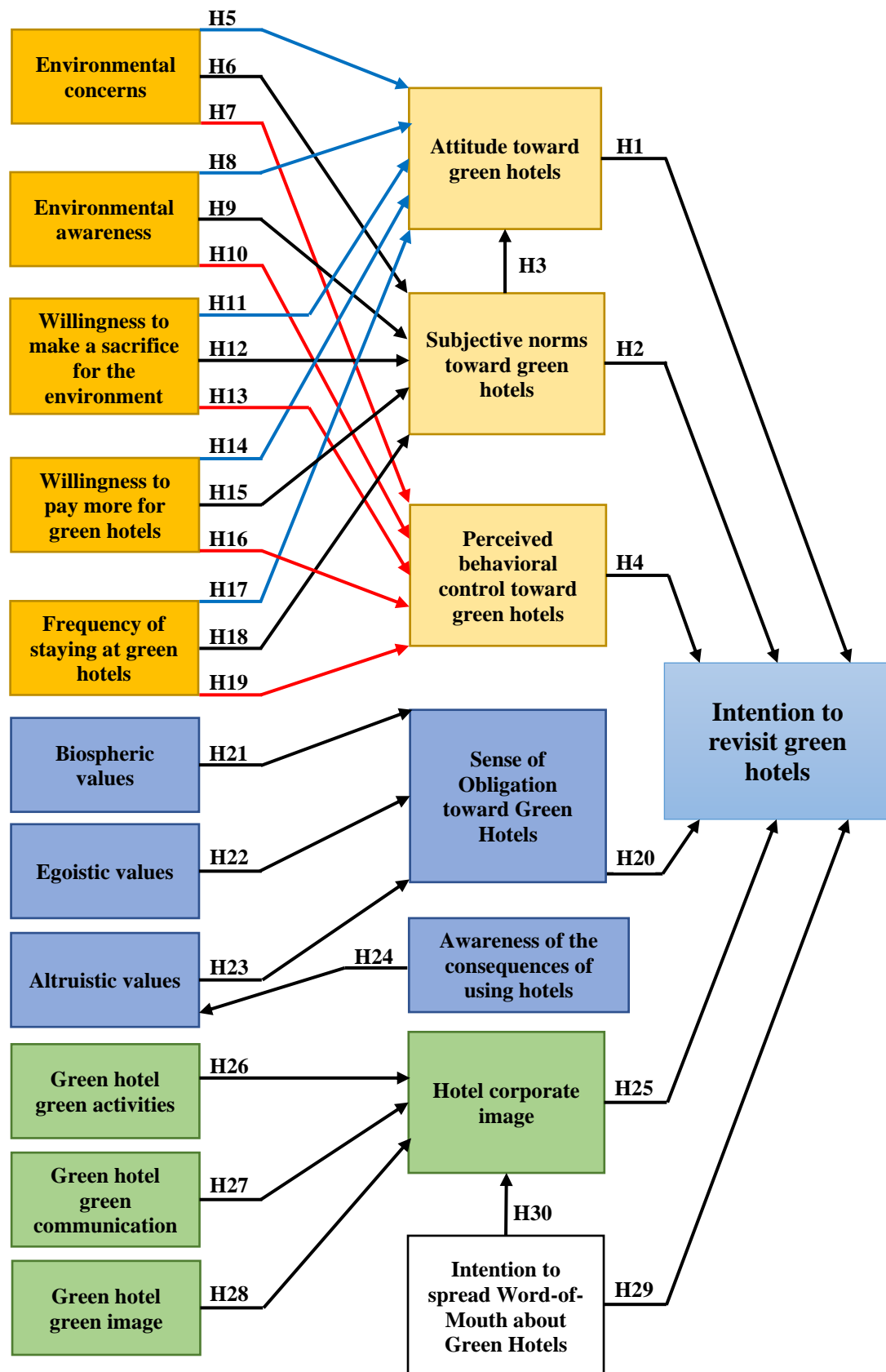


Figure 13: Updated theoretical framework obtained by integrating WOM into the CIMT, VBN, and extended TPB model

## 2.12 Theoretical Framework and Research Hypotheses

The theoretical framework of this study is shown in Figure 14. The model encompasses TPB with its extension, VBN, CIMT, and intention to spread WOM in order to measure individual intention to revisit a green hotel. The proposed framework also includes the concept of investigating individual intention from four different aspects: the self-perspective, prosocial perspective, B2C marketing perspective, and C2C marketing perspective. A total of 30 hypotheses linking these research constructs are therefore proposed:

**Hypothesis 1 - (H1):** There is a positive relationship between consumers' attitude toward green hotels and their intention to revisit green hotels.

**Hypothesis 2 - (H2):** There is a positive relationship between consumers' subjective norms toward green hotels and their intention to revisit green hotels.

**Hypothesis 3 - (H3):** There is a positive relationship between consumers' subjective norms toward green hotels and their attitude toward green hotels.

**Hypothesis 4 - (H4):** There is a positive relationship between consumers' perceived behavioral control toward green hotels and their intention to revisit green hotels.

**Hypothesis 5 (H5):** There is a positive relationship between consumers' environmental concerns and their attitude toward green hotels.

**Hypothesis 6 (H6):** There is a positive relationship between consumers' environmental concerns and their subjective norms toward green hotels.

**Hypothesis 7 (H7):** There is a positive relationship between consumers' environmental concerns and their perceived behavioral control toward green hotels.

**Hypothesis 8 (H8):** There is a positive relationship between consumers' environmental awareness and their attitude toward green hotels.

**Hypothesis 9 (H9):** There is a positive relationship between consumers' environmental awareness and their subjective norms toward green hotels.

**Hypothesis 10 (H10):** There is a positive relationship between consumers' environmental awareness and their perceived behavioral control toward green hotels.

**Hypothesis 11 (H11):** There is a positive relationship between consumers' willingness to make sacrifices for the environment and their attitude toward green hotels.

**Hypothesis 12 (H12):** There is a positive relationship between consumers' willingness to make sacrifices for the environment and their subjective norms toward green hotels.

**Hypothesis 13 (H13):** There is a positive relationship between consumers' willingness to make sacrifices for the environment and their perceived behavioral control toward green hotels.

**Hypothesis 14 (H14):** There is a positive relationship between consumers' willingness to pay more for green hotels and their attitude toward green hotels.

**Hypothesis 15 (H15):** There is a positive relationship between consumers' willingness to pay more for green hotels and their subjective norms toward green hotels.

**Hypothesis 16 (H16):** There is a positive relationship between consumers' willingness to pay more for green hotels and their perceived behavioral control toward green hotels.

**Hypothesis 17 (H17):** There is a positive relationship between consumers' frequency of staying at green hotels and their attitude toward green hotels.

**Hypothesis 18 (H18):** There is a positive relationship between consumers' frequency of staying at green hotels and their subjective norms toward green hotels.

**Hypothesis 19 (H19):** There is a positive relationship between consumers' frequency of staying at green hotels and their perceived behavioral control toward green hotels.

**Hypothesis 20 (H20):** There is a positive relationship between consumers' sense of obligation toward green hotels and their green hotel revisit intention.

**Hypothesis 21 (H21):** There is a positive relationship between consumers' biospheric values and their sense of obligation toward green hotels.

**Hypothesis 22 (H22):** There is a negative relationship between consumers' egoistic values and their sense of obligation toward green hotels.

**Hypothesis 23 (H23):** There is a positive relationship between consumers' altruistic value and their sense of obligation toward green hotels.

**Hypothesis 24 (H24):** There is a positive relationship between consumers' awareness of the consequences of using hotels and their altruistic values.

**Hypothesis 25 (H25):** There is a positive relationship between hotel corporate image and consumers' intention to revisit green hotels.

**Hypothesis 26 (H26):** There is a positive relationship between green hotel green activities and hotel corporate image.

**Hypothesis 27 (H27):** There is a positive relationship between green hotel green communication and hotel corporate image.

**Hypothesis 28 (H28):** There is a positive relationship between green hotel green image and hotel corporate image.

**Hypothesis 29 (H29):** There is a positive relationship between consumers' intention to spread word-of-mouth about green hotels and hotel corporate image.

**Hypothesis 30 (H30):** There is a positive relationship between consumers' intention to spread word-of-mouth about green hotels and their intention to revisit green hotels.

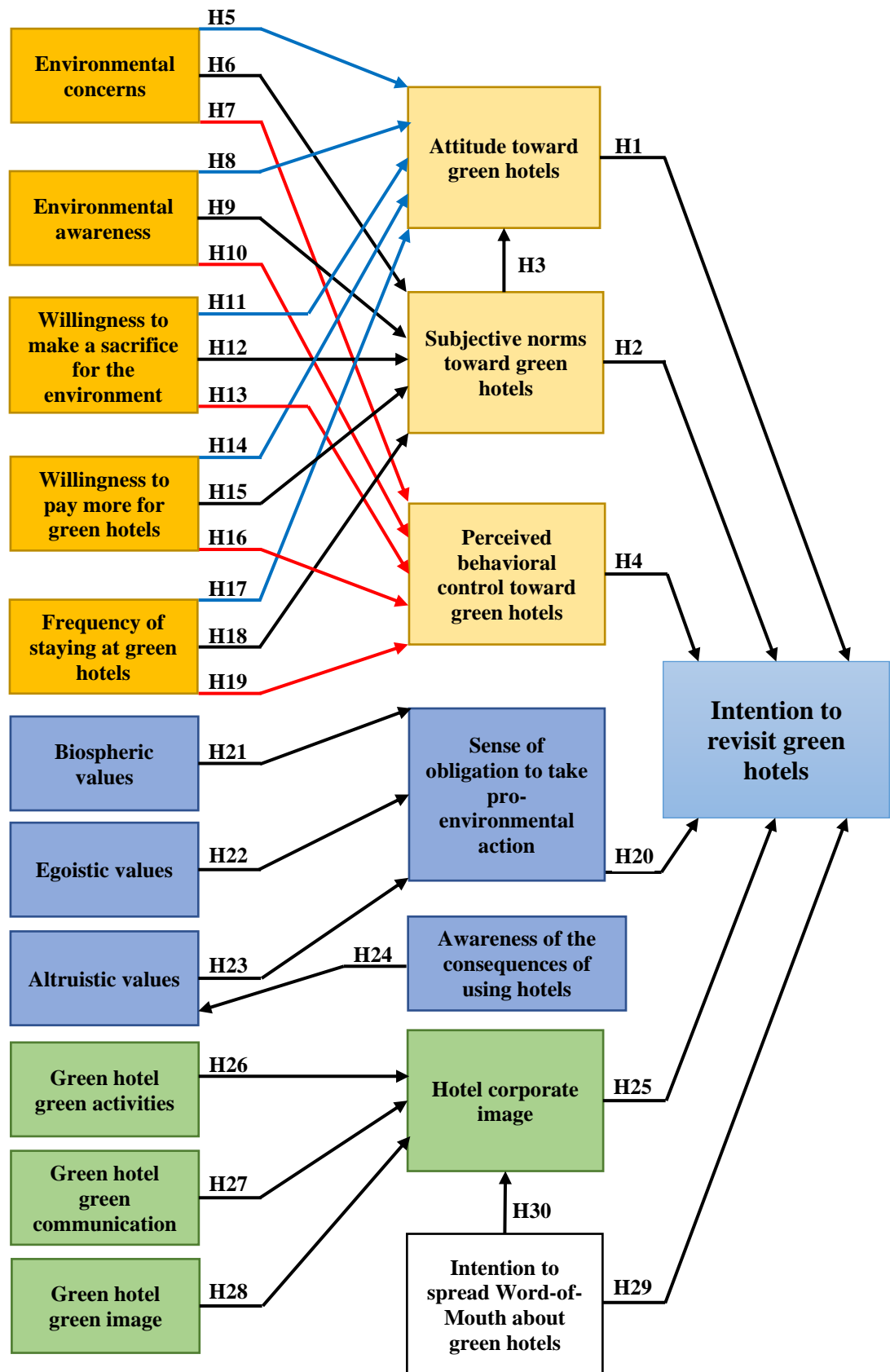


Figure 14: Theoretical framework

### **2.13 Chapter 2 Summary**

In Chapter 2, the conceptual framework has been developed, the key terms have been defined, the constructs have been discussed, and the hypotheses have been presented. The conceptual framework consists of 19 constructs and 30 hypotheses. The conceptual framework has been developed to investigate consumers' intentions to revisit green hotels from four perspectives: the self-perspective, prosocial perspective, B2C marketing perspective, and C2C marketing perspective. These four perspectives have been examined in terms of TPB, VBN theory, CIMT, and consumer intention to spread WOM.

## Chapter 3: Research Methodology

### 3.1 Overview

According to Polonsky and Waller (2011) the methodology section provides the reader with the road map of what was done and why, letting the readers understand how data were collected and analyzed. It acts as a guideline of how and where information came from that is linked to the objectives of the study. According to Alavi, Archibald, McMaster, Lopez, and Cleary (2018), research methodology could be defined as a set of techniques used to identify, select, process and analyze the information collected about the studied subject. These techniques are a conversion of the researchers' ontological and epistemological assumptions into procedures that allow directing the way social research is executed (Nguyen et al., 2018; Peffers, Tuunanen, Rothenberger, & Chatterjee, 2007). Research methodologies encourage the researchers to plan their research by justifying the reasons that motivated conducting the selected study, how to articulate such research issues as the research problem, research questions, data collection approach, type and size of collected data and best analysis technique that could seek best solutions (Baker, Edwards, & Doidge, 2012; Guthrie, Petty, Yongvanich, & Ricceri, 2004). In this section, research philosophy will be identified. After that research approach, research method, research paradigm, research strategy and time horizon will be selected. Then, questionnaires design, sampling strategy and ethical considerations will be discussed. Finally, the data analysis strategy, and problems and limitations will be presented.

### **3.2 Research Philosophy**

Choosing an appropriate research philosophy is an important part of the research methodology. Research philosophy is classified mainly as ontology and epistemology. These philosophical approaches enable the researcher to decide which approach, derived from research questions, should be adopted and why (Saunders & Lewis, 2009). When research philosophy is selected, the research approach, research method, research paradigm, research strategy and time horizon can be identified accordingly. In order to narrow down the selection of research methodologies, the research paradigm that fits with the research objectives need to be identified. A research paradigm is the set of common beliefs and agreements shared between scientists about how problems should be understood and addressed (Kuhn, 1970).

#### **3.2.1 Research Ontology**

Ontology is based on the nature of reality. Ontology in business research can be defined as the science or study of being (Blaikie, 2010). Ontology is a system of belief that reflects an interpretation by an individual about what constitutes a fact in social reality (Antwi & Hamza, 2015; Blaikie, 2007; Cochemé et al., 2007; Corbetta, 2003). According to the ontology, social entities should be perceived as objective or subjective. Therefore, objectivism (or positivism or realist) and subjectivism (constructionism or interpretivism or idealist) can be specified as two important aspects of ontology (Blaikie, 2007; Teymourlouie, Zaeri, Nematbakhsh, Thimm, & Staab, 2018). Objectivism portrays the position that social entities exist in reality external to social actors concerned with their existence (Blaikie, 2007; Bryman, 2016; Corbetta, 2003; Goodwin & Darley, 2008; Jonassen, 1991; Saunders & Lewis, 2009). Subjectivism (idealist), perceives those social phenomena as created from the



perceptions and consequent actions of those social actors concerned with their existence (Blaikie, 2007; Bryman, 2017; Corbetta, 2003; Foss, Klein, Kor, & Mahoney, 2008; Hamati-Ataya, 2014; Lembo, Lenzerini, Rosati, Ruzzi, & Savo, 2015).

Therefore, in this research, objectivism ontology (or positivism or realist) was adopted because the reality is considered to be objective and exist independently of human observation and interpretation. For this research, the reality can be determined as the social actors' behavior can be predicted and measured according to their specific patterns (Corbetta, 2003; Eisenberg et al., 2018; Henry & Pene, 2001; Turvey, 1992).

### **3.2.2 Research Epistemology**

Epistemology in business research is a branch of philosophy that deals with the sources of knowledge. Epistemology refer to how humans acquire knowledge about the world surrounding them, as well as how they justify this knowledge to be truthful and acceptable (Antwi & Hamza, 2015; Blaikie, 2007; Harris, Holmes, & Mertens, 2009; Merk, Rosman, Muis, Kelava, & Bohl, 2018). According to (laikie, 2007; Corbetta, 2003; Henry & Pene, 2001; Johnson, Onwuegbuzie, & Turner, 2007) the most prominent epistemological views (or research paradigms) are interpretivism and positivism. Interpretivism epistemology is linked with the subjectivism (or idealist) ontology (Young & Collin, 2004) and exists only in people's minds. It requires the researchers to be involved deeply in their studies to gain a better understanding of the external world (Sieber & Haklay, 2015; Siebers, 2001). Hence, the researchers play an active role in constructing a social reality from these subjective perceptions (Antwi & Hamza, 2015; Blaikie, 2007; Corbetta, 2003) and the outcomes of their researches are constructed realities that are time- and context-specific (Johnson et al., 2007). On the other hand, positivism epistemology is linked with the objectivism

(or realist) ontology. Positivism epistemology entails researchers to be disconnected from their research subjects to follow the deductive logic. This type of epistemology enables researchers to empirically discover general patterns of human behaviors (Andersson, amp, & Lundeberg, 1995; Antwi & Hamza, 2015; Blaikie, 2007; Corbetta, 2003; Gordon, Slade, & Schmitt, 1986).

This research adopts a positivism epistemology, where the understanding of social objective reality is achieved by collecting and analyzing empirical evidence in a detached and objective manner without influencing, or being influenced by, it.

### **3.3 Research approach**

The research approach can be classified into two approaches which are inductive approach and deductive approach. Inductive approach starts with the observations and seeks to find patterns within them and as a result of these patterns, theories are proposed towards the end of the research process (Bernard, 2017; Goddard & Melville, 2004; Lodico, Spaulding, & Voegtler, 2010; Saunders, Lewis, & Thornhill, 2003). According to Bernard (2017), inductive research involves the search for pattern from observation and the development of explanations – theories – for those patterns through a series of hypotheses. In addition, the inductive approach is linked to the subjectivism philosophy (Saunders & Lewis, 2009). A deductive approach is concerned with developing a hypothesis (or hypotheses) based on existing theory, and then designing a research strategy to test the hypothesis (Gulati, 2009; Russell, 2010; Wilson, 2014). Generally, positivism studies follow the deductive research strategy (Saunders & Lewis, 2009).

In order to match research philosophies and research approaches, a deductive approach is chosen for this study by using theoretical arguments based on existing

phenomena and testing hypotheses (Saunders & Lewis, 2009). This approach is used to describe the causal relationship between variables, testing hypotheses, and generalizing the regularities in human social behavior (Saunders & Lewis, 2009).

### **3.4 Research Method**

The research method can be classified into three methods which are qualitative method, quantitative method and mixed method. Qualitative method focuses on obtaining data through open-ended and conversational communication. Qualitative data refers to non-numeric information such as interview transcripts, notes, video and audio recordings, images and text documents. Generally, the application of inductive approach is associated with qualitative methods of data collection and data analysis. Qualitative data requires an inductive approach to analysis. Mixed method has both qualitative method and quantitative method. In a mixed type of data, both inductive and deductive approaches of analysis are utilized.

Quantitative research designs are either descriptive (i.e., subjects usually measured once) or experimental (i.e., subjects measured before and after a treatment). A descriptive study establishes only associations between variables; an experimental study establishes causality. Quantitative research deals in numbers, logic, and an objective stance. Quantitative research focuses on numeric and unchanging data and detailed, convergent reasoning rather than divergent reasoning. Quantitative data uses the deductive approach. Quantitative research has the following main characteristics:

- The data is usually gathered using structured research instruments.
- The results are based on larger sample sizes that are representative of the population.
- The research study can usually be replicated or repeated, given its high reliability.

- Researcher has a clearly defined research question to which objective answers are sought.
- All aspects of the study are carefully designed before data is collected.
- Data are in the form of numbers and statistics, often arranged in tables, charts, figures, or other non-textual forms.
- Project can be used to generalize concepts more widely, predict future results, or investigate causal relationships.
- Researcher uses tools, such as questionnaires or computer software, to collect numerical data.
- The overarching aim of a quantitative research study is to classify features, count them, and construct statistical models in an attempt to explain what is observed.

In order to have consistency between the research philosophy and research approach, a descriptive quantitative method was used for this research.

### **3.5 Research Paradigm**

Consideration of the research paradigm remains crucial to a study's design and method, since it forms the foundational beliefs and sets the direction of the study. The current research takes up the positivist research philosophy that is underpinned by the ontological assumption of realism. As such, a deductive process was followed where certain hypotheses about social reality was proposed and verified by analyzing the data collected from Abu Dhabi green hotel guests. Descriptive quantitative method was used to analyzed the data collected. The findings were tested for their generalizability by comparing them with those obtained from other studies in other contexts.

### **3.6 Research Strategy**

According to the research paradigm, a descriptive quantitative method will be applied. Therefore, there are two types of data collection that can be utilized. Either primary data collection type or secondary data collection type. This research utilized the primary data type and the source of the data was a questionnaire. Questionnaires can be classified as both, quantitative and qualitative depending on the nature of questions. Questionnaires answers obtained through closed-ended questions with multiple choice answer options are analyzed using quantitative methods that may involve pie-charts, bar-charts and percentages. Answers obtained to open-ended questionnaire questions are analyzed using qualitative methods. They involve discussions and critical analyses without use of numbers and calculations. Advantages of questionnaires include increased speed of data collection, low or no cost requirements, and higher levels of objectivity compared to many alternative methods of primary data collection.

Accordingly for this research, questionnaires answers obtained through closed-ended questions were used.

### **3.7 Time Horizon**

There are two types of time horizons namely Longitudinal and Cross-sectional. Cross-sectional study is defined as an observational study where data is collected as a whole to study a population at a single point in time to examine the relationship between variables of interest. Cross-sectional studies allow the study of many variables at a given time. Cross-sectional studies are quick to conduct as compared to longitudinal studies. A cross-sectional study is conducted at a given point in time, with

different samples. Cross-sectional studies cannot pin down cause-and-effect relationship, but multiple variables can be studied at a single point in time.

Longitudinal study, like the cross-sectional study, is also an observational study, in which data is gathered from the same sample repeatedly over an extended period of time. Longitudinal study can last from a few years to even decades depending on what kind of information needs to be obtained. The benefit of conducting a longitudinal study is that researchers can make notes of the changes, make observations and detect any changes in the characteristics of their participants. One of the important aspects here is that a longitudinal study extends beyond a single frame in time. As a result, they can establish a proper sequence of the events that occurred. A longitudinal study requires a researcher to revisit participants of the study at proper intervals, sometimes conducted with the same sample over the years. Longitudinal study can justify cause-and-effect relationship and only one variable is considered to conduct the study.

Therefore, for this research a cross-sectional study was applied.

### **3.8 Questionnaires Design**

A structured questionnaire was prepared to operationalize various constructs in the form of statements to measure participants' attitude, opinions, assumptions and behaviors. According to Martin (2006), the development of a questionnaire must address several issues: (1) the selection of measurement scales for the various constructs, (2) formatting of the questionnaire, (3) introducing and explaining the questionnaire to potential respondents, (4) pre-testing the questionnaire, (5) mode of distribution, and (6) data gathering and updating of the database. In addressing these

issues, guidelines for designing questionnaires for survey research by Burgess (2001) were adopted.

### 3.8.1 Selection of Measurement Scale

The essential step in developing the questionnaire is to select the proper measurement scale for each construct in the research model. According to Rosas and Ridings (2017), developing any new measurement, scale requires dedicated research to ensure the validation of the item selected and that it can represent such a construct. Hence, the recommendations of Burton-Jones and Lee (2017) stated in that researchers should use previously validated instruments wherever possible, being careful not to make significant alterations in the validated instrument without revalidating instrument content, constructs, and reliability. To operationalize the constructs, measurement items were, therefore, adapted from previous related scholarly studies to ensure the validity and reliability of the collected data, as described in Table 6.

Table 6: Construct measurement items

Constructs	#	Items	References
<b>Frequency of Stay at Green Hotels</b>	A.1	How often have you visited an environmentally responsible hotel during the past three years? 1-Seldom, 2- Between Seldom and Occasionally, 3-Occasionally, 4- Between Occasionally and Frequently, 5-Frequently	(Lam & Hsu, 2004; Perugini & Bagozzi, 2001)

Table 6: Construct measurement items (Continued)

Constructs	#	Items	References
	A.2	I have frequently stayed at an environmentally responsible hotel in the past three years. 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	
	A.3	During the last three years, majority of the hotels I visited were environmentally responsible hotels. 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	
<b>Intention to Revisit Green Hotel</b>	B.1	I am willing to stay at a green hotel when traveling in the future. 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	(Ajzen, 1991; Chen & Tung, 2014; Fishbein & Ajzen, 1977; Han & Kim, 2010; Han & Yoon, 2015; Kim, Kim, & Wachter, 2013; Perugini & Bagozzi, 2001)
	B.2	I plan to stay at a green hotel instead of a conventional hotel when traveling in the future. 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	
	B.3	I will expend effort on staying at a green hotel instead of a conventional hotel when traveling in the future. 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	
<b>Attitude Toward Green Hotel</b>	C.1	For me, staying at a green hotel when traveling is extremely good. 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	



Table 6: Construct measurement items (Continued)

Constructs	#	Items	References
	C.2	For me, staying at a green hotel when traveling is extremely desirable. 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	
	C.3	For me, staying at a green hotel when traveling is extremely pleasant. 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	
	C.4	For me, staying at a green hotel when traveling is extremely favorable. 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	
	C.5	For me, staying at a green hotel when traveling is extremely enjoyable. 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	
<b>Subjective Norms Toward Green Hotel</b>	D.1	Most people who are important to me think I should stay at a green hotel when traveling. 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	(Ajzen, 1991; Fishbein & Ajzen, 1977; Han, 2015; Han & Kim, 2010)
	D.2	Most people who are important to me would want me to stay at a green hotel when traveling. 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	

Table 6: Construct measurement items (Continued)

Constructs	#	Items	References
	D.3	People whose opinions I value would prefer that I stay at a green hotel when traveling. 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	
<b>Perceived Behavioral Control Towards Green Hotel</b>	E.1	Whether or not I stay at a green hotel when traveling is completely up to me. 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	(Ajzen, 1991; Fishbein & Ajzen, 1977; Han, 2015; Han & Kim, 2010)
	E.2	I am confident that if I want, I can stay at a green hotel when traveling. 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	
	E.3	I have resources, time, and opportunities to stay at a green hotel when traveling. 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	
<b>Biospheric Values</b>	F.1	For me, respecting the Earth is very important. 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	(De Groot et al., 2007; Stern et al., 1999)
	F.2	For me, unity with Nature is very important. 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	

Table 6: Construct measurement items (Continued)

Constructs	#	Items	References
	F.3	For me, protecting the Environment is very important. 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	
	F.4	For me, preventing Pollution is very important. 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	
<b>Egoistic Values</b>	G.1	A clean environment provides me with better opportunities for recreation. 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	(De Groot & Steg, 2008; Stern et al., 1993; Stern, Kalof, et al., 1995)
	G.2	Protecting the environment will threaten jobs for people like me. 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	
	G.3	Laws to protect the environment limit my choices and personal freedom. 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	
	G.4	Environmental protection is beneficial to my health. 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	
<b>Altruistic Values</b>	H.1	Pollution generated here harms people all over the earth. 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	(Stern et al., 1993; Stern, Kalof, et al., 1995)

Table 6: Construct measurement items (Continued)

Constructs	#	Items	References
	H.2	We don't need to worry about the environment because future generations will be better able to deal with these problems than we are now. 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	
	H.3	The effects of pollution on public health are worse than we realize. 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	
	H.4	Environmental protection will help people have a better quality of life 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	
	H.5	Environmental protection benefits everyone 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	
<b>Intention to Spread Word-of-Mouth about Green Hotel</b>	I.1	I will recommend a green hotel to my friends when they are travelling 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	(Prud'homme & Raymond, 2013)
	I.2	I will say positive things about green hotels 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	
	I.3	I encourage my relatives to select green hotels for their travels 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	

Table 6: Construct measurement items (Continued)

Constructs	#	Items	References
<b>Willingness to Pay More for Green Hotel</b>	J.1	It is acceptable to pay more for a hotel that engages in green practices 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	(Han et al., 2009; Rahman & Reynolds, 2016; Yadav et al., 2019)
	J.2	I am willing to pay more for a green hotel 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	
	J.3	I am willing to spend extra in order to stay at an environmentally friendly hotel 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	
<b>Sense of Obligation Towards Green Hotels</b>	K.1	I feel morally obliged to book green hotel instead of conventional hotel when traveling. 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	(De Groot et al., 2007; Onwezen et al., 2013)
	K.2	I feel personally obliged to book in an environmentally sound way, such as by booking green hotel. 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	
	K.3	I feel a moral obligation to take the environmental problems caused by hotels into account when making hotel booking choices. 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	

Table 6: Construct measurement items (Continued)

Constructs	#	Items	References
<b>Environmental Concerns</b>	L.1	The balance of nature is very gentle and can be easily upset. 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	(Abdul-Muhmin, 2007; Cordano et al., 2011; Fujii, 2006; Kim & Choi, 2005)
	L.2	Human beings are severely abusing the environment. 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	
	L.3	Humans must maintain the balance with nature to survive. 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	
	L.4	Human interferences with nature often produce disastrous consequences. 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	
<b>Environmental Awareness</b>	M.1	The effects of pollution on public health are worse than we realize. 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	(Ryan & Spash, 2008)
	M.2	Over the next several decades, thousands of species will become extinct. 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	

Table 6: Construct measurement items (Continued)

Constructs	#	Items	References
	M.3	Claims that current levels of pollution are changing earth's climate are exaggerated (reverse coded). 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	
	M.4	Environmental protection will provide a better world for me and my children. 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	
<b>Willingness to Sacrifice for Environment</b>	N.1	I am willing to give things up that I like doing if they harm the natural environment 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	(Rahman & Reynolds, 2016)
	N.2	I am willing to take on responsibilities that will help conserve the natural environment 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	
	N.3	I am willing to do things for the environment, even if I'm not thanked for my efforts 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	
	N.4	Even when it is inconvenient to me, I am willing to do what I think is best for the environment 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	

Table 6: Construct measurement items (Continued)

Constructs	#	Items	References
	N.5	I am willing to go out of my way to do what is best for the environment 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	
<b>Awareness of Hotels Consequences</b>	O.1	The hotel industry causes pollution, climate change, and exhaustion of natural resources. 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	(Bamberg, 2003; Bamberg & Möser, 2007)
	O.2	Hotels generate the environmental impacts on the neighboring areas and wider environment. 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	
	O.3	Hotels cause environmental deteriorations (e.g., waste from rooms, restaurants, and other facilities, excessive use of energy/water). 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	
	O.4	Green hotels practicing energy/water conservation, waste reduction, and diverse eco-friendly activities help to minimize the environmental degradations (reverse coded). 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	



Table 6: Construct measurement items (Continued)

Constructs	#	Items	References
<b>Hotel Corporate Image</b>	P.1	In my opinion, the hotels I were visited are well managed 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	(Javalgi et al., 1994; Nguyen & Leblanc, 2001)
	P.2	In my opinion, the hotels I were visited only want to make money (reverse coded). 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	
	P.3	In my opinion, the hotels I were visited are involved in various community activities 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	
	P.4	In my opinion, the hotels I were visited respond to consumer needs in a better way 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	
	P.5	In my opinion, the hotels I were visited always leave a good impression on me 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	
<b>Green Hotel Green Activities</b>	Q.1	The services provided by the hotels I were visited are eco-friendly 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	(Ko et al., 2013)

Table 6: Construct measurement items (Continued)

Constructs	#	Items	References
	Q.2	The hotels I were visited use products which are certified with green label 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	
	Q.3	The hotels I were visited increase the use of eco-friendly services for consumers 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	
	Q.4	The hotels I were visited are involved in energy conservation 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	
<b>Green Hotel Green Communication</b>	R.1	Advertisements (TV, online, printed, etc.) of the hotels I were visited reflect its green image 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	(Karaosmanoglu & Melewar, 2006)
	R.2	The public relation activities of the hotels I were visited to promote itself as well as its services reflect its green image 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	
	R.3	The sales promotions offered by the hotels I were visited reflect the green image 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	

Table 6: Construct measurement items (Continued)

Constructs	#	Items	References
	R.4	The sponsorship activities of the hotels I were visited reflect the green image 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	
<b>Green Hotel Green Image</b>	S.1	The hotels I were visited are professional about the green practices 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	(Chen, 2008)
	S.2	The hotels I were visited are successful in implementing green practices 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	
	S.3	The hotels I were visited have a good reputation for implementing green practices 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	
	S.4	The hotels I were visited are trustworthy about the green practices they implement 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	
	S.5	The hotels I were visited are concerned for consumer about green practices 1- Extremely disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Extremely agree	

Prior to data collection, the questionnaire was evaluated by two academic experts and the researcher's main supervisor. Expert views were sought from scholars with an interest in similar fields of research. The academic experts reviewed the questionnaire's items to verify their suitability and to ensure that all items completely addressed every aspect of the research questions. They were also requested to give their feedback about any ambiguities, redundancies, or difficulties in comprehension that they encountered, and modifications were made accordingly.

Before the initiation of the main field research and the official distribution of the questionnaire, a pilot test was conducted to evaluate the design and methodology of the instrument. According to Zikmund, Babin, Carr, and Griffin (2013), a pilot test is an experimental testing of a small sample group, with the results being used for testing a study design. Furthermore, Baumgartner, Strong, and Hensley (2006) asserted that the purpose of pilot testing is to determine how well respondents understand the contexts of questions, and that pilot testing also provides an opportunity to eliminate ambiguous questions and reduce bias. Additionally, a pilot test can be used to determine whether the language of the questions is understandable and, moreover, to gauge the time necessary to complete the questionnaire. However, the most helpful aspect of a pilot test is the ability to test the face validity and reliability of the questionnaire. Hence, it is critical to conduct a pilot test prior to the actual research (Bradburn, Sudman, & Wansink, 2004). This step entails an initial test of the data collection tools to determine and rectify any errors. Also, pilot testing can help to identify issues in the research methodology and data collection methods.

During the pretesting stage, a pilot test was performed on twenty volunteer participants from the study's target population. The volunteers were asked to comment on various aspects of a list of items corresponding to the constructs, including the

wording of the scales, questionnaire format, and instrument length. Their valuable feedback was used to improve the wording of the questions, thereby reducing the possibility of respondents interpreting the questions in different ways. The participants indicated that the questionnaire completion time of fifteen minutes was suitable, and that the questions were clear. In light of their feedback, some slight modifications were made following the pretest. Later, based on participants' feedback, the wording of a small number of items was modified and amendments were made. Additional instructions on how to answer the questions were also included on the cover page, and brief definitions or clarifying phrases were inserted into each section. As a result of these efforts, the survey was considered to be appropriate for data collection.

### **3.8.2. Formatting the Questionnaire**

According to Mondada (2017), formatting the questionnaire refers to how the questionnaire survey is laid out and how information is organized and presented. To solicit participation in the survey, a cover letter that introduced the researcher and described the topic under research, the research objectives and its potential value for both academics and the organization was distributed along with the questionnaire. The letter emphasized the voluntary nature of participation and that respondents had the right to withdraw at any time without being penalized. The letter also highlighted the fact that there are no right or wrong answer to any of the statements and that all answers would be treated as confidential. A one-page guide was also prepared to help participants to complete the questionnaire. The guide described the structure of the questionnaire and explained how the respondent could tick the relevant box to indicate a response for each statement. An example showing how the questionnaire box should be marked was included in the guide.

As a warming up, participants started with the demographic questions which are related to age, gender region of origin. The demographic information does not require much effort. A well-formatted survey help the participants to complete the survey conveniently, which is critical to generalization by maximizing the response rate (Fanning, 2005; Henry, Huang, Ferland, Mitchell, & Cohen, 2008). The structural layout of the questionnaire consisted of a two-column table format. The left column indicated the selected variables and its relative scale measurement items, while the right column offered the respondent a choice of five pre-coded response with the neutral point being neither agree nor disagree. The use of Likert 5-point scale allowed the participants to express how much they agree or disagree with the given statements. Figure 15 shows an example of the questionnaire structure. A copy of the full questionnaire is detailed in Appendix.

Using the scale provided below, please, indicate the level of agreement / disagreement with each of the following statements.						
باستخدام المقياس الوارد أدناه ، يرجى الإشارة إلى مستوى الاتفاق / الاختلاف مع كل من العبارات التالية.						
1	2	3	4	5		
Extremely disagree لا أوافق بشدة	Disagree لا أوافق	Neutral محايد	Agree أوافق	Extremely agree أوافق بشدة		
14.1	I am willing to give things up that I like doing if they harm the natural environment إنني على استعداد للتخلي عن الأشياء التي أحب فعلها إذا أضرت بالبيئة الطبيعية.	1	2	3	4	5
14.2	I am willing to take on responsibilities that will help conserve the natural environment أنا على استعداد لتحمل المسؤوليات التي ستساعد في الحفاظ على البيئة الطبيعية.	1	2	3	4	5
14.3	I am willing to do things for the environment, even if I'm not thanked for my efforts أنا على استعداد للقيام بأشياء من أجل البيئة ، حتى لو لم يقدم لي الشكر لجهودي.	1	2	3	4	5
14.4	Even when it is inconvenient to me, I am willing to do what I think is best for the environment حتى عندما يكون الأمر غير مريح بالنسبة لي ، فأنا على استعداد للقيام بما أعتقد أنه أفضل للبيئة.	1	2	3	4	5
14.5	I am willing to go out of my way to do what is best for the environment أنا على استعداد لبذل قصارى جهدي للقيام بما هو أفضل للبيئة.	1	2	3	4	5

Figure 15: The survey questionnaire format

### **3.8.3 Pre-Testing the Questionnaire**

Prior to distributing the questionnaire, it was subject to a pre-test by three faculty members familiar with quantitative research. Apart from a few statements that required re-wording to ensure clarity, the feedback indicated that the survey instrument was clear and comprehensible and that the measurement scales addressed the constructs that they intended to measure.

## **3.9 Sampling Strategy**

Sampling can be explained as a specific principle used to select members of a population to be included in the study. It has been rightly noted that because many populations of interest are too large to work with directly, techniques of statistical sampling have been devised to obtain samples taken from larger populations (Proctor, 2005). In other words, due to the large size of a target population, researchers have no choice but to study a number of cases of elements within the population to represent the population and to reach conclusions about the population.

### **3.9.1 Sample Selection**

The generalizability of the study is based on the representativeness of the respondents (Eid & El-Gohary, 2014). The participants of this study include UAE national and expatriate consumers (those who have visited green hotel/s during 2019 and 2020) in Abu Dhabi, UAE. Sampling methods can be classified into two categories: probability sampling and non-probability sampling (Cohen, Manion, & Morrison, 2002; Shively, 2011; Tyrer & Heyman, 2016). Probability sampling can further be separated into several types, such as stratified, simple random, and systematic sampling (Cohen et al., 2002), while non-probability sampling techniques include snowball, quota, purposive, accidental, and theoretical sampling (Cohen et al.,

2002; Trobia & Lavrakas, 2008). The main difference between the two major categories is that, in probability sampling, the chances of individuals in the wider population being selected for the sample are known whereas, in a non-probability sample, those chances are unknown. In probability sampling, each element in the population has a known non-zero chance of being selected using a random selection procedure (Henry, 1990). The phenomenon in question can thus be described more precisely since every participant has an equal probability of being selected from the population (Visser, Krosnick, & Lavrakas, 2000). According to Tyrer and Heyman (2016), probability sampling is more accurate in determining a population's true characteristics as it allows all members of the population to have an equal chance of being selected. Probability sampling is thus appropriate when a researcher wishes to generalize the study's findings, as it seeks representativeness of the wider population, and allows two-tailed tests to be administered in the statistical analysis of quantitative data. Moreover, probability sampling has less risk of bias than non-probability sampling (Cohen et al., 2002). In light of this, probability sampling was the most reasonable choice for the present study.

More precisely, the study used a stratified random sampling technique in the selection of respondents. This method of sampling involves dividing a population into smaller groups known as strata, which are formed to reflect members' shared attributes or characteristics. A random sample from each stratum is chosen with a membership proportional to the size of that stratum compared to the population. Every collection area is considered, as strata and sample consumers are chosen at random from each collection area. Stratified random sampling was adopted, dividing Abu Dhabi into twelve locations, from which consumer samples were chosen by simple random sampling. This technique (probability sampling, stratified sampling, and simple



random sampling) gave the study a representative sample without bias and minimized sampling errors, allowing the researcher to identify where sampling errors exist (Palys, 2003).

### 3.9.2 Sample Size

The sample size is the number of volunteers participating in the study. The more the participants the better the study would be. Increasing the number of participants will help to reduce the risk of accidentally having extreme, or biased, groups (Chow, Shao, Wang, & Lokhnygina, 2017). According to Liu Liu, Newell, and White (2018), the sample size plays a significant role in ensuring the quality of statistical analysis. Especially when researchers are interested in determining the correlation and defining that the empirical outcome of the hypothesis test is statistically significant.

Based on the researcher's experience, there are multiple recommendations regarding the appropriate way to calculate the sample size (Pearson & Mundform, 2010). According to Aaker and Day (1986), the sample size can be determined based on the sample size equation which is broadly acknowledged by social science researchers. The following equation can determine the sample size:

$$S = Z \sqrt{\frac{P(1-P)}{n}} \sqrt{\frac{N-n}{N-1}}$$

Where:

Z = Degree of required confidence (95%)


S = Sample error (5%)

P = Ratio of population characteristics available in the sample (50%)

N = Population size






n = Sample size

By applying Aaker and Day (1986) equation, the initial sample size value will be 90 questionnaires, which is relatively small comparing to the population size of 4.4 million people. Utilizing Nunnally Nunnally (1978) technique also allows counting all nineteen variables (independent and dependent included in the model). This technique will recommend having a sample size that is at least ten times the number of total variables, i.e., 190 questionnaires. Moreover, while applying anticipated effect size, desired statistical power level, number of latent variables, number of observed variables and probability level in the Soper (2017) online sample size, the calculation of the result shows that the recommended sample size is 106 questionnaires, as per Figure 16.

 **A-priori Sample Size Calculator for Structural Equation Models**

This calculator will compute the sample size required for a study that uses a structural equation model (SEM), given the number of observed and latent variables in the model, the anticipated effect size, and the desired probability and statistical power levels. The calculator will return both the minimum sample size required to detect the specified effect, and the minimum sample size required given the structural complexity of the model.

Please enter the necessary parameter values, and then click 'Calculate'.

**Anticipated effect size:**    
**Desired statistical power level:**    
**Number of latent variables:**    
**Number of observed variables:**    
**Probability level:**  

**Calculate!**

**Minimum sample size to detect effect:** 55  
**Minimum sample size for model structure:** 106  
**Recommended minimum sample size:** 106

Figure 16: Recommended sample size for this research

Table 7: Calculated sample size as per previous literature

#.	Research reference	Maximum Calculated Sample Size
1.	Soper (2017)	106
2.	Aaker and Day (1986)	90
3.	Nunnally (1978)	190

The researcher mentioned some studies that sought the optimal size of the survey sample to support the sample size considered for this survey. As shown in Table 7, as per the previous literature that the maximum required sample size is 190 questionnaires. However, to increase the sample confidence and decrease the sampling error, the sample size of this study will be increased up to 300 questionnaires.

### 3.9.3 Data Collection

To undertake the present study, approval was sought for data collection from the United Arab Emirates University Social Sciences Research Ethics Committee. In accordance with the ethical codes of conduct for research various issues were addressed, including a participant information sheet that detailed the objectives of the research and a consent form that addressed issues related to confidentiality, privacy, and potential risks associated with participation in the research.

Prior to the distribution of the survey questionnaire, the study needed to be approved by the management of the collection areas where the survey took place. The distribution of the survey questionnaire to the consumers was carried out between March 2020 and Apr 2020. A paper questionnaire and a covering letter were used to collect the data necessary to meet the purpose and objectives of the study. The covering letter was designed to encourage participation, and its first paragraph described the nature and the purpose of the study. The second paragraph included a request for

participation in the study, followed by statements guaranteeing anonymity and the extent to which confidentiality of information provided would be maintained. An assurance that participation was voluntary and that any individual approached may withdraw from participation at any time was also included. The covering letter also included the following text in an explanatory statement “The participation is voluntary; accordingly, you may withdraw at any time from the study. There is minimal risk in participating in this study since all data collected will be anonymous.” Participants were informed that a summary of results would be available at their request.

After assessing the survey through the pilot study, the survey was generated as a hard copy. Consumers were informed about the purpose of the study and were encouraged to participate by the primary researcher. The assurance regarding confidentiality was communicated verbally and in the survey’s covering letter. A clear undertaking was given that the response would be addressed at an aggregated-level, rather than as individual-level data. To clarify any questions arising from respondents, a direct way of contacting the primary researcher was provided. The drop-off/pick-up approach was used to collect the completed questionnaires. In addition to the online survey was utilized.

For this study, a representative sample of consumers above 18 years old was considered as the targeted population of participants. The primary researcher used the drop-off/pick-up approach to collect the completed questionnaires at each location by himself. This approach provided the primary researcher with the opportunity to convey the importance of the research personally to the respondents. Additionally, it ensured the presence of the respondent to complete the questionnaires as it had been hand-delivered by the researcher (Steele et al., 2001). According to Steele et al. (2001), the drop off/pick up approach helps to reduce errors of non-coverage and potential sample

bias without reducing the response rate. Hence, the researcher selected twelve attraction destinations in Abu Dhabi City which are Ferrari World in Abu Dhabi, Sheikh Zayed Mosque, Yas Marina Circuit and Yas Water World, Louvre Abu Dhabi, and seven malls located in Abu Dhabi and Abu Dhabi Airport. The researcher distributed the hard copy of the questionnaires in the coffeeshops and the entrances of the twelve destinations. The researcher requested the participants to handover the questionnaires to the information centers or to the coffeeshops staffs. In addition to the field survey, an online survey was utilized due to the time consumed during the field survey. The researcher used the QR code to distribute the questionnaires as online survey at the same twelve destinations.

As shown in Table 8, in total 765 participants were approached, 426 were excluded due to the filter question and 23 with missing values were excluded (i.e., a 93% response rate). Therefore, 316 replies were considered valid for further analysis.

Table 8: Number of valid surveys for further analysis

	<b>Field Survey</b>	<b>Online Survey</b>
<b>Total Participants</b>	178	587
<b>Excluded due to the filter question</b>	23	403
<b>Excluded due to missing values</b>	4	19
<b>Considered valid for further analysis</b>	151	165
<b>Total considered valid for further analysis</b>	316	

### 3.10 Ethical Considerations

Ethical consideration in any research is critical. Multiple ethical factors should be considered while conducting any study especially the factors related to rights,

values, social principles, or individual convictions. In general, this study was governed by UAE University Guidelines for conducting social research. Therefore, ethics clearance from the Social Sciences Research Ethics Committee was secured before the commencement of the data collection.

### **3.10.1 Voluntary Participation**

Voluntary participation refers to participant decision as to whether to take part in the research study or not. If the participant decides not to participate in the research, it will not result in any loss of benefits they are entitled to. A general explanation of the nature of the study was given to all respondents, especially the purpose and the benefits of this research. To ensure that the study complies with the UAE University standard, participants consent was required at the beginning, in the cover letter that was distributed along with the questionnaire before proceeding with the survey. The statement to indicate participants' consent to participate in the survey, namely "I agree to participate in the study voluntarily", guarantees complete voluntary participation (free will).

The first standard to adhere to when conducting a study is to ensure voluntary participation. Completing a questionnaire may require participants to spend a considerable amount of their time and disrupt their regular activities. In addition, the questionnaire required participants to reveal some personal information, which may be unknown to their colleagues. To comply with this standard, a cover letter was distributed along with the questionnaire and included a statement to indicate participants' consent. In addition, participants were requested to return the completed questionnaire to the researcher only if they wished to take part. It must be highlighted that this standard can impact on the generalizability of the research findings as participants are only those who are willing to participate which may reflect certain

personality traits. For the study findings to be generalizable to an entire population, any sample should also include those who are not so willing to participate (Babbie, 2010).

### **3.10.2 No harm to participants**

Ethical standards also require that the researcher should not put individual who voluntarily participated in a situation where they might be at “risk of harm” as a result of their participation. Harm can cover both physical and psychological harm. In this study, participants (individuals above 18 years old) have to answer the questions that were straightforward, neutral and easy to answer (Fouché-Copley, Govender, & Khan, 2016). Furthermore, individuals finalized the survey at their leisure without being subjected to peer or group pressure.

A questionnaire is not expected to cause any harm (physical or psychological) to participants. The questionnaire did not require participants to perform any physical work or take untested drugs or endure stressful testing conditions. Furthermore, they completed the questionnaire individually at their own leisure without being subject to peer or group pressure. Finally, to avoid any harassment to participants, the number of email reminders, was limited to a maximum of three.

### **3.10.3 Anonymity and confidentiality**

Making participants information “anonymous” means eliminating the contributor's name. However, the researcher needs to take more than this fundamental step to secure the participant's identity. According to Pezaro, Clyne, and Gerada (2018) other information can help to distinguish the individual, for instance: gender, age, a region of origin, qualification and monthly income. The more pieces of information that are introduced together, the easier it is to identify someone. Geographical

information joined with the name of the organization, can give away individual identity relatively quickly (Novak, 2014). Researchers should consider as many precautions as they can to secure anonymity and guarantee the realistic level of anonymity (Wiles, Crow, Heath, & Charles, 2008).

While “confidentiality” is defined as the protection provided on the data collected (Butler & Middleman, 2018), the concept of the examination of the selected topic is mainly to get to private feeling, stories, and concerns. The researcher should be clear about how the confidentiality of the collected information will be respected (Gibson, Benson, & Brand, 2013).

Several steps were followed to sustain firm confidentiality during all the stages starting with selecting the sample up to clearing the finding, taking into consideration securing the permission for distributing the survey from the required authority. Participant’s identity was not disclosed under any conditions, and their survey will be kept anonymous to ensure an honest response. These steps include:

- The survey did not require any identifying source of information such as full names, home address, phone numbers or email address.
- Respondents returned the questionnaires in person or attached with the personal email address specified in the survey cover sheet.
- In order to ensure confidentiality, all the hardcopy of the collected responses was securely stored in a locked location while for the electronic gathering the sheet was located in a dedicated folder in the researcher’s personal computer where both sources of data are accessible only by the researcher.
- Finally, the data collected will be accurately analyzed to provide clear findings.



#### **3.10.4 Avoiding deception**

According to Erat (2013) and Fogarty (2018), deception occurs as the consequence of researchers providing false or inadequate information to participants members to mislead about the nature of the research. Therefore, a cover letter was delivered along with the questionnaire in order to introduce the research to the consumer who is willing to participate in the current academic study under the supervision of UAE University. The letter contains the intention, the aim of conducting the study and the reasons for collecting data and its future use.

#### **3.10.5 Providing the right to withdraw**

The researcher informed the participant that “they have the privilege and the right to stop participating in this research at any point”. At the point when the participant decided to pull back, they would not be pressurized or forced in anyway if they would like to withdraw from the research process.

#### **3.10.6 Data Analysis and Reporting**

The ultimate goals of any social research are to search for facts and address unbiased reporting. Researchers should report any changes made to the collected data, providing details and justification for such change. Moreover, researchers have an ethical obligation towards finding true observations and not to enforce assumption or special interests through data analysis. This study also highlighted the limitation, as well as the unexpected adverse outcomes, where an effort was made to explain the reasons behind any inconsistencies, which result as a reference for future studies.

### **3.11 Data Analysis Strategy**

After the data collection and before proceeding with model analysis, data screening was performed using multivariate and univariate outlier identification to indicate data normality. Additionally, missing data were detected. Later, a preliminary factor analysis for the survey components was conducted to examine the common method variance (CMV), reliability, and scale uni-dimensionality of each construct. This test is considered to be essential because the independent variables and dependent variables data used in this study are entirely self-reported, and so are prone to CMV. To satisfy this test, first, Harman's single-factor test was conducted to check if the scale items are uni-dimensional. Second, a common latent factor (CLF) check was conducted using analysis of moment of structure (AMOS 28) confirmatory factor analysis (CFA) to capture the path of common variance among all the observed variables in the model. This test is essential to determine that CMV does not affect the standardized path coefficients.

After ensuring that the normality and factorability assumptions have been tested, the analysis process is carried out by adopting structural equation modeling with maximum likelihood estimation (SEM-MLE) with AMOS 28 to examine the fit of the study's measurement and structural models. Following the two-step modeling method suggested by Anderson and Gerbing (1988), the two-step modeling method begins by evaluating the validity of the measurement model and is followed by the conducting of the structural model assessment by testing standardized path coefficients. The rationale for this two-step approach is to ensure that conclusions emanating from structural relationships were drawn from a set of measurement instruments with desirable psychometric properties.

The assessment of the measurement model for the study's sample was performed by estimating discriminant and convergent validities, as well as internal consistency. Convergent validities were evaluated through item loadings on their related factors; discriminant validities were examined through a comparison between the average variance that the constructs and their measures share to the variances the constructs themselves share (Fornell & Larcker, 1981b; Hair, Black, Babin, Anderson, & Tatham, 2006). After the measurement model had been checked by means of discriminant and convergent validity, it was appropriate to proceed with the structural model. However, to assess the structural model and hypotheses, the study adopted SEM using AMOS 28 with maximum likelihood estimation. The structural model standardized path coefficients ( $\beta$  values) were tested for their respective significance levels, as well as for the coefficients of determination ( $R^2$  values). The significance of testing the structural model is to examine the hypothesized relationships included in the study's proposed conceptual model.

### **3.12 Chapter 3 Summary**

The study follows quantitative methodologies; a questionnaire was built and pre-tested to ensure its effectiveness as perceived by the respondents. Both simple random sample and self-administered questionnaire method were implemented while distributing questionnaires. Subsequently, response collected will be analyzed, and the result will be compared with the hypotheses built in the literature review section.

This chapter provided an overview of the research paradigm, its associated dimensions, and the reasoning behind the specific choices made in the current research. The research paradigm chosen was positivistic, therefore this social enquiry was approached in a manner similar to the physical science. Social reality was considered

as objective and generalizable, and results could be obtained through a deductive process where certain hypotheses are proposed and verified by analyzing data. While collecting the empirical data the researcher attempted to detach himself from other social actors, or phenomena, to eliminate biased results.

The study used quantitative methodology via a structured questionnaire that operationalized various constructs in the form of statements to measure participants' attitudes, opinions, assumptions and intention that was later analyzed using statistical techniques. The steps in developing the survey were discussed and explicated. These included selecting measurement scales from the existing literature, formatting the survey instrument and pre-testing it to ensure that it measures the constructs that are intended to be studied.

The chapter also discussed data collection in terms of the organization under study, the sample size and the data collection mechanism designed to ensure a high response rate. The data analysis technique also discussed, which made use of variance-based structural equation modeling due to the exploratory nature of the research and the complexity of the model under study.

The chapter concluded with a review of steps taken to satisfy ethical considerations in social research. This included voluntary participation, assuring no harm to participants, maintaining confidentiality and avoiding deception. The following chapter presents details of the statistical analysis of the data and concomitant results.

## **Chapter 4: Purification of Measures and Descriptive Analysis**

### **4.1 Overview**

As presented earlier in Chapter 3, the data has been collected through questionnaires. Accordingly, this chapter discusses the data screening and cleaning that ensured the quality of the replies and their subsequent utilization for further statistical analysis. This will be followed by a descriptive analysis of the survey respondents and a statistical analysis of both measurement of the used constructs and structural models of the research hypotheses.

### **4.2 Data Screening**

The raw data screening involved testing for accuracy, missing data analysis, the existence of outliers, verification of the distribution assumptions and checking of the common method bias to guarantee that the data was accurate, complete and appropriate for a further multivariate statistical analysis.

#### **4.2.1 Data Accuracy**

To test for the accuracy of the data, descriptive statistics for every variable were produced using the SPSS software. A record of less than 1, or greater than 5, was irregular since the survey instrument utilized a 5 point-Likert scale (where 'Strongly Agree' = 5, 'Agree' = 4, 'Neutral' = 3, 'Disagree' = 2 and 'Strongly Disagree' = 1). Any irregular replies were determined and dealt with. A selection from the 'Frequencies Summary' is displayed in Table 9. Data was verified as accurate as none of the research variables provided values outside of the expected range.

Table 9: Partial Display of the Dataset Descriptive Statistics

		A.1	A.2	A.3	B.1	B.2	B.3	C.1	C.2	C.3	C.4
<b>N</b>	<b>Valid</b>	316	316	316	316	316	316	316	316	316	316
	<b>Missing</b>	0	0	0	0	0	0	0	0	0	0
<b>Mean</b>		2.61	2.85	3.00	3.96	3.87	3.82	3.84	3.82	3.79	3.84
<b>Std. Deviation</b>		1.079	.998	1.069	.792	.802	.827	.819	.861	.782	.790
<b>Minimum</b>		1	1	1	1	1	1	1	1	1	1
<b>Maximum</b>		5	5	5	5	5	5	5	5	5	5

#### 4.2.2 Missing Data

Missing data is a common issue in data analysis. However, the impact of the missing data depends on their pattern, size (the amount that is missing) and the reason behind them (Tabaschnick & Fidell, 2013). There are many options for handling the missing data. First, to be left as they are, and this option might be utilized if the missing data are very few and non-random. Second, the missing data might be substituted by the mean of the used utilized scale (5 point-Likert Scale). Third, to delete the response or the affected constructs. The last solution is recommended if the sample size is big or when the participants have decided not to answer all the questions in the questionnaire. Furthermore, this solution is recommended if the variable that is having missing data are not essential to the study (Tabaschnick & Fidell, 2013). To evaluate the missing data, the SPSS Analyze / Multiple Imputation / Analyze Patterns facility generated an overall summary of the missing values, shown in Table 10.

As mentioned above, a careful analysis of missing values was conducted. No cases of missing data have been identified, as the completed responses were the only ones to be taken further, since these have given enough replies. In the present study,

the data set comprised 316 respondents, which have given feedback for the following analyses.

Table 10: Partial Display of the Dataset Missing Values

		D.1	D.2	D.3	E.1	E.2	E.3	F.1	F.2	F.3	F.4
<b>N</b>	<b>Valid</b>	316	316	316	316	316	316	316	316	316	316
	<b>Missing</b>	0	0	0	0	0	0	0	0	0	0
<b>Mean</b>		3.39	3.44	3.51	3.90	3.93	3.78	4.25	4.22	4.34	4.35
<b>Std. Deviation</b>		1.029	1.020	.990	.784	.694	.753	.778	.699	.687	.695
<b>Minimum</b>		1	1	1	1	1	1	1	1	1	1
<b>Maximum</b>		5	5	5	5	5	5	5	5	5	5

#### 4.2.3 Aberrant Values

Aberrant values or impermissible values are discussed as errors that might happen in entering the data (Hair Jr, Hult, Ringle, & Sarstedt, 2016). Computing the highest and lowest values of each element could define the impermissible values. Since all of the items in the recent research were assessed using a Likert scale from 1 to 5, any value below 1 or greater than 5 (outside this range) was treated as aberrant value and given special management. Detailed inspection reported no aberrant values in the entered data of the recent research.

#### 4.2.4 Presence of Outliers

Outliers are survey replies that have extraordinarily high or low values that make them significantly different from other replies for the same construct (Tabaschnick & Fidell, 2013). There are two types of outliers, "univariate" and "multivariate". Univariate outliers represent cases with an extreme value in one variable, while multivariate outliers are cases with strange combinations of scores on

two or more variables (Tabaschnick & Fidell, 2013). Outliers can misrepresent the outputs of a statistical analysis by increasing the variance of the error, reducing the power of statistical analysis and biasing predictions of substantive interest (Osborne & Overbay, 2004).

To check for the presence of multivariate outliers, Mahalanobis distance has been computed using SPSS to identify any multivariate outliers within the data. Mahalanobis' distance is an instrument for evaluating how far each reply is from the center of all the variables' distributions (i.e. the centroid in multivariate space) (Mahalanobis, 1927). The Mahalanobis distances of all the cases/observations on all the items of the scales were calculated, and the cases with a chi-square probability of Mahalanobis distance,  $p < 0.001$  were considered multivariate outliers. The Mahalanobis distance test has identified 15 cases that have an outlier (Table 11).

Table 11: Multivariate Outliers Test Results (Mahalanobis Distance Method)

<b>No</b>	<b>Case ID</b>	<b>Mahalanobis Distance</b>	<b>Probability</b>
<b>1</b>	9	82.65598	.00000
<b>2</b>	95	70.40659	.00000
<b>3</b>	253	66.28390	.00000
<b>4</b>	221	63.54553	.00000
<b>5</b>	167	59.29162	.00000
<b>6</b>	21	57.22712	.00001
<b>7</b>	18	54.97806	.00001
<b>8</b>	96	51.46292	.00005
<b>9</b>	26	49.85798	.00008
<b>10</b>	185	48.65946	.00012
<b>11</b>	4	48.13012	.00014
<b>12</b>	193	45.61937	.00034
<b>13</b>	14	45.57132	.00034
<b>14</b>	31	45.42431	.00036
<b>15</b>	307	44.02516	.00057



These 15 cases were earlier found to exhibit the presence of univariate outliers mainly in cases 4, 9, 14, 18, 21, 26, 31, 95, 96, 167, 185, 193, 221, 253 and 307. In order to examine whether it is better to eliminate these cases from the data set or not, an additional test was done by removing these cases from the data set, re-examining the normality through a Kolmogorov-Smirnov test, and calculating the values of skewness and kurtosis. The Kolmogorov-Smirnov test showed that there was no significant improvement in the normality of the data after removing the outliers ( $p < .05$ ).

Similarly, an analysis of skewness and kurtosis values after removing the outliers was made and the values of skewness and kurtosis were found to be outside the range of +1.5 and -1.5. This proved that no important enhancement in the normality of the data was realized by removing the cases. Accordingly, these 15 replies will not be eliminated from the data set and the remaining analysis was continued with all 316 cases.

#### **4.2.5 Normality**

The assumption of normality refers to the shape of the data distribution for each element being bell-shaped. It is worth mentioning that previous research suggest that checking for normality is crucial in most multivariate analysis (Tabaschnick & Fidell, 2013). However, other scholars suggest that true normality is uncommon or unreal, since much authentic data is not normal (Blanca, Arnau, López-Montiel, Bono, & Bendayan, 2013; Micceri, 1989). Moreover, Reinartz, Haenlein, and Henseler (2009) suggest that the maximum likelihood estimators (MLE) used in structural equation modeling (SEM) are relatively robust to violations of normality assumptions (Reinartz et al., 2009).

Table 12: Normality Test Results for all Constructs

	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
<b>A</b>	316	-.491	.137	-.548	.273
<b>B</b>	316	-.822	.137	1.829	.273
<b>C</b>	316	-.637	.137	1.445	.273
<b>D</b>	316	-.404	.137	-.066	.273
<b>E</b>	316	-.749	.137	2.579	.273
<b>F</b>	316	-1.101	.137	3.109	.273
<b>G</b>	316	-.531	.137	-.666	.273
<b>H</b>	316	-.689	.137	3.136	.273
<b>I</b>	316	-.427	.137	.748	.273
<b>J</b>	316	-.622	.137	-.209	.273
<b>K</b>	316	-.424	.137	.321	.273
<b>L</b>	316	-.711	.137	2.238	.273
<b>M</b>	316	-.715	.137	.750	.273
<b>N</b>	316	-.672	.137	2.257	.273
<b>O</b>	316	-.760	.137	1.560	.273
<b>P</b>	315	-.571	.137	1.116	.274
<b>Q</b>	316	-.516	.137	.228	.273
<b>R</b>	316	-.419	.137	.292	.273
<b>S</b>	316	-.353	.137	.403	.273
<b>Valid N (listwise)</b>	315				

Using SPSS 27.0, the statistical values of skewness and kurtosis were tested and found to be within their respective levels. As reported in Table 12, all the values support the normality of univariate distribution due to all values of skewness to being below the cut-off point of '3' as well as all values of kurtosis being not more than '8' (Kline, 2005; West, Finch, & Curran, 1995).

Hair Jr et al. (2016) recommend that the combined use of skewness and kurtosis coefficients in line with the Shapiro-Wilk Test give the highest powerful method to assess departures from univariate normality. The Shapiro-Wilk Test tests the null hypothesis that data distribution is normal, whereas distributions exhibiting skewness and kurtosis values greater than +1, or lower than -1, are considered as non-normal. The results are shown in Table 13.

Table 13: Display of Normality Test Results for all Variables

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
<b>A</b>	.181	315	.000	.927	315	.000
<b>B</b>	.225	315	.000	.887	315	.000
<b>C</b>	.210	315	.000	.897	315	.000
<b>D</b>	.153	315	.000	.932	315	.000
<b>E</b>	.220	315	.000	.892	315	.000
<b>F</b>	.194	315	.000	.833	315	.000
<b>G</b>	.152	315	.000	.916	315	.000
<b>H</b>	.136	315	.000	.928	315	.000
<b>I</b>	.232	315	.000	.887	315	.000
<b>J</b>	.189	315	.000	.899	315	.000
<b>K</b>	.175	315	.000	.928	315	.000
<b>L</b>	.205	315	.000	.893	315	.000
<b>M</b>	.154	315	.000	.914	315	.000
<b>N</b>	.202	315	.000	.900	315	.000
<b>O</b>	.178	315	.000	.930	315	.000
<b>P</b>	.155	315	.000	.949	315	.000
<b>Q</b>	.198	315	.000	.919	315	.000
<b>R</b>	.143	315	.000	.940	315	.000
<b>S</b>	.167	315	.000	.932	315	.000
a. Lilliefors Significance Correction						

## **4.2.6 Validity of Survey Responses**

### **4.2.6.1 Overview**

Because of the cross-sectional design of the study, data for both the independent and dependent variables were simultaneously collected using the same self-reported survey tool over a specific period. This may lead to some concerns that the validity of survey replies could be influenced by common method bias (CMB) and a non-response bias.

The common method bias reflects the argument that the observed variance in an endogenous variable is not only because of the relationship between the model variables, but also rather because of the variance presented by the measurement technique. This may result from respondents who try to make their answers appear socially good images of themselves, or from a bias because of the simultaneous collection of surveys concerning both the independent and dependent variables or the vagueness of the survey elements (MacKenzie & Podsakoff, 2012; Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Non-bias response arises from the point that some participants of the target population who have refused to participate in the study may have very different opinions or attitudes from those who contributed to the study (Rogelberg & Stanton, 2007).

To avoid such possible mistakes, the questionnaire included different procedural approaches. They were: (1) using measurement scales for endogenous and exogenous variables from different sources, (2) guaranteeing participants of the confidentiality of the survey and that their answers would remain anonymous, (3) managing the survey length, (4) Utilizing email to encourage participants to reply quickly, (5) emphasizing the significance of the study and (6) sending email reminders (MacKenzie & Podsakoff, 2012; Rogelberg & Stanton, 2007). Furthermore, the

following statistical analysis were conducted to verify that these potential sources of errors did not affect the quality of the survey data.

#### 4.2.6.2 Common Method Bias (CMB)

To test for possible common method variance, Herman's Single-Factor Test was utilized. The program extracted one factor to test whether a single factor could account for than 50% of the variance. The results shown in Table 14 show that a single factor could only account for 25.720 % of the variance, which is far less than the accepted threshold of 50% (Malhotra, Kim, & Patil, 2006). This supports that the survey replies are free from significant common method bias and that it was acceptable to proceed with the data analysis.

Table 14: Results of Herman's Single-Factor Test for Common Method Bias

<b>Total Variance Explained</b>						
<b>Component</b>	<b>Initial Eigenvalues</b>			<b>Extraction Sums of Squared Loadings</b>		
	<b>Total</b>	<b>% of Variance</b>	<b>Cumulative %</b>	<b>Total</b>	<b>% of Variance</b>	<b>Cumulative %</b>
<b>1</b>	19.033	25.720	25.720	19.033	25.720	25.720
<b>2</b>	11.076	14.968	40.688			
<b>3</b>	4.779	6.458	47.146			
<b>4</b>	3.801	5.136	52.282			
<b>5</b>	2.786	3.765	56.047			
<b>6</b>	2.315	3.129	59.176			
<b>7</b>	2.297	3.104	62.279			
<b>8</b>	1.886	2.548	64.827			
<b>9</b>	1.758	2.376	67.203			
<b>10</b>	1.714	2.316	69.519			

Extraction Method: Principal Component Analysis.

### 4.3 Descriptive Analysis

This section provides general information about respondents. The goal is to present a brief account of the profile of the study sample. Frequency analysis is utilized to distribute the participants according to characteristics which are gender, age, qualification, income level and nationality.

#### 4.3.1 Gender

The first descriptive analysis begins with the gender of the respondents. Table 15 shows that the majority of the respondents (62.7%) were males (198 respondents) and 37.3% were females (118 respondents). This indicates that there is an imbalance between the males and females within the sample. This is consistent with the percentage of male and female hotels visitors in the target population.

#### 4.3.2 Age

The second descriptive analysis shows the age of the respondents. Table 16 shows that only 4.1% of the respondents were aged 18-24 years, 33.5% were between 25 and 34 years, 37.7% were between 35 and 44 years, 17.1% were between 45 and 54 years, 3.2% were between 55 and 65 years. Only 4.4 % were more than 65 years old. This indicates that the majority (71.2%) of the respondents were between 25-44 years old, which reflects the real setting in the UAE as those are the most active hotel bookers.

Table 15: Gender of Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	198	62.7	62.7	62.7
	Female	118	37.3	37.3	100.0
	Total	316	100.0	100.0	

Table 16: Age of Respondents

		<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
<b>Valid</b>	<b>18-24</b>	13	4.1	4.1	4.1
	<b>25-34</b>	106	33.5	33.5	37.7
	<b>35-44</b>	119	37.7	37.7	75.3
	<b>45-54</b>	54	17.1	17.1	92.4
	<b>54-65</b>	10	3.2	3.2	95.6
	<b>More than 65</b>	14	4.4	4.4	100.0
	<b>Total</b>	316	100.0	100.0	

### 4.3.3 Education

The third descriptive statistic deals with the educational level of the participants. Table 17 shows that only very few (0.6%) of the respondents had a below secondary school education, 4.4% had high school certification, 15.5% had diploma certification, 57.6% had a bachelor's degree, 18.0% had a master's degree, and only 3.8% had a doctoral degree. This indicates that the majority of the respondents (94.9%) had diploma or more than diploma certification.

Table 17: Distribution by Educational Qualifications

		<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
<b>Valid</b>	<b>Below Secondary School</b>	2	0.6	0.6	0.6
	<b>Secondary Certificate Holder</b>	14	4.4	4.4	5.1
	<b>Diploma Holder</b>	49	15.5	15.5	20.6
	<b>Bachelor's Degree Holder</b>	182	57.6	57.6	78.2
	<b>Master's Degree Holder</b>	57	18.0	18.0	96.2
	<b>Doctorate Degree Holder</b>	12	3.8	3.8	100.0
	<b>Total</b>	316	100.0	100.0	

#### 4.3.4 Income Level

This study categorized the participants according to their monthly income as shown in Table 18. This variable reflects their ability to book hotels in general and green hotels in particular. The largest group of participants, 51.9%, earn more than AED 20,000 per month. It is shown that 29.4% earn less than AED 10,000. Finally, 18.7% earn between AED 10,000-19,000.

Table 18: Distribution by Income Level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than AED 10,000	93	29.4	29.4	29.4
	AED 10,000-19,000	59	18.7	18.7	48.1
	AED 20,000-29,000	62	19.6	19.6	67.7
	AED 30,000 -39,000	42	13.3	13.3	81.0
	AED 40,000-49,000	28	8.9	8.9	89.9
	More than AED 50,000	32	10.1	10.1	100.0
	Total	316	100.0	100.0	

#### 4.3.5 Nationality

Finally, in terms of nationality, this research has respondents from 28 different countries which include; Albania (0.3%), Armenia (0.3%), Bangladesh (0.3%), Cameroon (0.3%), Canada (0.9%), Egypt (10.4%), Greece (0.3%), India (31%), Iraq (0.3%), Italy (0.3%), Jordan (4.4%), Kazakstan (0.3%), Lebanon (4.4%), Libya (0.6%), Malta (0.3%), Morocco (0.3%), Oman (0.6%), Pakistan (4.7%), Philippines



(7%), Palestine (0.9%), Sudan (0.6%), Sweden (0.3%), Syria (2.5%), UAE (22.2%), UK (3.5%), USA (1.6%), Venezuela (0.3%) and Yemen (0.6%). Table 19 shows the distribution of sample by nationality

Table 19: Distribution of Sample by Nationality

		Frequency	Percent	Valid Percent	Cumulative Percent
<b>Valid</b>	<b>Albania</b>	1	.3	.3	.3
	<b>Armenia</b>	1	.3	.3	.6
	<b>Bangladesh</b>	1	.3	.3	.9
	<b>Cameroon</b>	1	.3	.3	1.3
	<b>Canada</b>	3	.9	.9	2.2
	<b>Egypt</b>	33	10.4	10.4	12.7
	<b>Greecek</b>	1	.3	.3	13.0
	<b>India</b>	98	31.0	31.0	44.0
	<b>Iraq</b>	1	.3	.3	44.3
	<b>Italy</b>	1	.3	.3	44.6
	<b>Jordan</b>	14	4.4	4.4	49.1
	<b>Kazakstan</b>	1	.3	.3	49.4
	<b>Lebanon</b>	14	4.4	4.4	53.8
	<b>Libya</b>	2	.6	.6	54.4
	<b>Malta</b>	1	.3	.3	54.7
	<b>Morocco</b>	1	.3	.3	55.1
	<b>Oman</b>	2	.6	.6	55.7
	<b>Pakistan</b>	15	4.7	4.7	60.4
	<b>Philippines</b>	22	7.0	7.0	67.4
	<b>Palestine</b>	3	.9	.9	68.4
<b>Sudan</b>	2	.6	.6	69.0	
<b>Sweden</b>	1	.3	.3	69.3	

Table 19: Distribution of Sample by Nationality (Continued)

		<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
	<b>Syria</b>	8	2.5	2.5	71.8
	<b>UAE</b>	70	22.2	22.2	94.0
	<b>UK</b>	11	3.5	3.5	97.5
	<b>USA</b>	5	1.6	1.6	99.1
	<b>Venezuela</b>	1	.3	.3	99.4
	<b>Yemen</b>	2	.6	.6	100.0
	<b>Total</b>	316	100.0	100.0	

#### 4.4 Reliability Analysis

The reliability of the survey instrument was assessed utilizing the values of Cronbach's Alpha to test the degree of consistency between the multiple measurements of a variable (Hair Jr et al., 2016). Variable reliability reflects the extent to which a group of measurement items are internally consistent in measuring the concept that they are supposed to measure (Hair Jr et al., 2016). Cronbach's Alpha assumes that all utilized elements in a scale are reliable and load equally on their construct.

In this research, the reliability was assessed using item-to-total correlation. The aim was to eliminate elements if they had low correlation unless they symbolized an additional domain of interest. This approach is considered the most common technique utilized by researchers for assuring the reliability of a multi-item scale (May, 1997). The purpose of the item-to-total correlation measure is to determine the relationship of a particular item to the rest of the items in the same dimension. The process helps

to ensure that the items making up the dimension share a common core (May, 1997). In this refinement process, each element to be kept for further analysis should have an item-to-total correlation score of 0.35 or above and would then be considered highly reliable (Cooper & Emory, 1995). Nunnally and Bernstein (1978) suggests that a reliability of 0.60 would be sufficient.

The following section reports the results of the reliability analyses which were conducted for all the measuring instruments in the questionnaire, namely; intention to revisit green hotels, attitude toward green hotels, subjective norms toward green hotels, perceived behavioral control toward green hotels, environmental concerns, environmental awareness, willingness to make a sacrifice for the environment, willingness to pay more for green hotels, frequency of staying at green hotels, sense of obligation toward green hotels, biospheric values, egoistic values, altruistic values, awareness of the consequences of using hotels, hotel corporate image, green hotel green activities, green hotel green communication, green hotel green image, and intention to spread word-of-mouth about green hotels (Reliability Analysis). Computing the item-to-total correlation and examining with coefficient alpha establishes the process of analyzing reliability. Item-to-total correlation and the Cronbach Alpha coefficient are observed to be very popular in the field of social science research (Fershtman & Muller, 1986).

Items with low item-to-total correlation have been dropped from further analysis. The item-total correlation analysis for the Altruistic Values scale indicated that one item (H2) should be excluded from further analysis which is 'We don't need to worry about the environment because future generations will be better able to deal with these problems than we are now'. For the Awareness of Consequences construct, the reliability analysis indicated that one item (O4) should be removed from further

analysis which is ‘Green hotels practicing energy/water conservation, waste reduction, and diverse eco-friendly activities help to minimize the environmental degradations’. Similarly, one item from the Corporate Image construct (P2) had to be removed which is ‘In my opinion, the hotels I visited only want to make money’ due to a low item-to-total correlation.

The estimated reliabilities for the refined scales are shown in the last column of Table 20, below, with the reliability coefficients ranging from 0.885 to 0.975 which were significantly higher than the acceptable level of 0.60 (Nunnally & Bernstein, 1978). These results confirm that reliable scales were used. This study calculates the reliability for every single variable. Table 20 shows the reliability coefficient and item-total correlations for all the study constructs.

Table 20: Reliability Analysis for the Research Constructs

<b>Item Code</b>	<b>Item</b>	<b>Item-total correlation</b>	<b>Cronbach's Alpha</b>
<b>A</b>	Frequency of stay at green hotels		0.918
<b>A.1</b>	How often have you visited an environmentally responsible hotel during the past three years?	.807	
<b>A.2</b>	I have frequently stayed at an environmentally responsible hotel in the past three years.	.850	
<b>A.3</b>	During the last three years, majority of the hotels I visited were environmentally responsible hotels.	.844	

Table 20: Reliability Analysis for the Research Constructs (Continued)

<b>Item Code</b>	<b>Item</b>	<b>Item-total correlation</b>	<b>Cronbach's Alpha</b>
<b>B</b>	Intention to revisit green hotels		0.903
<b>B.1</b>	I am willing to stay at a green hotel when traveling in the future.	.772	
<b>B.2</b>	I plan to stay at a green hotel instead of a conventional hotel when traveling in the future.	.846	
<b>B.3</b>	I will expend effort on staying at a green hotel instead of a conventional hotel when traveling in the future.	.803	
<b>C</b>	Attitude toward green hotels		0.953
<b>C.1</b>	For me, staying at a green hotel when traveling is Extremely good.	.850	
<b>C.2</b>	For me, staying at a green hotel when traveling is Extremely desirable.	.855	
<b>C.3</b>	For me, staying at a green hotel when traveling is Extremely pleasant.	.893	
<b>C.4</b>	For me, staying at a green hotel when traveling is Extremely favorable.	.875	
<b>C.5</b>	For me, staying at a green hotel when traveling is Extremely enjoyable.	.872	
<b>D</b>	Subjective norms toward green hotels		0.960
<b>D.1</b>	Most people who are important to me think I should stay at a green hotel when traveling.	.898	

Table 20: Reliability Analysis for the Research Constructs (Continued)

<b>Item Code</b>	<b>Item</b>	<b>Item-total correlation</b>	<b>Cronbach's Alpha</b>
<b>D.2</b>	Most people who are important to me would want me to stay at a green hotel when traveling.	.934	
<b>D.3</b>	People whose opinions I value would prefer that I stay at a green hotel when traveling.	.911	
<b>E</b>	Perceived behavioral control toward green hotels		0.885
<b>E.1</b>	Whether or not I stay at a green hotel when traveling is completely up to me.	.770	
<b>E.2</b>	I am confident that if I want, I can stay at a green hotel when traveling.	.829	
<b>E.3</b>	I have resources, time, and opportunities to stay at a green hotel when traveling.	.729	
<b>F</b>	Biospheric values		0.940
<b>F.1</b>	For me, respecting the Earth is Very important.	.864	
<b>F.2</b>	For me, unity with Nature is Very important.	.802	
<b>F.3</b>	For me, protecting the Environment is Very important.	.894	
<b>F.4</b>	For me, preventing Pollution is Very important.	.869	
<b>G</b>	Egoistic values		0.973
<b>G.1</b>	A clean environment provides me with better opportunities for recreation.	.935	

Table 20: Reliability Analysis for the Research Constructs (Continued)

<b>Item Code</b>	<b>Item</b>	<b>Item-total correlation</b>	<b>Cronbach's Alpha</b>
<b>G.2</b>	Protecting the environment will threaten jobs for people like me.	.934	
<b>G.3</b>	Laws to protect the environment limit my choices and personal freedom.	.944	
<b>G.4</b>	Environmental protection is beneficial to my health.	.917	
<b>H</b>	Altruistic values		0.936
<b>H.1</b>	Pollution generated here harms people all over the earth.	.842	
<b>H.3</b>	The effects of pollution on public health are worse than we realize.	.807	
<b>H.4</b>	Environmental protection will help people have a better quality of life	.897	
<b>H.5</b>	Environmental protection benefits everyone	.850	
<b>I</b>	Intention to spread word-of-mouth about green hotels		0.921
<b>I.1</b>	I will recommend a green hotel to my friends when they are travelling.	.838	
<b>I.2</b>	I will say positive things about green hotels.	.829	
<b>I.3</b>	I encourage my relatives to select green hotels for their travels.	.853	
<b>J</b>	Willingness to pay more for green hotels		0.975
<b>J.1</b>	It is acceptable to pay more for a hotel that engages in green practices.	.885	

Table 20: Reliability Analysis for the Research Constructs (Continued)

<b>Item Code</b>	<b>Item</b>	<b>Item-total correlation</b>	<b>Cronbach's Alpha</b>
<b>J.2</b>	I am willing to pay more for a green hotel.	.918	
<b>J.3</b>	I am willing to spend extra in order to stay at an environmentally friendly hotel.	.919	
<b>K</b>	Sense of obligation toward green hotels		0.940
<b>K1</b>	I feel morally obliged to book green hotel instead of conventional hotel when traveling.	.893	
<b>K2</b>	I feel personally obliged to book in an environmentally sound way, such as by booking green hotel.	.882	
<b>K3</b>	I feel a moral obligation to take the environmental problems caused by hotels into account when making hotel-booking choices.	.852	
<b>L</b>	Environmental concerns		0.897
<b>L.1</b>	The balance of nature is very gentle and can be easily upset.	.713	
<b>L.2</b>	Human beings are severely abusing the environment.	.744	
<b>L.3</b>	Humans must maintain the balance with nature to survive.	.815	
<b>L.4</b>	Human interferences with nature often produce disastrous consequences.	.807	
<b>M</b>	Environmental awareness		0.918
<b>M.1</b>	The effects of pollution on public health are worse than we realize.	.843	



Table 20: Reliability Analysis for the Research Constructs (Continued)

<b>Item Code</b>	<b>Item</b>	<b>Item-total correlation</b>	<b>Cronbach's Alpha</b>
<b>M.2</b>	Over the next several decades, thousands of species will become extinct.	.842	
<b>M.3</b>	Claims that current levels of pollution are changing earth's climate are exaggerated.	.713	
<b>M.4</b>	Environmental protection will provide a better world for me and my children.	.842	
<b>N</b>	Willingness to sacrifice for environment		0.926
<b>N.1</b>	I am willing to give things up that I like doing if they harm the natural environment	.806	
<b>N.2</b>	I am willing to take on responsibilities that will help conserve the natural environment	.788	
<b>N.3</b>	I am willing to do things for the environment, even if I'm not thanked for my efforts	.821	
<b>N.4</b>	Even when it is inconvenient to me, I am willing to do what I think is best for the environment	.802	
<b>N.5</b>	I am willing to go out of my way to do what is best for the environment	.818	
<b>O</b>	Awareness of hotels consequences		0.902
<b>O.1</b>	The hotel industry causes pollution, climate change, and exhaustion of natural resources.	.798	
<b>O.2</b>	Hotels generate the environmental impacts on the neighboring areas and wider environment.	.851	

Table 20: Reliability Analysis for the Research Constructs (Continued)

<b>Item Code</b>	<b>Item</b>	<b>Item-total correlation</b>	<b>Cronbach's Alpha</b>
<b>O.3</b>	Hotels cause environmental deteriorations (e.g., waste from rooms, restaurants, and other facilities, excessive use of energy/water).	.768	
<b>P</b>	Hotel corporate image		0.892
<b>P.1</b>	In my opinion, the hotels I were visited are well managed.	.704	
<b>P.3</b>	In my opinion, the hotels I were visited are involved in various community activities	.724	
<b>P.4</b>	In my opinion, the hotels I were visited respond to consumer needs in a better way	.820	
<b>P.5</b>	In my opinion, the hotels I were visited always leave a good impression on me	.801	
<b>Q</b>	Green hotel green activities		0.931
<b>Q.1</b>	The services provided by the hotels I were visited are eco-friendly	.849	
<b>Q.2</b>	The hotels I were visited use products which are certified with green label	.811	
<b>Q.3</b>	The hotels I were visited increase the use of eco-friendly services for consumers.	.898	
<b>Q.4</b>	The hotels I were visited are involved in energy conservation	.794	

Table 20: Reliability Analysis for the Research Constructs (Continued)

<b>Item Code</b>	<b>Item</b>	<b>Item-total correlation</b>	<b>Cronbach's Alpha</b>
<b>R</b>	Green hotel green communication		0.948
<b>R.1</b>	Advertisements (TV, online, printed, etc.) of the hotels I were visited reflect its green image.	.861	
<b>R.2</b>	The public relation activities of the hotels I were visited to promote itself as well as its services reflect its green image.	.885	
<b>R.3</b>	The sales promotions offered by the hotels I were visited reflect the green image.	.900	
<b>R.4</b>	The sponsorship activities of the hotels I were visited reflect the green image.	.852	
<b>S</b>	Green hotel green image		0.971
<b>S.1</b>	The hotels I were visited are professional about the green practices.	.870	
<b>S.2</b>	The hotels I were visited are successful in implementing green practices.	.931	
<b>S.3</b>	The hotels I were visited have a good reputation for implementing green practices.	.918	
<b>S.4</b>	The hotels I were visited are trustworthy about the green practices they implement.	.927	
<b>S.5</b>	The hotels I were visited are concerned for consumer about green practices.	.932	

## **4.5 Validity Analysis**

The remaining elements for each scale were submitted to an exploratory factor analysis (EFA) to assess their uni-dimensionality and underlying factor structure. The EFA has been performed using principal components analysis with Varimax rotation. This part covers the test to measure validity and scale development for variables included in this study. An order of steps has been implemented through the scale development process. This type of procedure was utilized to sustain the reliability and validity of the data.

### **4.5.1 Attitudes Related Factors**

Based on the literature review, nine factors have been identified as factors that are related to the attitudes towards green hotels. These factors are intention to revisit green hotels, attitude toward green hotels, subjective norms toward green hotels, perceived behavioral control toward green hotels, frequency of staying at green hotels, biospheric values, egoistic values, altruistic values, and intention to spread word-of-mouth about green hotels. To validate the constructs, the different items included have been submitted to the factor analysis. The results of our factor analysis are presented below.

Specific requirements should be met before factor analysis can be successfully used. First, variables should be measured using interval scales. Using a 5-point Likert scale in the survey fulfilled this requirement. A number of reasons account for this use of Likert scales. Second, the sample size should be more than 100 since the researcher generally cannot use factor analysis with fewer than 50 observations (Hair Jr et al., 2016). This requirement has been also fulfilled because there were 316 participants in this research. The results of the factor analysis tests are briefly discussed below.

#### 4.5.1.1 Bartlett's Test of Sphericity for Attitudes Related Factors

The 32 items representing the nine variables have been submitted to the factor analysis. The results of Exploratory Factor Analysis (EFA) yielded a nine-factor solution that accounted for 86.997 % of the variance extracted. The result for Bartlett's Test of Sphericity (BTS) was large at 10694.561, and the associated significance value was very small ( $p=0.00$ ). This shows that the data were appropriate for factor analysis (Snedecor & Cochran, 1989).

#### 4.5.1.2 Kaiser-Meyer-Olkin Measure of Sampling Adequacy for Attitudes Related Factors

The Kaiser-Meyer-Olkin (KMO) for measurement of sample adequacy (MSA) gives the computed KMO as 0.881, which is adequate, and above acceptable level (Snedecor & Cochran, 1989) (see Table 21).

Table 21: KMO and Bartlett's Test for Attitudes Related Factors

<b>Kaiser-Meyer-Olkin Measure of Sampling Adequacy.</b>		.881
<b>Bartlett's Test of Sphericity</b>	<b>Approx. Chi-Square</b>	10694.561
	<b>df</b>	496
	<b>Sig.</b>	.000

Since the above requirements were met, it was possible to infer that Factor Analysis was appropriate for this data set and that the procedures for factor analysis could be performed. The factor extraction results using Principal Component Analysis (PCA) are given in Table 22.

#### 4.5.1.3 Results of Principal Component Analysis Extraction Process for Attitudes Related Factors

Factor extraction results using Principal Component Analysis (PCA) are given in Table 22. It should be noted that an eigenvalue of 1.0 is used as the benchmark in deciding the number of factors (Hair Jr et al., 2016).

Table 22: Principal Component Analysis Extraction Results for Attitudes Related Factors

Total Variance Explained									
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	9.954	31.106	31.106	9.954	31.106	31.106	4.359	13.623	13.623
2	5.082	15.882	46.988	5.082	15.882	46.988	3.752	11.725	25.348
3	3.691	11.533	58.521	3.691	11.533	58.521	3.493	10.915	36.263
4	2.332	7.286	65.808	2.332	7.286	65.808	3.449	10.779	47.043
5	1.710	5.344	71.151	1.710	5.344	71.151	2.804	8.764	55.806
6	1.549	4.840	75.991	1.549	4.840	75.991	2.623	8.196	64.002
7	1.372	4.287	80.278	1.372	4.287	80.278	2.510	7.844	71.846
8	1.142	3.568	83.846	1.142	3.568	83.846	2.497	7.803	79.649
9	1.008	3.151	86.997	1.008	3.151	86.997	2.351	7.348	86.997
Extraction Method: Principal Component Analysis.									

#### 4.5.1.4 Extraction Method: Principal Component Analysis for Attitudes Related Factors

An initial (un-rotated) solution identified 32 items and nine factors with eigenvalues of more than one, accounting for 86.997 % of the variance (see Table 22). As Table 23 shows, all 32 items score communalities that range from 0.802 to 0.949.

Therefore, it could be concluded that a degree of confidence in the factor solution has been achieved.

Table 23: Communalities for Attitudes Related Factors

	<b>Initial</b>	<b>Extraction</b>
<b>A.1</b>	1.000	.843
<b>A.2</b>	1.000	.886
<b>A.3</b>	1.000	.874
<b>B.1</b>	1.000	.833
<b>B.2</b>	1.000	.874
<b>B.3</b>	1.000	.845
<b>C.1</b>	1.000	.820
<b>C.2</b>	1.000	.833
<b>C.3</b>	1.000	.874
<b>C.4</b>	1.000	.857
<b>C.5</b>	1.000	.853
<b>D.1</b>	1.000	.915
<b>D.2</b>	1.000	.949
<b>D.3</b>	1.000	.924
<b>E.1</b>	1.000	.832
<b>E.2</b>	1.000	.872
<b>E.3</b>	1.000	.812
<b>F.1</b>	1.000	.861
<b>F.2</b>	1.000	.802

Table 23: Communalities for Attitudes Related Factors (Continued)

	<b>Initial</b>	<b>Extraction</b>
<b>F.3</b>	1.000	.895
<b>F.4</b>	1.000	.868
<b>G.1</b>	1.000	.932
<b>G.2</b>	1.000	.932
<b>G.3</b>	1.000	.943
<b>G.4</b>	1.000	.912
<b>H.1</b>	1.000	.835
<b>H.3</b>	1.000	.809
<b>H.4</b>	1.000	.890
<b>H.5</b>	1.000	.843
<b>I.1</b>	1.000	.863
<b>I.2</b>	1.000	.864
<b>I.3</b>	1.000	.892
Extraction Method: Principal Component Analysis.		

#### 4.5.1.5 Factor Rotation and Factor Loading for Attitudes Related Factors

On being satisfied with the nine chosen variables, a loading of all the items within the nine factors was examined. The Varimax technique for rotated component analysis was used with a cut-off point for interpretation of the factors at 0.50 or greater (Snedecor & Cochran, 1989). The results are summarized in Table 24.



Table 24: Rotated Component Matrix<sup>a</sup> for Attitudes Related Factors

	Component								
	1	2	3	4	5	6	7	8	9
<b>A.1</b>						.905			
<b>A.2</b>						.921			
<b>A.3</b>						.899			
<b>B.1</b>							.822		
<b>B.2</b>							.838		
<b>B.3</b>							.828		
<b>C.1</b>	.788								
<b>C.2</b>	.822								
<b>C.3</b>	.832								
<b>C.4</b>	.836								
<b>C.5</b>	.828								
<b>D.1</b>					.879				
<b>D.2</b>					.886				
<b>D.3</b>					.880				
<b>E.1</b>								.858	
<b>E.2</b>								.895	
<b>E.3</b>								.845	
<b>F.1</b>			.851						
<b>F.2</b>			.835						
<b>F.3</b>			.873						
<b>F.4</b>			.837						
<b>G.1</b>		.961							

Table 24: Rotated Component Matrix<sup>a</sup> for Attitudes Related Factors (Continued)

	Component								
	1	2	3	4	5	6	7	8	9
<b>G.2</b>		.961							
<b>G.3</b>		.964							
<b>G.4</b>		.948							
<b>H.1</b>				.839					
<b>H.3</b>				.845					
<b>H.4</b>				.857					
<b>H.5</b>				.822					
<b>I.1</b>									.756
<b>I.2</b>									.795
<b>I.3</b>									.833
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.									
a. Rotation converged in 7 iterations.									

All items were loaded onto the designed factors for which they were allocated. Factor loadings were all higher than 0.60 so that each item loaded higher on its associated construct than on any other construct. As suggested by Hair Jr et al. (2016), a factor loading higher than 0.35 is considered statistically significant at an alpha level of 0.05. This is supported by the discriminant validity of the measurement.

#### **4.5.1.6 Factor Naming and Interpretation Process for Attitudes Related Factors**

The interpretation of the nine-factor solution was accomplished by relating them to the theoretical concepts of marketing and tourism literature. The nine variables can be explained as follows:

Factor 1 consists of five items and fits very well with the ‘attitude toward green hotels.’ This factor comprises the following items (1) For me, staying at a green hotel when traveling is extremely good, (2) For me, staying at a green hotel when traveling is extremely desirable, (3) For me, staying at a green hotel when traveling is Extremely pleasant, (4) For me, staying at a green hotel when traveling is Extremely favorable and (5) For me, staying at a green hotel when traveling is Extremely enjoyable. The values are closely grouped with the highest loading being ‘For me, staying at a green hotel when traveling is Extremely favorable’ (.836) and the lowest loading “For me, staying at a green hotel when traveling is extremely good” (0.788).

Factor 2 consists of four items. This factor represents the customers’ opinions regarding ‘egoistic values.’ It covers the following items (1) A clean environment provides me with better opportunities for recreation, (2) Protecting the environment will threaten jobs for people like me, (3) Laws to protect the environment limit my choices and personal freedom, and (4) Environmental protection is beneficial to my health. The values are closely grouped with the highest loading being “A clean environment provides me with better opportunities for recreation” (0.961) and the lowest loading “Environmental protection is beneficial to my health” (0.948).

Factor 3 consists of four items and fits very well with the ‘biospheric values.’ This factor comprises the following items (1) For me, respecting the Earth is Very important, (2) For me, unity with Nature is Very important, (3) For me, protecting the Environment is Very important and (4) For me, preventing Pollution is Very important.

The values are closely grouped with the highest loading being ‘For me, protecting the Environment is Very important’ (.873) and the lowest loading “For me, unity with Nature is Very important” (0.735).

Factor 4 consists of four items and fits very well with the ‘altruistic values.’ This factor comprises the following items (1) Pollution generated here harms people all over the earth, (2) the effects of pollution on public health are worse than we realize, (3) Environmental protection will help people have a better quality of life and (4) Environmental protection benefits everyone. The values are closely grouped with the highest loading being ‘Environmental protection will help people have a better quality of life’ (.857) and the lowest loading “Environmental protection benefits everyone” (0.822).

Factor 5 consists of three items and fits very well with the ‘subjective norm toward green hotels.’ This factor comprises the following items (1) Most people who are important to me think I should stay at a green hotel when traveling, (2) Most people who are important to me would want me to stay at a green hotel when traveling, and (3) People whose opinions I value would prefer that I stay at a green hotel when traveling. The values are closely grouped with the highest loading being ‘Most people who are important to me would want me to stay at a green hotel when traveling’ (.886) and the lowest loading “Most people who are important to me think I should stay at a green hotel when traveling” (0.879).

Factor 6 consists of three items and fits very well with the ‘frequency of staying at green hotels.’ This factor comprises the following items (1) How often have you visited an environmentally responsible hotel during the past three years? (2) I have frequently stayed at an environmentally responsible hotel in the past three years, and (3) During the last three years, majority of the hotels I visited were environmentally

responsible hotels. The values are closely grouped with the highest loading being ‘I have frequently stayed at an environmentally responsible hotel in the past three years’ (.921) and the lowest loading “During the last three years, majority of the hotels I visited were environmentally responsible hotels” (0.899).

Factor 7 consists of three items and fits very well with the ‘intention to revisit green hotels.’ This factor comprises the following items (1) I am willing to stay at a green hotel when traveling in the future, (2) I plan to stay at a green hotel instead of a conventional hotel when traveling in the future, and (3) I will expend effort on staying at a green hotel instead of a conventional hotel when traveling in the future. The values are closely grouped with the highest loading being ‘I plan to stay at a green hotel instead of a conventional hotel when traveling in the future’ (.838) and the lowest loading “I am willing to stay at a green hotel when traveling in the future” (0.822).

Factor 8 consists of three items and fits very well with the ‘perceived behavioral control toward green hotels.’ This factor comprises the following items (1) Whether or not I stay at a green hotel when traveling is completely up to me, (2) I am confident that if I want, I can stay at a green hotel when traveling, and (3) I have resources, time, and opportunities to stay at a green hotel when traveling. The values are closely grouped with the highest loading being ‘I am confident that if I want, I can stay at a green hotel when traveling’ (.895) and the lowest loading “I have resources, time, and opportunities to stay at a green hotel when traveling” (0.845).

Factor 9 consists of three items and fits very well with the ‘intention to spread word-of-mouth about green hotels.’ This factor comprises the following items (1) I will recommend a green hotel to my friends when they are travelling, (2) I will say positive things about green hotels, and (3) I encourage my relatives to select green hotels for their travels. The values are closely grouped with the highest loading being

'I encourage my relatives to select green hotels for their travels' (.833) and the lowest loading "I will recommend a green hotel to my friends when they are travelling" (0.756).

#### **4.5.2 External Factors Related Variables**

Based on the literature review, ten factors have been identified as factors that are related to the antecedents for the attitudes towards green hotels. These factors are environmental concerns, environmental awareness, willingness to make a sacrifice for the environment, willingness to pay more for green hotels, sense of obligation toward green hotels, awareness of the consequences of using hotels, hotel corporate image, green hotel green activities, green hotel green communication, and green hotel green image. To validate the constructs, the different items included have been submitted to the factor analysis. The results of the factor analysis are presented below.

Specific requirements should be met before factor analysis can be successfully used. First, variables should be measured using interval scales. Using a 5-point Likert scale in the survey fulfilled this requirement. A number of reasons account for this use of Likert scales. Second, the sample size should be more than 100 since the researcher generally cannot use factor analysis with fewer than 50 observations (Hair Jr et al., 2016). This requirement has been also fulfilled because there were 316 customers in this research. The results of the factor analysis tests are briefly discussed below:

##### **4.5.2.1 Bartlett's Test of Sphericity for External Factors Related Variables**

The 37 items representing the ten variables have been submitted to the factor analysis. The results of Exploratory Factor Analysis (EFA) yielded a ten-factor solution that accounted for 83.993 % of the variance extracted. The result for Bartlett's Test of Sphericity (BTS) was large at 12437.268, and the associated significance value

was very small ( $p=0.00$ ). This shows that the data were appropriate for factor analysis (Snedecor & Cochran, 1989).

#### 4.5.2.2 Kaiser-Meyer-Olkin Measure of Sampling Adequacy for External Factors Related Variables

The Kaiser-Meyer-Olkin (KMO) for measurement of sample adequacy (MSA) gives the computed KMO as 0.906, which is adequate, and above acceptable level (Snedecor & Cochran, 1989) (see Table 25).

Table 25: KMO and Bartlett's Test for External Factors Related Variables

<b>Kaiser-Meyer-Olkin Measure of Sampling Adequacy.</b>		.906
<b>Bartlett's Test of Sphericity</b>	<b>Approx. Chi-Square</b>	12437.268
	<b>df</b>	741
	<b>Sig.</b>	.000

Since the above requirements were met, it was possible to infer that Factor Analysis was appropriate for this data set and that the procedures for factor analysis could be performed. The factor extraction results using Principal Component Analysis (PCA) are given in Table 26.

#### 4.5.2.3 Results of Principal Component Analysis Extraction Process for External Factors Related Variables

Factor extraction results using Principal Component Analysis (PCA) are given in Table 26. It should be noted that an eigenvalue of 1.0 is used as the benchmark in deciding the number of factors (Hair Jr et al., 2016).

Table 26: Principal Component Analysis Extraction Results for External Factors Related Variables

Total Variance Explained									
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
	1	12.472	31.981	31.981	12.472	31.981	31.981	4.828	12.379
2	6.852	17.570	49.550	6.852	17.570	49.550	4.194	10.753	23.132
3	2.812	7.209	56.759	2.812	7.209	56.759	3.373	8.650	31.782
4	2.083	5.340	62.100	2.083	5.340	62.100	3.288	8.430	40.212
5	1.966	5.040	67.140	1.966	5.040	67.140	3.233	8.291	48.503
6	1.770	4.538	71.677	1.770	4.538	71.677	3.088	7.917	56.420
7	1.441	3.694	75.372	1.441	3.694	75.372	2.829	7.255	63.675
8	1.209	3.099	78.471	1.209	3.099	78.471	2.729	6.997	70.671
9	1.114	2.855	81.326	1.114	2.855	81.326	2.723	6.981	77.652
10	1.040	2.667	83.993	1.040	2.667	83.993	2.473	6.341	83.993
Extraction Method: Principal Component Analysis.									

#### 4.5.2.4 Extraction Method: Principal Component Analysis for External Factors Related Variables

An initial (un-rotated) solution identified 37 items and ten factors with eigenvalues of more than one, accounting for 83.993 % of the variance (see Table 26). As Table 27 shows, all 37 items score communalities that range from 0.698 to 0.927. Therefore, it could be concluded that a degree of confidence in the factor solution has been achieved.



Table 27: Communalities for External Factors Related Variables

	<b>Initial</b>	<b>Extraction</b>
<b>J.1</b>	1.000	.903
<b>J.2</b>	1.000	.927
<b>J.3</b>	1.000	.927
<b>K.1</b>	1.000	.900
<b>K.2</b>	1.000	.903
<b>K.3</b>	1.000	.879
<b>L.1</b>	1.000	.698
<b>L.2</b>	1.000	.795
<b>L.3</b>	1.000	.820
<b>L.4</b>	1.000	.820
<b>M.1</b>	1.000	.850
<b>M.2</b>	1.000	.842
<b>M.3</b>	1.000	.720
<b>M.4</b>	1.000	.857
<b>N.1</b>	1.000	.779
<b>N.2</b>	1.000	.773
<b>N.3</b>	1.000	.807
<b>N.4</b>	1.000	.789
<b>N.5</b>	1.000	.805
<b>O.1</b>	1.000	.826
<b>O.2</b>	1.000	.874
<b>O.3</b>	1.000	.829
<b>P.1</b>	1.000	.704

Table 27: Communalities for External Factors Related Variables (Continued)

	Initial	Extraction
<b>P.3</b>	1.000	.745
<b>P.4</b>	1.000	.833
<b>P.5</b>	1.000	.828
<b>Q.1</b>	1.000	.844
<b>Q.2</b>	1.000	.818
<b>Q.3</b>	1.000	.885
<b>Q.4</b>	1.000	.785
<b>R.1</b>	1.000	.861
<b>R.2</b>	1.000	.891
<b>R.3</b>	1.000	.897
<b>R.4</b>	1.000	.837
<b>S.1</b>	1.000	.836
<b>S.2</b>	1.000	.919
<b>S.3</b>	1.000	.914
<b>S.4</b>	1.000	.914
<b>S.5</b>	1.000	.923
Extraction Method: Principal Component Analysis.		

#### 4.5.2.5 Factor Rotation and Factor Loading for External Factors Related Variables

On being satisfied with the ten chosen variables, a loading of all the items within the ten factors was examined. The Varimax technique for rotated component analysis was used with a cut-off point for interpretation of the factors at 0.50 or greater (Snedecor & Cochran, 1989). The results are summarized in Table 28 below:





Table 28: Rotated Component Matrix<sup>a</sup> for External Factors Related Variables  
(Continued)

	Component									
	1	2	3	4	5	6	7	8	9	10
<b>S.3</b>	.884									
<b>S.4</b>	.887									
<b>S.5</b>	.895									
Extraction Method: Principal Component Analysis.										
Rotation Method: Varimax with Kaiser Normalization.										
a. Rotation converged in 8 iterations.										

All items were loaded onto the designed factors for which they were allocated. Factor loadings were all higher than 0.60 so that each item loaded higher on its associated construct than on any other construct. As suggested by Hair Jr et al. (2016), a factor loading higher than 0.35 is considered statistically significant at an alpha level of 0.05. This is supported by the discriminant validity of the measurement.

#### **4.5.2.6 Factor Naming and Interpretation Process for External Factors Related Variables**

The interpretation of the ten-factor solution was accomplished by relating them to the theoretical concepts of marketing and tourism literature. The ten variables can be explained as follows:

Factor 1 consists of five items and fits very well with the ‘green hotel green image.’ This factor comprises the following items (1) The hotels I were visited are professional about the green practices, (2) The hotels I were visited are successful in implementing green practices, (3) The hotels I were visited have a good reputation for implementing green practices, (4) The hotels I were visited are trustworthy about the

green practices they implement and (5) The hotels I were visited are concerned for consumer about green practices. The values are closely grouped with the highest loading being ‘The hotels I were visited are concerned for consumer about green practices’ (.895) and the lowest loading “The hotels I were visited are professional about the green practices” (0.815).

Factor 2 consists of five items. This factor represents the customers’ opinions regarding ‘willingness to sacrifice for environment.’ It covers the following items (1) I am willing to give things up that I like doing if they harm the natural environment, (2) I am willing to take on responsibilities that will help conserve the natural environment, (3) I am willing to do things for the environment, even if I’m not thanked for my efforts, (4) Even when it is inconvenient to me, I am willing to do what I think is best for the environment and (5) I am willing to go out of my way to do what is best for the environment. The values are closely grouped with the highest loading being “I am willing to go out of my way to do what is best for the environment” (0.842) and the lowest loading “I am willing to give things up that I like doing if they harm the natural environment” (0.814).

Factor 3 consists of four items and fits very well with the ‘environmental awareness.’ This factor comprises the following items (1) The effects of pollution on public health are worse than we realize, (2) Over the next several decades, thousands of species will become extinct, (3) Claims that current levels of pollution are changing earth’s climate are exaggerated and (4) Environmental protection will provide a better world for me and my children. The values are closely grouped with the highest loading being ‘Environmental protection will provide a better world for me and my children’ (.862) and the lowest loading “Claims that current levels of pollution are changing earth’s climate are exaggerated” (0.794).

Factor 4 consists of four items and fits very well with the 'green hotel green activities.' This factor comprises the following items (1) The services provided by the hotels I were visited are eco-friendly, (2) The hotels I were visited use products which are certified with green label, (3) The hotels I were visited increase the use of eco-friendly services for consumers and (4) The hotels I were visited are involved in energy conservation. The values are closely grouped with the highest loading being 'The hotels I were visited use products which are certified with green label' (.813) and the lowest loading "The hotels I were visited are involved in energy conservation" (0.788).

Factor 5 consists of four items and fits very well with the 'green hotel green communication.' This factor comprises the following items (1) Advertisements (TV, online, printed, etc.) of the hotels I were visited reflect its green image, (2) The public relation activities of the hotels I were visited to promote itself as well as its services reflect its green image, (3) The sales promotions offered by the hotels I were visited reflect the green image and (4) The sponsorship activities of the hotels I were visited reflect the green image. The values are closely grouped with the highest loading being 'The public relation activities of the hotels I were visited to promote itself as well as its services reflect its green image' (.845) and the lowest loading "The sponsorship activities of the hotels I were visited reflect the green image" (0.740).

Factor 6 consists of four items and fits very well with the 'hotel corporate image.' This factor comprises the following items (1) In my opinion, the hotels I were visited are well managed, (2) In my opinion, the hotels I were visited are involved in various community activities, (3) In my opinion, the hotels I were visited respond to consumer needs in a better way and (4) In my opinion, the hotels I were visited always leave a good impression on me. The values are closely grouped with the highest loading being 'In my opinion, the hotels I were visited respond to consumer needs in

a better way' (.834) and the lowest loading "In my opinion, the hotels I were visited are well managed" (0.744).

Factor 7 consists of four items and fits very well with the 'environmental concerns.' This factor comprises the following items (1) The balance of nature is very gentle and can be easily upset, (2) Human beings are severely abusing the environment, (3) Humans must maintain the balance with nature to survive and (4) Human interferences with nature often produce disastrous consequences. The values are closely grouped with the highest loading being 'Human beings are severely abusing the environment' (.816) and the lowest loading "The balance of nature is very gentle and can be easily upset" (0.690).

Factor 8 consists of three items and fits very well with the 'willingness to pay more for green hotel.' This factor comprises the following items (1) It is acceptable to pay more for a hotel that engages in green practices, (2) I am willing to pay more for a green hotel, and (3) I am willing to spend extra in order to stay at an environmentally friendly hotel. The values are closely grouped with the highest loading being 'It is acceptable to pay more for a hotel that engages in green practices' (.872) and the lowest loading "I am willing to spend extra in order to stay at an environmentally friendly hotel" (0.854).

Factor 9 consists of three items and fits very well with the 'sense of obligation towards green hotels.' This factor comprises the following items (1) I feel morally obliged to book green hotel instead of conventional hotel when traveling, (2) I feel personally obliged to book in an environmentally sound way, such as by booking green hotel, and (3) I feel a moral obligation to take the environmental problems caused by hotels into account when making hotel-booking choices. The values are closely grouped with the highest loading being 'I feel morally obliged to book green hotel



instead of conventional hotel when traveling' (.869) and the lowest loading "I feel a moral obligation to take the environmental problems caused by hotels into account when making hotel-booking choices" (0.849).

Factor 10 consists of three items and fits very well with the 'awareness of hotels consequences.' This factor comprises the following items (1) The hotel industry causes pollution, climate change, and exhaustion of natural resources, (2) Hotels generate the environmental impacts on the neighboring areas and wider environment, and (3) Hotels cause environmental deteriorations (e.g., waste from rooms, restaurants, and other facilities, excessive use of energy/water). The values are closely grouped with the highest loading being 'Hotels cause environmental deteriorations (e.g., waste from rooms, restaurants, and other facilities, excessive use of energy/water)' (.854) and the lowest loading "The hotel industry causes pollution, climate change, and exhaustion of natural resources" (0.786).

#### **4.6 Chapter 4 Summary**

This chapter underlines the primary analysis of the collected data. This includes first, encoding, editing and entering the data into SPSS. This is followed by the reliability and validity tests, which cover all the study variables to find the extent to which the measurements are reliable and valid. Item-to-total correlation was computed for each construct. As shown in Table 29, all constructs have an acceptable reliability values ranged from 0.853 to 0.928, which was significantly higher than the acceptable level of 0.60 (Nunnally & Bernstein, 1978) and therefore, acceptable for further analysis.

Table 29 presents a summary of the reliability analysis of the main variables in this research. Then, construct validities were explained. The reliability and validity

analyses show that the measures are both reliable and valid. Lastly, the study examined the general descriptive analysis of the respondents' profile and their response distribution. In addition, some initial interpretations are also put forward as a start for the data analysis process.

In the next chapter, more statistical analysis will be utilized to explore the relationships between green behavior antecedents and consequences and examine the study model and hypotheses.

Table 29: Reliability Analysis of Main variables in the Study

<b>Basic Constructs</b>	<b>Total Number of Items</b>	<b>Cronbach Alpha</b>
<b>Frequency of Stay at Green Hotels</b>	3	0.918
<b>Intention to Revisit Green Hotel</b>	3	0.903
<b>Attitude Toward Green Hotel</b>	5	0.953
<b>Subjective Norm Toward Green Hotel</b>	3	0.960
<b>Perceived Behavioral Control Toward Green Hotel</b>	3	0.885
<b>Biospheric Values</b>	4	0.940
<b>Egoistic Values</b>	4	0.973
<b>Altruistic Values</b>	4	0.936
<b>Intention to Spread Word-of-Mouth about Green Hotel</b>	3	0.921
<b>Willingness to Pay More for Green Hotel</b>	3	0.975
<b>Sense of Obligation Toward Green Hotels</b>	3	0.940
<b>Environmental Concerns</b>	4	0.897
<b>Environmental Awareness</b>	4	0.918
<b>Willingness to Sacrifice for Environment</b>	5	0.926
<b>Awareness of Hotels Consequences</b>	3	0.902
<b>Hotel Corporate Image</b>	4	0.892
<b>Green Hotel Green Activities</b>	4	0.931
<b>Green Hotel Green Communication</b>	4	0.948
<b>Green Hotel Green Image</b>	5	0.971

## **Chapter 5: Model and Hypotheses Testing**

### **5.1 Overview**

Chapter 4 has filtered, cleaned and validated the data that was collected from the field and has presented an exploratory analysis of different aspects of green hotel revisit intention. The current chapter presents the next and the main step of the data analysis, namely, model and hypotheses testing. The present study used IBM SPSS 27.0 and IBM AMOS 28 for data analysis.

### **5.2 Measurement Models**

It is important to indicate that, as recommended by Anderson and Gerbing (1988), before testing the full latent model, an exploratory factor analysis (EFA) was conducted in chapter 4 using principal components analysis with Varimax rotation. For the Attitudes Related Factors, the results of Exploratory Factor Analysis (EFA) yielded a nine-factor solution that accounted for 86.997 % of the variance extracted (chapter 4). For the External Factors Related Variables, the results of Exploratory Factor Analysis (EFA) yielded a ten-factor solution that accounted for 83.993 % of the variance extracted (chapter 4). All items loaded highly on their intended constructs.

#### **5.2.1 Confirmatory Factor Analysis (CFA)**

Before examining the research model which considers all the constructs together, it is important to highlight, from a methodological point of view, that the two-step approach recommended by Hair, Risher, Sarstedt, and Ringle (2019) has been utilized in this study. The two-step approach provides unique advantages for separating the two phases into a measurement model and a structural model. The first stage

involves factor analysis with bootstrapping methodology for validation of the measurement model. Estimation of the structural model, the second part of the two-step approach, specifies the causal relationships among the hypothesized constructs.

#### **5.2.1.1 Confirmatory Factor Analysis for the External Factors**

Testing the measurement model intended to discover reflective indicator loadings, internal consistency reliability, convergent validity, and discriminant validity of latent variables (Hair et al., 2019). The results, shown in Table 30, support the proposed eleven-factor solution, comprising Intention to Spread Word-of-Mouth about Green Hotel (WOM), Hotel Corporate Image (HCI), Green Hotel Green Activities (GHGA), Green Hotel Green Communication (GHGC), Green Hotel Green Image (GHGI), Environmental Concerns (EC), Environmental Awareness (EA), Biospheric Values (BV), Egoistic Values (EV), Altruistic Values (AV) and Awareness of Hotels Consequences (AOHC).

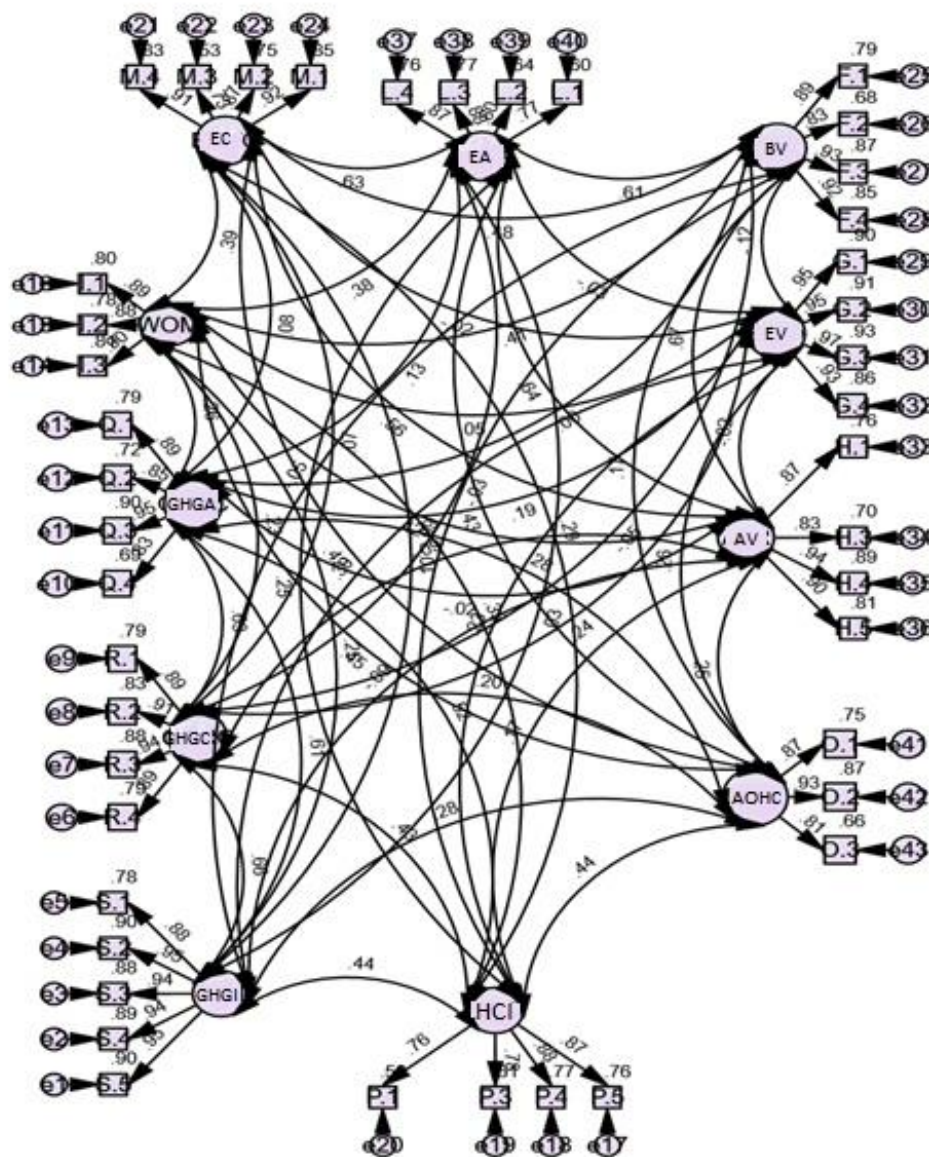


Figure 17: Antecedents of the External Factors

Testing the measurement model intended to discover reflective indicator loadings, internal consistency reliability, convergent validity, and discriminant validity of latent variables (Hair et al., 2019) of Figure 17 are shown in Table 30 and Table 31 which summarize descriptive statistics for the goodness of fit of the measurement model. First, reflective indicator loadings ranged from 0.500 to 0.943, which were all

statistically significant. Second, to test the internal consistency of items, a reliability test using Cronbach's  $\alpha$  coefficients produced values for the constructs ranging from 0.892 to 0.973, indicating an acceptable level of reliability ( $\alpha = 0.70$ ) as advised by (Nunnally & Bernstein, 1978). Composite reliabilities (CR) within the 0.896 to 0.972 range exceeded the recommended 0.70 threshold (Nunnally & Bernstein, 1978). Third, the average variance extracted (AVE) estimates within the range of 0.48 to 0.88 were all above the minimum acceptable value of 0.50 (Fornell & Larcker, 1981a).

Table 30: The fitness indices for the External Factors Antecedents

<b>Statistic</b>	<b>Index value Obtained</b>	<b>Suggested Acceptable Level</b>
<b>Chi-square significance</b>	0.00	> 0.01
<b>CMIN/DF</b>	1.618	<3
<b>GFI</b>	0.848	>0.90
<b>AGFI</b>	0.814	> 0.80
<b>TLI</b>	0.961	>0.95
<b>CFI</b>	0.967	>0.90
<b>RMSEA</b>	0.044	<0.10

The fitness indices are listed in Table 30. Although Chi-square significance =0.000 the other indices show that the model has a good fit and aligned with the suggested statistic proposed by (Bentler, 1990; Hu & Bentler, 1995; Jöreskog & Sörbom, 1982). Furthermore, although the GFI is lower than the cut-off point of 0.90, the other indices show also that the model has a good fit and aligned with the suggested statistic proposed by experts (Bentler, 1990; Hu & Bentler, 1995; Jöreskog & Sörbom, 1982) such as Adjusted goodness-of-fit indices AGFI=0.814 ( $\geq 0.80$ ), the Comparative

fit index (CFI) =0.967 ( $\geq 0.90$ ), the CMIN/DF=1.618 ( $< 3$ ), RMSEA =0.044 ( $< 0.10$ ) and TLI=0.961 ( $> 0.95$ ).

Both Cronbach's Alpha and the Composite Reliability Index can take any value between 0 and 1, with values between 0.7 and 0.9 considered as satisfactory (Hair Jr et al., 2016). Table 31 gives a summary of values for Cronbach's Alpha, the Composite Reliability Index and Average Variance extracted for all the model constructs. The values suggest that all the measurement constructs are both valid and reliable and therefore can be used for path analysis.

Table 31: External Factors Antecedents CFA

Construct	Scale	Factor Loading	Cronbach's Alpha	CR	AVE
<b>Green hotel green image (GHGI)</b>	S.5	.903	<b>0.971</b>	<b>0.972</b>	<b>0.875</b>
	S.4	.893			
	S.3	.880			
	S.2	.895			
	S.1	.803			
<b>Green hotel green communication (GHGC)</b>	R.4	.808	<b>0.948</b>	<b>0.945</b>	<b>0.812</b>
	R.3	.885			
	R.2	.797			
	R.1	.757			
<b>Green hotel green activities (GHGA)</b>	Q.4	.681	<b>0.931</b>	<b>0.932</b>	<b>0.774</b>
	Q.3	.908			
	Q.2	.714			
	Q.1	.792			

Table 31: External Factors Antecedents CFA (Continued)

<b>Construct</b>	<b>Scale</b>	<b>Factor Loading</b>	<b>Cronbach's Alpha</b>	<b>CR</b>	<b>AVE</b>
<b>Intention to spread word-of-mouth about green hotel (WOM)</b>	I.3	.819	<b>0.921</b>	<b>0.921</b>	<b>0.796</b>
	I.2	.774			
	I.1	.794			
<b>Hotel corporate image (HCI)</b>	P.5	.767	<b>0.892</b>	<b>0.896</b>	<b>0.683</b>
	P.4	.774			
	P.3	.610			
	P.1	.579			
<b>Environmental awareness (EA)</b>	M.4	.832	<b>0.918</b>	<b>0.897</b>	<b>0.685</b>
	M.3	.500			
	M.2	.734			
	M.1	.856			
<b>Biospheric values (BV)</b>	F.1	.781	<b>0.940</b>	<b>0.940</b>	<b>0.797</b>
	F.2	.694			
	F.3	.878			
	F.4	.834			
<b>Egoistic values (EV)</b>	G.1	.880	<b>0.973</b>	<b>0.971</b>	<b>0.894</b>
	G.2	.918			
	G.3	.943			
	G.4	.837			
<b>Altruistic values (AV)</b>	H.1	.760	<b>0.936</b>	<b>0.937</b>	<b>0.789</b>
	H.3	.697			
	H.4	.887			



Table 31: External Factors Antecedents CFA (Continued)

Construct	Scale	Factor Loading	Cronbach's Alpha	CR	AVE
	H.5	.812			
<b>Environmental concerns (EC)</b>	L.4	.759	<b>0.897</b>	<b>0.915</b>	<b>0.730</b>
	L.3	.767			
	L.2	.629			
	L.1	.587			
<b>Awareness of hotels consequences (AOHC)</b>	O.1	.760	<b>0.902</b>	<b>0.904</b>	<b>0.759</b>
	O.2	.867			
	O.3	.651			

### 5.2.1.2 Convergent and Discriminant Validity Analysis for the External Factors

Convergent validity describes the extent to which items of a specific variable converge or share a high proportion of variance (Hair Jr et al., 2016). Convergent validity can be evaluated by three criteria (Čater & Čater, 2010; Fornell & Larcker, 1981a; Hair Jr et al., 2016; Hooper, Coughlan, & Mullen, 2008; Liang & Wang, 2004). Firstly, factor loading for an item is at least 0.6 and significant. Secondly, construct reliability is a minimum of 0.60 (See Table 31). Finally, average variance extracted (AVE) for a construct is larger than 0.5.

On the other hand, discriminant validity is present when the variances extracted by the constructs (AVE) from each construct are greater than the correlations. As seen in Table 32, all latent constructs had the squared root of AVE higher than their inter-correlation estimates with other corresponding constructs (the factor scores as single item indicators were used to calculate the between-constructs

correlations); this implied that the constructs were empirically distinct (Fornell & Larcker, 1981a). For example, Environmental Concern (ENVC)' squared root of AVE is 0.885 and is greater than any squared correlation among the other constructs, i.e., 0.477, -0.028, 0.565 and 0.407 which means that Environmental Concern (ENVC) as a construct is empirically distinct.

Table 32: Discriminant Validity Results for the External Factors

	ENVA	GIM	CORC	GREC	WOM	CORI	ENVC	BIO	EGO	ALR	AOC
ENVA	<b>0.828</b>										
GIM	0.026	<b>0.935</b>									
CORC	-0.042	0.661	<b>0.901</b>								
GREC	0.121	0.607	0.629	<b>0.880</b>							
WOM	0.385	0.250	0.221	0.263	<b>0.892</b>						
CORI	0.249	0.448	0.438	0.530	0.350	<b>0.826</b>					
ENVC	0.633	0.092	0.051	0.076	0.384	0.276	<b>0.855</b>				
BIO	0.605	-0.037	-0.053	0.011	0.416	0.089	0.477	<b>0.893</b>			
EGO	-0.040	0.301	0.236	0.193	0.040	0.231	-0.028	-0.130	<b>0.946</b>		
ALR	0.649	-0.096	-0.098	-0.020	0.417	0.167	0.565	0.654	-0.026	<b>0.888</b>	
AOC	0.423	0.280	0.184	0.294	0.444	0.446	0.407	0.175	0.258	0.239	<b>0.871</b>

Note: Diagonal values (in bold) are squared roots of AVE; off-diagonal values are the estimates of inter-correlation between the latent constructs.

Confirmation of discriminant validity arose because all of the variances compared were greater than the square of the correlation coefficients for Fornell-Larcker criterion (Fornell & Larcker, 1981a). The results of Fornell-Larcker criterion appear in Table 32. Consequently, the measures for the proposed 11 constructs attained both convergent and discriminant validity as well as high reliability.

### **5.2.1.3 Confirmatory Factor Analysis for Green Behavior Results**

Similarly, confirmatory factor analysis (CFA) was conducted to verify the theorized construct of the observed variables of green hotels results. The results, shown in Table 33, support the proposed eight-factor solution, comprising intention to revisit green hotel (ITR), willingness to pay more for green hotel (WTP), willingness to sacrifice for environment (WTS), attitude toward green hotels (ATGH), subjective norm toward green hotels (SC), perceived behavioral control toward green hotels (PBC), frequency of stay at green hotels (FPB), and sense of obligation towards green hotels (SOO).

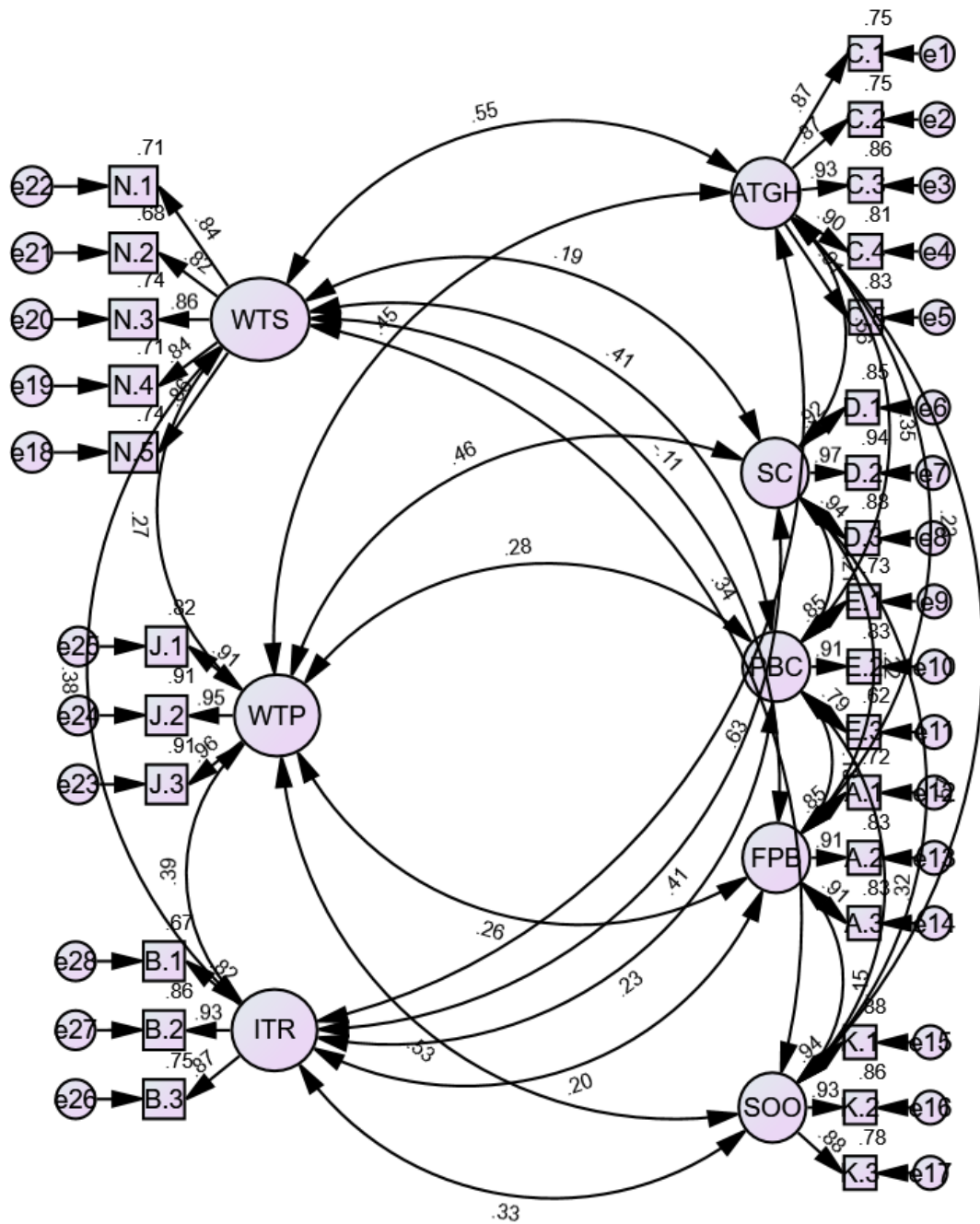


Figure 18: Green Behavior Results

As was the case with the components of the antecedents of the green hotel behavior, it was decided that items with factor loading and R2 less than 0.5 will be excluded. All the factor loadings on the main and sub-constructs are high. All the factor loadings and R2 are reasonably high. The results of the measurement model which are

the indicators of the latent variable (Bian, 2011) of Figure 18 are shown in Table 32 and Table 33. All the factor loadings are sufficiently high and the high values of Cronbach's Alpha, Composite Reliability (CR) and Average Variance Extracted (AVE) also reflect high internal consistency and reliability of the main construct and all the sub-constructs.

Table 33: The fitness indices for Green Behavior Results

<b>Statistic</b>	<b>Index value Obtained</b>	<b>Suggested Acceptable Level</b>
<b>Chi-square significance</b>	0.000	> 0.05
<b>CMIN/DF</b>	2.126	<3
<b>GFI</b>	0.858	> 0.90
<b>AGFI</b>	0.821	> 0.80
<b>TLI</b>	0.951	>0.95
<b>CFI</b>	0.958	>0.90
<b>RMSEA</b>	0.060	<0.10

The fitness indices are listed in Table 33. Although Chi-square significance =0.000 the other indices show that the model has a good fit and aligned with the suggested statistic proposed by (Bentler, 1990; Hu & Bentler, 1995; Jöreskog & Sörbom, 1982). Furthermore, although the GFI is lower than the cut-off point of 0.90, the other indices show also that the model has a good fit and aligned with the suggested statistic as proposed by experts (Bentler, 1990; Hu & Bentler, 1995; Jöreskog & Sörbom, 1982) such as Adjusted goodness-of-fit indices AGFI=0.821 ( $\geq 0.80$ ), the Comparative fit index (CFI) =0.958 ( $\geq 0.90$ ), the CMIN/DF=2.126 ( $< 3$ ), RMSEA =0.060 ( $< 0.10$ ) and TLI=0.951 ( $> 0.95$ ).

Both Cronbach's Alpha and the Composite Reliability Index can take any value between 0 and 1, with values between 0.7 and 0.9 considered as satisfactory (Hair Jr et al., 2016). Table 34 gives a summary of values for Cronbach's Alpha, the Composite Reliability Index and Average Variance Extracted for all the model constructs. The values suggest that all the measurement constructs are both valid and reliable and therefore can be used for path analysis.

Table 34: Green Behavior Results Antecedents CFA

<b>Construct</b>	<b>Scale</b>	<b>Factor Loading</b>	<b>Cronbach's Alpha</b>	<b>CR</b>	<b>AVE</b>
<b>Attitude toward green hotels (ATGH)</b>	C.1	.750	<b>0.953</b>	<b>0.953</b>	<b>0.801</b>
	C.2	.750			
	C.3	.863			
	C.4	.812			
	C.5	.830			
<b>Subjective norm towards green hotels (SC)</b>	D.1	.846	<b>0.960</b>	<b>0.960</b>	<b>0.889</b>
	D.2	.941			
	D.3	.880			
<b>Perceived behavioral control toward green hotels (PBC)</b>	E.1	.729	<b>0.885</b>	<b>0.960</b>	<b>0.889</b>
	E.2	.830			
	E.3	.623			
<b>Frequency of stay at green hotels (FPB)</b>	A.1	.716	<b>0.918</b>	<b>0.918</b>	<b>0.789</b>
	A.2	.824			
	A.3	.828			

Table 34: Green Behavior Results Antecedents CFA (Continued)

<b>Construct</b>	<b>Scale</b>	<b>Factor Loading</b>	<b>Cronbach's Alpha</b>	<b>CR</b>	<b>AVE</b>
<b>Sense of obligation toward green hotels (SOO)</b>	K.1	.882	<b>0.940</b>	<b>0.940</b>	<b>0.840</b>
	K.2	.857			
	K.3	.781			
<b>Willingness to sacrifice for environment (WTS)</b>	N.5	.738	<b>0.926</b>	<b>0.926</b>	<b>0.716</b>
	N.4	.709			
	N.3	.740			
	N.2	.681			
	N.1	.712			
<b>Willingness to pay more for green hotels (WTP)</b>	J.3	.912	<b>0.975</b>	<b>0.957</b>	<b>0.880</b>
	J.2	.908			
	J.1	.821			
<b>Intention to revisit green hotels (ITR)</b>	B.3	.752	<b>0.903</b>	<b>0.904</b>	<b>0.759</b>
	B.2	.857			
	B.1	.669			

#### 5.2.1.4 Convergent and Discriminant Validity Analysis for Green Behavior Results

Convergent validity describes the extent to which items of a specific variable converge or share a high proportion of variance (Hair Jr et al., 2016). Convergent validity can be evaluated by three criteria (Čater & Čater, 2010; Fornell & Larcker, 1981a; Hair Jr et al., 2016; Hooper et al., 2008; Liang & Wang, 2004). Firstly, factor loading for an item is at least 0.6 and significant. Secondly, construct reliability is a

minimum of 0.60 (See Table 34). Finally, average variance extracted (AVE) for a construct is larger than 0.5.

On the other hand, discriminant validity is present when the variances extracted by the constructs (AVE) from each construct are greater than the correlations. As seen in Table 35, all latent constructs had the squared root of AVE higher than their inter-correlation estimates with other corresponding constructs (the factor scores as single item indicators were used to calculate the between-constructs correlations); this implied that the constructs were empirically distinct (Fornell & Larcker, 1981a). For example, perceived behavioral control (PBC) squared root of AVE is 0.888 is greater than any squared correlation among the other constructs, i.e., -0.126, 0.321, 0.414 and 0.234 which means that perceived behavioral control (PBC) as a construct is empirically distinct.

Table 35: Discriminant Validity Results for Green Behavior Results

	<b>WTP</b>	<b>ATGH</b>	<b>SC</b>	<b>PBC</b>	<b>FPB</b>	<b>SOO</b>	<b>WTS</b>	<b>ITR</b>
<b>WTP</b>	<b>0.938</b>							
<b>ATGH</b>	0.454	<b>0.895</b>						
<b>SC</b>	0.457	0.560	<b>0.943</b>					
<b>PBC</b>	0.278	0.354	0.214	<b>0.853</b>				
<b>FPB</b>	0.258	0.228	0.220	-0.126	<b>0.888</b>			
<b>SOO</b>	0.526	0.479	0.568	0.321	0.154	<b>0.917</b>		
<b>WTS</b>	0.267	0.550	0.193	0.414	-0.110	0.345	<b>0.846</b>	
<b>ITR</b>	0.390	0.631	0.411	0.234	0.197	0.334	0.381	<b>0.871</b>

Note: Diagonal values (in bold) are squared roots of AVE; off-diagonal values are the estimates of inter-correlation between the latent constructs.



Confirmation of discriminant validity arose because all the square roots of the estimates of AVE of each construct was higher than the correlation between any pair of latent constructs, thereby suggesting acceptable discriminant validity in this study (Fornell & Larcker, 1981a). The results of Fornell-Larcker criterion appear in Table 35. Consequently, the measures for the proposed 8 constructs attained both convergent and discriminant validity as well as high reliability.

### **5.3 Hypotheses Testing**

Examining collinearity demonstrated a lack of bias in the coefficients before accessing the structural model. The VIF values were close to 3 or lower, confirming collinearity was not a concern. The data were analyzed using path analysis, which is a multivariate analytical methodology for empirically examining sets of relationships in the form of linear causal models (Duncan, 1966). The aim of path analysis is to examine the direct and indirect effects of each hypothesis on the basis of knowledge and theoretical constructs (Pedhazur & Kerlinger, 1982). A path diagram symbolizes the suggested antecedents and consequents among the variables in the model. Arrows are used to symbolize the hypothesized relationships and the direction of the influence in the model. When specifying a path model, a distinction is drawn between exogenous variables and endogenous variables. Exogenous variables' influence is outside the model and endogenous variables have influence within the model. In this case, the antecedents of green image, behaviors and value are treated as the exogenous variables, and green image, behaviors and value consequences are the endogenous variables.

Table 32 depicts the proposed structural model that reflects the suggested relationships between the research variables. The value of the path coefficient

associated with each path represents the strength of each linear influence. The structural equation-modelling package, AMOS, has been utilized to examine the hypotheses developed in the model. The researcher used the factor scores as single item indicators and performed a path analysis, applying the maximum likelihood estimates (MLE) method, following the guidelines suggested by Jöreskog and Sörbom (1982).

### **5.3.1 Structural-Model Testing**

Finally, given that the aim of this research was to examine the hypothesized causal relationships among the variables of the model (see Figure 19), the structural equation-modeling package, AMOS 28 has been used (see Table 36). The factor means were employed as single item indicators to perform path analysis, applying the maximum likelihood estimates (MLE) method, following the guidelines suggested by Jöreskog and Sörbom (1982). A more detailed analysis of the results and measures for model fit is reported in Table 36.

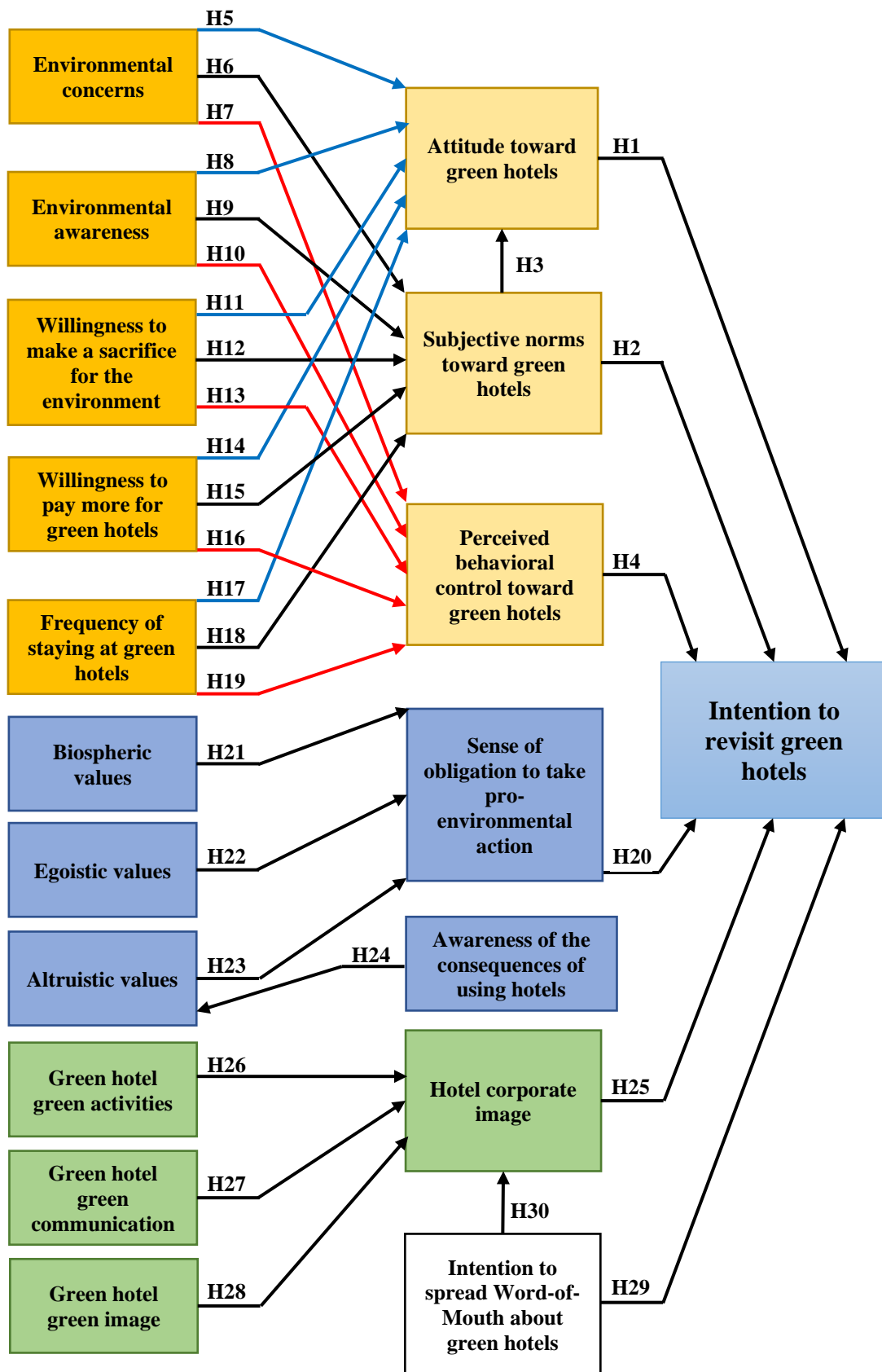


Figure 19: Research model

To apply the MLE method for estimating the model, the constructs must satisfy the criterion of multivariate normality (Bagozzi & Yi, 1988). Therefore, for all the constructs, tests of normality, i.e. skewness, kurtosis, (Bagozzi & Yi, 1988), were conducted. Tests in chapter 4 indicated no departure from normality as most of the results are close to one (i.e. +/- 1) (Bagozzi & Yi, 1988). Thus, once normality was confirmed for all the constructs, it was decided to proceed with the use of the maximum likelihood estimation (MLE) method to estimate the model. The reliability of the constructs was assessed by item-to-total correlations and Cronbach's alpha reliability coefficient (see Chapter 4) (Nunnally, 1994).

Furthermore, as discussed in Chapter 4, to evaluate the presence of multivariate outliers, the analysis of Mahalanobis distance has been carried out using AMOS to identify any multivariate outliers within the data. Mahalanobis' distance is a metric for estimating how far each case is from the center of all the variables' distributions (i.e. the centroid in multivariate space) (Mahalanobis, 1927). The Mahalanobis distance test has identified 30 cases that have an outlier.

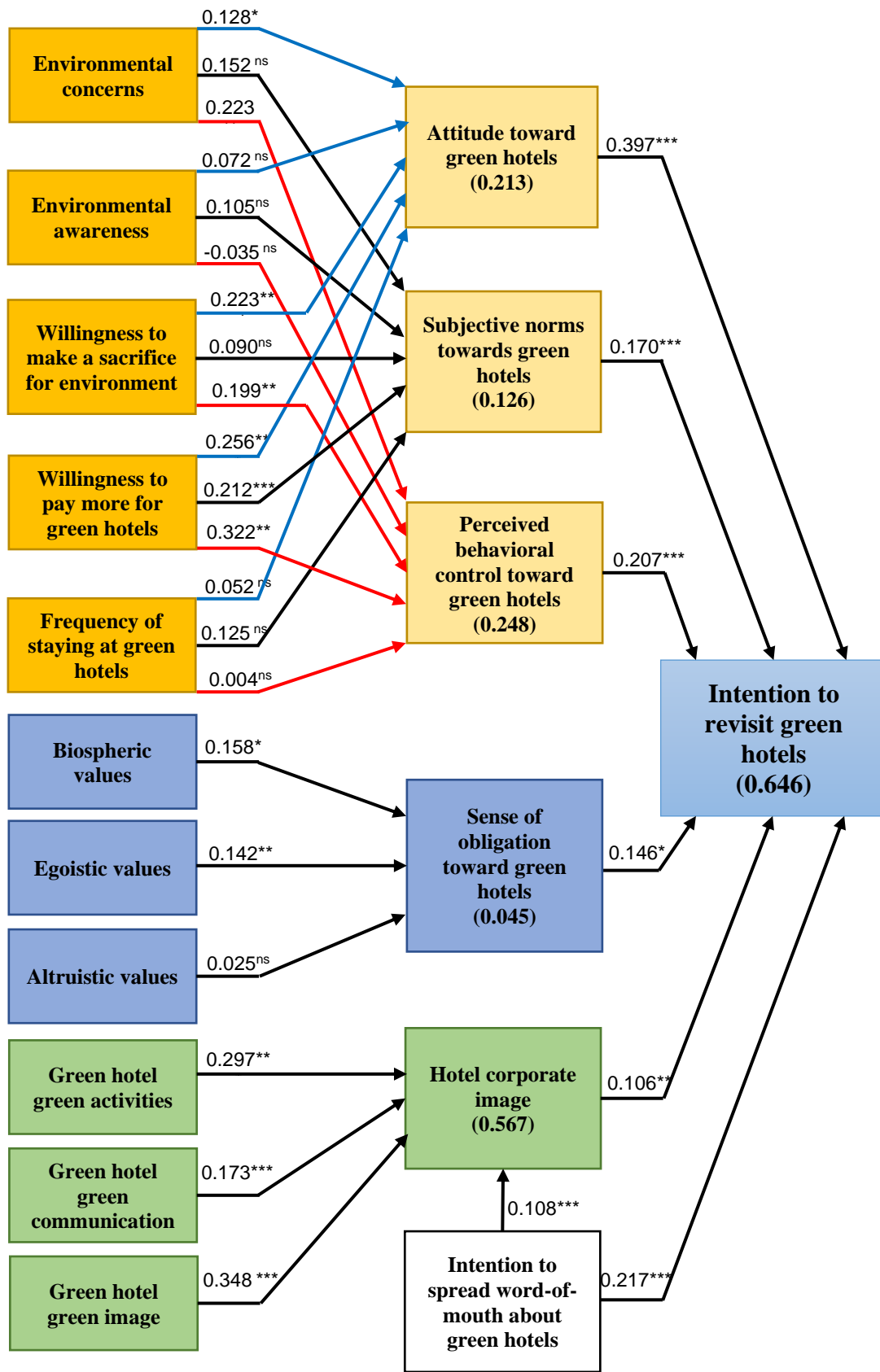


Figure 20: Tested research model

The current study model explains 64.6 % for the Intention to Revisit Green Hotel, which indicates that it has a stronger prediction capacity. The results of testing hypotheses from H1 to H30 using MLE-SEM approach are shown in Figure 20.

The structural model was examined by conducting structural equation modeling. The results presented an acceptable fit:  $X^2/df = 3.034$ , GFI = 0.958, AGFI= 0.831, CFI = 0.966, RMR = 0.041 and RMSEA = 0.080 (Hu & Bentler, 1995). Since these indices confirm that the overall fit of the model to the data was good, it was computed that the structural model was an appropriate basis for hypothesis testing.

H3 and H24 have been deleted from the model as including them lead to make the model being unaccepted when it was examined by conducting structural equation modeling.

Table 36: Hypotheses Testing

Predictor variables	Criterion Variables	Hypothesized relationship	Standardized coefficient	R <sup>2a</sup>
Green hotel green activities	Hotel corporate image	<b>H26</b>	0.297***	<b>0.567</b>
Green hotel green communication	Hotel corporate image	<b>H27</b>	0.173***	
Green Hotel Green Image	Hotel corporate image	<b>H28</b>	0.348 ***	
Intention to spread word-of-mouth about green hotels	Hotel corporate image	<b>H30</b>	0.108***	
Environmental concerns	Attitude toward green hotels	<b>H5</b>	0.128*	<b>0.213</b>
Environmental awareness	Attitude toward green hotels	<b>H8</b>	0.072 <sup>ns</sup>	
Willingness to sacrifice for environment	Attitude toward green hotels	<b>H11</b>	0.223***	
Willingness to pay more for green hotels	Attitude toward green hotels	<b>H14</b>	0.256***	
Frequency of staying at green hotels	Attitude toward green hotels	<b>H17</b>	0.052 <sup>ns</sup>	

Table 36: Hypotheses Testing (Continued)

Predictor variables	Criterion Variables	Hypothesized relationship	Standardized coefficient	R <sup>2a</sup>
Environmental concerns	Subjective norms toward green hotels	<b>H6</b>	0.152 <sup>ns</sup>	<b>0.126</b>
Environmental awareness	Subjective norms toward green hotels	<b>H9</b>	0.105 <sup>ns</sup>	
Willingness to sacrifice for environment	Subjective norms toward green hotels	<b>H12</b>	0.090 <sup>ns</sup>	
Willingness to pay more for green hotels	Subjective norms toward green hotels	<b>H15</b>	0.212***	
Frequency of staying at green hotels	Subjective norms toward green hotels	<b>H18</b>	0.125 <sup>ns</sup>	
Environmental concerns	Perceived behavioral control toward green hotels	<b>H7</b>	0.223**	<b>0.248</b>
Environmental awareness	Perceived behavioral control toward green hotels	<b>H10</b>	-0.035 <sup>ns</sup>	
Willingness to sacrifice for environment	Perceived behavioral control toward green hotels	<b>H13</b>	0.199***	
Willingness to pay more for green hotels	Perceived behavioral control toward green hotels	<b>H16</b>	0.322***	
Frequency of staying at green hotels	Perceived behavioral control toward green hotels	<b>H19</b>	0.004 <sup>ns</sup>	
Biospheric values	Sense of obligation toward green hotels	<b>H21</b>	0.158**	<b>0.045</b>
Egoistic values	Sense of obligation toward green hotels	<b>H22</b>	0.142**	
Altruistic values	Sense of obligation toward green hotels	<b>H23</b>	0.025 <sup>ns</sup>	
Attitude toward green hotels	Intention to revisit green hotels	<b>H1</b>	0.397***	<b>0.646</b>
Subjective norms toward green hotels	Intention to revisit green hotels	<b>H2</b>	0.170***	
Perceived behavioral control toward green hotels	Intention to revisit green hotels	<b>H4</b>	0.207***	

Table 36: Hypotheses Testing (Continued)

Predictor variables	Criterion Variables	Hypothesized relationship	Standardized coefficient	R <sup>2a</sup>
Sense of obligation toward green hotels	Intention to revisit green hotels	<b>H20</b>	0.146***	
Hotel corporate image	Intention to revisit green hotels	<b>H25</b>	0.106***	
Intention to spread word-of-mouth about green hotels	Intention to revisit green hotels	<b>H29</b>	0.217***	
<b>Statistic</b>			<b>Suggested</b>	<b>Obtained</b>
<b>Chi-Square Significance</b>			≥0.01	0.000
<b>Goodness-of-fit index (GFI)</b>			≥0.90	0.958
<b>Adjusted Goodness-of-fit index (AGFI)</b>			≥0.80	0.831
<b>Comparative fit index (CFI)</b>			≥0.90	0.966
<b>Normed Fit Index (NFI)</b>			≥0.90	0.953
<b>Root Mean Square Residual (RMR)</b>			≤0.05	0.041
<b>Root mean square residual (RMSEA)</b>			≤0.10	0.080
***P<0.01, **P<0.05, ns is not significant				

To test the 28 hypotheses, a structural model was used. The results give support to most of the hypotheses. Table 36 shows the estimated standardized parameters for the causal paths.

Firstly, the entire suggested factors have been found to positively affect the hotel corporate image, namely: intention to spread word-of-mouth about green hotels (H30) (Standardized Estimate=0.108, P< 0.01), green hotel green activities (H26) (Standardized Estimate=0.297, P< 0.01), green hotel green communication (H27) (Standardized Estimate=0.173, P< 0.01) and green hotel green image (H28) (Standardized Estimate=0.348, P< 0.01). The results from the path analysis show that among all independent variables, the green hotel green image ( $\beta = 0.348$ ) was the key driver behind the formation of the Hotel Corporate Image followed by the green hotel



green activities then the green hotel green communication and finally the intention to spread word-of-mouth about green hotel. Therefore, Hypotheses H26, H27, H28 and H30 were accepted.

Secondly, the hypotheses of the environmental awareness (H8) (Standardized Estimate=0.072,  $P > 0.10$ ) and the frequency of staying at green hotels (H17) (Standardized Estimate=0.052,  $P > 0.10$ ) have an insignificant positive impact and therefore have been rejected. The suggested factors positively affects the attitude toward green hotels, namely the Environmental Concerns (H5) (Standardized Estimate=0.128,  $P < 0.05$ ), willingness to pay more for green hotel (H14) (Standardized Estimate=0.256,  $P < 0.01$ ) and willingness to sacrifice for environment (H11) (Standardized Estimate=0.223,  $P < 0.01$ ). As can be seen from the results, willingness to pay more for green hotels has the greatest impact on the attitude toward green hotels followed by the willingness to sacrifice for environment then the environmental concerns. Therefore, Hypotheses H5, H11 and H14 were accepted while H8 and H17 were rejected.

Thirdly, the hypotheses of the environmental concerns (H6) (Standardized Estimate=0.152,  $P > 0.10$ ), the environmental awareness (H9) (Standardized Estimate=0.105,  $P > 0.10$ ), the willingness to sacrifice for environment (H12) (Standardized Estimate=0.090,  $P > 0.10$ ) and frequency of staying at green hotels (H18) (Standardized Estimate=0.125,  $P > 0.10$ ) have an insignificant positive impact on the subjective norms toward green hotels and therefore have been rejected. The suggested factor positively affects the subjective norms toward green hotels, namely the willingness to pay more for green hotels (H15) (Standardized Estimate=0.212,  $P < 0.01$ ). As can be seen from the results, willingness to pay more for green hotels has the

only impact on the subjective norms toward green hotels. Therefore, Hypothesis H15 was accepted while H6, H9, H12 and H18 were rejected.

Fourthly, the hypotheses of the environmental awareness (H10) (Standardized Estimate=-0.035,  $P > 0.10$ ) and the frequency of staying at green hotels (H19) (Standardized Estimate=0.004,  $P > 0.10$ ) have an insignificant positive impact on the perceived behavioral control toward green hotels and therefore have been rejected. The suggested factors positively affect the perceived behavioral control toward green hotels, namely the Environmental Concern (H7) (Standardized Estimate=0.223,  $P < 0.05$ ), the willingness to pay more for green hotels (H16) (Standardized Estimate=0.322,  $P < 0.01$ ) and the willingness to sacrifice for environment (H13) (Standardized Estimate=0.199,  $P < 0.01$ ). As can be seen from the results, willingness to pay more for green hotels has the greatest impact on the perceived behavioral control toward green hotels followed by the environmental concerns toward green hotels then the willingness to sacrifice for environment. Therefore, Hypotheses H7, H13 and H16 were accepted while H10 and H19 were rejected.

Fifthly, the hypothesis of the altruistic values (H23) (Standardized Estimate=-0.025,  $P > 0.10$ ) has an insignificant positive impact on the sense of obligation toward green hotels and therefore has been rejected. The suggested factors positively affect the sense of obligation toward green hotels, namely the biospheric values (H21) (Standardized Estimate=0.158,  $P < 0.05$ ) and the egoistic values (H22) (Standardized Estimate=0.142,  $P < 0.05$ ). As can be seen from the results, the biospheric values has the greatest impact on the sense of obligation toward green hotels followed by the egoistic values. Therefore, Hypotheses H21 and H22 were accepted while H23 was rejected.

Finally, all the suggested factors have been found to positively affect the intention to revisit green hotels, namely the attitude toward green hotels (H1) (Standardized Estimate=0.397,  $P < 0.01$ ), the subjective norm toward green hotels (H2) (Standardized Estimate=0.170,  $P < 0.01$ ), the perceived behavioral control toward green hotels (H3) (Standardized Estimate=0.207,  $P < 0.01$ ), the sense of obligation toward green hotels (H20) (Standardized Estimate=0.146,  $P < 0.01$ ), the hotel corporate image (H25) (Standardized Estimate=0.106,  $P < 0.01$ ), the hotel corporate image (H25) (Standardized Estimate=0.106,  $P < 0.01$ ) and the intention to spread word-of-mouth about green hotels (H29) (Standardized Estimate=0.217,  $P < 0.01$ ).

The results from the path analysis show that among all independent variables, the attitude toward green hotels was the key driver behind the consumers' intention to revisit green hotels followed by the intention to spread word-of-mouth about green hotels, then the perceived behavioral control toward green hotels, then the subjective norm toward green hotels, then the sense of obligation toward green hotels, and finally the hotel corporate image. Therefore, Hypotheses H1, H2, H4, H20, H25 and H29 were accepted.

#### **5.4 Chapter 5 Summary**

This chapter provides the statistical analysis results that enabled the researcher to come to conclusions that extend beyond the simple data. This chapter discusses the processes and findings of the confirmatory factor analysis, path analysis, and hypotheses testing, which were used for analytic objectives.

The results of the first confirmatory factor analysis support the proposed eleven-factor solution, comprising intention to spread word-of-mouth about green hotels, hotel corporate image, green hotel green activities, green hotel green

communication, green hotel green image, environmental concerns, environmental awareness, biospheric values, egoistic values, altruistic values and awareness of hotels consequences.

Furthermore, the results of the second confirmatory factor analysis support the proposed eight-factor solution, comprising intention to revisit green hotels, willingness to pay more for green hotels, willingness to sacrifice for environment, attitude toward green hotels, subjective norm toward green hotels, perceived behavioral control toward green hotels, frequency of staying at green hotels and sense of obligation toward green hotels.

After the results of confirmatory factor analysis, the suggested hypotheses have been tested. The results summary of hypotheses testing is presented in Table 37.

Table 37: Results of Hypotheses Testing

Hypotheses	Result
<b>Hypothesis 1 - (H1):</b> There is a positive relationship between consumers' attitude toward green hotels and their intention to revisit green hotels.	Accepted
<b>Hypothesis 2 - (H2):</b> There is a positive relationship between consumers' subjective norms toward green hotels and their intention to revisit green hotels.	Accepted
<b>Hypothesis 3 - (H3):</b> There is a positive relationship between consumers' subjective norms toward green hotels and their attitude toward green hotels.	Deleted
<b>Hypothesis 4 - (H4):</b> There is a positive relationship between consumers' perceived behavioral control toward green hotels and their intention to revisit green hotels.	Accepted

Table 37: Results of Hypotheses Testing (Continued)

Hypotheses	Result
<b>Hypothesis 5 (H5):</b> There is a positive relationship between consumers' environmental concerns and their attitude toward green hotels.	Accepted
<b>Hypothesis 6 (H6):</b> There is a positive relationship between consumers' environmental concerns and their subjective norms toward green hotels.	Rejected
<b>Hypothesis 7 (H7):</b> There is a positive relationship between consumers' environmental concerns and their perceived behavioral control toward green hotels.	Accepted
<b>Hypothesis 8 (H8):</b> There is a positive relationship between consumers' environmental awareness and their attitude toward green hotels.	Rejected
<b>Hypothesis 9 (H9):</b> There is a positive relationship between consumers' environmental awareness and their subjective norms toward green hotels.	Rejected
<b>Hypothesis 10 (H10):</b> There is a positive relationship between consumers' environmental awareness and their perceived behavioral control toward green hotels.	Rejected
<b>Hypothesis 11 (H11):</b> There is a positive relationship between consumers' willingness to make sacrifices for the environment and their attitude toward green hotels.	Accepted
<b>Hypothesis 12 (H12):</b> There is a positive relationship between consumers' willingness to make sacrifices for the environment and their subjective norms toward green hotels.	Rejected
<b>Hypothesis 13 (H13):</b> There is a positive relationship between consumers' willingness to make sacrifices for the environment and their perceived behavioral control toward green hotels.	Accepted
<b>Hypothesis 14 (H14):</b> There is a positive relationship between consumers' willingness to pay more for green hotels and their attitude toward green hotels.	Accepted

Table 37: Results of Hypotheses Testing (Continued)

Hypotheses	Result
<b>Hypothesis 15 (H15):</b> There is a positive relationship between consumers' willingness to pay more for green hotels and their subjective norms toward green hotels.	Accepted
<b>Hypothesis 16 (H16):</b> There is a positive relationship between consumers' willingness to pay more for green hotels and their perceived behavioral control toward green hotels.	Accepted
<b>Hypothesis 17 (H17):</b> There is a positive relationship between consumers' frequency of staying at green hotels and their attitude toward green hotels.	Rejected
<b>Hypothesis 18 (H18):</b> There is a positive relationship between consumers' frequency of staying at green hotels and their subjective norms toward green hotels.	Rejected
<b>Hypothesis 19 (H19):</b> There is a positive relationship between consumers' frequency of staying at green hotels and their perceived behavioral control toward green hotels.	Rejected
<b>Hypothesis 20 (H20):</b> There is a positive relationship between consumers' sense of obligation toward green hotels and their green hotel revisit intention.	Accepted
<b>Hypothesis 21 (H21):</b> There is a positive relationship between consumers' biospheric values and their sense of obligation toward green hotels.	Accepted
<b>Hypothesis 22 (H22):</b> There is a negative relationship between consumers' egoistic values and their sense of obligation toward green hotels.	Accepted
<b>Hypothesis 23 (H23):</b> There is a positive relationship between consumers' altruistic value and their sense of obligation toward green hotels.	Rejected
<b>Hypothesis 24 (H24):</b> There is a positive relationship between consumers' awareness of the consequences of using hotels and their altruistic values.	Deleted

Table 37: Results of Hypotheses Testing (Continued)

Hypotheses	Result
<b>Hypothesis 25 (H25):</b> There is a positive relationship between hotel corporate image and consumers' intention to revisit green hotels.	Accepted
<b>Hypothesis 26 (H26):</b> There is a positive relationship between green hotel green activities and hotel corporate image.	Accepted
<b>Hypothesis 27 (H27):</b> There is a positive relationship between green hotel green communication and hotel corporate image.	Accepted
<b>Hypothesis 28 (H28):</b> There is a positive relationship between green hotel green image and hotel corporate image.	Accepted
<b>Hypothesis 29 (H29):</b> There is a positive relationship between consumers' intention to spread word-of-mouth about green hotels and hotel corporate image.	Accepted
<b>Hypothesis 30 (H30):</b> There is a positive relationship between consumers' intention to spread word-of-mouth about green hotels and their intention to revisit green hotels.	Accepted

Source: Analysis of Survey Data

## **Chapter 6: Discussion, Theoretical and Practical Implications, Assumptions and Limitations, Recommendations for Future Research, and Conclusion**

### **6.1 Overview**

In Chapters 2 and 3, the theoretical framework was developed to define the key terms (Webster & Watson, 2002), and a suitable research methodology was identified to enable the researcher to plan the research. In Chapters 4 and 5, the model and the hypotheses were tested. In this chapter, the results will be discussed and the theoretical and practical implications presented. Then, the assumptions and limitations of this study will be considered, and recommendations for future research will be discussed. Finally, conclusions will be drawn.

### **6.2 Discussion**

#### **6.2.1 Overview**

The discussion will provide a brief summary of the study and relate the findings to previous research. It will highlight newly identified additions to existing theories and lay the groundwork for new theories. Accordingly, this section will consider each of the relevant theories in turn.

#### **6.2.2 Theory of Planned Behavior (TPB) and Its Extension**

##### **6.2.2.1 Overview**

In this study, TPB has been used to investigate consumer revisit intention from the self-perspective. TPB can predict volitional and nonvolitional controls (Ajzen, 1985) and is still the most popular predictor of consumer purchase behavioral intentions (Aman et al., 2012; Chen & Tung, 2014; Han et al., 2010; Paul et al., 2016;



Rezai et al., 2012). Here, the researcher have gone beyond existing models, expanding TPB by incorporating environmental concern, environmental awareness, willingness to pay more for green hotels, willingness to make a sacrifice for the environment, and frequency of staying at green hotels. These five constructs have been used to predict attitude toward green hotels, subjective norms toward green hotels, and perceived behavioral control toward green hotels, which are in turn predictors of intention to revisit green hotels. Accordingly, this section will discuss the outcomes of the hypothesis testing related to TPB and its extensions (H1 to H19).

The relationships in H8 to H19 have not been measured or tested in any previous studies (that is, the relationships between environmental awareness and both subjective norms and perceived behavioral control toward green hotels; between willingness to pay more to stay in green hotels and both subjective norms and perceived behavioral control toward green hotels; between willingness to make a sacrifice for the environment and TPB constructs; and between frequency of past behavior and TPB constructs). The procedure used in this study has generated insights that help to explain intention to revisit, thereby opening the door for future studies to explore these relationships further. In addition, it enriches the hospitality and consumer behavior literature by improving our understanding of individuals' pro-environmental decision-making processes and increasing predictive power in relation to their intentions. This study is also the first to explain the eco-friendly decision-making process of lodging customers from the self-perspective using the TPB framework supplemented with meaningful constructs that influence self-perspective intention.

#### **6.2.2.2 Attitude toward Green Hotels**

Consumer attitude significantly predicts green product purchase intention (Chaudhary & Bisai, 2018; Chin et al., 2018; Yadav & Pathak, 2016). Customer

attitude toward green hotels is an important factor in green hotel revisit intention (Baker et al., 2014; Chou et al., 2012). An individual with a high positive attitude toward a certain behavior will have a high positive intention to perform that behavior (Chen & Tung, 2014; Fishbein & Ajzen, 1980; Han et al., 2010). In line with these findings, this study confirms that there is a positive relationship between consumer attitude toward green hotels and intention to revisit green hotels; thus, H1 is accepted.

This finding is similar to the outcomes of the studies conducted by Chen and Peng (2012); Han et al. (2011); Han and Kim (2010); Kang et al. (2012); Lee et al. (2010), who found that the green attitude of hotel customers positively influences their intention to revisit green hotels. Likewise, the result is in line with the work of Chang et al. (2014); Chen and Tung (2014); Han (2015); Han et al. (2010); Han et al. (2015); Han and Kim (2010); Han and Yoon (2015); Muniandy et al. (2019); Nimri (2018); Nimri et al. (2020); Olya et al. (2019); Suki and Suki (2015); Teng et al. (2015); Verma and Chandra (2018a); Verma et al. (2019); Yadav et al. (2019). All of these researchers concluded that there is a positive influence of consumer attitude on green hotel revisit intention. Furthermore, the positive relationship between consumer attitude toward green hotels and intention to revisit green hotels corroborates the results reported by Wang et al. (2020); Wang et al. (2019), who found that consumer green purchase attitude positively and significantly influences green purchase intention. Similarly, Han et al. (2010) and Paul et al. (2016) found that the effect of consumer attitude to green hotels was the strongest predictor of green hotel revisit intention.

The exception to this consensus is the finding of Jiang and Gao (2019) that customer attitude toward green hotels has no positive influence on revisit intention. The disagreement may be due to the lack of a filter question in their survey, since the majority of their respondents reported that they had never stayed at a green hotel.

### 6.2.2.3 Subjective Norms toward Green Hotels

Previous results have disclosed a complex and unclear relationship between subjective norms, attitude, and intention in green marketing (Chen, 2013; Chen & Tung, 2014; Chen & Chai, 2010; Coleman et al., 2011; Han et al., 2010; Han & Yoon, 2015; Paul et al., 2016; Rezai et al., 2012; Sinnappan & Rahman, 2011). Many researchers have found a positive significant relationship between subjective norms and green purchase intention (Chen & Tung, 2014; Han & Yoon, 2015; Lee, 2008; Ryu & Jang, 2006; Sinnappan & Rahman, 2011). Chen and Peng (2012), Han and Kim (2010), Sinnappan and Rahman (2011), Tarkiainen and Sundqvist (2005) and Vazifehdoust et al. (2013) found that consumer subjective norms toward green products have a positive impact on intention to purchase green products. Chin et al. (2018), Ha and Janda (2012), Kim and Han (2010) and Yadav and Pathak (2016) used TPB to study the influence of consumer subjective norms toward green products on intention to purchase green products, and found a positive impact. The findings of the present study confirm that there is a positive relationship between consumer subjective norms toward green hotels and intention to revisit green hotels; thus, H2 is accepted.

This finding is similar to the outcomes of the studies conducted by Chang et al. (2014); Chen and Peng (2012); Chen and Tung (2014); Gustin and Weaver (1996); Han (2015); Han et al. (2010); Han et al. (2015); Han and Kim (2010); Han and Yoon (2015); Muniandy et al. (2019); Olya et al. (2019); Teng et al. (2015); Verma and Chandra (2018a), who, using TPB, found a positive influence of subjective norms toward green hotels on green hotel revisit intention. In addition, Chen and Peng (2012) examined the factors that contribute to Chinese tourists' choice of green hotels when visiting Europe, and found that the influence of subjective norms was greater than that of attitude or perceived behavioral control.

In contrast to these findings, Choi et al. (2015), who used VBN theory, found that subjective norms were not successful in explaining consumer decision-making processes regarding intention to revisit green hotels. Likewise, Chaudhary and Bisai (2018) used VBN to understand green buying behavior and found that consumer subjective norms toward green products had no significant relationship with intention to purchase green products. Other studies have found that subjective norms have an insignificant relationship with green purchase intention (Chan & Tsang, 2011; Leonidou et al., 2010; Paul et al., 2016; Sinnappan & Rahman, 2011; Tarkiainen & Sundqvist, 2005). Adopting a TPB approach, Wang et al. (2019) investigated consumer green purchase intention toward green hotel selection and concluded that subjective norms have no significant influence on green purchase intention. Suki and Suki (2015), using TPB to study green hotel revisit intention, found that subjective norms had no positive influence on customer intention to visit a green hotel. Again using TPB, Yadav et al. (2019) concluded that the influence of subjective norms on behavioral intentions toward green hotels was positive but insignificant, while Nimri (2018) observed only a small influence.

According to Chang (1998), Chen and Chai (2010), Han et al. (2010), Shepherd and O'keefe (1984), Tarkiainen and Sundqvist (2005) and Vallerand et al. (1992), subjective norms have an insignificant relationship with behavioral intention; this relationship is significant only when attitude has a mediating role. However, Han et al. (2010) and Ryu and Jang (2006) found a positive relationship between consumers' subjective norms and attitudes (Tsai, 2010; Wu & Lin, 2007). Moreover, when Chang (1998), Han et al. (2010) and Ryu and Jang (2006) modified the TPB model by adding the path from subjective norms to attitude, the addition significantly improved the fit of the model. This proposed relationship can be interpreted as an

individual's perceived social pressure from salient referents to engage in a certain behavior inducing a favorable/unfavorable evaluation of a behavior.

According to some researchers, there is a significant path from subjective norms to attitudes in consumer decision-making in general (Chang, 1998; Chen & Chai, 2010; Han et al., 2010; Shepherd & O'keefe, 1984; Tarkiainen & Sundqvist, 2005; Vallerand et al., 1992). Han and Kim (2010) used TPB to study green hotel revisit intention, and found a positive influence of subjective norms on attitude; Wang et al. (2019) used TPB to investigate consumer green purchase intention toward green hotel selection, and found a positive relationship between subjective norms and green purchase attitude toward green hotel selection. In the same connection, Han et al. (2010) observed a positive influence of subjective norms on visit intention and subjective norms through attitude, while Teng et al. (2015) found a significant relationship between subjective norms and attitudes toward patronage of green hotels. In their TPB-based study, Muniandy et al. (2019) also found a positive relationship between subjective norms and attitudes in visitors who chose to visit a green hotel.

However, in the present study, H3 was deleted, as the fit in the structural equation modeling was unacceptable. Accordingly, it is not possible to conclude from these results whether there is a positive relationship between consumers' subjective norms toward green hotels and their attitude toward green hotels.

#### **6.2.2.4 Perceived Behavioral Control toward Green Hotels**

Inclusion of perceived behavioral control in TPB significantly improves its predictive ability in relation to individual behaviors (Ajzen & Driver, 1991; Han et al., 2010; Oh & Hsu, 2001). The findings of the present study confirm that there is a positive relationship between consumers' perceived behavioral control toward green hotels and their intention to revisit green hotels; thus, H4 is accepted. This finding is

in line with the outcomes of numerous previous studies (Chang et al., 2014; Chen & Peng, 2012; Chen & Tung, 2014; Han, 2015; Han et al., 2010; Han & Kim, 2010; Lien et al., 2012; Muniandy et al., 2019; Nimri, 2018; Nimri et al., 2020; Olya et al., 2019; Suki & Suki, 2015; Teng et al., 2015; Verma & Chandra, 2018a; L. Wang et al., 2019; Yadav et al., 2019). All these studies used TPB to clarify the relationship between perceived behavioral control toward green hotels and intention to revisit green hotels, and they agree that there is a positive influence of perceived behavioral control toward green hotels on green hotel revisit intention.

#### **6.2.2.5 Environmental Concerns**

Environmental concerns are a significant predictor of green behavior (Chen & Hung, 2016; Choi et al., 2009; Do PacO & Raposo, 2009; Jain & Kaur, 2004; Lee et al., 2010; Martinez Garcia de Leaniz et al., 2018; Ong & Musa, 2012; Paul et al., 2016; Verma & Chandra, 2016). The findings of the present study confirm that there is a positive relationship between consumer environmental concerns and attitude toward green hotels; thus, H5 is accepted. This is in line with the conclusion of Verma et al. (2019) that environmental concerns significantly and positively influence consumer attitude toward green hotels. It also agrees with the work of Chen and Tung (2014), who used an extended TPB to show that environmental concerns positively influence attitude toward visiting green hotels, and the work of Jiang and Gao (2019), who found that environmental concerns positively influence both consumer attitude toward green hotels and intention to revisit green hotels.

The present findings indicate that the positive relationship between consumers' environmental concerns and their subjective norms toward green hotels is insignificant; thus, H6 is rejected. This is in contrast to some previous research, including the work of Chin et al. (2018), who found that environmental concerns

significantly predict consumers' subjective norms toward buying green products. Similarly, Chaudhary and Bisai (2018), who used VBN to understand green buying behavior, found that environmental concerns relate positively to subjective norms, and Chen and Tung (2014), using an extended TPB, showed that environmental concerns positively influence subjective norms toward visiting green hotels.

The present findings confirm that there is a positive relationship between consumers' environmental concerns and their perceived behavioral control toward green hotels; thus, H7 is accepted. This outcome is in agreement with previous studies, including that of Chen and Tung (2014), where there was a clear positive influence of environmental concerns on perceived behavioral control toward visiting green hotels; Chaudhary and Bisai (2018), who used VBN to understand green buying behavior, and found that environmental concerns relate positively to perceived behavioral control; and Chin et al. (2018), who concluded that environmental concerns significantly predict consumer perceived behavioral control toward the purchase of green products.

#### **6.2.2.6 Environmental Awareness**

Previous research has established that consumers' level of awareness about the environment is the core driver of their green decisions and behaviors (Akehurst et al., 2012; Chan et al., 2014; Clark et al., 2003; Corraliza & Berenguer, 2000; Han, Hwang, et al., 2017a; Hedlund, 2011; Lind et al., 2015; Mobley et al., 2010; Onwezen et al., 2013; Schultz et al., 2005; Stern, 2000; Van der Werff et al., 2013a). Environmental awareness is an important precondition for green consumer behavior (Chiu et al., 2014b; Han et al., 2010; Kim & Han, 2010; Roberts, 1996; Ryan & Spash, 2008) and an important determinant of green intention (Akehurst et al., 2012; Chan et al., 2014; Do Paco & Raposo, 2009; Roberts, 1996). It influences customers' attitudes toward products (Murray & Schlacter, 1990), leading them to take actions to protect the

environment (Han et al., 2011; Han et al., 2010; Kalafatis et al., 1999; Kim & Han, 2010; Roberts, 1996; Vazifehdoust et al., 2013). Yadav and Pathak (2016) used TPB to study the intention of young consumers toward buying green products and found that environmental knowledge among these young consumers significantly influences their intention to purchase green products.

Accordingly, to improve the predictive power of TPB, scholars have added environmental awareness to the model (Do PacO & Raposo, 2009; Han et al., 2010; Kalafatis et al., 1999; Laroche et al., 2001; Roberts, 1996; Straughan & Roberts, 1999; Vlosky et al., 1999a). However, the findings of the present study find only an insignificant positive relationship between consumer environmental awareness and attitude toward green hotel; thus, H8 is rejected. Similarly, the relationship between consumers' environmental awareness and their subjective norms toward green hotels is positive but insignificant; thus, H9 is rejected. Moreover, the positive relationship between consumer's environmental awareness and their perceived behavioral control toward green hotels is insignificant; thus, H10 is rejected.

#### **6.2.2.7 Willingness to Make a Sacrifice for the Environment**

Willingness to make a sacrifice is a significant driver of environmentally responsible intentions (Han & Hyun, 2017; Iwata, 2002; Rahman & Reynolds, 2016; Thøgersen, 2000). According to Davis et al. (2011), willingness to make a sacrifice for the environment involves acting against one's immediate self-interest, expending effort, or incurring costs in order to promote the welfare of the environment. The findings of the present study confirm that there is a positive relationship between consumer willingness to make a sacrifice for the environment and attitude toward green hotels; thus, H11 is accepted. The positive relationship between consumer willingness to make a sacrifice for the environment and subjective norms toward green



hotels is, however, insignificant; thus, H12 is rejected. Nevertheless, there is a positive relationship between consumer willingness to make a sacrifice for the environment and perceived behavioral control toward green hotels; thus, H13 is accepted.

#### **6.2.2.8 Willingness to Pay More for Green Hotels**

The availability of financial resources and the economic circumstances of consumers play an important role in their intention to adopt green behaviors (Ertz et al., 2016). Accordingly, price is the most important barrier to green consumption (Gadenne et al., 2011; Gleim et al., 2013; Nasir & Karakaya, 2014), and it is important for green hotels to understand consumers' willingness to pay more (Gleim et al., 2013). Consumers do in some cases show willingness to pay more for green products and services (DiPietro et al., 2013; Han et al., 2009; Kang et al., 2012; Kelly et al., 2007; Kim et al., 2015; Laroche et al., 2001; Lee et al., 2010; Masau & Prideaux, 2003; Shen, 2012; Sigala, 2014; Susskind, 2014). Among young consumers, Tan et al. (2019) investigated the relationship between low price-sensitivity and green product buying decisions; they found that low price-sensitivity is positively associated with decisions to buy green products. According to Biswas and Roy (2015), Ling (2013), Prakash and Pathak (2017), Roberts (1996), Sheehan and Atkinson (2012), Stern (2000), Suki and Suki (2015), Vandermerwe and Oliff (1990) and Yadav and Pathak (2017), consumers are willing to pay a premium for green products, a finding that has been confirmed for green food products specifically (Tung et al., 2012).

In the hospitality context, according to Slye (2009), approximately 30% of consumers are willing to pay more for environmentally responsible hotels. Likewise, Chang et al. (2015), Han et al. (2011), Han and Hyun (2018a), Kang et al. (2012) and W. G. Kim et al. (2017) found that consumers are willing to pay more to stay at green hotels. Consumers have been found to be ready to pay more to stay at hotels that are

certified green (Fairweather et al., 2005; Laroche et al., 2001). Bohdanowicz (2003) established that as many as 25% of hotel guests are willing to do this, and Kuminoff et al. (2010) quantified the premium for a standard room in a green hotel at \$9–\$26. Normally, however, consumers believe that green hotels are expensive compared to conventional hotels (Han et al., 2009; Jauhari & Manaktola, 2007; Kasim, 2004b). Despite their concerns for the environment, many are not willing to pay more to stay in a green hotel (Jauhari & Manaktola, 2007; Kasim, 2004a; Millar & Baloglu, 2011). Thus, it is important to understand consumer behaviors in order to influence their purchasing choices in relation to green hotels (Han et al., 2010).

Consumers' green attitudes have a positive relationship with their willingness to pay more for green products (Han et al., 2009; Laroche et al., 2001; Ojea & Loureiro, 2007), including green hotels (Han et al., 2011; Kang et al., 2012). A majority of US consumers are willing to pay more for green hotels (Guadalupe-Fajardo, 2002), as are tourists in Taiwan (Lee & Gan, 2007). Eco-friendly consumers are notably willing to pay more for green hotels (Kang et al., 2012; Khan, 2003). Conversely, however, there are consumers who prefer to pay less for conventional hotels rather than to pay more for green hotels (Kasim, 2004a), and a majority of consumers are not willing to pay more to stay at green hotels (Millar & Baloglu, 2011). The findings of the present study confirm that there is a positive relationship between consumers' willingness to pay more for green hotels and their subjective norms toward green hotels; thus, H14 is accepted. There is also a positive relationship between consumers' willingness to pay more for green hotels and their subjective norms toward green hotels; thus, H15 is accepted. Moreover, there is a positive relationship between consumers' willingness to pay more for green hotels and their perceived behavioral control toward green hotels; thus, H16 is accepted.

### 6.2.2.9 Frequency of Staying at Green Hotels

Frequency of past behavior is an important determinant of intention and behavior (Lee & Back, 2008; Oh & Hsu, 2001; Ouellette & Wood, 1998; Perugini & Bagozzi, 2001; Ryu & Jang, 2006), and numerous researchers have emphasized the need to consider this predictor in TPB (Lee & Back, 2007; Oh & Hsu, 2001; Ouellette & Wood, 1998; Perugini & Bagozzi, 2001). Lee and Back (2008) extended the TPB by including past behavior, which they found to be an important determinant of intention. Perugini and Bagozzi (2001) developed a model of purposive behavior that is a modified TPB model, and they found that frequency of past behavior, among other added constructs, plays a significant role in decision-making processes. Other researchers who have increased the predictive power of TPB by including frequency of past behavior are Ajzen (1991), Lee and Back (2008); Oh and Hsu (2001); Perugini and Bagozzi (2001); Ryu and Jang (2006). Frequency of past behavior is thus established as a significant predictor in purchase decision-making processes (Ajzen, 1991; Bansal & Taylor, 1999; Han et al., 2009; Han & Ryu, 2007; Lam & Hsu, 2006; Lee & Back, 2008; Lee & Choi, 2009; Oh & Hsu, 2001; Perugini & Bagozzi, 2001; Taylor & Baker, 1994).

Perceived behavioral control encompasses previous experiences and expected hindrances (Paul et al., 2016), such as the availability of green resources that consumers are willing to spend during their stay in a green hotel. Han et al. (2010) found that frequency of past behavior has a significant influence on consumer intention to visit green hotels. However, the present study finds that the positive relationship between frequency of staying at green hotels and attitude toward green hotels is insignificant; thus, H17 is rejected. The positive relationship between frequency of staying at green hotels and subjective norms toward green hotels is also insignificant;

thus, H18 is rejected. Moreover, the positive relationship between frequency of staying at green hotels and behavioral control toward green hotels is not significant; thus, H19 is rejected.

### **6.2.3 Value Belief Norm (VBN) Theory**

#### **6.2.3.1 Overview**

The present study has used VBN theory to investigate consumer revisit intention from the prosocial perspective. VBN theory is useful for examining green behavior because it includes several essential elements for environmentalism (Stern, 2000), and it addresses consumers' prosocial motives effectively (De Groot & Steg, 2009, 2010; Han, 2015; Kim & Han, 2010). To date, researchers have tested both full and partial VBN models (Kaiser et al., 2005; Nordlund & Garvill, 2003; Raymond et al., 2011; Stern, 2000; Stern et al., 1999; Van Riper & Kyle, 2014; Wynveen et al., 2012; Wynveen & Sutton, 2017). Here, a partial model of VBN was adopted that consists of intention to revisit green hotels, a sense of obligation toward green hotels, biospheric values, egoistic values, altruistic values, and awareness of the consequences of using hotels. This section will discuss the outcomes of the hypothesis testing related to VBN (H20 to H24).

#### **6.2.3.2 Sense of Obligation toward Green Hotels**

A sense of obligation to take pro-environmental action is a key construct that can explain consumers' environmentally responsible decisions (Bertoldo & Castro, 2016; Fornara et al., 2016; Han & Hwang, 2017; Han, Hwang, et al., 2017a; Onwezen et al., 2013; Schwartz, 1992; Stern, 2000). According to Jansson (2011), a sense of obligation to take pro-environmental action is positively related to green purchase intention. There is a positive relationship between this sense of obligation and the

intention to purchase green products (Jansson, 2011; Prakash & Pathak, 2017). According to Han and Hwang (2017) and Van Riper and Kyle (2014), there are direct relationships between the sense of obligation to take a pro-environmental action and green decisions, and the sense of obligation has been found to be a strong predictor of green behaviors (Klößner, 2013; Thøgersen & Grunert-Beckmann, 1997; Zhang et al., 2014).

The present study confirms that there is a positive relationship between consumers' sense of obligation toward green hotels and their intention to revisit green hotels; thus, H20 is accepted. This finding is in line with the work of Bamberg and Schmidt (2003), Harland et al. (2007) and Steg et al. (2005) who observed a positive relationship between consumers' sense of obligation to be green and their green behaviors, and with studies that have found an influence of consumers' sense of obligation toward green hotels on their decision to stay in green hotels (Choi et al., 2015; Han et al., 2015; Jakovcevic & Steg, 2013; Van Riper & Kyle, 2014).

#### **6.2.3.3 Biospheric Values**

Landon et al. (2018) used VBN to study tourists' green behavioral intention and found that biospheric values influence behavioral intention mediated by constructs of the VBN model. The present study confirms that there is a positive relationship between consumers' biospheric values and their sense of obligation toward green hotels; thus, H21 is accepted. This finding agrees with the results of Choi et al. (2015), who used VBN theory to investigate consumers' intentions to visit green hotels. They found that biospheric values have a positive effect on awareness of consequences; awareness of consequences has a positive effect on ascription of responsibility; ascription of responsibility has a positive effect on personal norms; and personal norms have a positive effect on intention to visit green hotels. Similarly, Roos and Hahn

(2019) and Stern et al. (1999) found that consumer's biospheric values have a positive influence on their sense of obligation to take pro-environmental action.

#### **6.2.3.4 Egoistic Values**

From the pro-environmental perspective, consumers who have egoistic values are motivated to protect the environment by their perception of the consequences to their own health and well-being (De Groot & Steg, 2008). Therefore, egoistic values can affect environmental behavior positively (Stern, Dietz, et al., 1995; Stern et al., 1993). Generally, however, egoistic values have a negative relationship with environmental protection. Consumers who have highly egoistic values tend to avoid the cost of recycling if it is not economic. The present study confirms that there is a negative relationship between consumers' egoistic values and their sense of obligation toward green hotels; thus, H22 is accepted. This finding is in line with the findings of Roos and Hahn (2019) and Stern et al. (1999), who concluded that consumers' egoistic values have a negative influence on their sense of obligation to take pro-environmental action.

#### **6.2.3.5 Altruistic Values**

This study finds that the positive relationship between consumer altruistic values and their sense of obligation toward green hotels is insignificant; thus, H23 is rejected. This finding runs contrary to previous research. Altruistic values are important for environmental behavior, as a public good is at stake (Heberlein, 1972; Stern, 2000), and researchers have found a positive relationship between altruism and environmentally responsible consumer behavior (Corbett, 2005; Heberlein, 1972; Nguyen et al., 2017; Stern, 2000; Straughan & Roberts, 1999; Teng et al., 2015). Altruism has a positive relationship with green consumer behavior (Straughan &

Roberts, 1999), including a significant and positive impact on customer intention to visit green hotels (Teng et al., 2015). According to Ayuso (2006), Corbett (2005) and Rivera and De Leon (2005), there is positive relationship between altruism and the intention to be environmentally responsible. Likewise, according to Roos and Hahn (2019) and Stern et al. (1999), consumers' altruistic values have a positive influence on their sense of obligation to take pro-environmental action.

#### **6.2.3.6 Awareness of the Consequences of Using Hotels**

In the present study, H24 was deleted, as the fit in the structural equation modeling was unacceptable. Accordingly, it is not possible to conclude from these results whether there is a positive relationship between consumer awareness of the consequences of using hotels and their altruistic value.

### **6.2.4 Corporate Identity Mix Theory (CIMT)**

#### **6.2.4.1 Overview**

In this study, CIMT has been used to investigate consumer revisit intention from the hotel perspective. Through B2C marketing, green hotels aim to promote themselves as green in order to encourage consumers to revisit them. Accordingly, this section discusses the outcomes of the hypothesis testing related to CIMT (H25 to H28).

#### **6.2.4.2 Hotel Corporate Image**

Tourism and hospitality research recognizes the power of corporate image (Lee et al., 2010). Overall image has a significance influence on customer decision-making processes (Han et al., 2009; Lin et al., 2007; Martínez, 2015; Prendergast & Man, 2002a; Prendergast & Man, 2002b; Ryu et al., 2008; Ryu et al., 2012), which is a critical driving force in intention (Brunner et al., 2008; Lee et al., 2010; Prendergast & Man, 2002a; Prendergast & Man, 2002b). For hotels, a positive overall image increases

customer willingness to revisit (Ryu et al., 2008). Many researchers have suggested that there is a positive relationship between corporate image and behavioral intention (David et al., 2005; Kang & Yang, 2010; Keh & Xie, 2009; Ko et al., 2013; Lee et al., 2010; Miles & Covin, 2000).

The present study confirms that there is a positive relationship between hotel corporate image and consumer intention to revisit green hotels; thus, H25 is accepted. This finding is similar to the outcomes of the studies conducted by Flavián et al. (2005), Herbig and Milewicz (1995), Kang and Yang (2010), Ko et al. (2013) and Lee et al. (2010), all of whom found that corporate image has a significant positive relationship with purchase intention. This relationship has been validated in the lodging sector (Han et al., 2010; Han & Kim, 2010; Lee et al., 2010), and Han et al. (2009) confirmed that corporate image has a positive influence on green hotel revisit intention. Lita et al. (2014) and Yadav et al. (2016b) also found that corporate image positively influences consumers' intention to revisit green hotels.

#### **6.2.4.3 Green Hotel Green Activities**

Green practices through CSR have a positive influence on purchasing behavior (Creyer, 1997; Forte & Lamont, 1998; Mason, 2000; Simon, 1995) and a strong influence on consumer ascription of corporate image from green/eco-friendly activities (Berens et al., 2005; Ellen et al., 2006). This study confirms that there is a positive relationship between green hotel green activities and green hotel corporate image; thus, H26 is accepted. This finding is similar to the results of Yadav et al. (2016b), who studied consumer intention to revisit green hotels and found that green/eco-friendly activities positively influence the corporate image of a firm. Likewise, Han et al. (2015) found that green activity has a positive influence on green hotel revisit intention.



#### **6.2.4.4 Green Hotel Green Communication**

Advertising is an effective tool for communicating corporate identity (Alden et al., 1999; Keller, 2009). Green communication through green advertisements is a means of influencing consumer purchase behavior toward green products (Ansar, 2013; Chekima et al., 2015; Rahbar & Wahid, 2011). According to Javalgi et al. (1994), communication is the best tool for a firm seeking to create and maintain its corporate image. In the context of tourism, there is a positive influence of corporate communication on the corporate image through implementation of green practices (Yadav et al., 2016b). The present study confirms that there is a positive relationship between green hotel green communication and green hotel corporate image; thus, H27 is accepted. This finding is similar to the outcomes of the study conducted by Tan et al. (2019) to investigate the relationship between green advertising and green product buying decisions among young consumers. They found that consumer perception of green advertising is positively associated with decisions to buy green products. Moreover, corporate image is known to be positively influenced by the corporate communication of green practices (Burchell & Cook, 2006; Morsing & Schultz, 2006; Yadav et al., 2016b).

#### **6.2.4.5 Green Hotel Green Image**

Green image is an important determinant of corporate image (Mayer et al., 2012; Wu et al., 2016), and green firm green image has an influence on firm corporate image (Mayer et al., 2012). Green hotel green image is also thought to have a positive influence on consumer intention to revisit green hotels (Han et al., 2009; Lee et al., 2010). The present study confirms that there is a positive relationship between a green hotel's green image and its corporate image; thus, H28 is accepted. This finding is similar to the outcome of the study conducted by Wang, Wang, Xue, et al. (2018), who

found that the green image of green hotels strongly influences consumer green satisfaction and green trust, which are positively related to the intention to recommend green hotels to individuals around them. Similarly, in the context of young consumers, Tan et al. (2019) investigated the relationship between eco-labeling and green product buying decisions, and found that eco-labeling of product is positively associated with decisions to buy green products. In this connection, Corrigan (1996), Lynes and Dredge (2006) and Yadav et al. (2016b) observed a positive relationship between the green image of an organization and its corporate image.

## **6.2.5 Consumer-to-Consumer (C2C) Marketing Perspective**

### **6.2.5.1 Overview**

In this study, intention to spread WOM was used to investigate the intention to revisit green hotels from the C2C marketing perspective. Therefore, this section will discuss the outcomes of the hypothesis testing related to intention to spread WOM (H29 and H30).

### **6.2.5.2 Intention to Spread Word-of-Mouth about Green Hotels**

Many researchers have investigated the influence of WOM on consumer purchase intentions (Baber et al., 2016; C.-W. Chen et al., 2014; Erkan & Evans, 2016; Mortazavi et al., 2014; Sharifpour et al., 2016; Wu & Wang, 2011; Yu & Natalia, 2013). Positive WOM is a powerful marketing tool, as it influences purchase decisions (Lee & Blum, 2015; Lee et al., 2016; Parsa & Cobanoglu, 2011). The present study confirms that there is a positive relationship between consumer intention to spread WOM about green hotels and hotel corporate image; thus, H29 is accepted. This finding is similar to the outcome of the studies by Lee et al. (2010) and Suki (2013), who found a positive relationship between a green hotel's image and consumers'

intention to spread positive WOM about the hotel. Lee et al. (2010) also found that hotel corporate image has a strong link to intention to spread positive WOM.

The present study confirms that there is a positive relationship between consumer intention to spread WOM about green hotels and intention to revisit green hotels; thus, H30 is accepted. This finding is in line with the results obtained by Han et al. (2009); Prendergast and Man (2002b); Ryu et al. (2008), who found that WOM has a positive influence on revisit intention.

### **6.3 Theoretical and Practical Implications**

In Abu Dhabi, green consumerism is at the emerging stage, and few green hotels are currently available. The present study therefore has theoretical and practical implications for the future of this sector.

#### **6.3.1 Theoretical Implications**

The model that consists of environmental concerns, willingness to make a sacrifice for the environment, willingness to pay more for green hotels, frequency of staying at green hotels and attitude toward green hotels explains 21.3% of attitude toward green hotels. Willingness to pay more for green hotels has the greatest impact on attitude toward green hotels, followed by willingness to make a sacrifice for the environment, and then environmental concerns. The model that consists of willingness to pay more for green hotels and subjective norms toward green hotels explains 12.6% of subjective norms toward green hotels. Willingness to pay more for green hotels is the only factor with an impact on subjective norms toward green hotels. The model that consists of environmental concerns, willingness to make a sacrifice for the environment, willingness to pay more for green hotels, and perceived behavioral control toward green hotels explains 24.8% of perceived behavioral control toward

green hotels. Willingness to pay more for green hotels has the greatest impact on perceived behavioral control toward green hotels, followed by environmental concerns, and then willingness to make a sacrifice for the environment. Environmental awareness and frequency of staying at green hotels have a positive but insignificant influence on the TPB constructs.

Accordingly, in this study, only three constructs have an influence on the TPB constructs, namely, environmental concerns, willingness to make a sacrifice for the environment, and willingness to pay more for green hotels. Of these, willingness to pay more for green hotels has the greatest impact on the TPB constructs. Attitude toward green hotels was the key driver behind consumer intention to revisit green hotels ( $\beta = 0.397$ ), followed by perceived behavioral control toward green hotels, and then subjective norms toward green hotels.

The model that consists of biospheric values, egoistic values, and a sense of obligation toward green hotels explains 4.5% of sense of obligation toward green hotels. Biospheric values have the greatest impact on the sense of obligation toward green hotels, followed by egoistic values. Altruistic values have a positive but insignificant influence on the sense of obligation toward green hotels.

The model that consists of green hotel green activities, green hotel green communication, green hotel green image, intention to spread WOM about green hotels, and hotel corporate image explains 56.7% of hotel corporate image. Green hotel green image has the greatest impact on hotel corporate image, followed by green hotel green activities, and then intention to spread WOM about green hotels.

The results of the path analysis show that, among the independent variables, attitude toward green hotels is the key driver behind consumer intention to revisit green hotels, followed by intention to spread WOM about green hotels, perceived behavioral

control toward green hotels, subjective norms toward green hotels, a sense of obligation toward green hotels, and finally hotel corporate image. This study model explains 64.6% of consumer intention to revisit green hotels.

In light of these findings, the model can be updated as shown in Figure 21.

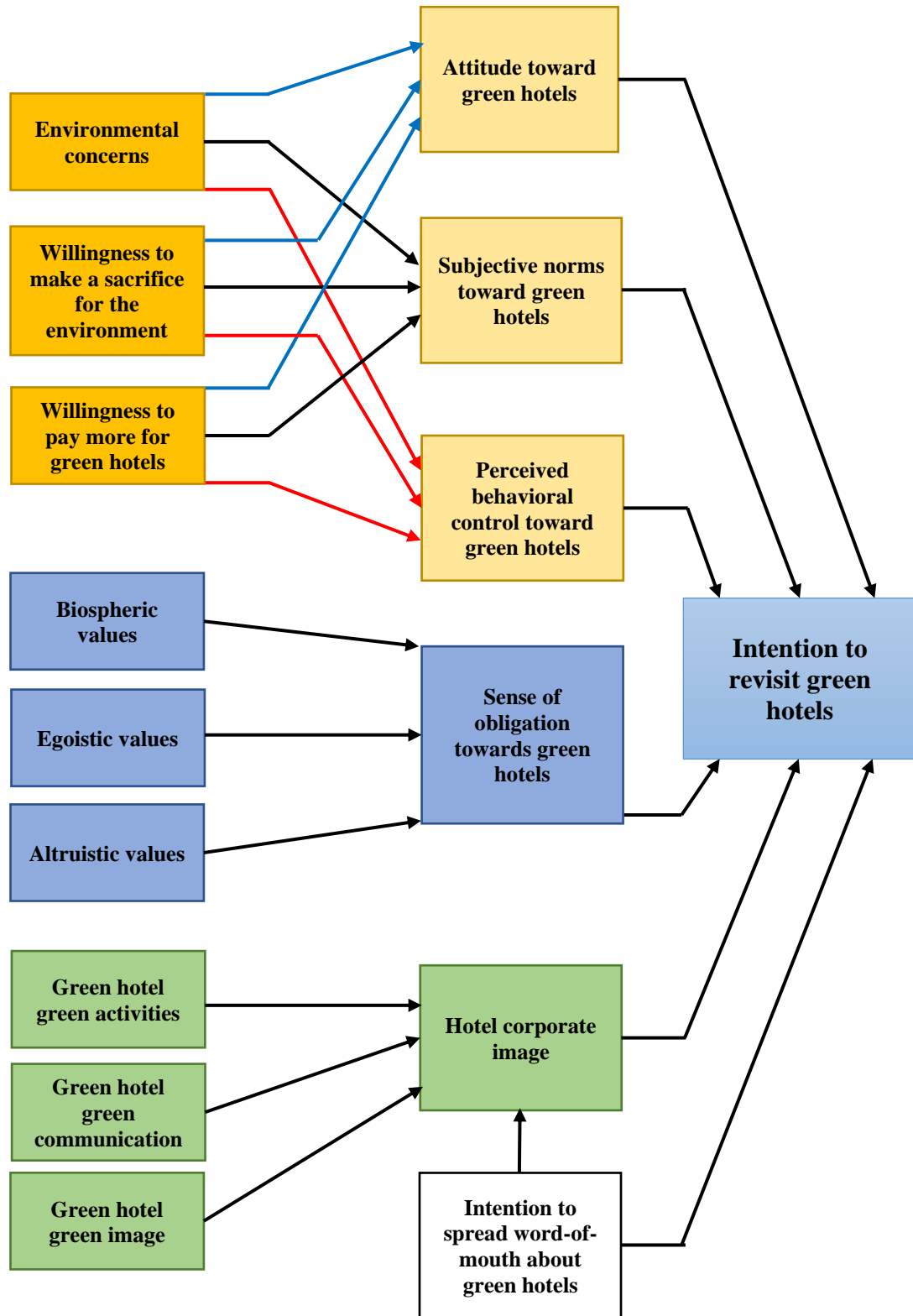


Figure 21: Updated theoretical framework

### **6.3.2 Practical Implications**

A key challenge for marketers in Abu Dhabi is understanding purchasing and consumption behavior. This study focuses on the factors that influence consumer intention to revisit green hotels, and our findings have a number of managerial implications for hotels.

Increasing numbers of hotels acknowledge the importance of reducing their impact on the environment. As well as implementing changes in practices, hotels must also promote environmentally friendly behaviors among their consumers. There are a number of benefits that hotels can expect to reap from their pro-environmental efforts. Besides the obvious positive impacts on the environment and the long-term survival of the planet, there are a number of immediate and direct advantages. First, there are financial benefits associated with the promotion of environmentally friendly behaviors in hotels. Many green behaviors, such as reducing energy and water usage, can lead to immediate substantial monetary savings. Second, with the pro-environmental movement gaining in popularity, there is the benefit of securing a competitive advantage in the marketplace. Consumers are increasingly willing to pay more for products that benefit the environment, and they often seek out green choices. Third, the Abu Dhabi government has not yet made green hotel practices obligatory. This gives hotels the chance to start implementing changes before they are forced to do so by regulations. With more control over the process, they can implement improvements gradually, without incurring large losses due to hasty changes and process failures. Fourth, the results of this study indicate that subjective norms toward green hotels are a strong predictor of consumer intention to revisit green hotels. Accordingly, practitioners should take care to maintain a positive influence on communities (the people around the consumer), as communities exert a strong influence on consumers.

The results of this study also yield a number of pragmatic suggestions for professionals in the hotel and marketing industries. From the prosocial perspective, it should be noted that people who care about themselves (those who have egoistic values) and the environment (those who have biospheric values) are more likely to have eco-friendly attitudes, and therefore more willing to revisit green hotels, than those who have altruistic values. Accordingly, practitioners should invest in giving consumers evidence that green hotels care about those values in terms of respecting natural resources, protecting the environment, and preventing pollution. In addition, practitioners should demonstrate to consumers that protecting the environment is also the responsibility of the consumers themselves, as this approach will stimulate a sense of obligation toward green hotels. Practitioners should, for instance, announce the sustainability values and green practices of their hotels through different channels, such as television, newspapers, and social media. The results of this study show the importance of a strong orientation toward the environmental concerns of consumers, and practitioners should therefore find ways to stimulate consumers by reminding them about those concerns through a range of communication channels. Practitioners can also usefully focus on B2C marketing in the form of advertising eco-friendly products and educating consumers about green practices.

## **6.4 Assumptions, Limitations, and Challenges**

### **6.4.1 Assumptions**

The use of a questionnaire as a measurement instrument assumes that the participants will give truthful and honest responses about their experiences, and that the number of responses will be adequate to arrive at conclusive results. The study also



assumes that the respondents can afford to pay the extra cost of visiting a green hotel (i.e., that unwillingness to pay more was not due simply to lack of money).

#### **6.4.2 Limitations**

Despite this study's specific contribution to the literature on sustainable hotel consumer behavior, a number of limitations should be noted that pave the way for further research. First, the data for this research were collected through both an online survey and a field survey. A disadvantage of any online survey is that responses may be provided by participants who do not fit the criteria (in this case, respondents who may not have visited a green hotel). Future research should include a field survey only and should administer it at green hotels to ensure that information is gathered only from consumers who have visited a green hotel. Second, the present study applied and tested TPB. Since the measures for the variables within the proposed model were designed to be appropriate in the green hotel context, generalization of our findings to other hotel sectors or industries should only be attempted with caution. Third, participants may have been influenced by their emotions, since the subject of the questionnaire has an ethical element that may have provoked a personal reaction in some respondents. Fourth, the present study is restricted to measuring consumer intention to revisit green hotels, and it provides no assessment of actual behavior. Fifth, as with any use of a questionnaire as a measurement instrument, the fact that people like to look good in the eyes of others may lead to social desirability bias in their responses. Sixth, the use of a cross-sectional survey approach to collect data is a notable limitation. Seventh, consumer gender, income level, education level, length of stay, purpose of trip, and number of companions may also have a significant influence on intention to revisit green hotels, but these factors were not included here. Eighth, the questionnaire was administered in March 2020, when government restrictions in

relation to the COVID-19 pandemic made it difficult to distribute the questionnaire to hotel guests. Ninth, TPB does not account for other variables that are factors in behavioral intention and motivation such as fear, threat, mood, and past experience. Frequency of past behavior was included as an extension of TPB to help overcome this limitation; nevertheless, other potentially relevant factors were not considered in the research theoretical framework. Tenth, in terms of the methodology chosen, and because of the small sample, the data collected and the findings made cannot be extrapolated on a broader scale. In other words, the generalizability of the results is questionable. Lastly, TPB considers normative influences and does not take into account environmental or economic factors that may influence a consumer's intention to perform a behavior. The extension of TPB (to include environmental concerns, environmental awareness, willingness to make a sacrifice for the environment, and willingness to pay more for a green hotel) goes some way to overcoming this limitation, but there remain other environmental and economic factors to take into account.

### **6.4.3 Challenges**

There were several challenges which the researcher encountered while conducting the research for this dissertation. The first challenge was recruiting a sufficient number of participants. Thus, access to the participants and obtaining permission for the research was a major challenge. Secondly the researcher was restricted by time and cost, which determined the choice of more efficient method, such as the questionnaire, instead of the more time-consuming focus groups or participant observation.

## 6.5 Recommendations for Future Research

As mentioned in Section 6.4, a limitation of this study is its use of a cross-sectional survey approach to collect data. Future studies should use a longitudinal survey to overcome this limitation. Likewise, consumer gender, income level, education level, length of stay, purpose of trip, and number of companions might have an important effect on consumer intention to revisit green hotels. Therefore, future studies should include these factors, either as direct effects or as moderating effects of the behavioral factors.

According to Kardes et al. (2011) and Tadajewski (2009), consumer behavior includes all activities related to a purchase, in addition to the consumer's emotional, mental, and behavioral responses. Therefore, future research should include emotional factors as elements that may influence green hotel revisit intention. Habits and perceptions also play an important role in shaping consumer behavior (Preuss, 1991); for example, consumers like to have fresh towels and sheets every day (Tzschentke, Kirk, & Lynch, 2008). From the consumer perspective, then, perceptions of comfort can become a barrier to acceptance of the concept of visiting green hotels (Dolnicar, Crouch, & Long, 2008). Therefore, future research should consider consumer habits and perceptions of comfort as elements that can influence green hotel revisit intention.

Similarly, personal factors such as age and life-cycle stage, occupation, economic situation, lifestyle, personality, and self-concept have an influence on consumer decisions. The model of the buyer decision process involves five stages: recognition of a need or problem, information search, comparison of the alternatives, purchase, and post-purchase evaluation. Accordingly, future research should focus on

how the evaluation of alternatives leads to green hotels not being at the top of the consumer's list.

The data used in this study are exclusively from green hotel consumers in Abu Dhabi. Although this context-specificity gives depth to the present study, it limits the generalizability of the findings. Application of the findings to other countries requires caution, as the research sample includes domestic and international guests in Abu Dhabi hotels, and their responses may have been affected by hotel location, hotel corporate image, or characteristics of Abu Dhabi as an international tourism destination, among other factors that are not under study here. Future research should therefore focus on a range of different contexts, taking hotel guest background, ethics, knowledge, and religion as possible moderators.

## **6.6 Conclusion**

The aim of this study was to understand the factors that influence consumers to revisit green hotels from the self-perspective and the prosocial, B2C, and C2C perspectives. Accordingly, it adopted a distinctive approach that integrates all four perspectives to develop a comprehensive framework and test it empirically. This is a novel contribution to the literature, as, to the best of the researcher's knowledge, this has not been attempted before. Three established theories (TPB, VBN, and CIMT) were used, and intention to spread WOM about green hotels was included as a way to measure C2C influence. The outcome is a successful extension of TPB with the addition of important constructs that are highly interrelated with the original TPB variables. The inclusion of these predictors contributes to a better understanding of the theoretical mechanism of TPB in the context of environmentally responsible hotels. The roles of some established constructs within TPB (attitude, subjective norms, and

perceived behavior control) in determining intention have been redefined within this extended theoretical framework. The integrated variables, which can be employed to explain a range of green decision-making processes and intentions in a variety of contexts, have been identified as important drivers of green intention.

The outcomes demonstrate the feasibility of using an established socio-psychological model (TPB) to measure consumer intention to revisit green hotels in Abu Dhabi. Moreover, the study empirically validates the applicability of the TPB model when revised to incorporate the five additional constructs (environmental awareness, environmental concerns, willingness to pay more for green hotels, willingness to make a sacrifice for the environment, and frequency of past behavior of visiting green hotels). Environmental awareness, willingness to pay more for a green hotel, and willingness to make a sacrifice for the environment increase the robustness and predictive ability of the proposed theoretical framework for measuring consumer intention to revisit green hotels. This is of significance for the Abu Dhabi context, where there is a focus on ecological issues and on encouraging a favorable attitude and moral reflectiveness on the part of consumers so that they revisit green hotels.

This research makes four principal contributions to the tourism and hospitality literature: (a) It provides a robust framework that predicts the influence of the self-perspective, the prosocial perspective, the firm marketing perspective, and the consumer marketing perspective on consumer intention to revisit green hotels; (b) It measures and tests a number of relationships that have not been measured or tested in previous work, thereby generating insights that will encourage intention to revisit and opening the door for future studies to explore these relationships further; (c) It clarifies the role played by the study variables in consumer intention to revisit green hotels; (d)

It answers the question of what factors affect customer intention to revisit green hotels in the case of Abu Dhabi.

The novel contribution of this study is therefore its provision of an integrated model that predicts the influence of the self-perspective, the prosocial perspective, the firm marketing perspective, and the consumer marketing perspective on consumer intention to revisit green hotels. Although previous studies have examined revisit intention from the self-perspective and/or the prosocial perspective, there has been almost no relevant research in relation to hospitality, especially in the Gulf Cooperation Council (GCC) context. It is particularly remarkable that the key driver of consumer intention to revisit green hotels is attitude toward green hotels, followed in descending order by intention to spread WOM about green hotels, perceived behavioral control toward green hotels, subjective norms toward green hotels, sense of obligation toward green hotels, and finally hotel corporate image.

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## Appendix

<p>Dear Survey Participant,</p> <p>We would like you to participate in this study to explore the antecedent of green hotel revisit intention in Abu Dhabi. This research is conducted as part of completing the Doctorate of Business Administration (DBA) Degree in the United Arab Emirates University (UAEU). This study is intended to better understand the factors impacting consumer's intention. Kindly note that participation is voluntary, accordingly you may withdraw at any time from the study. There is minimal risk in participating in this study since all data collected will be anonymous. If you have questions regarding this study, please do not hesitate to contact the researcher directly as per the contact information below.</p> <p>Thank you in advance for your valuable contribution to this important study.</p> <p>Abdulaziz Faisal Alremeithi          Doctorate of Business Administration (DBA) Student          College of Business and Economics          United Arab Emirates University (UAEU)          E-Mail: <a href="mailto:980910800@uaeu.ac.ae">980910800@uaeu.ac.ae</a></p>	<p>عزيزي المشارك في الاستطلاع ،</p> <p>نود منكم المشاركة في هذه الدراسة لاستكشاف نية إعادة زيارة الفنادق الخضراء في أبو ظبي. يتم إجراء هذا البحث كجزء من استكمال درجة الدكتوراه في إدارة الأعمال (DBA) من جامعة الإمارات العربية المتحدة (UAEU). تهدف هذه الدراسة إلى فهم العوامل التي تؤثر على نية المستهلك بشكل أفضل. يرجى ملاحظة أن المشاركة طوعية ، وبالتالي يمكنك الانسحاب في أي وقت من الدراسة. هناك حد أدنى من المخاطر في المشاركة في هذه الدراسة لأن جميع البيانات التي يتم جمعها ستكون مجهولة المصدر. إذا كانت لديك أسئلة بخصوص هذه الدراسة ، فيرجى عدم التردد في الاتصال بالباحث مباشرةً وفقاً لمعلومات الاتصال أدناه.</p> <p>شكراً لك مقدماً على مساهمتك القيمة في هذه الدراسة المهمة.</p> <p>عبدالعزیز فيصل الرميثي          طالب دكتوراه في إدارة الأعمال (DBA)          كلية الإدارة والاقتصاد          جامعة الإمارات العربية المتحدة (UAEU)          البريد الإلكتروني: <a href="mailto:980910800@uaeu.ac.ae">980910800@uaeu.ac.ae</a></p>
<p><b>Who should complete this questionnaire?</b></p>	
<p>The following questions should be answered by an individual who has visited the green hotel/s in Abu Dhabi during 2019 and 2020.</p>	
<p><b>Did you visit green hotel/s in Abu Dhabi during 2019 and 2020? ( Yes / No )</b></p>	
<p><b>من يجب أن يكمل هذا الاستبيان؟</b></p>	
<p>يجب الإجابة على الأسئلة التالية من قبل الفرد الذي زار الفندق / الفنادق الخضراء في أبو ظبي خلال عامي 2019 و 2020.</p>	
<p><b>هل قمت بزيارة فندق / فنادق خضراء في أبو ظبي خلال عامي 2019 و 2020؟ ( نعم / لا )</b></p>	

1	<b>Background Information</b>	
1.1	Gender الجنس	<input type="checkbox"/> Male ذكر <input type="checkbox"/> Female انثى
1.2	Age Category by year الفئة العمرية	<input type="checkbox"/> 18-24 <input type="checkbox"/> 25-34 <input type="checkbox"/> 35-44 <input type="checkbox"/> 45-54 <input type="checkbox"/> 54-55 <input type="checkbox"/> 55-64 <input type="checkbox"/> أكثر من 65
1.3	Educational Qualifications المؤهلات الراسية	<input type="checkbox"/> Below Secondary school غير حاصل على شهادة الصف الثاني عشر <input type="checkbox"/> Secondary school certificate holder حاصل على شهادة الصف الثاني عشر <input type="checkbox"/> Diploma holder حاصل على الدبلوم <input type="checkbox"/> Bachelor's degree holder حاصل على درجة البكالوريوس <input type="checkbox"/> Master's degree holder حاصل على درجة الماجستير <input type="checkbox"/> Doctorate degree holder حاصل على درجة الدكتوراه
1.4	Monthly Income Level الدخل الشهري بالدرهم الاماراتي	<input type="checkbox"/> Less than AED 10,000 أقل من <input type="checkbox"/> AED 10,000-19,000 <input type="checkbox"/> AED 20,000-29,000 <input type="checkbox"/> AED 30,000 -39,000 <input type="checkbox"/> AED 40,000-49,000 <input type="checkbox"/> More than AED 50,000 أكثر من
1.5	Nationality الجنسية : .....	
1.6	How often have you visited an environmentally responsible hotel during the past three years? كم مرة قمت بزيارة فندق مسؤول بيئياً خلال السنوات الثلاثة الماضية؟ 1. Seldom نادراً 2. Between Seldom and Occasionally بين نادراً وأحياناً 3. Occasionally في بعض الأحيان 4. Between Occasionally and Frequently بين الحين والآخر 5. Frequently كثيراً	
1.7	I have frequently stayed at an environmentally responsible hotel in the past three years. بشكل متكرر قمت بزيارة فندق مسؤول بيئياً خلال السنوات الثلاث الماضية؟ 1. Extremely disagree لا أوافق بشدة 2. Disagree لا أوافق 3. Neutral محايد 4. Agree أوافق 5. Extremely agree أوافق بشدة	
1.8	During the last three years, majority of the hotels I visited were environmentally responsible hotels خلال السنوات الثلاثة الماضية ، كانت غالبية الفنادق التي قمت بزيارتها فنادق مسؤولة بيئياً 1. Extremely disagree لا أوافق بشدة 2. Disagree لا أوافق 3. Neutral محايد 4. Agree أوافق 5. Extremely agree أوافق بشدة	

Using the scale provided below, please, indicate the level of agreement / disagreement with each of the following statements.

باستخدام المقياس الوارد أدناه ، يرجى الإشارة إلى مستوى الاتفاق / الاختلاف مع كل من العبارات التالية.

1	2	3	4	5
Extremely disagree لا أوافق بشدة	Disagree لا أوافق	Neutral محايد	Agree أوافق	Extremely agree أوافق بشدة

2.1	I am willing to stay at a green hotel when traveling in the future. أنا على استعداد للبقاء في فندق أخضر عند السفر في المستقبل.	1	2	3	4	5
2.2	I plan to stay at a green hotel instead of a conventional hotel when traveling in the future. أخطط للبقاء في فندق أخضر بدلاً من فندق تقليدي عند السفر في المستقبل.	1	2	3	4	5
2.3	I will expend effort on staying at a green hotel instead of a conventional hotel when traveling in the future. سأبذل جهداً من أجل الإقامة في فندق أخضر بدلاً من الإقامة فندق تقليدي عند السفر في المستقبل.	1	2	3	4	5

3.1	For me, staying at a green hotel when traveling is Extremely good. بالنسبة لي ، البقاء في فندق أخضر عند السفر أمر جيد للغاية.	1	2	3	4	5
3.2	For me, staying at a green hotel when traveling is Extremely desirable. بالنسبة لي ، البقاء في فندق أخضر عند السفر أمر مرغوب فيه للغاية.	1	2	3	4	5
3.3	For me, staying at a green hotel when traveling is Extremely pleasant. بالنسبة لي ، الإقامة في فندق أخضر عند السفر ممتعة للغاية.	1	2	3	4	5
3.4	For me, staying at a green hotel when traveling is Extremely favorable. بالنسبة لي ، البقاء في فندق أخضر عند السفر مناسب للغاية.	1	2	3	4	5
3.5	For me, staying at a green hotel when traveling is Extremely enjoyable. بالنسبة لي ، فإن الإقامة في فندق أخضر عند السفر ممتعة للغاية.	1	2	3	4	5

4.1	Most people who are important to me think I should stay at a green hotel when traveling. يعتقد معظم الأشخاص المهمين بالنسبة لي أنني يجب أن أبقى في فندق أخضر عند السفر.	1	2	3	4	5
4.2	Most people who are important to me would want me to stay at a green hotel when traveling. معظم الأشخاص المهمين بالنسبة لي يريدون مني البقاء في فندق أخضر عند السفر.	1	2	3	4	5
4.3	People whose opinions I value would prefer that I stay at a green hotel when traveling. الأشخاص الذين أقدر آرائهم يفضلون أن أبقى في فندق أخضر عند السفر.	1	2	3	4	5

5.1	Whether or not I stay at a green hotel when traveling is completely up to me. سواء أقممت أم لا في فندق أخضر عند السفر فهذا بمحض اختياري.	1	2	3	4	5
5.2	I am confident that if I want, I can stay at a green hotel when traveling. أنا واثق من أنني إذا أردت ، يمكنني البقاء في فندق أخضر عند السفر.	1	2	3	4	5
5.3	I have resources, time, and opportunities to stay at a green hotel when traveling. لدي موارد ووقت وفرص للبقاء في فندق أخضر عند السفر.	1	2	3	4	5

Using the scale provided below, please, indicate the level of agreement / disagreement with each of the following statements.

باستخدام المقياس الوارد أدناه ، يرجى الإشارة إلى مستوى الاتفاق / الاختلاف مع كل من العبارات التالية.

1	2	3	4	5
Extremely disagree لا أوافق بشدة	Disagree لا أوافق	Neutral محايد	Agree أوافق	Extremely agree أوافق بشدة

6.1	For me, respecting the Earth is very important. بالنسبة لي ، احترام الأرض مهم جدا.	1	2	3	4	5
6.2	For me, unity with Nature is very important. بالنسبة لي ، الوحدة مع الطبيعة مهمة جدا.	1	2	3	4	5
6.3	For me, protecting the Environment is very important. بالنسبة لي ، حماية البيئة مهمة جدا.	1	2	3	4	5
6.4	For me, preventing Pollution is very important. بالنسبة لي ، منع التلوث مهم جدا.	1	2	3	4	5

7.1	A clean environment provides me with better opportunities for recreation. توفر البيئة النظيفة فرصًا أفضل للاستجمام.	1	2	3	4	5
7.2	Protecting the environment will threaten jobs for people like me. حماية البيئة ستهدد فرص العمل لأشخاص مثلي.	1	2	3	4	5
7.3	Laws to protect the environment limit my choices and personal freedom. قوانين حماية البيئة تحد من خياراتي وحرويتي الشخصية.	1	2	3	4	5
7.4	Environmental protection is beneficial to my health. حماية البيئة مفيدة لصحتي.	1	2	3	4	5

8.1	Pollution generated here harms people all over the earth. التلوث الناتج هنا يضر الناس في جميع أنحاء الأرض.	1	2	3	4	5
8.2	We don't need to worry about the environment because future generations will be better able to deal with these problems than we are now. لا داعي للقلق بشأن البيئة لأن الأجيال القادمة ستكون قادرة على التعامل مع هذه المشكلات بشكل أفضل مما نحن عليه الآن.	1	2	3	4	5
8.3	The effects of pollution on public health are worse than we realize. آثار التلوث على الصحة العامة أسوأ مما ندرك.	1	2	3	4	5
8.4	Environmental protection will help people have a better quality of life. حماية البيئة سوف تساعد الناس على الحصول على نوعية حياة أفضل.	1	2	3	4	5
8.5	Environmental protection benefits everyone. حماية البيئة تفيد الجميع.	1	2	3	4	5

9.1	I will recommend a green hotel to my friends when they are travelling سأوصي أصدقائي بالإقامة في فندق أخضر عندما يسافرون	1	2	3	4	5
9.2	I will say positive things about green hotels سأقول أشياء إيجابية عن الفنادق الخضراء	1	2	3	4	5
9.3	I encourage my relatives to select green hotels for their travels أشجع أقاربي على اختيار الفنادق الخضراء لرحلاتهم	1	2	3	4	5

Using the scale provided below, please, indicate the level of agreement / disagreement with each of the following statements.

باستخدام المقياس الوارد أدناه ، يرجى الإشارة إلى مستوى الاتفاق / الاختلاف مع كل من العبارات التالية.

1	2	3	4	5
Extremely disagree لا أوافق بشدة	Disagree لا أوافق	Neutral محايد	Agree أوافق	Extremely agree أوافق بشدة

10.1	It is acceptable to pay more for a hotel that engages in green practices من المقبول أن أدفع أكثر مقابل فندق يشارك في الممارسات الخضراء	1	2	3	4	5
10.2	I am willing to pay more for a green hotel أنا على استعداد لدفع المزيد مقابل الإقامة في فندق أخضر	1	2	3	4	5
10.3	I am willing to spend extra in order to stay at an environmentally friendly hotel أنا على استعداد لإنفاق المزيد من أجل البقاء في فندق صديق للبيئة	1	2	3	4	5

11.1	I feel morally obliged to book green hotel instead of conventional hotel when traveling أشعر أنني ملزم من الناحية الأخلاقية بحجز فندق أخضر بدلاً من الفندق التقليدي عند السفر	1	2	3	4	5
11.2	I feel personally obliged to book in an environmentally sound way, such as by booking green hotel. أشعر أنني ملزم شخصياً بالحجز بطريقة سليمة بيئياً ، مثل حجز فندق أخضر .	1	2	3	4	5
11.3	I feel a moral obligation to take the environmental problems caused by hotels into account when making hotel booking choices أشعر بالالتزام أخلاقي بأخذ المشكلات البيئية التي تسببها الفنادق في الاعتبار عند اتخاذ خيارات الحجز في الفنادق	1	2	3	4	5

12.1	The balance of nature is very gentle and can be easily upset. ميزان الطبيعة دقيق للغاية ويمكن أن يختل بسهولة.	1	2	3	4	5
12.2	Human beings are severely abusing the environment. البشر يسيئون استخدام البيئة بشدة.	1	2	3	4	5
12.4	Humans must maintain the balance with nature to survive. يجب على البشر الحفاظ على التوازن مع الطبيعة من أجل البقاء.	1	2	3	4	5
12.5	Human interferences with nature often produce disastrous consequences. غالبًا ما تؤدي التدخلات البشرية مع الطبيعة إلى عواقب وخيمة.	1	2	3	4	5

13.1	The effects of pollution on public health are worse than we realize. آثار التلوث على الصحة العامة أسوأ مما ندرك.	1	2	3	4	5
13.2	Over the next several decades, thousands of species will become extinct. على مدى العقود القليلة القادمة ، سوف تنقرض آلاف الأنواع.	1	2	3	4	5
13.3	Claims that current levels of pollution are changing earth's climate are exaggerated. إن الادعاءات بأن المستويات الحالية للتلوث تغير مناخ الأرض مبالغ فيها.	1	2	3	4	5
13.4	Environmental protection will provide a better world for me and my children. ستوفر حماية البيئة عالماً أفضل لي ولأطفالي.	1	2	3	4	5

Using the scale provided below, please, indicate the level of agreement / disagreement with each of the following statements.

باستخدام المقياس الوارد أدناه ، يرجى الإشارة إلى مستوى الاتفاق / الاختلاف مع كل من العبارات التالية.

1	2	3	4	5
Extremely disagree لا أوافق بشدة	Disagree لا أوافق	Neutral محايد	Agree أوافق	Extremely agree أوافق بشدة

14.1	I am willing to give things up that I like doing if they harm the natural environment إنني على استعداد للتخلي عن الأشياء التي أحب فعلها إذا أضرت بالبيئة الطبيعية.	1	2	3	4	5
14.2	I am willing to take on responsibilities that will help conserve the natural environment أنا على استعداد لتحمل المسؤوليات التي ستساعد في الحفاظ على البيئة الطبيعية.	1	2	3	4	5
14.3	I am willing to do things for the environment, even if I'm not thanked for my efforts أنا على استعداد للقيام بأشياء من أجل البيئة ، حتى لو لم يقدم لي الشكر لجهودي.	1	2	3	4	5
14.4	Even when it is inconvenient to me, I am willing to do what I think is best for the environment حتى عندما يكون الأمر غير مريح بالنسبة لي ، فأنا على استعداد للقيام بما أعتقد أنه أفضل للبيئة.	1	2	3	4	5
14.5	I am willing to go out of my way to do what is best for the environment أنا على استعداد لبذل قصارى جهدي للقيام بما هو أفضل للبيئة.	1	2	3	4	5

15.1	The hotel industry causes pollution, climate change, and exhaustion of natural resources. تسبب صناعة الفنادق التلوث وتغير المناخ واستنفاد الموارد الطبيعية.	1	2	3	4	5
15.2	Hotels generate the environmental impacts on the neighboring areas and wider environment. الفنادق تولد الآثار البيئية على المناطق المجاورة والبيئة بشكل كبير.	1	2	3	4	5
15.3	Hotels cause environmental deteriorations (e.g., waste from rooms, restaurants, and other facilities, excessive use of energy/water). تسبب الفنادق تدهورًا بيئيًا (على سبيل المثال ، إهدار بسبب الغرف والمطاعم وغيرها من المرافق ، والإفراط في استخدام الطاقة / المياه).	1	2	3	4	5
15.4	Green hotels practicing energy/water conservation, waste reduction, and diverse eco-friendly activities help to minimize the environmental degradations. تساعد الفنادق الخضراء التي تمارس الحفاظ على الطاقة / المياه وخفض النفايات والأنشطة المتنوعة الصديقة للبيئة على تقليل التدهور البيئي.	1	2	3	4	5

16.1	In my opinion, the hotels I were visited are well managed في رأيي ، الفنادق التي قمت بزيارتها تتم إدارتها بشكل جيد	1	2	3	4	5
16.2	In my opinion, the hotels I were visited only want to make money. في رأيي ، الفنادق التي قمت بزيارتها تريد فقط كسب المال.	1	2	3	4	5
16.3	In my opinion, the hotels I were visited are involved in various community activities في رأيي ، الفنادق التي قمت بزيارتها تشارك في أنشطة مجتمعية مختلفة.	1	2	3	4	5
16.4	In my opinion, the hotels I were visited respond to consumer needs in a better way في رأيي ، الفنادق التي زرتها تستجيب لاحتياجات المستهلك بطريقة أفضل.	1	2	3	4	5
16.5	In my opinion, the hotels I were visited always leave a good impression on me في رأيي ، الفنادق التي زرتها دائمًا تترك فيني انطباعًا جيدًا.	1	2	3	4	5



Using the scale provided below, please, indicate the level of agreement / disagreement with each of the following statements.

باستخدام المقياس الوارد أدناه ، يرجى الإشارة إلى مستوى الاتفاق / الاختلاف مع كل من العبارات التالية.

1	2	3	4	5
Extremely disagree لا أوافق بشدة	Disagree لا أوافق	Neutral محايد	Agree أوافق	Extremely agree أوافق بشدة

17.1	The services provided by the hotels I were visited are eco-friendly الخدمات التي تقدمها الفنادق التي زرتها كانت خدمات صديقة للبيئة.	1	2	3	4	5
17.2	The hotels I were visited use products which are certified with green label تستخدم الفنادق التي زرتها منتجات معتمدة بشعار أخضر.	1	2	3	4	5
17.3	The hotels I were visited increase the use of eco-friendly services for consumers الفنادق التي قمت بزيارتها تزيد من استخدام الخدمات الصديقة للبيئة للمستهلكين.	1	2	3	4	5
17.4	The hotels I were visited are involved in energy conservation الفنادق التي زرتها تشارك في الحفاظ على الطاقة.	1	2	3	4	5

18.1	Advertisements (TV, online, printed, etc.) of the hotels I were visited reflect its green image الإعلانات (التلفزيون ، عبر الإنترنت ، المطبوعات ، إلخ) للفنادق التي زرتها تعكس صورتها الخضراء.	1	2	3	4	5
18.2	The public relation activities of the hotels I were visited to promote itself as well as it services reflect its green image تعكس أنشطة العلاقات العامة في الفنادق التي قمت بزيارتها للترويج لنفسها بالإضافة إلى الخدمات صورتها الخضراء.	1	2	3	4	5
18.3	The sales promotions offered by the hotels I were visited reflect the green image عروض المبيعات التي تقدمها الفنادق التي قمت بزيارتها تعكس الصورة الخضراء للفندق.	1	2	3	4	5
18.4	The sponsorship activities of the hotels I were visited reflect the green image تعكس الفنادق التي زرتها رعايتها بالانشطة البيئية صورتها الخضراء	1	2	3	4	5

19.1	The hotels I were visited are professional about the green practices الفنادق التي زرتها محترفة في الممارسات الخضراء	1	2	3	4	5
19.2	The hotels I were visited are successful in implementing green practices الفنادق التي زرتها ناجحة في تطبيق الممارسات الخضراء	1	2	3	4	5
19.3	The hotels I were visited have a good reputation for implementing green practices تتمتع الفنادق التي زرتها بسمعة طيبة في تطبيق الممارسات الخضراء	1	2	3	4	5
19.4	The hotels I were visited are trustworthy about the green practices they implement الفنادق التي زرتها جديرة بالثقة بشأن الممارسات الخضراء التي تنفذها	1	2	3	4	5
19.5	The hotels I were visited are concerned for consumer about green practices الفنادق التي زرتها معنية بالممارسات الخضراء من قبل المستهلكين	1	2	3	4	5