

THE INFLUENCE OF VALUES AND ATTITUDES ON GREEN CONSUMER
BEHAVIORAL INTENTIONS: AN EMPIRICAL EXAMINATION OF
THREE GREEN PRODUCTS

By

IMRAN RAHMAN

A dissertation submitted in partial fulfillment of
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To the Faculty of Washington State University:

The members of the Committee appointed to examine the dissertation of Imran Rahman find it satisfactory and recommend that it be accepted.

Dennis Reynolds, Ph.D., Chair

Hyun Jeong “Jenny” Kim, Ph.D.

Suprateek Sarker, Ph.D.

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Abstract

by Imran Rahman, Ph.D.
Washington State University
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Chair: Dennis Reynolds

Extant literature and consumer surveys have signified the rise in demand for environment-friendly products. Hospitality environment-related literature revealed a gap in regards to understanding the deeper facets of consumer behavior. There is an apparent shortage of studies incorporating general values and general attitudes as predictors of specific behavior or behavioral intentions for different green products. Research has also not been very forthcoming in analyzing the influence of egoistic values and status-related motives on green product patronage – an area touted to deliver major implications for marketers and practitioners.

This study addresses these aforementioned inadequacies by developing a conceptual framework that seeks to understand consumers' behavioral intentions in regards to three green products – the green hotel, organic wine, and an environment-friendly car. Based on Schwartz's Values theory, using Stern's nomenclature, in conjugation with value-attitude-hierarchy and green signaling theory, I seek to analyze the values and attitudes that influence consumers' green

product purchase intention, willingness to pay a premium, and willingness to sacrifice. The study empirically tested the influence of biospheric, altruistic, and egoistic values on behavioral intentions related to the three green products.

A self-report consumer survey, operationalized by structural equation modeling, revealed the significant influence of biospheric value on all three types of behavioral intentions across all three green products. Altruistic value only influenced willingness to sacrifice for green hotels while egoistic value influenced purchase intentions for organic wines and hybrid/electric cars.

Green products whose product class exudes status and/or whose consumption is more a public practice, appeal to consumers as a social-status enhancing medium. Consumers also would increasingly embrace a green product if it can connote personal benefits. However, consumers' egoistic values would neither cause them to pay more nor sacrifice for these products. Regarding high-impact environmental products such as the green hotel that often involve consumers in the environmental management process, altruistic value-oriented consumers are willing to sacrifice their own luxury, convenience, and quality expectations. Thus, for the green hotel a fitting marketing strategy would be to pitch it as benefiting to not only the environment but also the humankind.

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CHAPTER ONE

INTRODUCTION

“I feel more confident than ever that the power to save the planet rests with the individual consumer”. - Denis Hayes

The goal of chapter 1 is to provide a synopsis that sets the tone of this study. First, a brief background of the underlying facts and issues regarding green consumerism is provided. Then the problem statement and fundamental research gaps are addressed. The rationale and purpose of this study are accounted for in the next section. The chapter concludes with an overview of the significance of this study.

Background

Environment awareness is on the rise (Kalafatis, Pollard, East, & Tsogas, 1999). Since the onset of the “New Environmental Paradigm” (Catton & Dunlap, 1978) in the late 1970s, increasing attention has been placed on the interface between society and the natural environment, including the importance of environmental consciousness as a factor that can influence human behavior (Dunlap & Catton, 1979). Green consumerism, one facet of such behavior, began to emerge eventually across different industries and markets. The advent of green products and green consumerism influenced practitioners and researchers to study consumer motives behind their green behavior. Naturally, businesses identified the huge potential green consumerism brought about in the marketplace. They clearly saw the need of

effectively marketing the environmentally friendly products to the consumers through well-organized strategies so that their “environmental” appeal is maximized. An efficient strategy involved better notifying consumers about the environmental predicaments (Owens, 2000). The environmental concern (e.g., Bamberg, 2003; Fransson & Garling, 1999; Stern & Dietz, 1994) of the consumers was triggered by this strategy.

A second strategy focused on making environment-friendly goods more affordable, more proficient, and included more financial incentives such as tax breaks (e.g., Van Vugt, Meertens, & Van Lange, 1995). Consumers’ rational economic perspective (e.g., Geller, 1989) was activated by this strategy. In addition, motives that are more socially oriented can be stronger influencers of consumers’ propensity to be green (Van Vugt, 2009). These motives tap into consumers’ social, reputational, and status-oriented perspectives. As such, it is important we analyze this third strategy in addition to the two frequently used ones so that we better understand the dynamics of green consumerism.

Like other industries, the hospitality industry has embraced the green consumerism phenomenon. The demand for green hotels has historically been intermittent, but today it is omnipresent (Butler, 2008). An ever-increasing number of consumers are opting for environment-friendly products over alternatives and willing to pay a price premium (Laroche, Bergeron, & Barbaro-Forleo, 2001). This pattern is quite apparent in the hospitality industry in recent years. For example, the 2008 National Leisure Travel Monitor survey revealed that as much as 85% of leisure travelers think they are environmentally cognizant (Crocker, 2008). Another study revealed that as many as 43 million US travelers have articulated their concern for nature (Vora, 2007). Moreover, Deloitte undertook a survey that showed 34 percent of 1,155

business travelers actively look for environment-friendly hotels and 38% have researched environment-friendly hotels (Clausing, 2008). These statistics make it obvious that there is a strong demand for hotels exhibiting an environmental appeal – the green hotels.

Other green products both in and outside the hospitality industry are experiencing tremendous growth. The Nielsen Company revealed that organic wine sales in the US improved 12% in 2009, representing a growth rate increase of almost 4 times (Nichols, 2009).

Environment-friendly cars serve as another strong example. According to Mintel (2012), sales improved an astonishing 73%, with practically 440,000 hybrids, plug-in hybrid, and electric vehicles sold in 2012. These statistics show the power of green consumerism in recent years.

The advent of green consumption also provided greater opportunities for related research. Myung, McClaren, and Li (2012) conducted an evaluation of environmental research in the hospitality discipline. About 58 articles were identified between 2000 and 2010 among which the vast majority – 29 articles – covered environmental-management issues. However, in recent years consumer behavior research has gained momentum, reaching 10 articles in 2010 alone, which represented 17% of total articles in that year. Although environmental research is progressing rapidly in this field, several gaps and shortcomings remain unaddressed.

Problem Statement

A major gap in hospitality environment-related literature pertains to understanding the deeper aspects of consumer behavior (Myung et. al, 2012). In particular, understanding the deeper aspects of behaviors of consumers in the context of different green products remains underexplored. In regards to shortcomings, a vital one identified by Myung et al. (2012) is the

paucity of theory or theoretical viewpoints. The most prevalent theoretical lens in environmentally related hospitality literature is Ajzen's (1991) theory of planned behavior. Even though the theory of planned behavior has effectively predicted micro levels of consumer behavior, studies focusing on theories that delve into macro levels of environmental behavior would facilitate understanding green consumer behavior in the hospitality perspective (Myung et al., 2012). Furthermore, there is an apparent shortage of studies incorporating general values and general attitudes as influencers of specific behavior or behavioral intentions. For instance, the literature exploring altruistic values, altruism and related attitudes in regards to green hotel is sparse (Teng, Wu, & Liu, 2013). Similarly, research has been very limited regarding the influence of egoistic values and status related motives on green product specific behavior or behavioral intentions.

On a different note, it has been suggested that hospitality researchers bring into play existing models, theories, and theoretical perspectives from other disciplines that would benefit the progress of environmentally related research and help elucidate the value of green practices and initiatives in the hospitality industry (Myung et al., 2012). Studies comparing different green products across industries are also on the deficient side.

Purpose of Study

The purpose of this study, then, is to develop a conceptual framework that seeks to understand consumers' behavioral intentions in regards to three green products – the green hotel, organic wine, and an environment-friendly car. My review, analyses, and discussion mostly center on green hotels with organic wines and hybrid/electric cars playing a supplementary role primarily for comparative purposes. Based on Schwartz (1992) Values theory, using Stern's

(2000) nomenclature, in conjugation with value-attitude-hierarchy and costly signaling theory, I seek to analyze the values and attitudes that influence consumers' green product purchase intention, willingness to pay a premium, and willingness to sacrifice.

Stern (2000) characterized Schwartz's broad general values into three categories – biospheric values, altruistic values, and egoistic values. In addition to values, this study identifies the relevant attitude variables that emerge from these three value orientations, which may explain consumers' green behavioral intentions. Ecocentric and Anthropocentric attitudes, helping attitudes, and status consumption are considered as influencers of consumers' behavioral intentions in regards to the three green products. Although the comprehensive framework that I propose includes attitudes, I do not empirically test the effect of attitudes. Instead, the empirical model that I analyze only considers the effect of biospheric, altruistic, and egoistic values on consumers' purchase intention, willingness to pay more, and willingness to sacrifice for the three green products. As such, only a portion of the proposed conceptual model is investigated empirically as part of this study.

Significance of Study

This study is intended to better explain the deeper facets of consumer behavior in the context of three different green products. There have been a number of studies about what makes consumers embrace a green product. It is important to illustrate that consumers might approach different environmental products differently and as such, consumer behavior should not be generalized for all green products. This study looks into three prominent green products separately and compares the underlying consumer behavior related to them. Practitioners and

researchers would be able to know what actually prompts customers to make green purchases, to sacrifice more luxurious/convenient competing products, and to pay a premium price for each of the three green products under consideration. The three green products were specifically chosen keeping in mind their different attributes such as price, purchase frequency, consumption patterns, and degree of involvement. Although these three products work on environmental appeal, consumers' values and attitudes might have differing influence on behavioral intentions related to each of these products. Therefore, researchers and practitioners must have insight into these differences and understand why they exist. It is also expected that understanding the different consumer behavioral intentions and the extent of their differentness in regards to the three products would help practitioners formulate better marketing strategies, which are more product-specific. In fact, a fundamental objective of this study is to suggest to practitioners how to improve their approaches in regards to the marketing of the three green products. As such, through the findings of this study, I expect to offer some insights that would benefit green product marketers, manufacturers, and practitioners, facilitate the green consumerism process, and advance the environmental agenda.

CHAPTER TWO

LITERATURE REVIEW

“If we each take responsibility in shifting our own behavior, we can trigger the type of change that is necessary to achieve sustainability for our race or this planet. We change our planet, our environment, our humanity every day, every year, every decade, and every millennia.” – Yehuda Berg

Chapter two provides the theoretical foundation of the study. The chapter begins with an understanding of green consumerism and green consumer behavior from a prefatory standpoint. This is followed by an in-depth understanding of prevalent theories and a review of related literature in the context of the three green products – green hotel night, organic wine, and environment-friendly car. Along the process, research propositions are developed based on relevant theoretical bases and research findings. These propositions contribute towards formulating the three conceptual models for the three environment-friendly products used in this study. A detailed account of the concept of involvement is provided to illustrate differences and similarities within the green product category and among the three green products. Lastly, the hypotheses and the representative conceptual frameworks that are to be empirically tested are exhibited.

Green Consumerism and Green Consumer Behavior

Green consumerism is frequently referred to as a kind of pro-social consumer behavior (Wiener & Doesher, 1991). It is hard to find a universally agreed upon definition of green

consumerism and its related terms. According to Moisander (2007), green consumerism can be explicated as a particular form of socially conscious (Anderson & Cunningham, 1972) or socially responsible (Antil, 1984) consumer behavior that encompasses an environmentalist (Scheffer, 1991) viewpoint and hence maybe be referred to as *environmentally concerned consumption* (Henion, 1976). The green consumers normally engage in the purchase and consumption of products that are considered green, environment-friendly, pro-environmental, or sustainable. These terms will be used interchangeably for the purpose of this study and they refer to the same phenomenon (i.e., being environmentally significant). As such, green consumer behavior, for the purpose of this study, refers to environmentally significant behavior, environmentally responsible behavior, pro-environmental behavior, or ecologically concerned behavior in the context of product consumption.

Theoretical Base

In order to understand the dynamics of green consumer behavior, we need to understand the related theoretical bases prevalent in related literature. According to Myung et al. (2012), an important shortcoming of environmentally related research in the hospitality literature is the dearth of theory or theoretical standpoints. A relatively limited number of studies applied theoretical viewpoints: the theory of planned behavior (Han, Hsu, & Lee, 2009; Han, Hsu, Sheu, 2010; Han & Kim, 2010; Kim & Han, 2010; Lee, Hsu, Han, & Kim, 2010;; Manaktola & Jauhari, 2007), the descriptive social norms and social comparison theory (Goldstein, Cialdini, & Griskevicius, 2007; Goldstein, Griskevicius, & Cialdini, 2008;), the New Ecological Paradigm construct (Kang, Stein, Heo, & Lee, 2012; Mair & Bergin-Seers, 2010), and the theory of consumer demand (Millar & Baloglu, 2011; Rahman, Su, & Reynolds, 2013). It is apparent that

Ajzen's (1991) theory of planned behavior has been the predominant theoretical lens applied to environmentally related studies in the hospitality literature. The theory of planned behavior, a revised version of the theory of reasoned action (Ajzen & Fishbein, 1980), asserts that attitude toward behavior, subjective norms, and perceived behavioral control mutually contour one's behavioral intentions and behaviors (Ajzen, 1985). The theory of reasoned action, on the other hand, presupposes that individuals are rational, and attitude toward a specific behavior along with other factors foretells their behavioral intention regarding that behavior. The theory of planned behavior has been used to explain such facets of green consumer behavior as paying comparable regular-hotel prices for a green hotel (Kim & Han 2010), intention to visit a green hotel (Han et al. 2010), and intention to revisit a green hotel (Han & Kim, 2010). This theory has been consistently used to predict micro levels of consumer behavior based on narrowly focused consumer attitudes. For example, Teng et al. (2013) used attitudes towards green hotels to predict intention to visit green hotel. In this study, I am interested in predicting green behavioral intentions related to the three green products from general values and general attitudes not from attitudes specific to the three green products. Park, Kim, and McCleary (2014) took a similar approach and used top management's general environmental attitudes to predict companies' environmental behavior.

As mentioned before, theoretical studies that center on macro levels of environmental behavior would help to advance our knowledge in regards to environmentally related hospitality research. A good example of a theory that focuses on macro levels of environmental behavior, as asserted by Myung et al. (2012) in their review, is the value-belief-norm theory of environmentalism (Stern, 2000; Stern & Dietz, 1994; Stern et al., 1999). Schwartz's values

theory (1992) focusing on general values influencing attitudes and behavior serves as another great example. From the literature review, it appears that there is a strong need to develop a comprehensive conceptual framework, which would allow researchers to understand the deeper facets of green consumer behavior. This framework needs to be tested for different green products beyond mere hospitality products. In addition, it is crucial that this comprehensive framework explains the root and the process of forming these environmental behavior or behavioral intentions in the context of different products.

Understanding the Value Concept

The influence of human values in explicating pro-environmental behaviors is apparent in the literature (e.g. Axelrod, 1994; Clark, Kotchen, & Moore, 2003; Stern, 2000). Values are viewed as noteworthy because of their universal nature and thus may influence various beliefs, attitudes, and behaviors concurrently (De Groot, 2008; Rohan, 2000; Rokeach, 1973). Studies seeking to identify values that explain environmental attitudes and behavior are aplenty (e.g., Karp, 1996; McCarty & Shrum, 1994; Stern, Dietz, Abel, Guagnano, & Kalof, 1999). As such, the main theoretical lens applied to this study is Schwartz's (1992) values theory. According to this theory, values are "desirable, trans-situational goals, varying in importance, that serve as guiding principles in people's lives" (Schwartz, 1996, p. 2). Although Schwartz's (1992) values theory forms the base of this study, I use Stern's value classification to extend the inquiry. Stern (2000) asserted that three forms of values or value orientations are germane in regards to explaining pro-environmental behaviors – egoistic, altruistic, and biospheric values (see also, De Groot & Steg, 2007, 2008; Schultz, 2001; Schultz, 2002; Snelger, 2006; Steg, Dreijerink, & Abrahamse, 2005; Stern, Dietz, & Guagnano, 1995; Stern, Dietz, & Guagnano, 1998; Stern,

Dietz, & Kalof, 1993; Stern, Kalof, Dietz, & Guagnano, 1995). However, before proceeding further, it is useful to provide an overview of Schwartz's value concept and theory and explain the connection with the subsequent nomenclatures. As part of the overview, a detailed understanding of values is provided, which will help explain the value-attitude-behavior hierarchy.

Values have certain common features and differences. Schwartz (2006) summarized these characteristics based on works of various researchers (e.g., Allport, 1961; Feather, 1995; Inglehart, 1997; Kluckhohn, 1951; Kohn, 1969; Morris, 1956; Rokeach, 1973):

- Values refer to beliefs that are inherently connected to emotion.
- They are desirable goals that people strive to accomplish. As such, they are classified as a motivational construct.
- Values go beyond particular actions and situations. Values can be differentiated easily from norms and attitudes because of their abstract nature. Norms and attitudes, on the other hand, relate to actions, objects, or situations that are more precise.
- Values function as standards or decisive factors. In other words, values direct the choice or assessment of actions, policies, individuals, and events.
- Values are ranked by their relative significance. They involve a hierarchical attribute that differentiates from concepts such as norms and attitudes. The values that people have form a ranked structure of value priorities that seeks to illustrate people as individuals.
- The relative influence of values guides actions. More precisely, the tradeoff among relative competing values is what shapes attitudes and behavior.

Schwartz's Values Theory

Values are distinguished from one another by means of the nature of motivational goal being conveyed. A person might feel that a certain value is important to him. However, the same value can be completely unimportant to another person. Schwartz proposed a broad taxonomy of 56 values. These values might vary in their importance on a personal and cultural level. However, the core of these values is considered universal. In fact, studies undertaken across countries and diverse cultures established two broad facets of these values – self-transcendence vs. self-enhancement and openness to change vs. conservation (De Groot, 2008; Schwartz, 1994; Schwartz & Bardi, 2001; Schwartz et al., 2001).

The self-transcendence vs. self-enhancement dimension has universalism and benevolence values opposing power and achievement values whereas the openness to change vs. conservation dimension includes self-direction and stimulation values opposing security, conformity, and tradition values (Schwartz, 2006; Schwartz, Melech, Lehmann, Burgess, Harris, & Owens, 2001). It is worth mentioning that the hedonism value includes aspects of both openness and self-enhancement (Schwartz et al., 2001). Studies have affirmed that self-transcendent (i.e., altruistic or biospheric) compared to self-enhancement (i.e., egoistic) dimension is especially connected to environmental beliefs and behaviors, as environmental behavior generally entails a clash between short-term personal benefits and long-term collective concerns (De Groot & Steg, 2007; Nordlund & Garvill, 2002, 2003; Stern, 2000; Thøgersen & Ölander, 2002). Self-transcendence emphasizes serving the interests of others such as understanding, appreciating, tolerating all people (with no regard to their rank or status), motivation to look for social justice, and equality for all who want to be helpful, loyal, and

honest (Roccas, Schwartz, & Amit, 2010). Self-enhancement, on the other hand, defines individuals motivated to achieve social status and prestige, to control and dominate people and resources, to be considered successful, and to exhibit competence according to social standards (Roccas et al., 2010).

The self-transcendent value orientation has been shown to comprise both altruistic and biospheric values (De Groot, 2008). According to Stern and colleagues (Stern, 2000; Stern & Dietz, 1994; Stern et al., 1993; Stern et al., 1998), three distinct value orientations influence environmental beliefs and behavior – egoistic, social-altruistic, and biospheric. Egoistic values place emphasis on maximizing individual outcomes while social-altruistic values advocate a concern for the welfare of others, and biospheric values involve an inherent concern for the environment and the biosphere (De Groot, 2008). Furthermore, De Groot (2008) added that the majority of studies involving environmental behavior fail to incorporate a distinction of biospheric and altruistic value orientations (e.g. Bardi & Schwartz, 2003; Corraliza & Berenguer, 2000; McCarty & Shrum, 1994; Nordlund & Garvill, 2002; Stern & Dietz, 1994; Stern et al., 1998). The works of Stern and colleagues and De Groot and colleagues solve this conundrum.

De Groot and Steg (2007) developed a concise survey instrument to measure the three environmental values. The instrument consisted of values from Schwartz's value inventory that are conducive to understanding environmental beliefs and behavior. Similar to the approach of Stern et al. (1998), some biospheric values were added to the instrument as they were underrepresented in Schwartz's value inventory. By undertaking three separate studies, De Groot and Steg (2007) validated the distinction between three value orientations by applying

confirmatory factor analysis. The instrument was then validated using samples from five different countries.

Value-attitude-behavior Hierarchy

Values influence attitudes and behaviors. The social adaptation theory (Kahle, 1983; Kahle, Kulka, & Klingel, 1980; Piner & Kahle, 1984) describes values as a form of social cognition that facilitates an individual to acclimatize to his/her environment (Homer & Kahle, 1988). Both values and attitudes, as such, are adaptation constructs that materialize continually from the absorption, accommodation, organization, and amalgamation of environmental information (Kahle, 1983; Homer & Kahle, 1988). Values mirror the most elemental attributes of adaptation because they are the most abstract of the social cognitions. These abstractions operate as archetypes from which attitudes and behaviors are erected (Homer & Kahle, 1988). Cognitions, and hence values, direct a person about which conditions to go into and about how to behave in such situations (Kahle, 1980, Homer & Kahle, 1988). In retrospect, the effect in theory surges from abstract values to midrange attitudes to definite behaviors within a given situation (Homer & Kahle, 1988).

Homer and Kahle (1988) tested this causal link of values-attitudes-behavior empirically. Using survey data from food shopping, the researchers showed that values have internal and external facets that affect attitudes. Moreover, they also showed the influence of attitudes on behaviors, confirming the value-attitude-behavior hierarchy. Research has also confirmed the causal relationship of values on ensuing behaviors. For example, Williams (1979) contended that “actual selections of behavior result from concrete motivations in specific situations which are partly determined by prior beliefs and values of the actor” (p. 20). Among others, Carman (1978)

proposed a model of causal association between values and consumption behaviors. The numerous applications of the aforementioned theory of reasoned action and theory of planned behavior across various disciplines also confirmed the causal link between attitudes and behavioral intentions, which is considered as proxy of actual behavior.

The three values – biospheric, altruistic, and egoistic – lead to attitudes and behaviors as explained by the values theory and values-attitudes-behavior hierarchy. Behavioral intentions are used as a dependent variable in this study instead of actual behaviors. According to Fishbein & Ajzen (1975), volitional behaviors are caused by behavioral intentions, which refer to the likelihood to act. In other words, intention to act determines a behavior (Ajzen, 2005). Intention acts as the best predictor of behavior if measured precisely (Fishbein & Ajzen, 1975). In addition, the antecedents of behavioral intentions are more easily measured than that of behaviors (Phillips & Jang, 2012; Teng et al., 2013). Therefore, it makes better sense to use behavioral intentions as a proxy of actual behavior for the purpose of this study.

In summary, this study examines the values and corresponding attitudes that lead consumers to behave in an environmentally significant manner. As such, it is important to explore the underlying attitudes that may arise from these value orientations in the context of the three products used in this study – green hotel night, organic wine, and environment-friendly car.

Understanding Green Hotels

The green consumers started to emerge in the 1990s, which marked the beginning of the alleged green decade when environmentalism started to flourish on a global platform (Kirkpatrick, 1990). Since that time, the concept of green hotels has become quite eminent. The Green Hotels Association (2014) defines green hotels as “environmentally friendly properties

whose managers are eager to institute programs that save water, save energy, and reduce solid waste – while saving money – to help protect our one and only earth” (para. 8). In keeping pace with the increasing number of environmentally conscious customers, practitioners and marketers in the lodging industry are actively joining the environmental bandwagon and are trying hard to establish a green reputation for their facilities (Brown, 1996; Chan & Wong, 2006). However, the lodging industry is often criticized for the discrepancy between attitude and action; this is because of perceptions that some lodging companies acknowledge the importance of the ecology to their businesses but fail to implement corresponding environment friendly practices (Anguera, Ayuso, & Fullana, 2000; Graci & Dodds, 2008; Iwanowski & Rushmore, 1994; Pryce, 2001).

Several reasons are attributed to why this gap exists. First, the hotel industry thrives on opulence and sumptuousness. As such, the ideology and rationale behind green hotels are not clearly understood and applied (Iwanowski & Rushmore, 1994). Other factors such as cost, complexity, varied organizational structures, encumber the ability of individual companies to embrace environmental stewardship (Anguera et al., 2000; Graci, 2008; Henderson, 2007). Correspondingly, information asymmetry and the need to share best practices are a major obstruction (Graci, 2008). There is also the ubiquitous low regulatory pressure resulting from inadequate government policies concerning the tourism industry and limited attention on voluntary actions (Anguera et al., 2000; Graci & Dodds, 2008; Pryce, 2001). In addition, it is not erroneous to state that a hefty proportion of small and medium-sized lodging facilities do not necessarily notice the benefits of environment management (Pryce, 2001). Nevertheless, the growing trend towards green consumerism has continued to influence lodging companies’ strategy in a positive way.

It is reasonable to assume that the hospitality industry does not generate excessive amounts of pollution judging against many other industries such as mining and manufacturing. The hospitality industry also does not use excessive amount of nonrenewable resources. However, these do not necessarily indicate that the industry has negligible consequences on resources and the environment (Chan & Wong, 2006). According to Bohdanowicz & Martinac, (2003), in regards to environmental impact, the lodging industry is touted as the most detrimental sector within the hospitality industry, and can attribute as much as 75% of its harmful environmental effects to the use of non-durable goods, energy, and water, along with heavy discharges to air, water, and earth. The lodging industry consumes sizeable portions of energy, water, and produces great quantities of wastes because of the unique nature of its business and operational characteristics. The ensuing ecological impacts of hotel facilities are naturally of a bigger scale than that entailed by most other types of similarly sized buildings (Rada, 1996; Robinot & Giannelloni, 2010). Being one of the largest industries in the world, the impact the industry has on the environment is huge. This is why the hotel industry is always on the limelight when it comes to environmental stewardship.

The lodging industry with its large size and capability can certainly contribute hugely to environmental protection. It is therefore highly important that hotels adapt efficient “environmental management” practices for the sake of the environment. According to Calvache & Evra (2008), environmental management is defined as the “whole process by which the hotels define policies, strategies as well as develop environmental practices in order to reduce their negative impact on the natural environment” (p. 2). In other words, environmental management or green management refers to the procedures, practices, and initiatives that a business instigates

with the goal of plummeting, eradicating, and preferably thwarting detrimental environmental impacts that result from its operations (Cooper, 1998). The hotels that follow this process and endeavor to embrace environmental stewardship by efficiently using their resources such as energy, water, and materials while at the same time ensuring service quality are referred to as “green hotels” (Calvache & Evra, 2008). Green hotels are one such facility that can encourage consumers to be environment-friendly. Signs in hotels constantly remind guests to use less water, electricity, and to recycle wastes. Green hotels, therefore, not only contribute to environmental protection by establishing environmental practices but also encourage consumers to be ecologically conscious. The role of green hotels in facilitating environmental stewardship is thus colossal.

Practices, and Initiatives of Green Hotels

Hotels participate in the environmental bandwagon by implementing a range of practices that are considered environment-friendly. These practices can be categorized under the following headers: recycle of waste, waste management, clean air, energy and water conservation, environmental health, building permits, compliance with legislation and regulations, purchasing, and environmental education (Hsieh, 2012; Mensah, 2006). In hotels across the world, there are plenty of examples of green product and service related attributes. America’s Best Value Inns announced that it would transition to biodegradable packaging of toiletries (Watkins, 2010). Painting the roof of the building with a white coating that can deflect heat by 85% while reducing surface temperatures by 50%, is another example of a green initiative (Hsu, 2009). Greening the roof by planting a garden on the roof in order to reduce the greenhouse effect can be another effective way of going green (Easton, 2010). Among others, using glass pitchers

instead of water bottles to reduce or eliminate plastic is an initiative taken by many green hotels (Clausing, 2010).

In order to reduce the amount of paper used and recycled, several hotels such as The Bellagio and other MGM Resorts in Las Vegas are discontinuing placement of phone books in guest rooms (MGM Resorts International, 2010). By installing solar panels, hotels such as the Crowne Plaza Copenhagen are capturing the sun's energy in order to provide power to the hotel (Intercontinental Hotel Group, 2010). Purchasing towels and sheets that are Fair Trade certified is another way of going green (Butler, 2008). Another emerging initiative that many hotels are undertaking is recycling unused or partially used soap with Clean the World, an organization that collects, cleans, and distributes soap throughout the world (De Lollis, 2010). The Hyatt Regency Chicago through its efficient recycling and waste-reduction program recovered about 70% of recyclable materials, salvaged approximately \$120,000 worth of hotel items, and reduced waste-hauling costs by half (Enz & Siguaw, 1999).

Some hotels that provide robes and slippers to guests are no longer placing them in the room but rather asking guests to request them. This reduces laundry costs and impact, as typically robes are washed after each guest checks out regardless of whether the guest used the robe or not (Mayock, 2009). Marriott is purchasing room key cards made of 50% recycled plastic, pillows made from recycled bottles, and toilet paper rolls that do not have the cardboard center (GreenBiz.com, 2010).

The American Hotel & Lodging Association (2011) has on its website several eco-friendly case studies from member properties. By looking at these case studies, companies and guests can learn what initiatives the leading hotels are undertaking in an effort to become

environment-friendly. Accor, for example, is using creative building materials including low volatile organic compound paint and flooring made of recycled, graded hardwood. Accor also designed rooms where the air conditioning automatically switches off if windows are opened, louvers in foyers provide effective and natural airflow and energy savings, external awnings to guest rooms reduce radiated heat from direct sunlight, and black-out curtains block out light and absorb heat. In addition, Accor developed a gray water separation process, undertook treatment and reuse of water in toilets, irrigation, fire hydrants, and the sprinkler tank, and collected rainwater from gutters in the garden water storage tank for recycling. Along with these waste and reuse innovations, Accor addressed waste recovery and reduction by using worm farms to deal with organic fruit and vegetable waste producing fertilizer for the hotel's herb garden (Cortijo, 2003).

Kimpton Hotels and Resorts created a program called Earthcare that uses environmentally sensitive products and services and involved employees at all levels to encourage ideas for implementation (AH&LA, 2011). The Earthcare program has several components such as the use of nontoxic cleaning products, recycling both in the back of the house and the front of the house, and the use of organic food products (AH&LA, 2011). Marriott switched to an *ozone activated laundry* and other laundry systems and replaced 4,500 outdoor signs with LED and fiber optic technology. Guests can purchase carbon offsets and see their money donated to the Juma reserves in Amazonas, Brazil (Gunther, 2009).

The Fairmont Miramar, Santa Monica, California, has started to conserve water by stopping power washing the front driveway that saves 274,000 gallons of water (AH&LA, 2011). In another case, Trout Point Lodge in Canada has implemented a variety of sustainability efforts

into both the design and operations, including natural ventilation, no air conditioning in rooms and use of locally grown organic fruits and vegetables. Guest surveys show that 60% to 80% of the customers preferred this resort because of its green appeal (Tossell, 2009).

Aloft by Starwood is undertaking many innovations such as using recycled tires as entry carpet, wood floors made from recycled wood, dimming or automatic lighting in public areas, eco-friendly chemicals for cleaning, and saline pools to reduce the amount of chlorine that goes down the drain (AH&LA, 2011). In another case, one green Radisson hotel property unplugged the mini-refrigerators in all of its 142 guest rooms and placed proper signage to educate guests about this initiative and explained that the refrigerator could be used if the guest desired by simply plugging it in (AH&LA, 2011).

Several research studies used various green products and services prevalent the hotel industry. For example, Miller & Bologlu (2011) examined the environment-friendly features that customers look for in guestrooms. In their study, they used recycling policy, use of recycle bins in hotel rooms & lobby, towel policy, linen policy, shampoo amenities (individual bottles and refillable dispensers), green certification programs such as LEED, occupancy sensors to control lighting, key cards that control guestroom power, and the use of energy-efficient light bulbs as examples of green initiatives in hotels. In an earlier version of their study, they used low flow toilets, faucets, & showerheads, and refillable soap dispensers. In another case, Scanlon (2007) used energy management system, dishwashers using recycled water, auxiliary generators, grey water for irrigation, composting, community initiatives, and shuttle transportation for staff as real-life practices of hotels. Rahman et al. (2013) revealed consumers perceive three environmental practices as most important – using energy-efficient light bulbs, educating the

staff about environment protection and social responsibility, and recycle bins in the service area of the hotel. They also showed that leisure travelers appreciated environmental practices more highly than business travelers do.

Having understood the different green practices of green hotels, it is important we look into the underlying reasons or motivations behind implementing these practices.

Why Are Hotels Going Green?

Several reasons are attributed to why businesses are increasingly embracing environment-friendly practices. According to Bansal and Roth (2000), competitiveness, legitimation, and ecological responsibility, serve as the top three reasons behind an organization's environmental stewardship. A plethora of studies identified rationales and benefits of hotels' green endeavor. Among the many different reasons are financial gains, bolstering employee organizational commitment, public scrutiny, enhancing investor relations, and general social benefit (Gan, 2006; Juholin, 2004; Rahman et al., 2012). Newman and Breeden (1992) asserted that a hotel would reap several important benefits from instituting an effective environment management agenda. These include competitive advantage, media recognition, risk minimization, potential cost savings, and stakeholder endorsement and satisfaction (Newman & Breeden, 1992). Based on an extensive literature review, Park et al. (2014) contended that there are the four widespread benefits of environment management: enhanced stakeholder relations, better marketing benefits, improved operational efficiency and profits, and satisfied social responsibility. Another efficacious advantage of environment management is strengthening the relationship with the local community (Kirk, 1995). According to Bohdanowicz (2005) customers are the fundamental stakeholder that push practitioners to embrace environment friendly initiatives, as they are ever

more environmentally conscious. Along with the customer, the employee is another important organizational stakeholder (Buysse & Verbeke, 2003; Kirk, 1995).

Some other advantages deserve a mention. Marketing benefits such as corporate image and reputation serve as shining examples (Bohdanowicz, 2005; Kirk, 1995, 1998; Park et al., 2014). Kirk (1998) showed that marketing benefits over competitors are significant motivations for implementing environment management programs. Bohdanowicz (2005) revealed that improving the hotel image by means of relevant environmental practices is a key rationale behind introducing green programs in lodging facilities. Specific to hotel operations, reduced operating costs, and enhanced resource efficiency are overarching returns of environmental management initiatives (Bohdanowicz, 2005, 2006). In addition, social responsibility serves as a crucial motive for implementing environment-friendly practices in hotels (British Chamber of Commerce, 1996; Tzschentke, Kirk, & Lynch, 2004; Tzschentke, Kirk, & Lynch, 2008). In addition to all the aforementioned reasons, legal compliance is often found to be the foremost reason for operationalizing green initiatives (British Chamber of Commerce, 1996; Stabler & Goodall, 1997).

In broad terms, managers' decision to embrace green practices is derived by 1) a concern for the environment and 2) a profit motive. The first assumption is addressed by Hambrick and Mason's (1984) upper echelons theory. This theory stresses two points: "(1) executives act on the basis of their personalized interpretations of the strategic situations they face, and (2) these personalized construals are a function of the executives' experiences, values, and personalities" (Hambrick, 2007, p. 334). Park et al. (2014) applied this theory, along with the environment attitude-behavior premise and showed that top managers' environmental attitudes influenced

hotels' environmental management practices through perceived benefits of environmental management. The second assumption is simply the economic approach, which explains the firm's espoused behavior as a function of its performance (Delmas & Toffel, 2004). Under this assumption, the resource based theory of the firm serves as an overarching theoretical lens that describes the phenomenon by which internal dynamics such as competitive advantage and financial concerns stimulate the actions of a firm (Aragon-Correa, & Sharma, 2003; Hart 1995). Collectively, this research stream illustrates the conditions that are financially conducive to be green and establishes that managers demonstrate rational behavior when they espouse *beyond compliance* initiatives for those conditions (Delmas & Toffel, 2004; King & Lenox, 2001; Konar & Cohen, 1997; Russo & Fouts, 1997).

The second motivation relates to attracting ecologically conscious consumers – a market segment that is increasingly expanding since the onset of the “New Environmental Paradigm” (Catton & Dunlap, 1978) in the late 1970s, which increased the attention on the interface between society and the natural environment including the importance of environmental consciousness as a factor that can influence human behavior (Dunlap & Catton, 1979). According to Rahman, Reynolds, and Svaren (2012) and Bohdanowics (2005), one of the most important reasons of going green is the customer who acts as the central stakeholder for driving hotels to be environmentally friendly. Thus, hotel managers need to understand the dynamics of consumer behavior if they want to successfully implement an efficient environmental management system through successful ecological marketing.

The Ecologically Conscious Consumer

The premise of ecological marketing is that a segment of consumers exist who are motivated to buy environmentally safe products and who will respond to an ecological appeal (Henion, 1976). This segment of consumers is referred to as the ecological concerned consumers. This group of consumers consistently participates in environmentally friendly consumption and demonstrates ecological behavior through their actions. Ecological behavior refers to “actions which contribute towards environmental preservation and/or conservation” (Axelrod & Lehman, 1993, p. 153). The behavior of the ecologically concerned consumers can be explained by the means-end theory. The means-end approach is modeled as a chain that starts with the consumer’s perception of a product’s attributes, which leads to perceptions about the functional and then social and psychological consequences of the product’s use (Fotopoulos, Krystallis, & Ness, 2003). These perceived consequences are governed by the values that are personally relevant to the individual consumer, who will thus prefer products with attributes that help them achieve a desired end state that correspond with these personal values (Judica & Perkins, 1992).

Environmental attitude refers to “the collection of beliefs, affect, and behavioral intentions a person holds regarding environmentally related activities or issues” (Schultz, Shriver, Tabanico, & Khazian, 2004, p. 31). Attitudes concerning ecologically significant behavior and concern for the natural environment are established as robust predictors of environmental behavior (Hines, Hungerford, & Tomera, 1986; Kaiser, Oerke, & Bogner, 2007; Kaiser, Wölfling, & Fuhrer, 1999; Park et al., 2014). The environmental attitude construct has been viewed both as uni-dimensional and multidimensional in previous research (Milfont & Duckitt, 2004). The New Environmental Paradigm (NEP) scale traditionally operationalized the construct as one-dimensional (Dunlap & Van Liere, 1978; Dunlap, Van Liere, Mertig, & Jones,

2000; Milfont & Duckitt, 2004). Thompson and Barton (1994), on the other hand, offered a seemingly more plausible taxonomy of environmental attitude grounded in an ecocentric ethic (i.e., concern for all living things or in an anthropocentric ethic that represents concern for humans). This study uses Thompson and Barton's environmental attitude classification.

Anthropocentrism places humans above all with other life forms as important only to the degree they have an effect on humans or are of utility to humans (Kortenkamp & Moore, 2001; Thompson & Burton, 1994). In lieu of the anthropocentric logic, nature has moral concern because harming or protecting nature can in turn hurt or benefit humans (Kortenkamp & Moore, 2001). Thus, looking at the definition of anthropocentrism closely, it becomes evident that the root of such attitude stems from an inherent care towards humankind. Conversely, ecocentrism accords all non-human entities the same moral standing as human beings. The ecocentric ethic endows nature moral consideration because it is believed that nature has certain intrinsic and fundamental value associated with it (Kortenkamp & Moore, 2001). A good way to distinguish ecocentrism and anthropocentrism is by the excerpt provided by Thompson and Burton (1994, p. 150):

Ecocentrics will probably agree with anthropocentrics that ecological issues should be addressed so that health and quality of life can be preserved – the difference is that ecocentrics feel that even if these were not issues, nature is worth preserving because of the transcendental dimension.

While anthropocentrism needs further explanation, it is imperative to note that ecocentric attitudes stem from a biospheric value orientation, one that emphasizes the innate significance of the environment. As such, the following hypothesis is offered:

Proposition 1: Biospheric value significantly influences ecocentric attitude with stronger value causing stronger attitude.

Research has widely illustrated the consumer behavior angle of the ecologically concerned consumer. For example, Cook, Stewart, and Repass (1992) found that consumers who show environmental attitudes are willing to pay higher prices, spending about 8.5% extra for services and products from corporations that care about the environment. In a more recent study, it was established that consumers' environment-friendly attitudes are significantly related to their intentions to visit a green hotel, to spread word-of-mouth about a green hotel, and to pay a premium price for a green hotel (Han, Hsu, Lee, & Sheu, 2011). Bohdanowicz (2003) showed that 75% of hotel guests support and prefer eco-labeled hotels, with 25% willing to pay a premium. In another study, Kang et al. (2012) found that hotel guests with stronger environmental attitudes are willing to pay higher premiums for hotels' environment-friendly schemes. In an internal meta-analytic study of hedonic price premium, researchers found that guests could expect to pay \$9-\$26 premium for a standard room in green hotels (Kuminoff, Zhang, & Rudi, 2010).

It is apparent that there exists a large group of ecologically conscious consumers in the hospitality industry and they possess strong environmental attitudes. As a result they specifically choose a green hotel because of the hotel's environment-friendly appeal and they have greater expectations that the hotel is truly environment friendly than the average customer. Not only they choose the green hotel, they also actively demonstrate their *environmental attitude* by participating in the hotels' green practices such as recycling, towel and linen reuse programs, etc. Endorsing a green product can signal a certain level of sacrifice of quality or convenience from

the green consumers. For example, participating in a towel reuse program makes the customers reuse their towels, which is a sacrifice in terms of the convenience or luxury offered in a hotel.

In summary, a customer can purchase a night at a green hotel, sacrifice some convenience, luxury, and/or quality, and even pay a premium price to stay at a green hotel. This consumer behavior results from their ecocentric attitude, which in turn comes from their biospheric values. In addition, values directly influence behavior and behavioral intentions as contended by Schwartz's values theories. Biospheric values represent an inherent concern for the nature and environment. As such, biospheric values are expected to directly influence behavioral intentions related to the green hotel in the same manner as the ecocentric attitudes would have. Hence, I contend biospheric values would influence consumers' intention to visit, willingness to sacrifice, and willing to pay a premium positively.

Proposition 2: Biospheric value significantly influences green hotel visit intention with stronger value causing stronger intention.

Proposition 3: Biospheric value significantly influences willingness to sacrifice for green hotels with stronger value causing stronger willingness.

Proposition 4: Biospheric value significantly influences willingness to pay more for green hotels with stronger value causing stronger willingness

Proposition 5: Ecocentric attitude significantly influences green hotel visit intention with stronger value causing stronger intention.

Proposition 6: Ecocentric attitude significantly influences willingness to sacrifice for green hotels with stronger value causing stronger willingness.

Proposition 7: Ecocentric attitude significantly influences willingness to pay more for green hotels with stronger attitude causing stronger willingness.

Altruistic Values, Altruism, and Helping Attitudes

Altruism is regarded as a personal value that can guide human behavior (Schwartz & Bilsky, 1987; Stern, Dietz, Kalof, & Guagnano, 1995). Altruism involves an innate concern about the wellbeing of the society and its inhabitants (Stern, Dietz, & Kalof, 1993). More precisely, altruism refers to the act of doing something good for others without expecting anything in return (Rushton, 1980; Teng et al., 2013). Altruistic values have been found to be stronger among individuals who partake in pro-environmental initiatives (Dietz, Stern, & Guagnano, 1998; Karp, 1996; Stern 2000; Stern & Dietz, 1994; Stern, Dietz, Kalof, & Guagnano, 1995). As such, altruism positively correlates with environmentally responsible consumer behavior (Straughan & Roberts, 1999; Teng et al., 2013). Altruistic motives are essential for people to behave responsibly towards the environment as it is considered to be a public good (Heberlein, 1972; Stern, 2000). Traditionally, theories of altruism or altruistic values were used to explain pro-environmental behavior. Schwartz's (1973, 1977) moral norm-activation theory of altruism asserts that altruistic and/or pro-environmental behavior occur as a reaction to personal moral norms that are stimulated in individuals who deem that certain situations may associate certain threats to others and their actions could necessarily forestall those adverse consequences.

In the hospitality literature, altruism has often been found to motivate hotel firms to embrace environmental stewardship (Ayuso, 2006; Rivera & De Leon, 2005). Teng et al. (2013) recently included the altruism construct in the theory of planned behavior framework and

successfully predicted green hotel visit intention. In this study, I use Schwartz's value theory with Stern's classification and the value-attitude-behavior hierarchy to postulate that altruistic values can give rise to certain attitudes and behavioral intentions directly.

Batson and Coke (1981) proposed that altruism could be an antecedent to attitude. In addition to influencing behavioral intentions directly, altruistic values can cause certain types of attitudes that in turn will influence behavioral intentions. Anthropocentric attitude is one such attitude. Looking at the concept of anthropocentrism closely, it becomes evident that the root of such attitude stems from an inherent care towards the overall humankind. It can be inferred that anthropocentric attitudes come from altruistic values as the latter also involves caring towards people in general.

Proposition 8: Altruistic value significantly influences anthropocentric attitude with stronger value causing stronger attitude.

Another attitude that stems from altruistic value is a general helping attitude. Helping attitudes refer to peoples' general helping tendencies. Researchers have long considered the likelihood of an intrinsically altruistic or helping personality (Batson, 1991) and its influence on pro-social and pro-environmental behavior. Several scholars have attempted to devise a scale that measures general helping traits. Rushton, Chrisjohn, and Fekken (1981) devised the Self-Report Altruism Scale (SRA) that measures helping or altruistic characteristics of individuals derived from the frequency of their helping behaviors. Romer, Gruder, and Lizzadro (1986) developed the Helping Orientation Questionnaire (HOQ) that measures four different helping orientations: altruistic, receptive giving, inner sustaining, and selfish. Two scholars developed scales that measure direct helping attitudes. Barber (1994) first devised a 20-item helping attitude

inventory, which measured such attitudes using 10 positive and 10 negative items on a bipolar scale. Similarly, Nickell (1998) developed the helping attitude scale (HAS), which is a Likert Scale measuring the positive and negative attitudes toward helping others.

Referring back to my review of green hotels, it was suggested that green hotels' environment-friendly initiatives not only protect environmental resources but also reduce expenses for the hotel operators. Since green hotels are facilitating the environmental agenda, consumers might view cost savings for the hotel operators favorably. Even after knowing about green hotels' cost savings through environment-friendly initiatives, consumers, in general, are willing to pay a premium price for a night at a green hotel. It is most likely because of their altruistic values and helping attitudes. Altruistic consumers' would want to help hotel operators save money as they might view the cost savings as a reward for a good cause such as protecting the environment. Altruistic consumers, therefore, would most likely patronize green hotels, sacrifice certain levels of luxury and convenience, and would even pay a premium price. Thus, consumers' altruistic values and helping attitudes might cause them to demonstrate these green behavioral intentions.

Proposition 9: Altruistic value significantly influences helping attitude with stronger value causing stronger attitude.

Proposition 10: Altruistic value significantly influences green hotel visit intention with stronger value causing stronger intention.

Proposition 11: Altruistic value significantly influences willingness to sacrifice for green hotels with stronger value causing stronger willingness.

Proposition 12: Altruistic value significantly influences willingness to pay more for green hotels with stronger value causing stronger willingness.

Proposition 13: Helping attitude significantly influences green hotel visit intention with stronger attitude causing stronger intention.

Proposition 14: Helping attitude significantly influences willingness to sacrifice for green hotels with stronger attitude causing stronger willingness.

Proposition 15: Helping attitude significantly influences willingness to pay more with stronger attitude causing stronger willingness.

Egoistic Values and Status Consumption

It is a known fact that individuals are for the most part susceptible to the social and reputational facets of their behaviors in regards to conservation and cooperation (Bateson, Nettle, & Roberts, 2006). This is why people prefer to donate to environmental and social causes publicly (Milinski, Semmann, Krambeck, & Marotzke, 2006). This indicates that many consumers might patronize environment-friendly goods for social and reputational reasons. Socially oriented motives are often demonstrated to be powerful predictors of peoples' conservation efforts (Van Vugt, 2009). In self-report survey research, environmental and economic pleas are rated the highest for green product endorsements (Nolan, Schultz, Cialdini, Goldstein, & Griskevicius, 2008). However, field experiments in hotels and residential communities reveal that people prefer to conserve more in response to pleas that consider the social side of protection, such as showing that others are undertaking conservation in similar

situations (e.g., Goldstein et al., 2008; Schultz, Nolan, Cialdini, Goldstein, & Griskevicius, 2007). This stems from the importance people give to their social status and reputation.

According to the costly signaling theory, an altruistic act communicates more than a person's pro-sociality, i.e., an individual's aptitude to sustain costs (Zahavi, 1975). In essence, an individual's ability to incur costs for the society and environment in a social setting helps to bolster the person's standing in the society. Among the social motives is the pervasive and influential desire for social status (e.g., Amaldoss & Jain 2005; Charles, Hurst, & Roussanov 2009). Status refers to the position or rank in society granted to an individual by others (Dawson & Cavell, 1987). Thus, consumers often use, display, and consume goods and services as a means of gaining social status (Mason, 1981).

Studies have shown that engaging in pro-social behaviors helps to enhance a person's reputation (Semmann, Krambeck, & Milinski, 2005; Wedekind & Braithwaite, 2002). A person's helpfulness and caring nature in a group towards other group members often establishes the reputation of that person as a good team player. As a result, such people are often more sought-after as a team member, friend, companion, colleague, or even romantic partner (Cottrell, Neuberg, & Li, 2007; Griskevicius et al., 2007; Iredale, Van Vugt, & Dunbar, 2008; Stiff & Van Vugt, 2008). It has been shown that people undergoing self-sacrifices for group welfare are often admired by their peers to the point that they are often chosen as leaders (Gurven, Allen-Arave, Hill, & Hurtado, 2000; Hardy & Van Vugt, 2006). This indicates that pro-sociality can very well be a feasible strategy to attain status in a community (Griskevicius et al., 2007). Politicians illustrate this point well.

Marketing managers and their observers often focus on the status of their brands and on the status-seeking motives of their consumers (e.g., Gardyn, 2002; Wetlaufer, 2001). Their goal is to make the consumers engage in status consumption. Status consumption refers to the phenomenon by which “individuals strive to improve their social standing through conspicuous consumption of consumer products that confer or symbolize status for both the individual and surrounding others” (Eastman, Goldsmith, & Flynn, 1999, p. 42). Similarly, O’Cass and Frost (2002) state that status consumption “is the process of gaining status or social prestige from the acquisition and consumption of goods that the individual and significant others perceive to be high in status” (p. 68). There appears to be a perceptible link between egoistic values and status consumption attitudes. Egoistic values consist of a commitment to maximize personal well-being and one's own outcomes. Then again, an individual shows status consumption tendencies as a way to increase his self-worth in society. As such, a person with stronger egoistic values would mostly reflect stronger status consumption attitudes.

Recent research has revealed that status motives influenced green product patronization. Griskevicius et al. (2010) conducted experiments in which consumers chose green products over their more lavish non-green counterparts when status motives were elicited. This is indeed puzzling because status has been conventionally associated with a desire for sumptuousness and self-indulgence (e.g., Rucker & Galinsky, 2008; Sadalla & Krull, 1995). Griskevicius et al. (2010) included three different products in their experiment – a car, a dishwasher, and a household cleaner. By using costly signaling theory, Griskevicius et al. (2010) revealed that environment-friendly products could express to other consumers that their owners have the capability and will to endure the cost of owning a commodity that has environmental and societal

merits but may be substandard for their own personal use. As such, consuming an environment-friendly product can lead to a person's status and reputational enrichment. In a later study, Sexton and Sexton (2013) established this phenomenon as a modern variant of wealth signaling, touting it as conspicuous conservation or green signaling. According to them:

In a theoretical model of green signaling, intrinsic motivations make purchases of impure environmental public goods more valuable to those with preferences for environmental protection than those without, allowing for inference about individual characteristics based on consumption behavior. Status, then, is attained by consumption of conspicuous green products and its value is increasing in the strength of environmental preferences one's peers (Sexton & Sexton, 2013, p. 18).

These effects should hold true in regards to green hotels. Indeed, studies have shown that considerably higher levels of conservation (e.g., participating in linen and terry use programs) are generated by providing information about preservation behaviors of other hotel guests, thereby making the conservation effort more socially conducive (e.g., Goldstein et al., 2008; Griskevicius et al., 2010; Schultz, Nolan, Cialdini, Goldstein, & Griskevicius, 2007).

In summary, by endorsing a green hotel, a person is likely to bolster his reputation in the social context. For the same reason, a person may well be willing to sacrifice some form of luxury, convenience, and value by choosing a green hotel over its non-green counterparts. He might also be prepared to pay a premium price for achieving the intended benefits. As egoistic values consist of a commitment to maximize personal well-being and one's own outcomes, improving a person's social status serves the purpose. It might be argued that hotel purchase decisions tend to be private consumption experiences and as such might not really enhance a

person's social status. However, in this modern world of social network services such as Facebook, Twitter, and Instagram, coupled with the increased use of smartphones, a person has the opportunity to readily make his green hotel consumption experience public with the click of a few buttons. Moreover, the green hotel consumption experience would most likely add to a person's self-satisfaction since he is engaging in environment-friendly activities. This would likely contribute to improving a person's well-being. As such, we propose the following hypotheses:

Proposition 16: Egoistic value significantly influences status consumption attitude with stronger value causing stronger attitude.

Proposition 17: Egoistic value significantly influences green hotel visit intention with stronger value causing stronger intention.

Proposition 18: Egoistic value significantly influences willingness to sacrifice for green hotels with stronger value causing stronger willingness.

Proposition 19: Egoistic value significantly influences willingness to pay more for green hotels with stronger value causing stronger willingness.

Proposition 20: Status consumption attitude significantly influences willingness to pay more for green hotels with stronger attitude causing stronger willingness.

Proposition 21: Status consumption attitude significantly influences green hotel visit intention with stronger attitude causing stronger intention.

Returning to the discussion of anthropocentrism, a strong connection between anthropocentric and egoistic value is evident. According to Thompson and Burton (1994), egoistic and social-altruistic values are analogous to anthropocentric attitudes because they both

center on the outcome for humans. As such, a positive relationship is expected between egoistic value and anthropocentrism. Similarly, a positive relationship is expected between anthropocentrism and green hotel behavioral intentions. Patronizing green hotels would likely benefit people by enhancing their status as theorized by green signaling. For the same underlying reason, consumers would likely be willing to pay more and undergo sacrifices. As such, the following hypotheses are offered:

Proposition 22: Egoistic value significantly influences anthropocentric attitude with stronger value causing stronger attitude.

Proposition 23: Anthropocentric attitude significantly influences green hotel visit intention with stronger attitude causing stronger intention.

Proposition 24: Anthropocentric attitude significantly influences willingness to sacrifice for green hotels with stronger attitude causing stronger willingness.

Proposition 25: Anthropocentric attitude significantly influences willingness to pay more for green hotels with stronger attitude causing stronger willingness.

All these propositions lead to the following conceptual model:

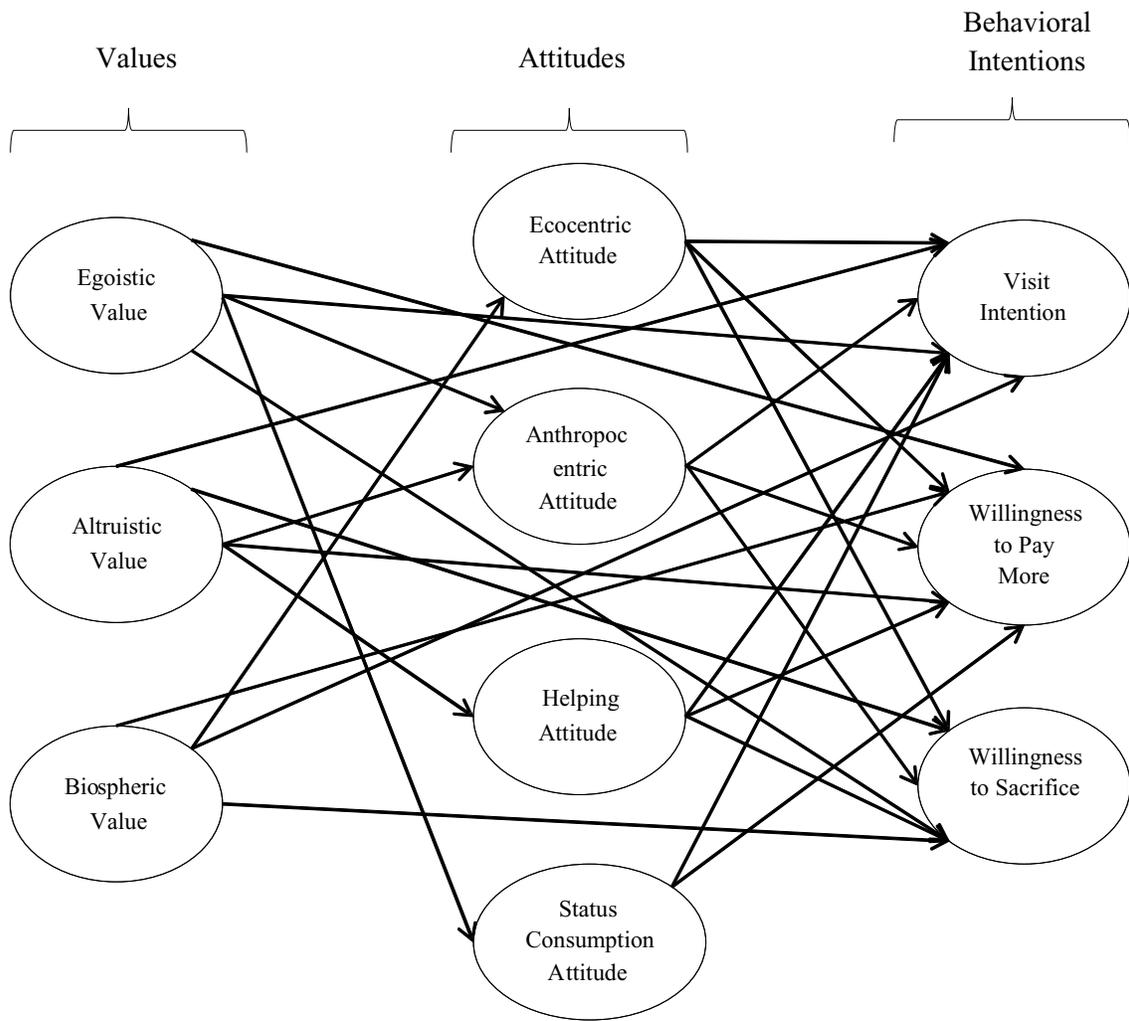


Figure 1: Conceptual model – The Green Hotel

Organic Wines

The second product considered in this study is organic wine. Organic farming and production methods utilize natural, organic inputs and sustainable technologies to bring products to the marketplace. Organic agricultural production omits the use of manufactured or ‘artificial’

chemical fertilizers and pesticides to reduce pollution and improve the quality of the soil and the produce it yields (Reed, 2010; Seyfang, 2007). In addition to improving and sustaining soil health, organic production reduces surface and groundwater pollution, promotes habitat and genetic diversity protection for wildlife, and preserves significant elements of the cultural landscape such as small farms (Biao, Xiaorong, Zhuhong, & Yaping, 2003). According to the United States Department of Agriculture (USDA), the term *organic* is used in product labeling to indicate that the product has been certifiably produced via approved methods that “integrate cultural, biological, and mechanical practices that foster cycling of resources, promote ecological balance, and conserve biodiversity” (USDA 2012, para. 1).

Consumers concerned with sustainable consumption appreciate eco-friendly packaging practices and organic products, which they perceive as fitting their sense of identity, attitudes, and personal values (Vermeir & Verbeke, 2006). Yiridoe, Bonti-Ankomah, and Martin (2005) undertook a detailed review of empirical studies that compared organic products and their normally grown equivalents. They found food safety and human health concerns, animal welfare considerations, and environmental concern as primary determinants of organic food purchase. Numerous studies have shown that consumers perceive organic products as healthier and of higher quality as well as being safer for the environment (Magnusson, Arvola, Hursti, Aberg, & Sjoden, 2003; Saba & Messina, 2003; Schifferstein & Oude Ophius, 1998; Williams & Hammit, 2001). Alongside the perceived health benefits of organic wine, drinking wine in moderation is considered beneficial to a person’s overall health. One particular study has shown that consuming alcohol about one drink a day or less entails a 14-25% less likely probability to develop heart disease compared to drinking no alcohol at all (Ronksley Brien, Turner, Mukamal,

& Ghali, 2011). Organic wines in addition to providing this benefit uses a pesticide free farming process and contains no added sulfites, which are commonly used as preservatives in non-organic wines. Thus, they are considered healthier than conventional wines.

In general, consumers are willing to pay a premium price for organic food. Organic wines are often associated with higher prices, between 25% and 30% above the costs of a conventional wine because of the higher costs of production as well as the higher utility they have for consumers who perceive them as superior in quality, healthier, and as more environment-friendly (Molla-Bauza et al., 2005). Research has shown that some consumers prefer organic over non-organic wines and that they are willing to pay a premium price for such products (Forbes, Cohen, Cullen, Wratten, & Fountain, 2009; Fotopoulos & Krystallys, 2001; Molla-Bauza et al., 2005). Forbes et al. (2009) found that around 73% of consumers indicated that they are willing to pay more for an environmentally sustainable wine. Molla-Bauza et al. (2005), in their analysis of Spanish consumers, found that on an average they are willing to pay a premium price of \$16.92. The same study also found that consumers concerned with a healthy lifestyle are willing to pay more for an organic wine than consumers concerned with environment and food/diet. Since consumers are paying a premium price for organic wines, they are sacrificing a traditional wine of higher quality, greater vintage, or a better brand for the same price. This shows they are making a sacrifice when they are purchasing an organic wine.

It is expected that the value-behavioral intention link and the attitude-behavioral intention link that were postulated for green hotels would prevail for organic wines. Studies have identified environmental concern as a major determinant of organic food purchase decisions (Grunert & Juhi, 1995; Hutchins & Greenhalgh, 1997), along with concerns for health (Goldman

& Clancy, 1991; Schifferstein & Oude-Ophuis 1998) and animal welfare (Harper & Makatouni, 2002; Hughes, 1995; Tregear, Dent, & McGregor, 1994). These studies provide important insights into consumer behavior. Specifically, this indicates consumers with a biospheric value orientation might prefer organic products such as organic wines because they are environmentally friendly. The same holds true for consumers with high ecocentric attitudes. However, it is important to note that ecocentric and anthropocentric attitude were not found to influence organic wine preferences once consumers were permitted to taste the wine (Rahman, Stumpf, & Reynolds, 2014). The experimental study of Rahman et al. (2014) revealed that once consumers tasted the wines, only taste influenced their wine repurchase intention but not the consumers' ecocentric or anthropocentric attitudes.

Proposition 26: Biospheric value significantly influences organic wine purchase intention with stronger value causing stronger intention.

Proposition 27: Biospheric value significantly influences willingness to sacrifice for organic wine with stronger value causing stronger willingness.

Proposition 28: Biospheric value significantly influences willingness to pay more for organic wines with stronger value causing stronger willingness.

Proposition 29: Ecocentric attitude significantly influences organic wine purchase intention with stronger attitude causing stronger intention.

Proposition 30: Ecocentric attitude significantly influences willingness to sacrifice for organic wines with stronger attitude causing stronger willingness.

Proposition 31: Ecocentric attitude influences willingness to pay more for organic wines with stronger attitude causing stronger willingness.

It is anticipated that altruistic values and anthropocentric attitudes and helping attitudes would lead to behavioral intentions related to organic wine in the same way as in the case of green hotels. Studies have determined concerns for health (Goldman & Clancy, 1991; Schifferstein & Oude-Ophuis 1998) and animal welfare (Harper & Makatouni, 2002; Hughes, 1995; Tregear et al., 1994) to be important predictors of organic food purchase decisions. Hence, anthropocentric attitudes would lead to organic wine purchase intentions since organic wine farming procedures are environment-friendly and conducive to health. Thus, endorsing organic wines means caring for nature as well as the welfare of humans and animals. The overall health and welfare benefits of organic wines might cause people to purchase these wines based on their altruistic values and helping attitudes as well. Similarly, consumers would want to pay a premium price and in the process, sacrifice similarly priced non-green wines of higher quality. Consumers would want to support the organic wine manufactures and farmers in general because of the various benefits of such products including health, environment-friendless, and animal welfare. Farmers and manufacturers are not typically saving additional money through organic wine cultivation and manufacture process. However, in green hotels, managers normally save additional costs through green practices and through the active participation of consumers in initiatives such as towel reuse programs and by means of various signs reminding the consumers to recycle, re-use, and be more mindful. In fact, compared to normal methods, production of organic wines costs about a third more (Crescimanno, Ficani, & Guccione, 2002). This shows the differing nature of the two green products; however, it is anticipated that the effect on consumers' wine-related behavioral intentions resulting from the altruistic value and helping

attitude would be similar to green hotels because both products are good for the environment compared to their non-green counterparts. Therefore, the following hypotheses are offered:

Proposition 32: Altruistic value significantly influences organic wine purchase intention with stronger value causing stronger intention.

Proposition 33: Altruistic value significantly influences willingness to sacrifice for organic wines with stronger value causing stronger willingness.

Proposition 34: Altruistic value significantly influences willingness to pay more for organic wines with stronger value causing stronger willingness.

Proposition 35: Anthropocentric attitude significantly influences organic wine purchase intention with stronger attitude causing stronger intention.

Proposition 36: Anthropocentric attitude significantly influences willingness to sacrifice for organic wine with stronger attitude causing stronger willingness.

Proposition 37: Anthropocentric attitude significantly influences willingness to pay more for organic wine with stronger attitude causing stronger willingness.

Proposition 38: Helping attitude significantly influences organic wine purchase intention with stronger attitude causing stronger intention.

Proposition 39: Helping attitude significantly influences willingness to sacrifice for organic wines with stronger attitude causing stronger willingness.

Proposition 40: Helping attitude significantly influences willingness to pay more for organic wines with stronger attitude causing stronger willingness.

It is expected that status consumption attitudes would influence consumers to patronize an organic wine in the same way it would influence visiting a green hotel. Wine has been widely

regarded as a conspicuous consumption good (Podolny, 2005; Veblen, 1953). It is a known fact that organic wines cost much more than their non-organic counterparts. Purchasing such wines signals a person's pro-sociality and the ability to incur costs as per the costly signaling theory.

There is another important difference between organic wines and a green hotel night. Organic wines have a direct benefit to the self, which a green hotel night does not appear to have. For instance, organic wine is considered healthy as it utilizes a chemical free farming process and it does not contain added preservatives. Similarly, wine in general is considered good for the heart (Ronksley et al., 2011). As such, egoistic value orientation might lead consumers to purchase organic wines because of the product's health benefits to the self. These same underlying aspects would cause consumers to pay a premium for an organic wine. The purchase process also indicates consumers' willingness to sacrifice since they are paying a premium price for the organic wines. We, thereby, propose the following:

Proposition 41: Egoistic value significantly influences organic wine purchase intention with stronger value causing stronger attitude.

Proposition 42: Egoistic value significantly influences willingness to sacrifice for organic wines with stronger value causing stronger willingness.

Proposition 43: Egoistic value significantly influences willingness to pay more for organic wines with stronger value causing stronger willingness.

Proposition 44: Status consumption attitude significantly influences organic wine purchase intention with stronger attitude causing stronger intention.

Proposition 45: Status consumption attitude significantly influences willingness to sacrifice for organic wine with stronger attitude causing stronger willingness.

Proposition 46: Status consumption attitude significantly influences willingness to pay more for organic wine with stronger attitude causing stronger willingness.

Based on the discussed theories and proposed hypotheses, the following conceptual model is presented. Propositions 1, 8, 9, 16, 22, 26-46 are represented in this model:

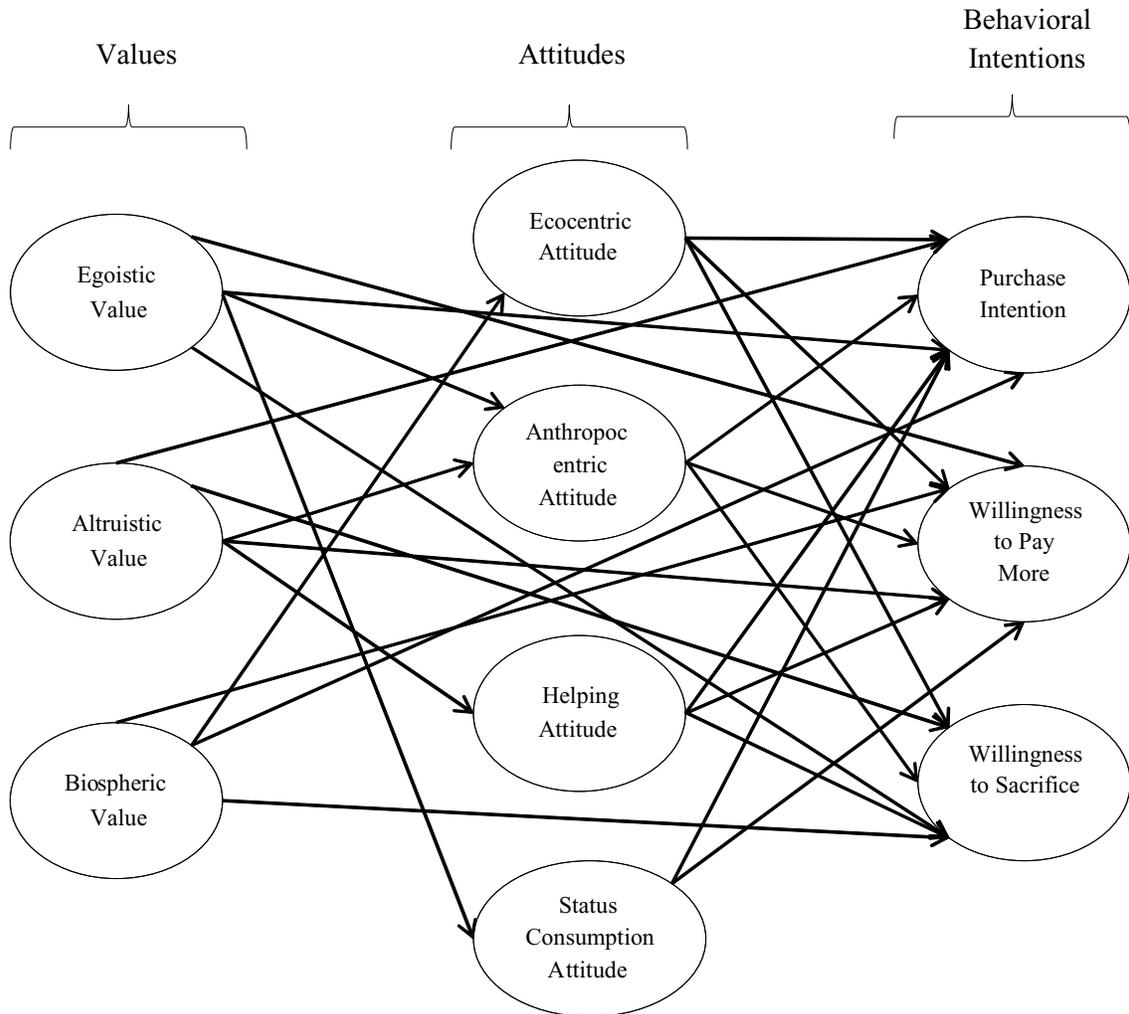


Figure 2: Conceptual Model – The Organic Wine

Environment-friendly Cars

A vehicle is referred to as hybrid if it utilizes more than one form of onboard energy to accomplish propulsion: a conventional internal-combustion engine and one or more electric motors (Edmunds, 2013). Electric vehicles, in comparison, are propelled exclusively by a single electric motor or multiple electric motors that are powered by rechargeable battery/batteries. These environment-friendly cars tend to provide more miles per gallon as they often combine two fuel sources – gasoline and battery or can also rely on a battery source alone. They, thus, consume less gasoline per mile and emit less pollution than comparable conventional gas-engine vehicles (Gallagher & Muehlegger, 2011). In a nutshell, these cars are more environmentally friendly, technologically advanced, and expensive than their non-green counterparts (Oliver & Lee, 2010).

Economic gain, technological interest, and environmental values are among the top reasons behind green car patronage (e.g., Heffner, Kurani, & Turrentine, 2007a; Heffner, Kurani, & Turrentine, 2007b; Klein, 2007; Ozaki & Sevastyanova, 2011). Consumers adopt environment-friendly cars, generally, in response to increases in gasoline expenses and government incentives, and as such, ownership of such cars is supposed to diminish energy consumption and improve energy security (Gallagher & Muehlegger, 2011; Ozaki & Sevastyanova, 2011). Among other motives are financial benefits and policy-related advantages (Ozaki & Sevastyanova, 2011). Policy related advantages can include income tax credits and deductions, state sales tax waivers, single-passenger accessibility to high-occupancy vehicle (HOV) lanes, and other applicable waivers such as costs associated with registration, emissions

testing, excise, and parking (Gallagher & Muehlegger, 2011). Research has also shown that reduced monetary costs and purchase tax relieves are two of the most important benefits of hybrid/electric car patronization (Potoglou & Kanaroglou, 2007). Consumers deem financial benefits, improving fuel-efficiency, and saving fuel costs in making their decisions in favor of such cars (Heffner et al., 2007a, 2007b; Klein, 2007). They even exchange larger and more expensive cars with smaller, lower-performance, and lower-cost hybrid/electric cars with the overarching objective of decreasing overall costs of ownership (De Haan, Mueller, & Peters, 2006; Klein, 2007). The prospect of driving in carpool lanes provides an additional advantage (Klein, 2007). These benefits are likely to stem from consumers' egoistic values, as they are personally advantageous to the consumer. One study revealed that 41% of Americans were willing to pay a premium for green cars (Ong & Hasselhoff, 2005). It was also revealed that households are prepared to pay between \$500 and \$1,200 to save \$100 in yearly maintenance costs, and \$2,200 to \$5,300 to save \$1,000 in annual fuel costs (Potoglou & Kanaroglou, 2007). Additionally, consumers are prepared to pay an additional \$2,000 to \$5,000 when purchasing a tax-free vehicle (Potoglou & Kanaroglou, 2007). It is anticipated that egoistic values would influence consumers to patronize a hybrid/electric vehicle because of their large advantages to the self. The same values would cause the consumers to pay a premium and sacrifice some form of luxury/convenience/performance. It is expected consumers would behave in the same way as it was anticipated in case of organic wine. However, the personal benefits in case of organic wines were health related. For the environment-friendly car, it is primarily economical.

Alongside direct financial benefits, green signaling and conspicuous conservation might also play a role here. Consumers have been found to use green cars as a medium to enhance their

status (e.g., Griskevicius et al., 2010; Sexton & Sexton, 2013). Although, this phenomenon has been elaborated in previous sections, it would be explored more explicitly in the context of hybrid/electric cars in the latter sections.

Proposition 47: Egoistic value significantly influences hybrid/electric car purchase intention with stronger value causing stronger intention.

Proposition 48: Egoistic value significantly influences willingness to sacrifice for hybrid/electric car with stronger value causing stronger willingness.

Proposition 49: Egoistic value significantly influences willingness to pay more for hybrid/electric car with stronger value causing stronger willingness.

According to Kahn (2007), ecologically concerned customers or *environmentalists* are more likely to buy environment-friendly vehicles than non-environmentalists in an attempt to save oil. As such, consumers with high biospheric values would consider purchasing hybrid/electric vehicles. These consumers are ecologically conscious, are concerned about protecting the environment, and are ready to reduce environmental impacts (Heffner et al., 2007a, 2007b; Ozaki & Sevastyanova, 2011). Ecocentric and anthropocentric attitudes both are likely to influence the purchase of environment-friendly automobiles. For instance, some consumers might choose hybrids over others because of their low emissions that aids in environmental conservation (Potoglou & Kanaroglou, 2007). Consumers are, in fact, willing to pay around \$2,000 to \$5,000 if their next vehicle has an emission percentage of only 10% of a regular vehicle (Potoglou & Kanaroglou, 2007). Others might purchase them based on their low fuel consumption, which helps to conserve oil, therein saving a finite resource for future generations (Ozaki & Sevastyanova, 2011). Thus, it can be because they care about the well-

being of human beings based on their altruistic values. They can also take a step to protect nature by saving its non-renewable resource because it is for the betterment of human beings. They might also be protecting nature through green cars' lower emissions because a healthy environment is good for humans. Consumers might also express their support to green car manufacturers purely on their altruistic values since the manufacturers are producing cleaner, economical vehicles and helping to protect our planet. A car manufacturer could produce environment-friendly vehicles, which substantially go beyond government fuel efficiency requirements, to boost their corporate social responsibility advertising and win consumer support (Siegel & Vitaliano, 2007). Consumers might express their endorsement of these companies by purchasing their green car.

The aforementioned values and attitudes would also most likely compel the consumers to sacrifice luxury and pay a premium. By purchasing hybrid in most instances such as in the case of the most common Toyota Prius consumers are settling for a "compact sedan with a small trunk, standard cloth seats, excellent gas mileage, and a sluggish engine" (Griskevicius et al., 2010; p. 392). With about the same amount of money they can actually buy a fully loaded version of Honda Civic or Toyota Corolla, which offer more power and luxury than the base model of Prius. Ecologically concerned consumers, thus, are keen to pay more for a car and sacrifice on performance, attributes, or comfort for the sake of environmental stewardship (Griskevicius et al., 2010). Consumers are also sacrificing a certain degree of luxury and comfort based on their egoistic values. As in the case of hybrids consumers are willing to settle for a car that ranks lower in performance and comfort in return for some personal benefits such as cost savings.

Proposition 50: Biospheric value influences hybrid/electric car purchase intention with stronger value causing stronger intention.

Proposition 51: Biospheric value influences willingness to sacrifice for hybrid/electric car with stronger value causing stronger willingness.

Proposition 52: Biospheric value influences willingness to pay more for hybrid/electric cars with stronger value causing stronger willingness.

Proposition 53: Altruistic value influences hybrid/electric car purchase intention with stronger value causing stronger intention.

Proposition 54: Altruistic value influences willingness to sacrifice for hybrid/electric car with stronger value causing stronger willingness.

Proposition 55: Altruistic value influences willingness to pay more for hybrid/electric car with stronger value causing stronger willingness.

Proposition 56: Ecocentric attitude influences hybrid/electric car purchase intention with stronger attitude causing stronger intention.

Proposition 57: Ecocentric attitude influences willingness to sacrifice for hybrid/electric car with stronger attitude causing stronger willingness.

Proposition 58: Ecocentric attitude influences willingness to pay more for hybrid/electric car with stronger attitude causing stronger willingness.

Proposition 59: Anthropocentric attitude influences hybrid/electric car purchase intention with stronger attitude causing stronger intention.

Proposition 60: Anthropocentric attitude influences willingness to sacrifice for hybrid/electric car with stronger attitude causing stronger willingness.

Proposition 61: Anthropocentric attitude influences willingness to pay more for hybrid/electric car with stronger attitude causing stronger willingness.

Oliver and Lee (2010) investigated US and Korean consumers' hybrid car purchase intentions. They found self-image congruence, tendency to seek information about green products, and perceived social value to have a strong positive relationship with purchase intentions in both South Korea and USA (Oliver & Lee, 2010). It was puzzling that among the top five reasons for Prius ownership, environmental consideration was ranked the lowest (Griskevicius et al., 2010). The foremost reason for purchasing the car was the fact that it makes a statement about the owner – it shows the world that he cares for the environment (Maynard, 2007). Apparently showing the world you care about the environment was seemingly more important than you actually care. Probably that is why the Honda Civic hybrid has not been as successful as the Toyota Prius, while sales of the regular Civic remain strong. This is most likely because the regular version of Honda Civic looks the same as the Honda Civic hybrid. On the other hand, the Toyota Prius is an exclusive hybrid model. It would be hard to tell by simply looking at the Civic that a person is driving a hybrid. As such, it is hard for people to show the world that they are driving a green car. Thus, it has more to do with *showing off* to the world that the owner cares whether or not the owner actually cares. It has to do with enhancing the owner's

status in the society. Indeed, Griskevicius et al. (2010) in applying costly signaling theory showed through experiments that consumers preferred the base Toyota Prius over a traditional and better equipped Honda Civic when status motives were elicited. Similarly, Sexton and Sexton (2013) demonstrated that consumers fancy the distinctively designed Toyota Prius significantly more compared to other even more luxurious hybrids in green communities and are even willing to pay a premium of \$430 to \$4,200 depending on the owner's location. This is because of green signaling stemming from a theory of conspicuous conservation, a phenomenon related to conspicuous consumption in which individuals seek status through displays of austerity amid growing concern about environmental protection (Sexton & Sexton, 2013). As such, it is expected that status consumption attitudes would predict consumers' environment-friendly car purchase intentions. Similarly, it would also predict consumers' willingness to pay as an individual's ability to incur costs initiates a status signal as per the costly signaling theory.

Proposition 62: Consumers' status consumption attitude significantly influences hybrid/electric car purchase intention with stronger attitude causing stronger intention.

Proposition 63: Consumers' status consumption attitude significantly influences willingness to pay more for hybrid/electric car with stronger attitude causing stronger willingness.

The following conceptual model is put together for consumer behavior in regards to the environment-friendly car segment of this study. Propositions 1, 8, 9, 16, 22, and 27-63 are represented in this model.

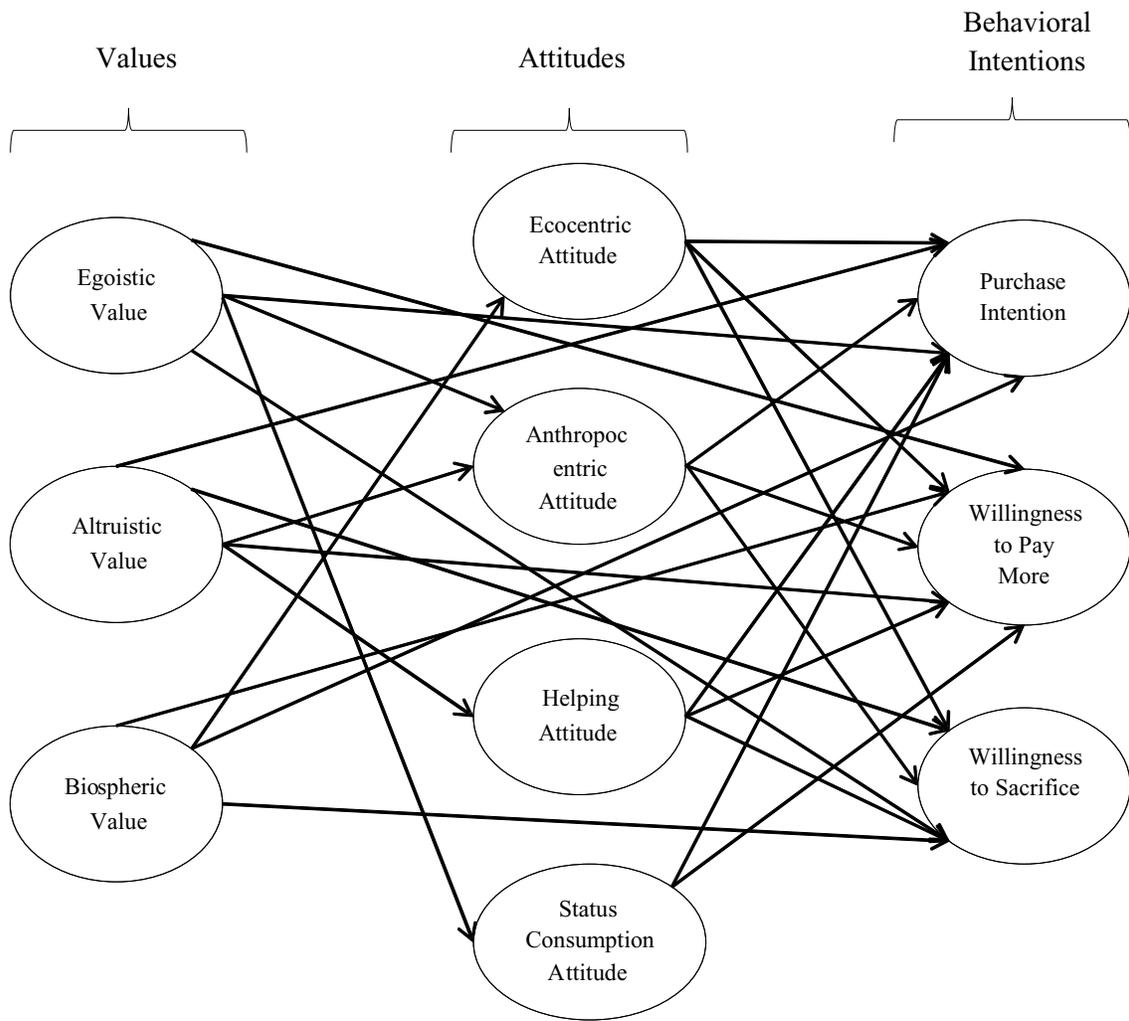


Figure 3: Conceptual Model – The Environment-friendly Car

The “Involvement” Factor

This study considers three products – green hotel, organic wine, and environment-friendly car. Having understood the various product characteristics, purchase motivations, and the expected consumer behavioral dynamics, it is important the concept of involvement is looked

into to provide a better understanding of the differences between the three green products. In effect, the concept of “involvement” can be used to differentiate among these three green products. Researchers consider consumers to be *involved* with a product when the product is perceived as addressing or corresponding to something of considerable value or central importance in their lives (Vermeir & Verbeke, 2006). Individual consumers tend to differ in their decision processes depending on the extent of their involvement with a product (Laurant & Kapferer, 1985). For example, involvement was found to positively influence consumers’ willingness to pay a premium price (Amendah & Park, 2008; Vlosky, Ozanne, & Fontenot, 1999).

Zaichkowsky (1986) classifies involvement into three categories: the *personal* (intrinsic interests, values, or needs that stimulate one towards an object), the *physical* (attributes of an object that entail differentiation and enhance interest), and the *situational* (something that momentarily increases the relevance of or interest in an object). Personal involvement entails that a person’s innate value system along with his distinctive experiences determine the degree of his involvement with an object (Zaichkowsky, 1986). Generally, involvement with something influences attitudes and behaviors relating to it (Slama and Tashchian, 1985). On a personal level, it is anticipated that the biospheric, altruistic, and egoistic values and the resulting attitudes would influence behavioral intentions related to these three products differently for different consumers. Although most of the hypothesized effects for the three different products would be similar in nature, their extent is predicted to vary. These variations may be due to the different physical characteristics of the products.

Involvement may vary depending on the physical characteristics of products. For instance, a green car is generally much more expensive than a bottle of organic wine and a night at a green hotel. The consumption period of a green car also is much more enduring. These products also vary in their purchase frequencies. People normally buy a car once in a number of years. As such, the purchase frequency for a green car is much less than an organic wine and a hotel night. Consumers might spend more time in researching a green car and in the process might become highly involved with the purchase situation or the product itself. Among other attributes, a green hotel night is a perishable product compared to a green car and organic wine. It is also much more dependent on the service quality of the provider. The nature of the consumption process also explains the distinctness of these three product types. Consumers use a car mainly for transportation, a hotel for accommodation, and a wine for its hedonistic benefits and sensation.

The variations that are expected in the results of this study also have to do with situational involvement. It is worthy to note that another important and widely used classification divides involvement into two types – product and purchase-decision involvement. Product involvement is commonly seen as two types – product importance (Lastovicka & Gardner, 1977) and enduring involvement (Block, 1981). According to Mittal (1989), “products that are hedonic or self-concept expressive evoke enduring involvement. In contrast, purely or largely functional or utilitarian products can be important without being enduringly involving” (p. 148). Purchase decision involvement, on the other hand, refers to “the extent of interest and concern that a consumer brings to bear upon a purchase decision task” (Mittal, 1989, p. 150). Purchase decision involvement serves as a good example of situational involvement. The type of involvement

exhibited in the purchase of a hotel night is more of this variety because most consumers will not have any enduring involvement in the hotel night but they would likely to be highly involved in the purchase process and have a high purchase decision involvement. The level of purchase decision involvement would also vary according to the type of consumers. Leisure travelers most likely would exhibit a higher purchase-decision involvement than business travelers. According to Mattila (1999), business travelers value any time savings in their hotel experience, while leisure travelers put more weight on the positive interactions with the hotel's staff. Leisure travelers also spend more time researching and reviewing the hotel and vacation spots (Fodness & Murray, 1997), which indicates that they are more involved in the purchase decision process than their business traveler counterparts are.

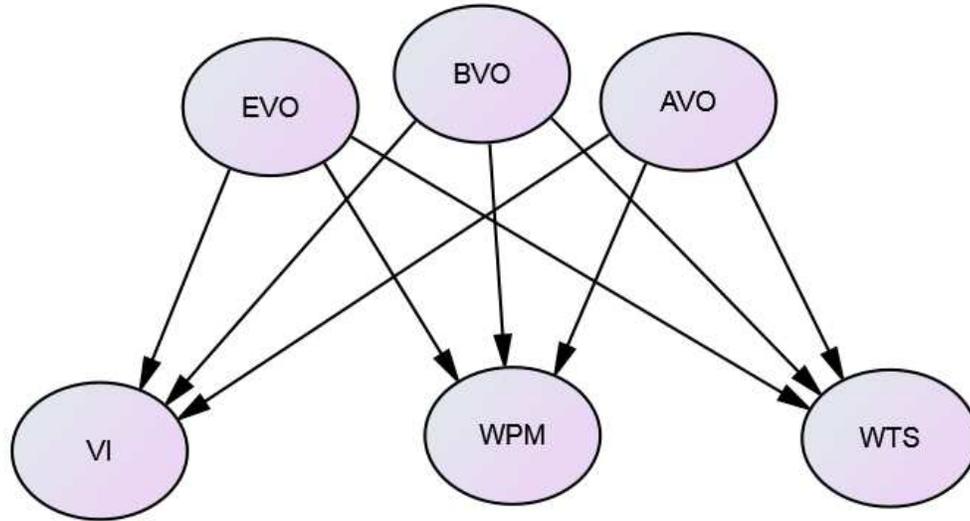
Understanding these differences in the context of involvement will aid in interpreting this study's results in a better way. Practitioners also need to understand these differences and together with this study's findings will be able to better design marketing campaigns that are more specific to product and consumer type.

Final Model and Hypotheses

Insofar, based on a comprehensive literature review, several propositions have been made and the conceptual models in regards to the three environmental products have been presented. However, as mentioned in the introduction section, due to the complexity of the models and availability of resources, only a part of those underlying models would be empirically tested and analyzed further. More specifically, the relationships between values and behavioral intentions will be empirically examined in the context of green hotel, organic wine, and environment-friendly car. The influence of biospheric, altruistic, and egoistic values on visit/purchase

intentions, willingness to pay more, and willingness to sacrifice will be investigated. In this section, the conceptual models and the related hypotheses are presented.

1. The Green Hotel Model



Note, EVO = Egoistic Value Orientation; AVO = Altruistic Value Orientation; BVO = Biospheric Value Orientation; VI = Visit Intention; WPM = Willingness to Pay More; WTS = Willingness to Sacrifice for Green Hotel.

Figure 4: Final Conceptual Model to be Empirically Tested – The Green Hotel Model

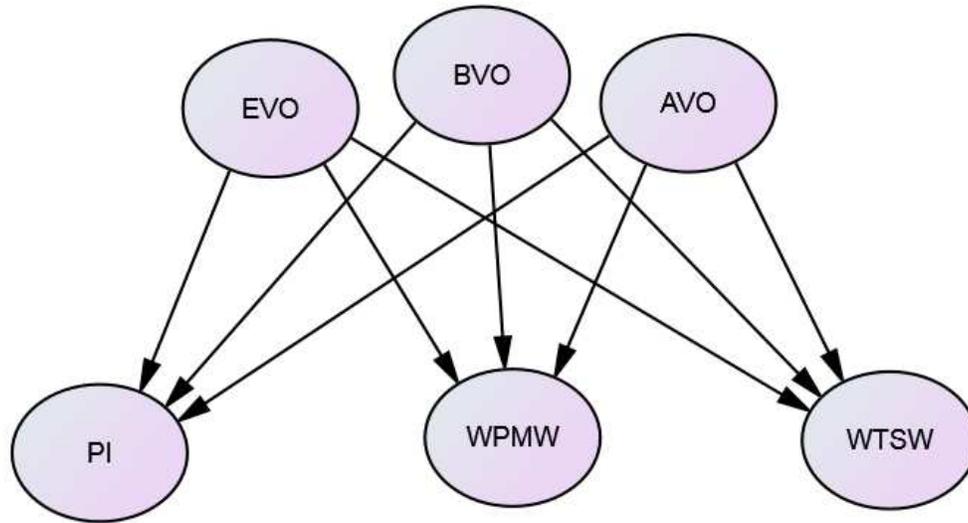
Hypotheses – The Green Hotel Model

Table 1: Hypotheses - The Green Hotel Model

Hypothesis	Description	Proposition
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#		#
1.1	Biospheric value significantly influences green hotel visit intention with stronger value causing stronger intention.	2
1.2	Biospheric value significantly influences willingness to sacrifice for green hotel with stronger value causing stronger willingness.	3
1.3	Biospheric value significantly influences willingness to pay more for green hotel with stronger value causing stronger willingness.	4
1.4	Altruistic value significantly influences green hotel visit intention with stronger value causing stronger intention.	10
1.5	Altruistic value significantly influences willingness to sacrifice for green hotel with stronger value causing stronger willingness.	11
1.6	Altruistic value significantly influences willingness to pay more for green hotel with stronger value causing stronger willingness.	12
1.7	Egoistic value significantly influences green hotel visit intention with stronger value causing stronger intention.	17
1.8	Egoistic value significantly influences willingness to sacrifice for green hotel with stronger value causing stronger willingness.	18
1.9	Egoistic value significantly influences willingness to pay more for green hotel with stronger value causing stronger willingness.	19

2. The Organic Wine Model



Note, EVO = Egoistic Value Orientation; AVO = Altruistic Value Orientation; BVO = Biospheric Value Orientation; PI = Purchase Intention; WPMW = Willingness to Pay More for Organic Wine; WTSW = Willingness to Sacrifice for Organic Wine.

Figure 5: Final Conceptual Model to be Empirically Tested – The Organic Wine

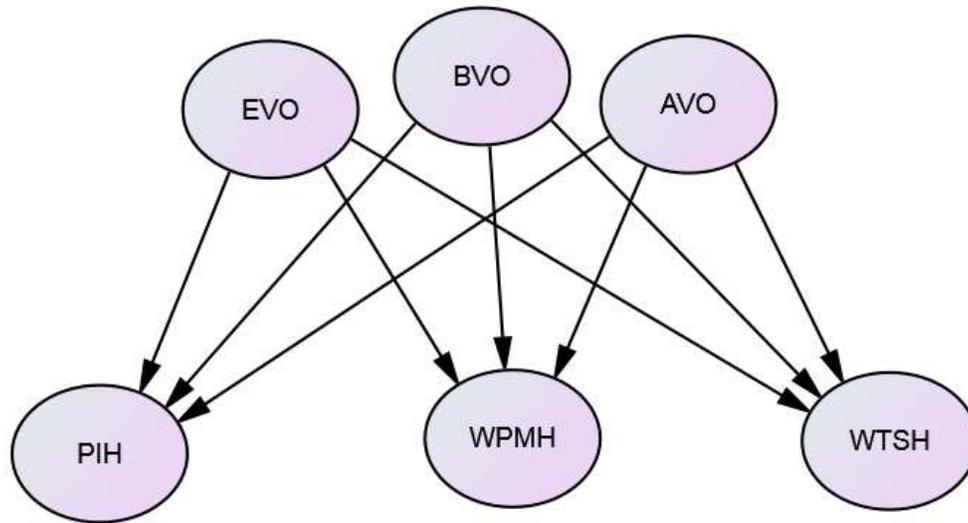
Hypotheses – The Organic Wine Model

Table 2: Hypotheses - The Organic Wine Model

Hypothesis #	Description	Proposition #
2.1	Biospheric value significantly influences organic wine purchase intention with stronger value causing stronger intention.	26
2.2	Biospheric value significantly influences willingness to sacrifice for organic wine with stronger value causing stronger willingness.	27

2.3	Biospheric value influences willingness to pay a more for organic wine with stronger value causing stronger willingness.	28
2.4	Altruistic value significantly influences organic wine purchase intention with stronger value causing stronger intention.	32
2.5	Altruistic value significantly influences willingness to sacrifice for organic wine with stronger value causing stronger willingness.	33
2.6	Altruistic value significantly influences willingness to pay more for organic wine with stronger value causing stronger willingness.	34
2.7	Egoistic value significantly influences organic wine purchase intention with stronger value causing stronger intention.	41
2.8	Egoistic value significantly influences willingness to sacrifice for organic wine with stronger value causing stronger willingness.	42
2.9	Egoistic value significantly influences willingness to pay more for organic wines with stronger value causing stronger willingness.	43

3. The Environment-friendly Car Model



Note, EVO = Egoistic Value Orientation; AVO = Altruistic Value Orientation; BVO = Biospheric Value Orientation; PIH = Purchase Intention Hybrid/Electric Car; WPMH = Willingness to Pay More for Hybrid/Electric Car; WTSH = Willingness to Sacrifice for Hybrid/Electric Car.

Figure 6: Final Conceptual Model to be Empirically Tested – The Environment-friendly Car Model

Hypotheses – The Hybrid/Electric Car Model

Table 3: Hypotheses - The Environment-friendly Car Model

Hypothesis #	Description	Proposition #
3.1	Egoistic value significantly influences hybrid/electric car purchase intention with stronger value causing stronger intention.	47

3.2	Egoistic value significantly influences willingness to sacrifice for hybrid/electric car with stronger value causing stronger willingness.	48
3.3	Egoistic value significantly influences willingness to pay more for hybrid/electric car with stronger value causing stronger willingness.	49
3.4	Biospheric value influences hybrid/electric car purchase intention with stronger value causing stronger intention.	50
3.5	Biospheric value influences willingness to sacrifice for hybrid/electric car with stronger value causing stronger willingness.	51
3.6	Biospheric value influences willingness to pay more for hybrid/electric car with stronger value causing stronger willingness.	52
3.7	Altruistic value influences hybrid/electric car purchase intention with stronger value causing stronger intention.	53
3.8	Altruistic value influences willingness to sacrifice for hybrid/electric car with stronger value causing stronger willingness.	54
3.9	Altruistic value influences willingness to pay a more for hybrid/electric car with stronger value causing stronger willingness.	55

CHAPTER THREE

RESEARCH DESIGN AND METHODS

“If we go on using the Earth uncaringly and without replenishing it, then we are just greedy consumers”. - Satish Kumar.

This study seeks to analyze consumer behavioral intentions in regards to three green products – green hotel night, organic wine, and environment-friendly car – based on consumers’ general values and attitudes. In the preceding chapter, the theoretical framework and research related to consumer behavior, hospitality, sociology, marketing, and psychology relevant to this study were presented. Based on the literature review, hypotheses were established that resulted in three conceptual models that are to be empirically tested. This chapter talks about how those three hypothesized conceptual models were investigated. As such, this chapter explains the methodology including research design, measures, and data analysis dynamics.

Research Design

This study is based on quantitative methodology employing a survey design. Based on a review of literature drawn primarily from hospitality, consumer behavior, marketing, psychology, and sociology fields, a conceptual framework was developed to address the interplay between general values, general attitudes, and green behavioral intentions. In total three conceptual frameworks were developed for the three different green products used in this study – green hotel night, organic wine, and environment-friendly car. In addition, several hypothesized relationships were developed to test the conceptual model. A survey instrument was then

developed employing measures of the constructs from related literature. The hypotheses developed to test the conceptual model were examined using Structural Equations Modeling.

Survey Instrument

The survey instrument was prepared and distributed using Qualtrics. Except willingness to sacrifice, all the measures were drawn from related literature. These measures have been widely used before and in this regard, they are considered valid and reliable. Ten graduate students were asked to read the final survey to examine their readability and to assure content validity. The services of Amazon MTurk was used for the purpose of this study. Most of the variables in this study were measured using a seven-point Likert scale that ranges from 1 (strongly disagree) to 7 (strongly agree) (see appendix for details).

Content Validity

Even though all our items barring willingness to sacrifice were from established and validated scales, the content validity of the items was double-checked by ten academics. Content validity indicates the extent to which the items of a research instrument are pertinent and representative of the underlying constructs for a specific measurement function (Haynes, Richard, & Kubany, 1995). The academics, consisting of graduate students and faculties, were asked to evaluate the extent of representation of the items (clearly representative, somewhat representative, not representative) of the associated constructs (Zaichowsky, 1985). Additionally, we also asked the pilot study participants, which numbered one hundred and twenty, to write their comments about the questionnaire.

Sample

The target sample size of this study is 400. The service of Amazon MTurk was employed to gather data. In order to identify the participants' minimum age, we considered two factors. First, the minimum drinking age in the US is 21. Second, it is important that participants are capable and experienced in making their purchasing decisions. On a related note, in many cases people under the age of 21 would most likely be pursuing college. So, 21 was determined to be a good lower age limit for the purpose of this study.

Amazon's Mechanical Turk (MTurk) provides an ideal set of criteria to conduct research: an integrated participant compensation system; a large participant pool; and a streamlined process of study design, participant recruitment, and data collection (Buhrmester, Kwang & Gosling, 2011). It is essentially a crowd-sourcing platform in which tasks, known as hits, are allocated to a population of unidentified workers for completion in exchange for compensation. Buhrmester et al. (2011) compared the quality of data obtained through MTurk to other sources. They contended that the data acquired via MTurk are at least as reliable as those gathered via conventional techniques are and that the participants are more demographically varied than are usual internet samples and typical American college samples.

Pilot Study

A pilot study was undertaken at a university in northwest USA. The survey was emailed to selected students in four courses in Hospitality Business Management. The survey was sent to about a 160 potential respondents. Those four classes typically enroll juniors and seniors above the age of 21 who received one extra credit point in their respective classes for completing the survey. The pilot study was conducted to assess the questionnaire's length, clarity, scale

reliability, and content validity. Prior to administering the pilot test, the survey was sent to ten academics to assess its face validity. Cronbach's alpha is calculated to measure the scale reliability for the factors identified, with 0.70 the minimum acceptable value (Hair, Black, Babin, & Anderson, 2009; Nunnally, 1978). If Cronbach's alpha is below 0.70, individual items may be deleted to obtain a higher reliability level.

Measures

Value Orientations

Value orientation measures were gathered from De Groot & Steg (2007). Their measures were derived from a short version of Schwartz's value scale (1992) envisaged by Stern et al., (1999). The scale consisted of thirteen value items: five items for the egoistic, four items for the altruistic, and four items for biospheric values. As per Schwartz's (1992) suggestion, participants were asked to rate the importance of these thirteen values "as a guiding principle in their lives" on a seven-point scale ranging from 1 *opposed to my values* to 7 *extremely important*. In addition, respondents were advised to vary the scores and to rate only few values as extremely important as per the instruction provided by Schwartz (1992).

Ecocentricism and Anthropocentrism Attitude

For the measure of ecocentricism and anthropocentrism, Thompson and Barton's (1994) scale was used. The ecocentricism and anthropocentric attitudes scale consisted of twelve items each. They are measured on a seven point scale (1 *strongly disagree* to 7 *strongly agree*).

Helping Attitude

Helping attitude was measured by a twenty-item scale developed by Nickell (1998). They are measured on a seven point scale (1 *strongly disagree* to 7 *strongly agree*).

Status Consumption Attitude

Status consumption attitude was measured using the five-item status consumption inventory by Eastman et al. (1999). They are measured on a seven point scale (1 *strongly disagree* to 7 *strongly agree*).

Intention to Visit a Green Hotel

The intention to visit a green hotel was measured by three questions used by Han et al. (2010). Teng et al. (2013) also used the same measure in a subsequent study. They are measured on a seven point scale (1 *strongly disagree* to 7 *strongly agree*).

Intention to Purchase Organic Wine

Intention to purchase organic wine was measured using three items using Oliver and Lee's (2010) items. The items were re-worded to fit the product that was measured. The first two items were measured on a seven point scale (1 *strongly disagree* to 7 *strongly agree*). The third item, "When you purchase your next wine, how likely are you to purchase an organic wine?" was measured on a seven-point scale that ranged from 1 *extremely unlikely* to 7 *extremely likely*.

Intention to Purchase Environment-friendly Car

Intention to purchase environment-friendly car was measured by three items. The same scale used by Oliver and Lee (2010) was employed in this study. The first two items were measured on a seven point scale (1 *strongly disagree* to 7 *strongly agree*). The third item, "When you purchase your next car, how likely are you to purchase a hybrid/electric car?" was measured on a seven-point scale that ranged from 1 *extremely unlikely* to 7 *extremely likely*.

Willingness to Pay More

Willingness to pay more for green hotel was measured using three items taken from Lee et al. (2010). The same three items are modified to reflect willingness to pay a premium price for hybrid/electric cars and organic wines respectively. Behavioral intention measures followed methodologies prevalent in the extant literature (e.g. Boulding, Kalra, Staelin, & Zeithaml, 1993; Cronin & Taylor, 1992; Zeithaml, Berry, & Parasuraman, 1996). They are measured on a seven point scale (1 *strongly disagree* to 7 *strongly agree*).

Willingness to Sacrifice

There is no good measure of willingness to sacrifice in the related literature. Thus, several questions were drafted to measure willingness to sacrifice. In regards to green hotels, three items measured consumers' willingness to sacrifice. The items included, "I am willing to sacrifice quality by staying at a green hotel", "I am willing to sacrifice convenience by staying at a green hotel", and "I am willing to sacrifice luxury by staying at a green hotel". Regarding, organic wines two items measured willingness to sacrifice. The items included, "I am willing to sacrifice wine quality by purchasing an organic wine" and "I am willing to sacrifice wine taste by purchasing an organic wine". Regarding green cars, willingness to sacrifice was measured by three items. These include, "I am willing to sacrifice luxury by purchasing a hybrid/electric car", "I am willing to sacrifice power/performance by purchasing a hybrid/electric car", and "I am willing to sacrifice quality features by purchasing a hybrid/electric car". They are measured on a seven point scale (1 *strongly disagree* to 7 *strongly agree*).

Demographics

The survey instrument also contained demographic questions. Questions were on participants' age, gender, education, ethnicity, and income. There were some questions related to participants' purchase behavior in this segment such as the approximate number of nights participants stay in hotels per year, the number of glasses of wine participants drink per week, and the number of miles participants drive per year.

Data Screening

Data screening was the first process of data analysis. The data was screened and cleaned to ensure their suitability for the subsequent analysis. First, the data set was examined for missing data, as non-random missing data process can bias the statistical results (Hair et al., 2009). Missing data indicates that some information is not available for a case whereas other information is available. The listwise deletion method was employed given that listwise deletion has been found to be more robust than other sophisticated methods (Allison, 2002). Graphical examination of the data was also conducted using box plots to detect any outliers.

Data Analysis Method

This study seeks to test the relationships among latent constructs that cannot be directly observed or measured. Structural Equations Modeling (SEM) was used to statistically examine the specified relationships between our latent constructs – the three general values constructs, and the three behavioral intentions. In SEM, unobservable latent variables are measured from observable indicator variables, focusing on the estimation of the relations among the latent variables without the influence of any measurement errors (Bentler, 1980; 1983; Bollen, 1989; Joreskog, 1973; Joreskog & Sorbom, 1979; Wang & Wang, 2012). Structural Equations Modeling has the capability to investigate how well the hypothesized model fits the data and

whether the identified structural relationships based on underlying theories are statistically significant. SEM integrates the measurement (factor analysis) and structural (path analysis) approaches (Wang & Wang, 2012). Factor analysis, especially confirmatory factor analysis (CFA) (the measurement model), specifies the relationships between the observed indicators and their posited underlying factors, whereas path analysis (the structural model) indicates the causal relationships amongst the latent variables as postulated by the underlying theories (Segars & Grover, 1993). By combining the two statistical methods, SEM overcomes the methodological limitations of factor analysis and path analysis. It is therefore a useful statistical tool for understanding the inter relationships among several latent variables.

It is a known fact that SEM requires a larger sample size compared to other multivariate techniques. This is because the estimation of sampling errors depends on the sample, and SEM statistical algorithms are unreliable with small samples (Hair et al., 2009). Opinions regarding the minimum sample sizes vary. According to Anderson & Gerbing (1988) a sample size of 150 is large enough to obtain a solution for models with more than three indicators per factor. However, Stevens (1996) recommends a sample size of at least 400 to avoid model misspecification. In general, when deciding on the sample size, the decisions must be made based on several factors, including multivariate normality, estimation technique, model complexity, amount of missing data, and the average error variance of the indicators (Hair et al., 2009). Taking all of these factors in to account, this study aimed at 400 completed questionnaires keeping in mind the 10:1 ratio of respondents to items as suggested by Hair et al. (2009).

There are various ways to evaluate a model's ability to represent the data. In this section, some of the most important measures used to assess the measurement and structural models of this study are explored.

Chi-square (χ^2)

In practice, the Chi-square values can be overly influenced by sample size. Hence, "findings of well-fitting hypothesized models, where the χ^2 value approximates the degrees of freedom, have proven to be unrealistic in most SEM empirical research" (Byrne, 2013). Models can be complex and often have a sample size that deems the Chi-square test less functional as a fit index (Hair et al., 2009). As such, the chi square is not recommended to be used as an indicator of goodness of fit between the model and the data (Byrne, 2013). Despite its vulnerability, it is common practice to report the Chi-square value and the model's degree of freedom (MacCallum & Browne, 1993). Taking into account the apparent limitations of the Chi-square statistic, other alternative goodness of fit indices are utilized to assess model fit. These measures are generally categorized into three clusters: absolute fit indices, incremental fit indices, and parsimony fit indices (Hair et al., 2009).

Absolute Fit Indices

The goodness-of-fit index (GFI) is a frequently used measure of absolute model fit. The GFI compares the hypothesized model with the null model. A value close to 1 indicates good fit (Hu & Bentler, 1995). Another frequently reported fit statistic is the root mean square error of approximation (RMSEA). In fact, RMSEA is well accepted as one of the most widely used indices in SEM (Byrne, 2013). RMSEA values less than .05 indicate good fit, those between .08

and .10 indicate mediocre fit, and those greater than .10 indicate poor fit (MacCallum, Browne, & Sugawara, 1996).

Incremental Fit Indices

Incremental or comparative fit indices evaluate how well the estimated model fits relative to the alternative baseline model (Hair et al., 2009). A CFI value greater than .90 usually suggests a well-fitting model (Bentler, 1992; Hair et al., 2009).

Parsimony Fit Indices

The parsimony fit indices indicate which model among a set of competing models best fits the data with respect to its complexity (Hair et al., 2009). A frequently used statistic is the parsimony normal fit index (PNFI). A high PNFI value represents a relatively better fit. The values range from 0 to 1, with 1 indicating a perfect fit.

It should be acknowledged that there is no simple rule to distinguish good models from poor ones. As such, several general guidelines used together help to determine the adequacy of a model. Hair et al. (2009) suggested that three or four fit indices should be provided that consists of at least one incremental index and one absolute index, along with the Chi-square value and degrees of freedom. Therefore, “reporting the Chi-square value and degrees of freedom, the CFI or TLI, and the RMSEA will usually provide sufficient unique information to evaluate a model” (Hair et al., 2009, p.672). Following the recommendation of Hair et al. (2009), this study reports the Chi-square statistics and the corresponding degrees of freedom (df), CFI, GFI, and RMSEA of the measurement and structural models.

Construct Validity

In addition to providing a solid fitting model, the model should demonstrate strong validity. Hair et al. (2009) contends that the measurement model validity normally relies on ascertaining satisfactory levels of goodness-of-fit for the measurement model and establishing precise support for construct validity. Construct validity is defined as “the extent to which a set of measured items actually reflect the theoretical latent constructs those items are designed to measure” (Hair et al., 2009, p.708). Construct validity represents two components—convergent validity and discriminant validity.

Convergent Validity

Convergent validity specifies that the internal consistency of a collection of items and is indicated by the strength of the association between the items theorized to predict a latent construct (Brown, 2006). Convergent validity is a subtype of construct validity. Several criteria can be used to demonstrate construct validity, which are touched upon in the following sections.

Factor Loadings

Factor loadings should be above the recommended value of .40 (Ford, MacCallum, & Tait, 1986). Ideally .70 or higher is considered excellent (Hair et al., 2009). In addition to the factor loading, the statistical significance of each estimated coefficient should be assessed (Anderson & Gerbing, 1988). The statistic often used to evaluate significance is the critical ratio (C. R.). The critical ratio represents the parameter estimate divided by its standard error and functions as a z statistic (Ho, 2006). The value needs to be greater than 1.96 to establish statistical significance (Byrne, 2013).

Squared Multiple Correlation (SMC)

Additionally, the squared multiple correlation (SMC) is also looked into as part of this study. The SMC is calculated as the square of the standardized factor loading and corresponds to the amount of a variable's variance that is explained by a latent factor (Hair et al., 2009).

Squared multiple correlation signifies how well an item measures a construct, and its accepted cut-off value is .50 or above (Hair et al., 2009).

Average Variance Extracted (AVE)

The average variance extracted (AVE) is calculated as the mean variance extracted for the items loading on a construct and as such, serves to be an estimate of convergence (Fornell & Larcker, 1981). An AVE value of .50 and above indicates satisfactory convergent validity (Fornell & Larcker, 1981).

Reliability

Reliability serves as another indicator of convergent validity. The coefficient alpha is universally used to estimate reliability (Hair et al., 2009). The construct reliability is often used in case of SEM models. A reliability value above .70 suggests that all the measures consistently correspond to the same latent construct. The recommended threshold for construct reliability is .70 (Bagozzi & Yi, 1988).

Discriminant Validity

Discriminant validity refers to the "extent to which a construct is truly distinct from other constructs (Hair et al., 2009, p.687). In confirmatory factor analysis, AVE serves as a robust indicator of discriminant validity. If a construct has an AVE value that is higher than the squared

multiple correlation (SMC), the construct is considered to exhibit good discriminant validity (Fornell & Larcker, 1981).

CHAPTER FOUR

ANALYSIS

“You have to hold yourself accountable for your actions, and that's how we're going to protect the Earth.” - Julia Butterfly Hill.

In the previous chapter, the intricacies of measuring the theoretical constructs and testing the hypothesized models were presented. This chapter delivers the results of this study. First, results related to the pilot study are discussed. Then, the attention is shifted to the main survey whereby results related to demographics are provided. Then the main analyses segment of the study is explored. As part of it, the results and findings related to testing the underlying hypotheses of this study are provided, setting the stage for a thorough discussion in the next chapter.

Pilot Study

First, the completed survey was sent to a group of ten academics to assess its face validity. Based on their suggestions, only one minor change was made regarding the organization of the survey. For the pilot study, the survey was sent to 160 students in four courses in the College of Business. One hundred and twenty completed responses were received yielding a response rate of 75%. Data screening showed no possible outliers or missing values. Descriptive analyses revealed that 40 participants (33.33%) were male and 80 participants (66.66%) were female. Age of the participants ranged from 20 to 36 years with 22 years as the mean. On average, the participants stayed 9.44 nights in hotels in one year, drove 6,653 miles per year, and

drank 2.11 glasses of wine in a week. An item that notes the ethnicity of the participants was added to the main survey as per the suggestion of the pilot study participants. In addition, we added two filler questions to test if the participants are paying attention to the survey questions.

Cronbach's alpha values were calculated for the study measures. The values ranged from .64 to .95. The egoistic value measure was a matter of concern, as the reliability was substantially less than the cut-off value of .70 as suggested by Nunnally (1978). However, it was acceptable as per the criteria suggested by DeVilles (1991). The rest of the constructs exhibited Cronbach's alpha values of greater than .70. The list of finalized items, their corresponding constructs and alpha values are provided in table 4.

Table 4: Descriptive Statistics and Reliability - Pilot Study

Measure	Items	Mean	Std. Dev.	Skewness	Kurtosis	Cronbach's alpha
Biospehric Value Orientation	Preventing pollution: protecting natural resources	5.29	1.27	-.70	-.56	.94
	Respecting the earth: harmony with other species	5.27	1.23	-.45	-.74	
	Unity with nature: fitting into nature	4.85	1.31	-.32	-.67	
	Protecting the environment: preserving nature	5.21	1.25	-.51	-.50	
Altruistic Value Orientation	Equality: equal opportunity for all	5.69	1.28	-.87	-.18	.77
	A world at peace: free of war and conflict	5.58	1.27	-.74	-.36	
	Social justice: correcting injustice, care for the weak	5.17	1.27	-.33	-.65	

	Helpful: working for the welfare of others	4.98	1.31	-.59	-.10	
Egoistic Value Orientation	Social power: control over others, dominance	3.43	1.40	.34	-.78	.64
	Wealth: material possessions, money	4.35	1.26	.12	-.50	
	Ambitious: hard-working, aspiring	5.95	.83	-.94	1.70	
	Authority: the right to lead or command	4.60	1.21	-.17	-.79	
	Influential: having an impact on people and events	5.43	1.09	-.51	-.27	
Visit Intention (Green Hotel)	I am willing to stay at a green hotel when traveling	5.65	9.24	-.85	1.24	.76
	I plan to stay at a green hotel when traveling	4.44	.96	.04	.90	
	I will make an effort to stay at a green hotel when traveling	4.19	1.32	.01	-.42	
Willingness to Pay More (Green Hotel)	It is acceptable to pay a premium to stay at a hotel that engages in green practices	4.32	1.29	-.65	.14	.87
	I am willing to pay more to stay at a green hotel	3.88	1.43	-.11	-.77	
	I am willing to spend extra in order to stay at an environmentally friendly hotel	4.12	1.40	-.43	-.47	
Willingness to Sacrifice (Green Hotel)	I am willing to sacrifice value by staying at a green hotel	3.24	1.46	-.01	-1.18	.87
	I am willing to sacrifice convenience by staying at a green hotel	3.18	1.48	.06	-1.19	
	I am willing to sacrifice	3.56	1.51	-.12	-.96	

	luxury by staying at a green hotel					
Purchase Intention (Organic Wine)	When you purchase your next wine, how likely are you to purchase an organic wine?	3.6	1.44	-.31	-.43	.91
	I intend to buy organic wine in the near future	3.84	1.53	-.26	-.58	
	I will make an effort to buy organic wine in the near future	3.92	1.58	-.40	-.72	
Willingness to Pay More (Organic Wine)	It is acceptable to pay a premium for an organic wine	4.10	1.30	-.28	.03	.91
	I am willing to pay more to buy an organic wine	3.76	1.54	-.12	-.97	
	I am willing to spend extra in order to buy an organic wine	3.82	1.43	-.26	-.68	
Willingness to Sacrifice (Organic Wine)	I am willing to sacrifice wine quality by purchasing an organic wine	3.05	1.61	.36	-1.06	.95
	I am willing to sacrifice wine taste by purchasing an organic wine	2.80	1.54	.55	-.83	
	I am willing to sacrifice wine value by purchasing an organic wine	2.98	1.52	.30	-.86	
Purchase Intention (Environment-friendly Car)	When you purchase your next car, how likely are you to purchase a hybrid/electric car?	3.49	1.68	.04	-1.03	.91
	I already own or intend to purchase a	3.36	1.64	.20	-.97	

	hybrid/electric car in the near future					
	I will make an effort to buy a hybrid/electric car in the near future	3.47	1.64	.12	-.94	
Willingness to Pay More (Environment-friendly car)	It is acceptable to pay a premium for a hybrid/electric car	4.11	1.45	-.47	.23	.91
	I am willing to pay more to buy a hybrid/electric car	3.49	1.59	.17	-.94	
	I am willing to spend extra in order to buy a hybrid/electric car	3.66	1.61	.05	-.94	
Willingness to Sacrifice (Environment-friendly car)	I am willing to sacrifice luxury by purchasing a hybrid/electric car	3.15	1.50	.47	-.61	.90
	I am willing to sacrifice power/performance by purchasing a hybrid/electric car	3.21	1.60	.47	-.82	
	I am willing to sacrifice quality features by purchasing a hybrid/electric car	3.05	1.40	.62	-.65	

Main Survey

Amazon's MTurk was employed to gather responses for the main study. The target responses was set to 400 at a commission rate of \$ 0.45. Only participants who live in the US were allowed to complete the task. In addition, only participants with an acceptance rate of 97% and above were allowed to complete the task. It took about 8 days to elicit 400 responses.

Handling missing data is crucial as non-random missing data can bias the results (Hair et al., 2009). The problem of missing values was not relevant in the case of this study. As part of the survey, it was mandatory for participants to fill out all the responses in order to submit the survey and receive credit. In Qualtrics there is an option whereby respondents cannot proceed to the next page or submit the survey unless they answer all of the questions. This option was used for all the questions, except the demographical ones. Despite this, fifteen incomplete surveys were recorded by Qualtrics as participants left the survey without completing or submitting it. Missing value analysis was quick to spot these incomplete surveys. These eight responses were deleted using the listwise deletion method. It is the most commonly used method to handle missing values in published studies (Gilley & Leone, 1991).

In addition, ten responses were deemed unacceptable because the participants filled out the filler question incorrectly. These participants most likely were not attentive enough and their responses might bias the statistical analyses. Responses were regularly screened throughout the duration of the survey and those 10 participants were not compensated in MTurk. Three hundred and seventy five responses were finalized for further data analysis.

Demographics

Table 5 shows the detailed demographic information. Participants were aged between 21 and 73 with 35.92 years as the average. Out of 372 responses received for gender, 214 (57.5%) were female and 158 (42.5%) were male. Out of 372 responses received for ethnicity, 301 are White/Caucasian (80.9%), 24 (6.5%) are Asian, 22 (5.9%) are Black/African American, 15 (4%) are Hispanic/Latino, 7 (1.9%) are mixed, 2 (0.5%) are Native American/Alaskan, and 1 (0.3%) are of other ethnicities. Out of 372 responses received for highest education level completed, 127

(34.1%) completed some college, 124 (33.3%) have a four year college degree, 43 (11.6%) have completed high school/GED, 34 (9.1%) have an associate degree, 27 (7.3%) have master's degree, 10 (2.7%) have doctoral degree, and 7 (1.9%) have not completed high school. Three hundred and forty nine participants reported their annual income that ranged from \$1,000 to \$200,000 with \$38,510.03 being the average. The study sample represented all the states of USA except Montana, Vermont, Wyoming, and New Mexico.

The participants were asked about the average number of miles they drive per year, the average number of drinks they consume per week, and the average number of nights they spend in hotels per year. Miles driven per year ranged from 0 to 180,000 with 12,238.2 miles as the average. Three hundred and sixty six participants filled out this question. Three hundred and seventy two participants filled out the question about their wine drinking frequency. Wine drinking frequency per week ranged from 0 to 21 glasses. The participants on an average consume 1.57 glasses of wine per week. Lastly, Three hundred and seventy two participants filled out the question about the number of nights they stay in hotels per year. Responses ranged from 0 to 100, with 6.75 nights as the average.

Table 5: Respondents' Demographic Profile

	N	%
Gender (N = 372)		
Male	158	42.5%
Female	214	57.5%
Age (N = 372; M = 35.92; Range: 21 -73)		

=>21; <25	76	20.44%
=>25; <30	80	21.51%
=>30; <35	52	13.98%
=>35; <40	42	11.29%
=>40; <45	24	6.45%
=>45; <50	22	5.91%
=>50; <55	29	7.80%
=>55; <60	26	6.99%
=>60; <75	21	5.65%
Ethnicity (N = 372)		
White/Caucasian	301	80.91%
Asian	24	6.45%
Black/African American	22	5.91%
Hispanic/Latino	15	4.03%
Mixed	7	1.88%
Native American/Alaskan	2	0.54%
Others	1	0.27%
Education (N = 372)		
Some College	127	34.14%
Four-year college degree	124	33.33%
High school/GED	43	11.56%
Associate degree	34	9.14%

Master's degree	27	7.26%
Doctorate degree	10	2.69%
Not completed high school	7	1.88%
Income (N=349; M = \$38,510.03; Range: \$1,000 - \$200,000)		
< \$10,000	31	8.88%
=> \$10,000; < \$20,000	51	14.61%
=> \$20,000; < \$30,000	72	20.63%
=> \$30,000; < \$40,000	56	16.05%
=> \$40,000; < \$50,000	40	11.46%
=> \$50,000; < \$60,000	32	9.17%
=> \$60,000; < \$70,000	21	6.02%
=> \$70,000; < \$80,000	14	4.01%
=> \$80,000; < \$90,000	14	4.01%
=> \$90,000; < \$100,000	5	1.43%
=> \$100,000	13	3.73%

Before proceeding with the SEM analyses, it is useful to look at the descriptive statistics from the main study. The following table provides the mean, standard deviation, skewness, and kurtosis of the items:

Table 6: Descriptive Statistics - Main Study

Measure	Items	Mean	Std.	Skewness	Kurtosis
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			Dev.		
Biospehric Value Orientation	Preventing pollution: protecting natural resources	5.44	1.41	-.896	.322
	Respecting the earth: harmony with other species	5.44	1.49	-.861	-.029
	Unity with nature: fitting into nature	4.99	1.50	-.476	-.634
	Protecting the environment: preserving nature	5.51	1.37	-.821	-.032
Altruistic Value Orientation	Equality: equal opportunity for all	5.55	1.57	-1.02	.117
	A world at peace: free of war and conflict	5.82	1.36	-1.22	.937
	Social justice: correcting injustice, care for the weak	5.62	1.47	-1.12	.723
	Helpful: working for the welfare of others	5.29	1.44	-.825	.216
Egoistic Value Orientation	Social power: control over others, dominance	2.38	1.38	1.16	.677
	Wealth: material possessions, money	3.58	1.56	.189	-.676
	Ambitious: hard-working,	5.40	1.27	-.736	.031

	aspiring				
	Authority: the right to lead or command	3.30	1.55	.512	-.658
	Influential: having an impact on people and events	4.24	1.51	-.114	-.802
Visit Intention (Green Hotel)	I am willing to stay at a green hotel when traveling	5.48	1.32	-1.31	2.02
	I plan to stay at a green hotel when traveling	4.24	1.39	-.407	.121
	I will make an effort to stay at a green hotel when traveling	4.39	1.59	-.472	-.454
Willingness to Pay More (Green Hotel)	It is acceptable to pay a premium to stay at a hotel that engages in green practices	4.30	1.64	-.420	-.678
	I am willing to pay more to stay at a green hotel	3.87	1.72	-.117	-1.08
	I am willing to spend extra in order to stay at an environmentally friendly hotel	4.03	1.76	-.278	-1.03
Willingness to Sacrifice (Green Hotel)	I am willing to sacrifice value by staying at a green hotel	3.72	1.70	-.090	-.963

	I am willing to sacrifice convenience by staying at a green hotel	3.84	1.77	-.076	-1.06
	I am willing to sacrifice luxury by staying at a green hotel	4.28	1.86	-.397	-.998
Purchase Intention (Organic Wine)	When you purchase your next wine, how likely are you to purchase an organic wine?	3.38	1.72	-.048	-1.03
	I intend to buy organic wine in the near future	3.50	1.85	.166	-1.07
	I will make an effort to buy organic wine in the near future	3.50	1.87	.218	-1.03
Willingness to Pay More (Organic Wine)	It is acceptable to pay a premium for an organic wine	4.12	1.64	-.314	-.733
	I am willing to pay more to buy an organic wine	3.63	1.79	.017	-1.16
	I am willing to spend extra in order to buy an organic wine	3.63	1.79	-.006	-1.12
Willingness to Sacrifice (Organic Wine)	I am willing to sacrifice wine quality by purchasing an organic wine	3.18	1.64	.311	-.798
	I am willing to sacrifice wine	3.00	1.62	.492	-.607

	taste by purchasing an organic wine				
	I am willing to sacrifice wine value by purchasing an organic wine	3.31	1.70	.178	-1.00
Purchase Intention (Environment-friendly Car)	When you purchase your next car, how likely are you to purchase a hybrid/electric car?	3.85	1.81	-.179	-1.05
	I already own or intend to purchase a hybrid/electric car in the near future	3.69	1.82	.105	-1.11
	I will make an effort to buy a hybrid/electric car in the near future	3.88	1.82	-.066	-1.12
Willingness to Pay More (Environment-friendly Car)	It is acceptable to pay a premium for a hybrid/electric car	4.33	1.67	-.517	-.631
	I am willing to pay more to buy a hybrid/electric car	4.06	1.79	-.289	-1.03
	I am willing to spend extra in order to buy a hybrid/electric car	4.06	1.81	-.291	-1.03
Willingness to	I am willing to sacrifice luxury	4.28	1.86	-.427	-.974

Sacrifice (Environment-friendly Car)	by purchasing a hybrid/electric car				
	I am willing to sacrifice power/performance by purchasing a hybrid/electric car	4.00	1.88	-.156	-1.19
	I am willing to sacrifice quality features by purchasing a hybrid/electric car	3.86	1.81	-.077	-1.12

There was nothing unusual about the descriptive statistics. The values were well within the conventional guidelines. Kline (2011) suggested that the cutoff absolute values should be 3.0 for skewness and 8.0 for kurtosis. The skewness values ranged from -.896 to 1.16 and the kurtosis ranged from -1.19 to 2.02, showing that the data quality is excellent under such criteria.

Since all of the constructs, except one of the dependent variables – willingness to sacrifice – were measured from already established and validated scales, there was no need to use exploratory factor analysis (EFA) for the purpose of this study. As seen from our pilot study results, the willingness to sacrifice measures for the three products demonstrated very strong reliability as well. Since this study is divided into three products, the first step was to undertake data analysis for the green hotel framework. CFA for the green hotel model was undertaken first as part of the principal data analyses procedure for this study, followed by testing the structural model. After that, the conceptual models for organic wine and hybrid/electric cars were tested.

Results – The Green Hotel Model

Measurement Model

Confirmatory factor analysis (CFA), with maximum likelihood estimation, was undertaken to identify the association between observed measures and their underlying factors.

Table 7 displays the factor loadings and the coefficient alpha for the measures.

Table 7: Confirmatory Factor Analysis Results and Reliability - The Green Hotel Model.

Variable	Measure	Standardized Loading*	Coefficient Alpha
Egoistic Value Orientation (EVO)	EVO1: Social power: control over others, dominance	.63	.70
	EVO2: Wealth: material possessions, money	.45	
	EVO 3: Ambitious: hard working, aspiring	.26	
	EVO4: Authority: the right to lead or command	.90	
	EVO5: Influence: having an impact on people and events	.62	
Biospheric Value Orientation (BVO)	BVO1: Respecting the earth	.79	.94
	BVO2: Unity with nature	.82	

	BVO3: Protecting the environment	.73	
	BVO4: Preventing pollution	.84	
Altruistic Value Orientation	AVO1: Equality: equal opportunity for all	.75	.87
	AVO2: A world at peace: free of war and conflict	.76	
	AVO3: Social injustice: correcting injustice, care for the weak	.89	
	AVO4: Helpful: working for the welfare of others	.77	
Visit Intention (VI)	VI1: I am willing to stay at a green hotel when traveling	.63	.84
	VI2: I plan to stay at a green hotel when traveling	.87	
	VI3: I will make an effort to stay at a green hotel when traveling	.92	
Willingness to Sacrifice for Green Hotel (WTS)	WTS1: I am willing to sacrifice quality by staying at a green hotel	.91	.92
	WTS2: I am willing to sacrifice convenience by staying at a green hotel	.93	

	WTS3: I am willing to sacrifice luxury by staying at a green hotel	.85	
Willingness to Pay Moreore (WPM)	WPM1: It is acceptable to pay more for a hotel that engages in green practices	.95	.94
	WPM2: I am willing to pay more for a green hotel	.95	
	WPM3: I am willing to spend extra in order to stay at an environmentally friendly hotel	.83	

All factor loadings were significant

CFA yielded the following fit statistics. $\chi^2 = 598.30$; $df = 194$; $p < .001$; $CFI = .94$; $GFI = .87$; $NFI = .92$ $RMSEA = .08$. The model fit was not acceptable. Especially the GFI value was less than the usually accepted cut-off value of .90. All factor loadings, except for one, were above the recommended minimum of .40 (Ford et al., 1986). Although all the factor loadings were significant, a couple of the factor loadings under egoistic value orientation were on the lower side. Especially EVO3 – Ambitious: hardworking, aspiring had a very low factor loading of .26. This item was deleted as a result. After deleting this item, the coefficient alpha for egoistic value orientation improved considerably to .74. This improved the model fit considerably. $\chi^2 = 482.7$; $df = 174$; $p < .001$; $CFI = .95$; $GFI = .89$; $RMSEA = .07$. Although, the model fit was just about acceptable, the modification indices was looked at for possibility of improving the model fit further. The modification between two error terms associated with

EVO4 and EVO 5 was very high (29.23). The two error terms were co-varied. This resulted in a much better fitting model. $\chi^2 = 403.2$; $df = 173$; $p < .001$; CFI = .96; GFI = .91; RMSEA = .06. However, after co-varying the error terms the factor loading for EVO5: influence: having an impact on people and events, significantly dropped to .34. The item was deleted as a result. The resulting model fit improved slightly further, $\chi^2 = 354.10$; $df = 155$; $p < .001$; CFI = .97; GFI = .91; RMSEA = .06. The coefficient alpha for the three item egoistic construct was .73. The modification indices were looked at for one last time as well as the residual co-variances. No significant issues were noticed. As a result, this CFA model was retained.

The convergent validity of the constructs were evaluated by the magnitude of the factor loadings and their corresponding statistical significance. All the factor loadings in the final model exceeded .5 and all were statistically significant (t -values > 1.96 ; $p < .05$). This indicated a substantial degree of convergent validity (Anderson & Gerbing, 1988). In addition, the AVE values and composite reliability of the constructs were also calculated. The results are shown in table 8.

Table 8: Correlations, Composite Reliability, and Average Variance Extracted – The Green Hotel Model.

Correlations among latent constructs (squared)^a

Measure	EVO	AVO	BVO	VI	WPM	WTS	AVE
EVO	1						.50
AVO	-.43 (.19)	1					.63
BVO	-.22 (.05)	.67 (.45)	1				.79

VI	-.21 (.04)	.49 (.24)	.64 (.41)	1			.67
WPM	-.16 (.03)	.42 (.18)	.56 (.31)	.75 (.56)	1		.83
WTS	-.19 (.04)	.47 (.22)	.55 (.30)	.71 (.50)	.69 (.48)	1	.81
Mean	3.09	5.57	5.35	4.70	4.07	3.95	
SD	1.50	1.46	1.44	1.43	1.71	1.78	
Composite Reliability	.74	.87	.94	.85	.94	.93	

Note, EVO = Egoistic Value Orientation; AVO = Altruistic Value Orientation; BVO = Biospheric Value Orientation; VI = Visit Intention; WPM = Willingness to Pay More; WTS = Willingness to Sacrifice for Green Hotel.

^aCorrelation coefficients are estimates from AMOS 21

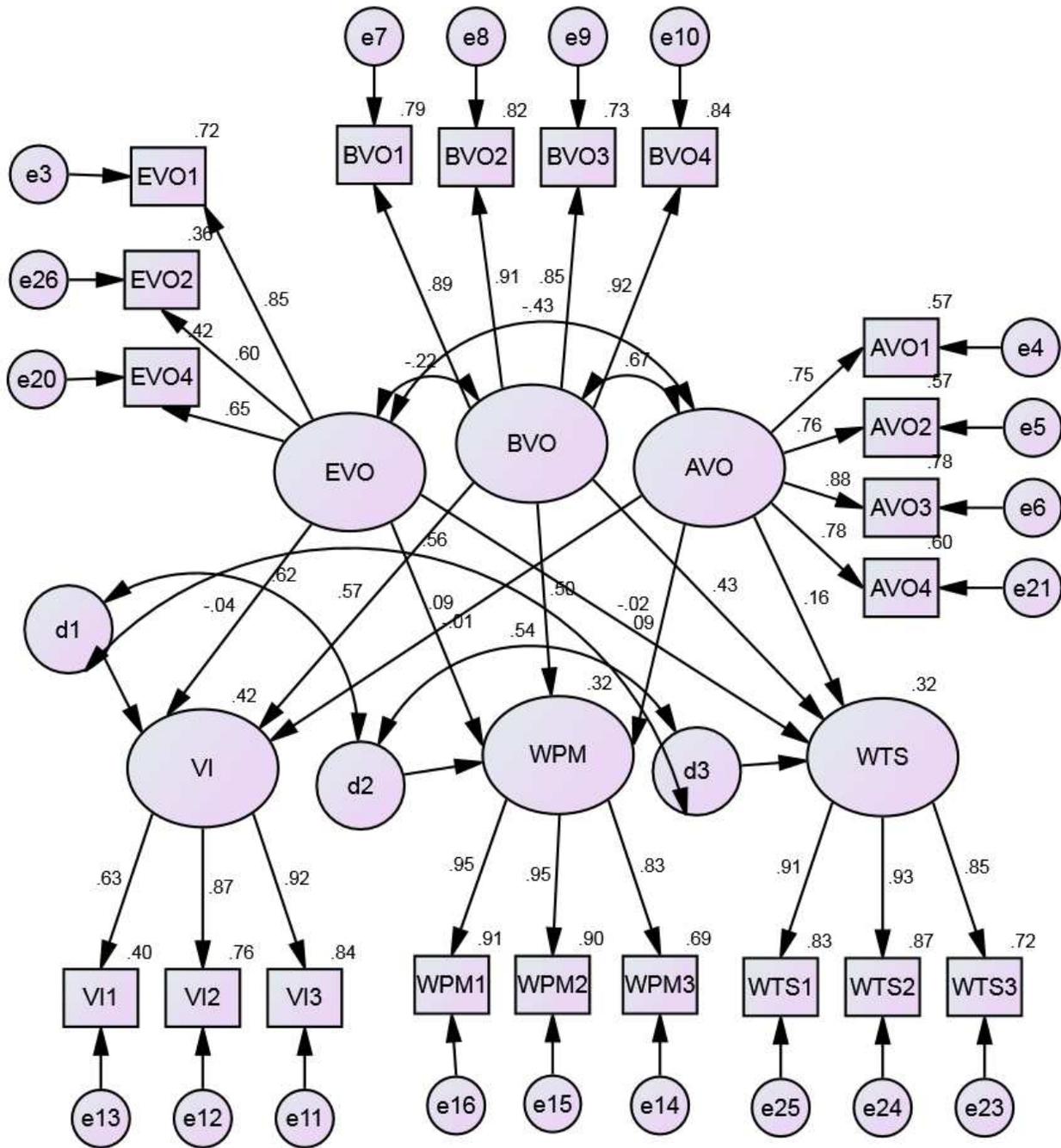
As per the validity index recommended by Fornell and Larcker (1981), all constructs exhibited satisfactory levels of convergent and discriminant validity. In other words, all constructs had AVE values greater than or equal to .5 and the square of the correlation estimates between these measures as suggested by Fornell and Larcker (1981). The construct egoistic value orientation was just on the borderline of these criteria.

Structural Model

It is important to note that, the disturbance terms associated with the endogenous variables were allowed to co-vary. This is because it is believed that visit intention, willingness to pay more, and willingness to sacrifice are reciprocally related in the model. According to Schaubroeck (1990), the disturbance terms involved in a reciprocal relationship are allowed to

co-vary because they may inhibit common causes that are not explicitly specified in the model. If a researcher decides not to do so, it may result in biased parameter estimates for the shared association (Schaubroeck, 1990).

The structural model had a good model fit as revealed by the fit statistics: $\chi^2 = 354.09$; $df = 155$; $p < .001$; CFI = .966; GFI = .914; RMSEA = .059. The detailed estimates and hypotheses test results are shown in the following figure and table.



Note, EVO = Egoistic Value Orientation; AVO = Altruistic Value Orientation; BVO = Biospheric Value Orientation; VI = Visit Intention; WPM = Willingness to Pay More; WTS = Willingness to Sacrifice for Green Hotel.

Figure 7: Structural Model Results – The Green Hotel Model

Table 9: Structural Path Estimates – The Green Hotel Model.

Hypothesis	Path	Coefficients	t-value	Results
1.1	Biospheric Value Orientation (BVO) → Visit Intention (VI)	.568	8.359**	Supported
1.2	Biospheric Value Orientation (BVO) → Willingness to Sacrifice for Green Hotel (WTS)	.434	6.170**	Supported
1.3	Biospheric Value Orientation (BVO) → Willingness to Pay More (WPM)	.498	7.064**	Supported
1.4	Altruistic Value Orientation (AVO) → Visit Intention (VI)	.093	1.241	Not supported
1.5	Altruistic Value Orientation (AVO) → Willingness to Sacrifice for Green Hotel (WTS)	.164	2.097*	Supported
1.6	Altruistic Value Orientation (AVO) → Willingness to Pay More (WPM)	.085	1.104	Not supported
1.7	Egoistic Value Orientation (EVO) → Visit Intention (VI)	-.043	-.753	Not supported
1.8	Egoistic Value Orientation (EVO) → Willingness to Sacrifice for Green Hotel	-.025	-.423	Not supported

	(WTS)			
1.9	Egoistic Value Orientation (EVO) → Willingness to Pay More (WPM)	-.012	-.210	Not supported

**p < .001; *p < .05

Results reveal that in the green hotel model, only 4 out of 9 hypotheses are supported. While controlling for the effects of egoistic value and altruistic value, biospheric value positively and significantly influenced green hotel visit intention ($\beta = .568$; $p < .001$), supporting hypothesis 1.1. While controlling for the effects of egoistic value orientation and altruistic value orientation, biospheric value orientation positively and significantly influenced willingness to sacrifice for green hotel ($\beta = .434$; $p < .001$), supporting hypothesis 1.2. While controlling for the effects of egoistic value orientation and altruistic value orientation, biospheric value orientation positively and significantly influenced willingness to pay more for green hotel ($\beta = .498$; $p < .001$), supporting hypothesis 1.3. Lastly, while controlling for the effects of egoistic value orientation and biospheric value orientation, altruistic value orientation positively and significantly influenced willingness to sacrifice for green hotel ($\beta = .164$; $p < .05$), supporting hypothesis 1.5.

Five of the hypotheses in the green hotel model were not supported. None of the hypotheses relating to egoistic value orientation was supported. While controlling for the effects of altruistic value orientation and biospheric value orientation in each case, egoistic value orientation did not positively and significantly influence 1) green hotel visit intention ($\beta = -.043$; $p > .05$), 2) willingness to pay more for green hotel ($\beta = -.012$; $p > .05$), 3) willingness to sacrifice for green hotel ($\beta = -.025$; $p > .05$). Moreover, while controlling for the effects of

egoistic value orientation and biospheric value orientation in each case, altruistic value orientation did not significantly influence 1) green hotel visit intention ($\beta = .093$; $p > .05$) 2) willingness to pay more for green hotel ($\beta = .085$; $p > .05$).

Results – The Organic Wine Model

Measurement Model

The CFA results indicated that the model fits the data well ($\chi^2 = 425.91$, $df = 155$, $p < .001$, $RMSEA = .068$, $CFI = .96$, $NFI = .94$, and $GFI = .903$). All the standardized factor loading values were greater than .60, comfortably above the recommended minimum of .40 (Ford et al., 1986). The details are presented in table 10 and 11:

Table 10: Confirmatory Factor Analysis Results and Reliability – The Organic Wine Model

Measure	Items	Standardized Loading*	Coefficient Alpha
Biospheric Value Orientation	Preventing pollution: protecting natural resources	.88	.94
	Respecting the earth: harmony with other species	.91	
	Unity with nature: fitting into nature	.85	
	Protecting the environment: preserving nature	.92	
Altruistic Value	Equality: equal opportunity for all	.75	.87

Orientation			
	A world at peace: free of war and conflict	.76	
	Social justice: correcting injustice, care for the weak	.88	
	Helpful: working for the welfare of others	.78	
Egoistic Value Orientation	Social power: control over others, dominance	.86	.73
	Wealth: material possessions, money	.59	
	Authority: the right to lead or command	.64	
Purchase Intention (Organic Wine)	When you purchase your next wine, how likely are you to purchase an organic wine?	.73	.91
	I intend to buy organic wine in the near future	.95	
	I will make an effort to buy organic wine in the near future	.97	
Willingness to Pay More (Organic Wine)	It is acceptable to pay a premium for an organic wine	.75	.92
	I am willing to pay more to buy an	.97	

	organic wine		
	I am willing to spend extra in order to buy an organic wine	.96	
Willingness to Sacrifice (Organic Wine)	I am willing to sacrifice wine quality by purchasing an organic wine	.98	.94
	I am willing to sacrifice wine taste by purchasing an organic wine	.94	
	I am willing to sacrifice wine value by purchasing an organic wine	.84	

Table 11: Correlations, Composite Reliability and Average Variance Extracted – The Organic Wine Model

Correlations among latent constructs (squared)^a

Measure	EVO	AVO	BVO	PI	WPMW	WTSW	AVE
EVO	1						.50
AVO	-.43 (.19)	1					.63
BVO	-.22 (.05)	.67 (.45)	1				.79
PI	-.21 (.04)	.22 (.05)	.39 (.15)	1			.79
WPMW	.07 (.005)	.29 (.08)	.43 (.19)	.69 (.48)	1		.81
WTSW	-.06 (.004)	.22 (.05)	.32 (.10)	.42 (.18)	.50 (.25)	1	.85

Mean	3.09	5.57	5.35	3.46	3.79	3.16
SD	1.50	1.46	1.44	1.81	1.74	1.65
Composite Reliability	.74	.87	.94	.92	.93	.94

Note, EVO = Egoistic Value Orientation; AVO = Altruistic Value Orientation; BVO =

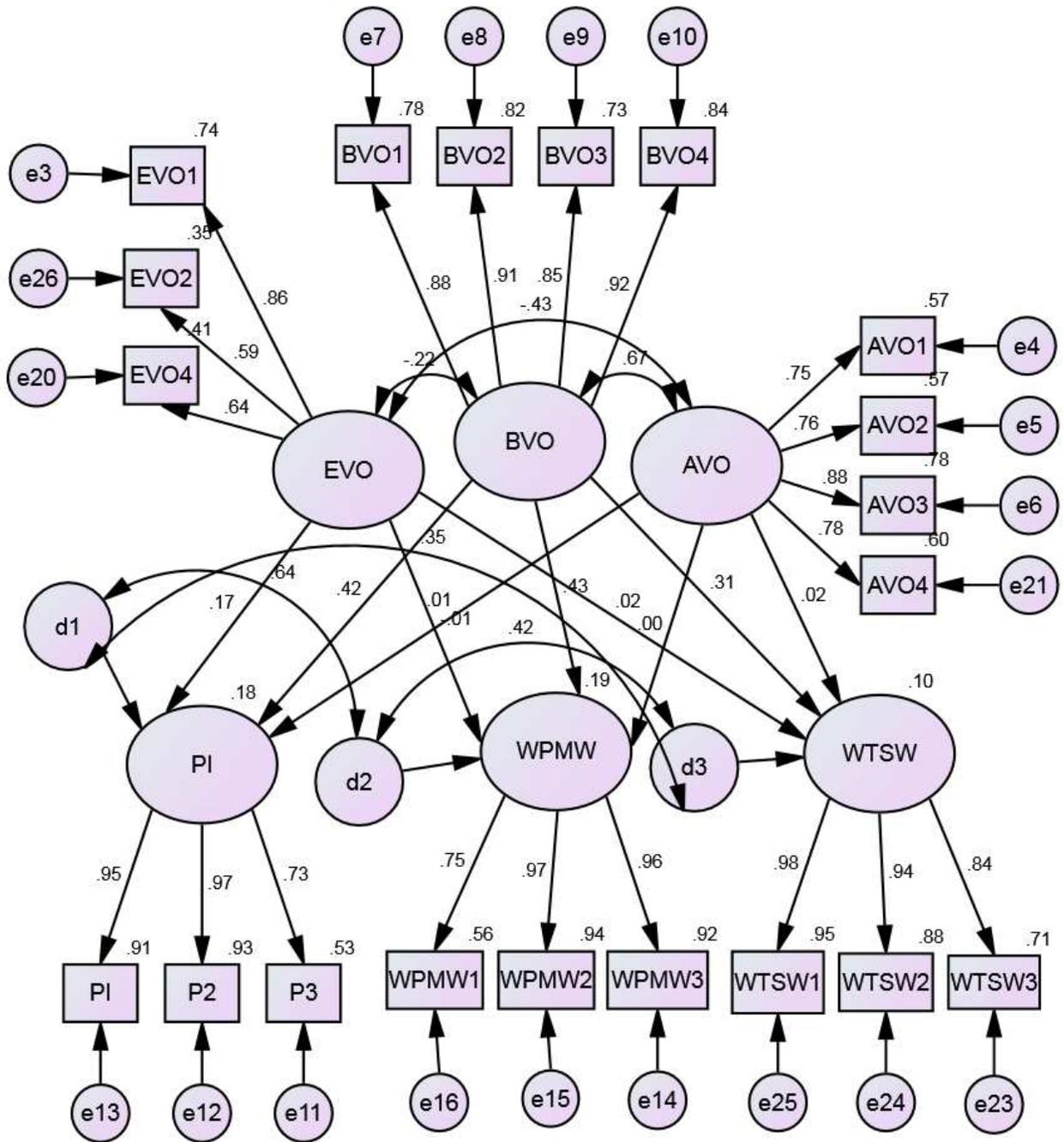
Biospheric Value Orientation; PI = Purchase Intention; WPMW = Willingness to Pay More for Organic Wine; WTSW = Willingness to Sacrifice for Organic Wine.

^aCorrelation coefficients are estimates from AMOS 21

In line with the recommendation by Fornell and Larcker (1981), all constructs demonstrated adequate convergent and discriminant validity. In other words, all constructs had AVE values greater than or equal to .50 and the square of the correlation estimates between these measures as suggested by Fornell and Larcker (1981). The construct egoistic value orientation was just on the borderline of these criteria.

Structural Model

The structural model had a good model fit as revealed by the fit statistics: $\chi^2 = 425.913$; $df = 155$; $p < .001$; CFI = .957; GFI = .913; RMSEA = .068. The results are portrayed in the following diagram and table:



Note, EVO = Egoistic Value Orientation; AVO = Altruistic Value Orientation; BVO = Biospheric Value Orientation; PI = Purchase Intention; WPMW = Willingness to Pay More for Organic Wine; WTSW = Willingness to Sacrifice for Organic Wine.

Figure 8: Structural Model Results – The Organic Wine Model

Table 12: Structural Path Estimates – The Organic Wine Model

Hypothesis	Path	Coefficients	t-value	Results
2.1	Biospheric Value Orientation (BVO) → Purchase intention (PI)	.418	5.446**	Supported
2.2	Biospheric Value Orientation (BVO) → Willingness to Sacrifice for Organic Wine (WTSW)	.310	4.054**	Supported
2.3	Biospheric Value Orientation (BVO) → Willingness to Pay More for Organic Wine (WPMW)	.431	5.880**	Supported
2.4	Altruistic Value Orientation (AVO) → Purchase Intention (PI)	.008	.092	Not supported
2.5	Altruistic Value Orientation (AVO) → Willingness to Sacrifice for Organic Wine (WTSW)	.020	.228	Not supported
2.6	Altruistic Value Orientation (AVO) → Willingness to Pay More for Organic Wine	-.001	-.011	Not supported

	(WPMW)			
2.7	Egoistic Value Orientation (EVO) → Purchase Intention (PI)	.168	2.604*	Supported
2.8	Egoistic Value Orientation (EVO) → Willingness to Sacrifice for Organic Wine (WTSW)	.018	.282	Not supported
2.9	Egoistic Value Orientation (EVO) → Willingness to Pay More for Organic Wine (WPMW)	-.013	-.208	Not supported

**p < .001; *p < .05

Results reveal that in the organic wine model, only 4 out of 9 hypotheses are supported. While controlling for the effects of egoistic value orientation and altruistic value orientation, biospheric value orientation positively and significantly influenced organic wine purchase intention ($\beta = .418$; $p < .001$). Thus, hypothesis 2.1 is supported. While controlling for the effects of egoistic value orientation and altruistic value orientation, biospheric value orientation positively and significantly influenced willingness to sacrifice for organic wine ($\beta = .310$; $p < .001$). While controlling for the effects of egoistic value orientation and altruistic value orientation, biospheric value orientation positively and significantly influenced willingness to pay more for organic wine ($\beta = .431$; $p < .001$). Therefore, hypotheses, 2.2 and 2.3 are also supported. Lastly, while controlling for the effects of altruistic value orientation and biospheric value orientation, egoistic value orientation positively and significantly influenced organic wine purchase intention ($\beta = .168$; $p < .05$), supporting hypothesis 2.7.

Five of the hypotheses regarding the organic wine model, were not supported. None of the hypotheses relating to altruistic value orientation were supported. While controlling for the effects of egoistic value orientation and biospheric value orientation in each case, altruistic value orientation did not significantly influence 1) organic wine purchase intention ($\beta = .008$; $p > .05$), 2) willingness to sacrifice for organic wine ($\beta = .020$; $p > .05$). Moreover, while controlling for the effects of egoistic value orientation and biospheric value orientation, altruistic value orientation did not positively and significantly influence willingness to pay more for organic wine ($\beta = -.001$; $p > .05$). In addition, egoistic value orientation did not positively and significantly influence willingness to pay more for organic wine ($\beta = -.013$; $p > .05$) while controlling for the effects of altruistic and biospheric value orientation. Finally, while controlling for the effects of altruistic and biospheric value orientation, egoistic value orientation did not have a significant effect on the willingness to sacrifice for organic wine ($\beta = .018$; $p > .05$).

Results – The Environment-friendly Car Model

Measurement Model

The CFA results indicated that the model fits the data well ($\chi^2 = 351.84$, $df = 155$, $p < .001$, $RMSEA = .058$, $CFI = .967$, $NFI = .943$, and $GFI = .917$). All the standardized factor loading values were greater than .60, comfortably above the recommended minimum of .40 (Ford et al., 1986). Detailed results are provided in table 13 and table 14.

Table 13: Correlations, Composite Reliability and Average Variance Extracted – The Environment-friendly Car Model

Measure	Items	Standardized Loading*	Coefficient Alpha
Biospehric Value Orientation	Preventing pollution: protecting natural resources	.89	.94
	Respecting the earth: harmony with other species	.91	
	Unity with nature: fitting into nature	.85	
	Protecting the environment: preserving nature	.92	
Altruistic Value Orientation	Equality: equal opportunity for all	.75	.87
	A world at peace: free of war and conflict	.76	
	Social justice: correcting injustice, care for the weak	.88	
	Helpful: working for the welfare of others	.77	
Egoistic Value Orientation	Social power: control over others, dominance	.83	.73

	Wealth: material possessions, money	.61	
	Authority: the right to lead or command	.65	
Purchase Intention (Environment-friendly Car)	When you purchase your next car, how likely are you to purchase a hybrid/electric car?	.82	.92
	I already own or intend to purchase a hybrid/electric car in the near future	.92	
	I will make an effort to buy a hybrid/electric car in the near future	.95	
Willingness to Pay More (Environment-friendly Car)	It is acceptable to pay a premium for a hybrid/electric car	.79	.93
	I am willing to pay more to buy a hybrid/electric car	.97	
	I am willing to spend extra in order to buy a hybrid/electric car	.97	
Willingness to Sacrifice (Environment-friendly Car)	I am willing to sacrifice luxury by purchasing a hybrid/electric car	.90	.91
	I am willing to sacrifice power/performance by purchasing a	.85	

	hybrid/electric car		
	I am willing to sacrifice quality features by purchasing a hybrid/electric car	.88	

^aCorrelation coefficients are estimates from AMOS 21

Table 14: Correlations, Composite Reliability, and Average Variance Extracted – The Environment-friendly Car Model

Correlations among latent constructs (squared)^a

Measure	EVO	AVO	BVO	PIH	WPMH	WTSH	AVE
EVO	1						.50
AVO	-.43 (.19)	1					.63
BVO	-.22 (.05)	.67 (.45)	1				.79
PIH	.02 (.0004)	.29 (.08)	.41 (.17)	1			.81
WPMH	-.09 (.008)	.35 (.12)	.46 (.21)	.64 (.41)	1		.84
WTSH	-.22 (.05)	.37 (.14)	.47 (.22)	.50 (.25)	.65 (.42)	1	.77
Mean	3.09	5.57	5.35	3.81	4.15	4.05	
SD	1.50	1.46	1.44	1.82	1.76	1.85	
Composite Reliability	.74	.87	.94	.93	.94	.91	

Note, EVO = Egoistic Value Orientation; AVO = Altruistic Value Orientation; BVO =

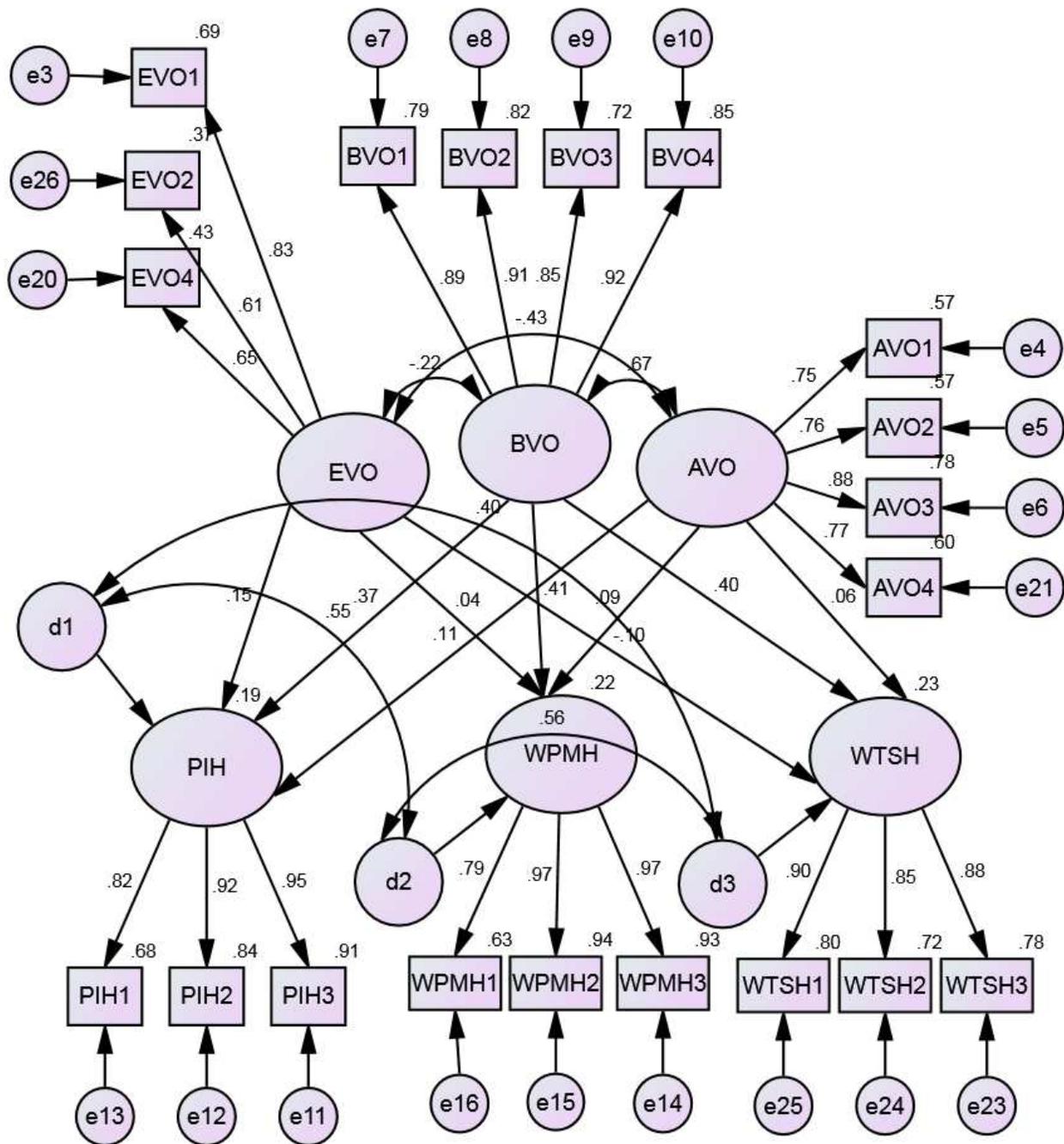
Biospheric Value Orientation; PIH = Purchase Intention Hybrid/Electric Car; WPMH =

Willingness to Pay More for Hybrid/Electric Car; WTSH = Willingness to Sacrifice for Hybrid/Electric Car.

Based on the validity index suggested by Fornell and Larcker (1981), all constructs showed acceptable convergent and discriminant validity. In other words, all constructs had AVE values greater than or equal to .50 and the square of the correlation estimates between these measures as suggested by Fornell and Larcker (1981). The construct egoistic value orientation was just on the borderline of these criteria.

Structural Model

The structural model has a good model fit as revealed by the fit statistics: $\chi^2 = 351.836$; $df = 155$; $p < .001$; CFI = .967; GFI = .917; RMSEA = .058. Detailed results are provided in figure 9 and table 15.



Note, EVO = Egoistic Value Orientation; AVO = Altruistic Value Orientation; BVO = Biospheric Value Orientation; PIH = Purchase Intention Hybrid/Electric Car; WPMH =

Willingness to Pay More for Hybrid/Electric Car; WTSH = Willingness to Sacrifice for Hybrid/Electric Car.

Figure 9: Structural Model Results – The Environment-friendly Car Model

Table 15: Structural Path Estimates – The Environment-friendly Car Model

Hypothesis	Path	Coefficients	t-value	Results
3.1	Egoistic Value Orientation (EVO) → Purchase Intention Hybrid/Electric Car (PIH)	.151	2.317*	Supported
3.2	Egoistic Value Orientation (EVO) → Willingness to Sacrifice for Hybrid/Electric Car (WTSH)	-.103	-1.598	Not supported
3.3	Egoistic Value Orientation (EVO) → Willingness to Pay More for Hybrid/Electric Car (WPMH)	.038	.616	Not supported
3.4	Biospheric Value Orientation (BVO) → Purchase Intention Hybrid/Electric Car (PIH)	.369	4.990**	Supported
3.5	Biospheric Value Orientation (BVO) → Willingness to Sacrifice for Hybrid/Electric Car (WTSH)	.405	5.451**	Supported
3.6	Biospheric value orientation (BVO) →	.406	5.666**	Supported

	Willingness to Pay More for Hybrid/Electric Car (WPMH)			
3.7	Altruistic Value Orientation (AVO) → Purchase Intention Hybrid/Electric Car (PIH)	.111	1.316	Not supported
3.8	Altruistic Value Orientation (AVO) → Willingness to Sacrifice for Hybrid/Electric Car (WTSH)	.057	.685	Not supported
3.9	Altruistic Value Orientation (AVO) → Willingness to Pay More for Hybrid/Electric car (WPMH)	.093	1.143	Not supported

**p < .001; *p < .05

Results reveal that in the environment-friendly car model, only 4 out of 9 hypotheses are supported. While controlling for the effects of egoistic value orientation and altruistic value orientation, biospheric value orientation positively and significantly influenced hybrid/electric car purchase intention ($\beta = .369$; $p < .001$). While controlling for the effects of egoistic value orientation and altruistic value orientation, biospheric value orientation positively and significantly influenced willingness to pay more for hybrid/electric car ($\beta = .406$; $p < .001$). While controlling for the effects of egoistic value orientation and altruistic value orientation, biospheric value orientation positively and significantly influenced willingness to sacrifice for hybrid/electric car ($\beta = .405$; $p < .001$). Lastly, while controlling for the effects of altruistic value orientation and biospheric value orientation, egoistic value orientation positively and

significantly influenced hybrid/electric car purchase intention ($\beta = .151$; $p < .01$). Thus, hypotheses 3.4, 3.5, 3.6 and 3.1 are supported

Five of the hypothesis regarding the environment-friendly car model, were not supported. None of the hypotheses relating to altruistic value orientation were supported. While controlling for the effects of egoistic value orientation and biospheric value orientation in each case, altruistic value orientation did not significantly influence 1) hybrid/electric car purchase intention ($\beta = .111$; $p > .05$), 2) willingness to pay more for hybrid/electric car ($\beta = .093$; $p > .05$), 3) willingness to sacrifice for hybrid/electric car ($\beta = .057$; $p > .05$). Thus, hypotheses 3.7, 3.8 and 3.9 are rejected. In addition, egoistic value orientation did not significantly influence willingness to pay more for hybrid/electric car ($\beta = .038$; $p > .05$) while controlling for the effects of altruistic and biospheric value orientation, rejecting hypothesis 3.3. Finally, while controlling for the effects of altruistic and biospheric value orientation, egoistic value orientation did not have a positive and significant effect on the willingness to sacrifice for hybrid/electric car ($\beta = -.103$; $p > .05$), not lending enough support for hypothesis 3.2.

Multigroup Invariance – Gender

Measurement invariance (MI) refers to the extent to which measurements undertaken in different conditions result in measures of the same attributes (Drasgow, 1984; Horn & McArdle, 1992; Meade, Michels, & Lautenschlager, 2007). Multigroup invariance was tested to see whether the components of the measurement model and the structural model are equivalent across gender. Only gender was analyzed for invariance, as the sample size was not large enough to test for invariance across ethnicities, education, or age. It is standard procedure to examine measurement invariance first as it is a logical precondition for substantive cross-group

comparisons (Joreskog, 1971; Vandenberg & Lance, 2000). It indicates whether a set of indicators assesses the same latent variables in different groups (Kline, 2011).

The Chi-square difference between the two genders was tested first as per the usual protocol. If the Chi-square difference is not significantly different, then the model is considered to be equivalent across groups (Byrne, 1998). However, the Chi-square value is sensitive to sample size and non-normality and thus should not be regarded as a criterion for multigroup invariance (Cheung & Rensvold, 2002). Therefore, two alternative indices, the CFI and RMSEA, are suggested (Byrne, 2013; Little, 1997). According to Little (1997), the CFI values between models should not be more than .05. Similarly, the rule of thumb for RMSEA difference is also .05 (Browne & Cudeck, 1993).

Table 16: Measurement Model Invariance

Gender (N)	Chi-square	df	RMSEA	CFI	NFI	GFI
Green Hotel Model						
Male (158)	270.23	155	.069	.957	.905	.861
Female (214)	244.48	155	.052	.972	.927	.898
Difference	25.78	0	.017	.015	.022	.037
Organic Wine Model						
Male (158)	271.55	155	.069	.954	.901	.858
Female (214)	337.36	155	.074	.952	.916	.875
Difference	65.81	0	.005	.002	.015	.017
Environment-friendly Car Model						

Male (158)	256.64	155	.065	.961	.909	.862
Female (214)	263.20	155	.057	.968	.926	.895
Difference	6.56	0	.008	.007	.017	.033

Table 17: Structural Model Invariance

Gender (N)	Chi-square	df	RMSEA	CFI	NFI	GFI
Green Hotel Model						
Male (158)	270.23	155	.069	.957	.905	.861
Female (214)	244.48	155	.052	.972	.927	.898
Difference	25.78	0	.017	.015	.022	.037
Organic Wine Model						
Male (158)	271.55	155	.069	.954	.901	.858
Female (214)	337.36	155	.074	.952	.916	.875
Difference	65.81	0	.005	.002	.015	.017
Environment-friendly Car Model						
Male (158)	256.64	155	.065	.961	.909	.862
Female (214)	263.20	155	.057	.968	.926	.895
Difference	6.56	0	.008	.007	.017	.033

First, two models in regards to green hotel, using male vs. female samples were compared. The comparison resulted in a Chi-square difference value of 25.78 with no significant

difference in the degrees of freedom in both the measurement and structural models. The CFI difference value for the measurement model (.015) was well within the recommendation suggested by Little (1997). Similarly, Δ RMSEA (.017) was well within the Browne and Cudeck's (1993) suggested criteria. Thus, it can be concluded that the green hotel measurement model and the structural model were equivalent across male and female.

The same process was followed in regards to the organic wine model. The comparison yielded a Chi-square difference value of 65.81 with no difference in the degrees of freedom in both the measurement and structural models. Δ CFI for the measurement model (.002) was well within the Little's (1997) recommendation. Similarly, Δ RMSEA (.005) was well within Browne and Cudeck's (1993) suggested criteria. Thus, the organic wine measurement model and the structural model were equivalent across males and females.

Finally, two models based on male vs. female samples were compared in regards to environment-friendly cars. The comparison yielded a Chi-square difference value of 6.56 with no difference in the degrees of freedom in both the measurement and structural models. The CFI difference value for the measurement model (.007) was well within the recommendation suggested by Little (1997). Similarly, Δ RMSEA (.008) was well within Browne and Cudeck's (1993) suggested criteria. Thus, it can be concluded that the environment-friendly car measurement model and the structural model were equivalent across male and female.

CHAPTER FIVE

DISCUSSION AND CONCLUSION

"Business is the economic engine of our Western culture, and if it could be transformed to truly serve nature as well as ourselves, it could become essential to our rescue." - Karl-Henrik Robert

The overarching goal of this concluding chapter is to provide a thoughtful discussion of the findings and the corresponding implications to practitioners and researchers. The chapter commences with a summary of what was achieved in the previous chapters. Limitations that were confronted during the course of this study are also discussed. The discussion of the relevant findings comprises the majority of this chapter. Additionally, a comparative piece in regards to the three green products is also offered.

Recap

The overarching purpose of this study was to develop and test a conceptual framework that seeks to better understand consumers' behavioral intentions in regards to three green products – the green hotel, organic wine, and an environment-friendly car.

Based on the multi-discipline literature review, several frameworks and related propositions were developed in regards to the three environmental products. The propositions included the effect of general values on more specific attitudes and behavioral intentions and the corresponding effect of attitudes on behavioral intentions. However, only a part of the conceptual framework was empirically tested. These pertained to the relationships between biospheric, altruistic, and egoistic values on visit/purchase intentions, willingness to pay more, and willingness to sacrifice for the three environmental products respectively.

The central theoretical lens was Schwartz's values theory. According to this theory, values are, "...desirable, trans-situational goals, varying in importance that serves as guiding principles in people's lives" (Schwartz & Bardi, 2001, p. 269). Consumers' values and beliefs must be considered when examining the antecedents of purchasing decisions (Hoyer & MacInnis, 2004). Purchase decisions involving environmental products are no exception. According to Stern (2000), three types of values fittingly explain pro-environmental behaviors, i.e., egoistic, altruistic, and biospheric values (see also, De Groot & Steg, 2007, 2008, 2010; Steg, Dreijerink, & Abrahamse, 2005; Stern, Dietz, & Guagnano, 1998). Egoistic values focus on making the most of personal outcomes, altruistic value focuses on the welfare of others, and biospheric value highlights the environment and the biosphere. Given that behavioral intentions serve as proxy to actual behaviors, this study's overarching purpose was to find out how the three fundamental environmental values – biospheric, altruistic, and egoistic – predict three fundamental pro-environmental behavioral intentions of consumers – purchase intention, willingness to sacrifice, and willingness to pay more – for three different environmental products – the green hotel, the organic wine, and the environment-friendly car.

Twenty-seven out of the sixty-three propositions were empirically tested in this study. More specifically, only the direct effects from values to the behavioral intentions were empirically analyzed. Consequently, a survey instrument was designed drawing predominantly from the extant literature. The measures for the three values and the two behavioral intentions utilized existing scales that had demonstrated strong validity and reliability in prior studies. The measure for willingness to sacrifice was developed for the purpose of this study and included the

sacrifices consumers make when endorsing green products in terms of feature, quality, value, and/or performance. All the measures exhibited adequate reliability.

The pilot study was conducted using university students and the main study employed Amazon's groundbreaking crowd sourcing system – Amazon Mechanical Turk (MTurk). The participants were representative of the general US population. Three hundred and seventy five completed responses were finalized for CFA and structural model analysis after accounting for missing values and outliers. Data analysis was undertaken using SPSS and AMOS 21. Both the measurement and structural models in each case of the three green products exhibited good model fit and robust validity. Significant support was only found for twelve out of the twenty-seven hypotheses. Next, I discuss the results related to each of the three models and then provide a comparative discussion.

The Green Hotel

Results regarding the green hotel model supported 4 out of the 9 hypotheses. Overwhelmingly, all three hypotheses involving biospheric value were strongly supported. This shows the strong predictive power of consumers' biospheric values in influencing their green hotel behavioral intentions. First, biospheric value significantly and positively influenced green hotel visit intention. This shows that consumers with a high degree of biospheric values or in other words consumers who are inherently concerned about nature would endorse green hotels. Conversely, consumers with a low degree of biospheric values or who do not care much about nature would not endorse green hotels. Biospheric value also significantly and positively affected willingness to sacrifice for the green hotel. This shows that consumers with a high degree of biospheric values or concern for the nature are willing to sacrifice value, convenience, and

luxury for green hotel. On the contrary, consumers with a low degree of biospheric values would most likely not sacrifice value, convenience, and luxury regarding their green hotel stay-over. It had been suggested that consumers consider purchasing an environmentally friendly product when it matches a conventional product on the functional performance, quality, convenience, and price (Bhattacharya, 2011; Schlegelmilch, Bohlen, & Diamantopoulos 1996; Wong, Turner, & Stoneman 1996). Chang and Kristiansen (2006) suggested that in regards to environmental products quality credentials are needed to be met in order to satisfy customers who are more demanding and better informed. The overarching question is whether this logic applies for all consumer types. I will illustrate this point next.

It must be acknowledged that many people perceive green products to be inferior to their non-green counterparts (Ottman, 1998; Roberts & Bacon, 1997). Time and again, a fixation on products' environmental merits has resulted in inferior green products and unsatisfying consumer experiences (Ottman, Stafford, & Hartman, 2006). Hotels are no exception. For example, participating in a towel reuse program makes the customers reuse their towels, which is a sacrifice in terms of the convenience or luxury offered in a hotel and is supposed to debilitate the quality of the consumption experience. However, the notion that green products have to perform as satisfactorily as conventional products does not seem to apply for consumers with high biospheric values. In addition, the mean ratings for the three "willingness to sacrifice for green hotels" items show that consumers more often than not are willing to sacrifice for green hotels. Especially, among the three attributes value, convenience, and luxury, it seems people are willing to sacrifice luxury for green hotels on a higher level. Consumers with high biospheric values tend to be highly appreciative of environmental initiatives and as such, they are mostly

highly involved with consuming environment-friendly products. Compared to conventional consumers, these high biospheric consumers are, therefore, willing to sacrifice more to satisfy their innate need for environmental welfare. The green hotel, especially, with its abundance of environmental activities such as linen and terry reuse programs, recycling, and ways to save electricity and water, provides the perfect avenue for these biospheric consumers to engage in environmental protection. Purchasing the hotel night itself is a green act and within this, the consumers are getting to carry out various environmental activities, which they normally strive to do in their households. Endorsing the green hotel will thereby provide a high degree of satisfaction to biospheric value oriented consumers.

Biospheric value significantly and positively affected willingness to pay more for green hotels. This shows that consumers with high degree of biospheric values or concern for the environment are willing to pay a higher price for their green hotel consumption experience. On the other hand, consumers with low degree of biospheric values are not so much willing to pay a higher price for green hotels. Thus, consumers with higher biospheric values are not only willing to sacrifice value, convenience, and luxury, but also are keen on paying a higher price for their green hotel consumption experience. In general, green products are costlier compared to their non-green counterparts (Washington & Miller, 2010; Robert & Bacon, 1997). Consumers in general have a perception that a green hotel might be more expensive than a non-green hotel (Ogbeide, 2012). In fact, one study has shown that guests could expect to pay around \$9-\$26 more for a standard room in green hotels (Kuminoff et al., 2010). A plethora of studies have confirmed that consumers are willing to pay a premium price for environmental products (see Cook et al., 1992; Freeman, 1989; Kapelianis & Strachan, 1996; Kassarian, 1971; Laroche et al.,

2001). In the context of green hotels, too, consumers in general have been willing to pay a price premium (e.g. Bohdanowicz, 2003; Muñoz & Rivera, 2002). The results for the willingness to pay more construct shows that participants are more inclined towards paying a premium for green hotel in this study. Studies have also confirmed that environmental attitudes/concern influences the willingness to pay more for green hotels (Han et al., 2011; Kang et al., 2012). Thus, results are consistent with what most studies have professed in related literature. As mentioned before, highly biospheric consumers derive a great deal of satisfaction through their green hotel endorsement. As a result, they are willing to spend extra to stay at a green hotel and at the same time sacrifice their luxury, convenience, and quality. It appears that the biospheric consumers' involvement level with green products is so much that they are willing to go the extra mile by paying a higher price and sacrificing quality. The findings for organic wine and environmental car, which I will explore in latter sections, confirm this.

The other hypothesis that was supported in the green hotel model was the effect of altruistic value on willingness to sacrifice for green hotels. This indicates that the higher the altruistic value for a person, the higher will be his willingness to sacrifice for a green hotel. Altruism is touted as the opposite of selfishness and involves helping others without any reward expectations in return. Thus, people with high altruistic values will inherently have a high concern for the well-being of others. It was expected that altruistic values would be significantly influential in predicting all three behavioral intentions in regards to green hotel. Because of the high impact hotels can create through environmental practices aimed at recycling waste, saving water, saving energy, to protect the planet and to contribute towards the welfare of its inhabitants, it was expected consumers would exhibit highly philanthropic attitudes towards

green hotels. The findings suggest that while altruistic consumers might inherently want to help green hotels by sacrificing their luxury, value, and convenience, they do not want to visit the hotel or pay a premium price. In other words, consumers' altruistic values are significantly causing them to sacrifice convenience, luxury, and value but the same values are not influencing consumers' green hotel endorsement and willingness to pay more. This might have to do with the reputation of green hotels and the underlying cost motive associated with them. Many green hotels are spending huge amount of money in embracing green practices that are beneficial for the environment. Simultaneously, the practitioners are making huge cost savings out of these practices. As a result, consumers might view these practices as self-interest oriented rather than altruistic. There also has been increasing media attention highlighting the negative sides of green hotels. There are hotels that are simply displaying signs, buying certifications, and claiming to be a green hotel without actually embracing any substantial green practices. These misleading green claims create consumer backlash in the form of consumer skepticism (Dief & Font, 2010; Nyilasy, Gangadharbatla, & Paladino, 2013), which negatively affects consumers' visit intentions (Rahman, Park, & Chi, 2012). Another consequence of this prevalent green hotel sensitivity is that guests are reluctant to pay more for the green hotel, although they are highly environmentally conscious (Lee et al., 2010). Thus, consumers' altruistic values are significantly influencing their willingness to sacrifice for the green hotel but neither their visit intentions nor their willingness to pay more for the green hotel.

Contrary to what have been hypothesized, none of the three hypotheses was supported in regards to egoistic value and green hotel behavioral intentions. In addition, results showed that the effects of egoistic value on visit intention, willingness to sacrifice for green hotel, and

willingness to pay more are all negative – the opposite direction to what was hypothesized. Thus, egoistic value did not significantly influence green hotel visit intention, willingness to sacrifice for green hotel, and willingness to pay more for green hotel respectively. The higher the egoistic value, the lower is green hotel visit intention, willingness to sacrifice for green hotel, and willingness to pay more for green hotel respectively.

“Egoistic concerns are based on a person’s valuing himself or herself above other people and above other living things” (Schultz, 2000, p. 392). Egoistic values consist of a commitment to maximize personal well-being and one's own outcomes. “Egoistic values predispose people to protect aspects of the environment that affect them personally or to oppose protection of the environment if the personal costs are perceived as high” (Stern & Dietz, 1994, p. 70). Based on costly signaling theory, and the findings of Griskevicius et al. (2010) in which consumers chose green products over their more luxurious non-green counterparts when status motives were elicited, it was postulated that egoistic values would influence green hotel behavioral intentions because green hotels would act as a status symbol and would signal a consumer’s ability and willingness to incur costs. However, it must not be forgotten that these theories are applicable for products whose consumption is more public. The hotel consumption experience tends to be more private, which the public normally do not get to see. Although consumers these days have the option of making such an experience public mostly through social networking, such a rationale is not quite plausible for every consumer. Comparatively, driving a hybrid/electric car or buying an organic wine bottle for a party or at a restaurant, would directly enhance a person’s status according to the green signaling theory.

Another potential detrimental effect involves social desirability bias. Social desirability refers to the propensity to refute socially unattractive behaviors and to disclose the ones that seem socially pleasing (Zerbe & Paulhus, 1987; Randall & Fernandes, 1991). This study operationalized a self-report survey that recorded values and environmental behavioral intentions. On the other hand, Griskevicius et al. (2010) utilized experiments that recorded actual behaviors. The effects that Griskevicius et al. (2010) found out using an experimental design might be difficult to replicate using a self-report survey with behavioral intentions as proxy for the actual behavior.

It is important to acknowledge that when highly egoistic individuals recognize a threat to themselves from environmental degradation, they will become concerned about environmental predicaments (Schultz, 2002). In those situations, the effect of egoistic values on behavioral intentions regarding environmental products might be positive. It is evident from the results, that neither green signaling nor a perceived self-related hazard from environment damage is taking place in the context of the green hotel. The findings are in harmony with popular research where egoistic values are repeatedly viewed as contrasting to the environmental schema (Clark, 1995; Schultz, 2002). This is because pro-environmental behaviors often necessitate individuals to hold back egoistic predispositions (Nordlund & Garvill, 2002; Stern, 2000; Thøgersen & Ölander, 2002). Thus, in the context of green hotels, it is reasonable to state that customers are holding down their egoistic tendencies. As a result, egoistic values although not significant, are negatively related to green hotel visit intention, willingness to sacrifice, and willingness to pay more.

Numerous studies have confirmed that egoistic values are for the most part negatively related to pro-environmental attitudes, intentions, and behaviors, while altruistic and/or biospheric values demonstrate a positive association (e.g., De Groot & Steg, 2010; Gärling, Fujii, Gärling, & Jakobsson, 2003; Milfont & Gouveia, 2006; Nordlund & Garvill, 2002; Stern & Dietz, 1994). Studies have also confirmed that biospheric values serve as a more robust predictor of behaviors, behavioral intentions, and attitudes compared to altruistic values (De Groot & Steg, 2008; 2010). The findings hold true in the context of green hotels as evident from the results of this study. However, we must not disregard the role of costly signaling and the associated status motives with green consumption. That is probably the reason the negative effect that was apparent between egoistic value and green hotel behavioral intentions was not strong enough to be significant, with costly signaling and status elicitation most likely coming into play for some consumers.

The Organic Wine

In the organic wine model, 4 out of the 9 hypotheses were supported. Similar to the green hotel model, all three hypotheses involving biospheric value were strongly supported. This shows the strong predictive power of consumers' biospheric values in influencing their green hotel behavioral intentions. First, biospheric value significantly and positively influenced organic wine purchase intention. This shows that consumers with a high degree of biospheric values or in other words consumers who are inherently concerned about the nature would purchase organic wines. Conversely, consumers with a low degree of biospheric values or who do not care much about nature, would not embrace organic wines. These findings are consistent with previous findings where environmental attitudes have successfully predicted willingness to purchase

environmentally friendly wines such that the higher the environmental attitude, the higher is the willingness to purchase (e.g., Barber, Taylor, & Strick, 2009). In the same way, environmental behavior has also been found to influence organic wine purchase intention (Barber, Taylor, & Deale, 2010).

Biospheric value significantly and positively affected willingness to sacrifice for organic wine purchase intention. This shows that consumers with high degree of biospheric values or concern for the environment are willing to sacrifice quality, taste, and value for organic wines. On the contrary, consumers with low degree of biospheric values would most likely not sacrifice quality, taste, and value of the organic wine. Consumers have associated organic wines with not having genuine taste and not providing a good value for the money (Sirieix & Remaud, 2010). These are evident from the low mean ratings of the items measuring willingness to sacrifice for organic wines. What is notable is that they are particularly sensitive about wine taste. Thus, the notion that green products have to attain consumer acceptance on key attributes similar to that of their conventional non-green counterparts, applies more in the case of organic wines than for green hotels. This is most probably due to consumer involvement. Wine is considered as a high involvement product (Hall & Mitchell, 2002) and consumers are expected to be particularly sensitive about the core sensory attributes of wine such as taste. However, this notion does not quite apply for consumers with high biospheric values, which is similar to what was found in the case of green hotels.

Biospheric value significantly and positively affected willingness to pay more for organic wines. This shows that consumers with a high degree of biospheric values or concern for the nature are willing to pay a higher price for organic wines. On the other hand, consumers with

low degree of biospheric values are not willing to pay a higher price for organic wines. Thus, consumers with higher biospheric values are not only willing to sacrifice value, convenience, and luxury, but also are keen on paying a higher price for organic wines. Studies in the past have indicated that consumers endorsing organic wines are willing to pay a premium which can range between 20-25% (Molla-Bauza et al., 2005; Ogbeide, Ford, & Stringer; Remaud, Mueller, Chvyl, & Lockshin, 2008). It is possible that for consumers with high biospheric values, this number can be substantially larger. This translates into a clear message for wine marketers. It seems there is an opportunity to charge more prices to the high biospheric consumers but marketers run the risk of losing other consumer types if they do so. In addition, marketers cannot discount the effect of quality credentials on organic wine endorsements. As mentioned before several researchers have contended that green products need to meet quality credentials of their conventional counterparts in order to stimulate purchase. An experimental study by Rahman et al. (2014) showed that in order to stimulate repeat purchase, organic wines need to meet consumers' taste expectations. The fact that it is organic, although might be enough to stimulate first time purchase even for ecocentric consumers, repeat purchase of the wine will only depend on whether the consumers liked its taste.

Next, we found that the effect of egoistic value on purchase intention of organic wines was such that the stronger the egoistic value, the stronger the purchase intention of organic wines and vice versa. As, egoistic value prompt individuals to safeguard facets of the environment that influence them personally, its influence on purchase intention of organic wine is understandable.

Wine has been widely regarded as a conspicuous consumption good (Podolny, 2005; Veblen, 1953). Organic wines are more expensive than conventional wines. Typically, the

production of organic wines cost producers a third more compared to normal methods (Crescimanno et al., 2002). This extra cost is reflected in the final price consumers pay. Likewise, the consensus among consumers is that organic wines are more expensive compared to their non-organic counterparts (Sirieix & Remaud, 2010). Purchasing organic wines, as such, can signal a person's pro-sociality and the ability to incur costs as per the costly signaling theory. The fact that wine consumption is often a public experience adds to the costly signaling phenomenon. Wine is a social lubricant (Thach, 2011). In the hospitality industry, the majority of wine sales occur in restaurants, banquet centers, bars, and nightclubs (Hall, O'Mahony, & Lockshin, 2001; Hall, Binny & O'Mahony, 2004). In such settings, wine contributes to socializing, relaxation, and learning (Barber, 2005). In the tourism industry, travelers seek wine tourism experiences through diverse channels such as cultural heritage events and festivals, dining and lodging experiences, education, formal wine tastings, cellar door sales, and winery tours (Charters & Ali-Knight, 2002). Thus, the consumption of wine is very much considered a public phenomenon that acts as a trigger for costly signaling and contributes to a person's social status enhancement.

Additionally, organic wine utilizes a chemical free farming process and does not contain added preservatives. That is why consumers view organic wines as good for their health (Sirieix & Remaud, 2010). This adds to the ubiquitous perception that wine generally is good for the heart (Ronksley et al., 2011). Hence, consumers have a direct benefit from consuming wines. Perceived benefits are one of the overarching reasons why consumers embrace a product. For organic food, the perceived benefits are obviously greater than conventional foods mainly because of their health benefits and environmental and animal welfare (Magnusson et al., 2003).

The same applies for organic wines in comparison to conventional wines. The symbolic nature of the product added with the perceived health benefits justifies the significant positive effect of egoistic value on purchase intention of organic wines. Thus, for the wine marketer a fitting strategy would be to pitch it as both healthy and environmentally beneficial, which most wine marketers seem to understand.

Egoistic value did not significantly influence consumers' willingness to sacrifice for organic wines. The result is in accord with the direction hypothesized, yet still raises questions. It shows that although egoistic value can influence organic wine purchase intention, it will not influence consumers' willingness to sacrifice for such wines. Consumers might feel organic wines add to their personal benefits but not to the extent that they will be willing to sacrifice the quality, taste, and value associated with the wine. Egoistic value also did not significantly influence consumers' willingness to pay more for organic wines. The surprising element is that the effect is in the opposite direction to what was hypothesized and what the literature suggested. Although the effect was not significant, it shows that the higher the egoistic value, the lower is the willingness to pay more for organic wines. Numerous studies showed that consumers are willing to pay a premium for organic wines (e.g., Molla-Bauza et al., 2005; Ureña, Bernabéu, & Olmeda, 2008; Bazoche, Deola, & Soler, 2008). However, the majority of such studies take into account only consumers who are willing to endorse organic wines. In many cases, consumers who will not consider organic wines are ignored. In reality there are many consumers who feel organic wines are not as tasty as conventional wines and as such, they are not willing to pay more for them. For these consumers, even though they feel consuming organic wine has certain personal benefits associated with it, they might not be willing to pay more.

Last but not least, altruistic value did not significantly influence consumers' 1) willingness to purchase organic wines, 2) willingness to pay more for organic wines, 3) willingness to sacrifice for organic wines. Most of these effects, although not significant, were in the hypothesized direction, which was very slightly tilted towards the negative direction. It is worth mentioning that people with high altruistic values will inherently have a high concern for the well-being of others. However, this goodwill towards others was not enough to warrant organic wine endorsement. Although organic wines have health and environmental benefits, consumers' altruistic value does not significantly shape their purchase intention. As noted, this was not the case for egoistic value. This shows that for organic wines people might be outweighing the personal benefits compared to the benefits to others.

Consumers' altruistic value also did not successfully influence their willingness to sacrifice for the organic wines. Consumers, in general, are not willing to sacrifice taste, quality, and value for organic wines. Even for highly altruistic consumers this fact is very much evident from the results. A similar conclusion is drawn from the results regarding consumers high in altruistic values who are not willing to pay a premium for organic wines. This effect was almost equal to zero.

The Environment-friendly Car

The environment-friendly car is referred to as hybrid/electric synonymously in this study. In the hybrid/electric car model, 4 out of the 9 hypotheses were supported. Similar to the green hotel and organic wine models, all three hypotheses regarding biospheric value were strongly supported. This shows the strong predictive power of consumers' biospheric values in influencing their hybrid/electric car behavioral intentions. Firstly, biospheric value significantly

and positively influenced hybrid/electric car purchase intention. This shows that consumers with a high degree of biospheric values or in other words consumers who are inherently concerned about the environment would purchase hybrid/electric cars. Conversely, consumers with a low degree of biospheric values or consumers who do not care much about the environment would not embrace hybrid/electric cars. The results support previous findings where environmental concern represented one of the main reasons for hybrid/electric car procurement (e.g., Carley, Krause, Lane, & Graham, 2013; Henning & Karlsson, 2011; Li, Clark, Jensen, Yen, & English, 2013). In green communities, consumers will be endorsing environmentally friendly vehicles to a greater extent (Sexton & Sexton, 2013). Similarly, environmentalists are much more inclined to endorse such vehicles than non-environmentalists do (Kahn, 2007). Biospheric value has been found to significantly influence consumers' willingness to pay more for hybrid/electric cars such that higher the biospheric values higher is the willingness to pay more. Studies have found consumers willing to pay a premium price for hybrid/electric vehicles (e.g., Achtnicht, 2012; Hidrue, Parsons, Kempton, & Gardner, 2011; Potoglou & Kanaroglou, 2007; Sexton & Sexton, 2013). It is reasonable to assert that consumers higher in biospheric value would probably be more willing to pay a premium for a hybrid/electric vehicle than other consumers given other factors such as income, gender, etc. remain the same.

Biospheric value also significantly influences consumers' willingness to sacrifice for hybrid/electric vehicles. In regards to willingness to sacrifice for hybrid/electric cars, consumers are willing to sacrifice luxury the most, followed by power/performance, and quality features. Usually, a hybrid car can cost as much as 20 percent more than its conventional gasoline engine counterpart and an electric or part-time electric model can be even more expensive (Edmunds,

2014). Thus, with the same amount, a consumer can afford a superior car that can offer more value in terms of quality, luxury, and performance. The results of this study suggest that for customers with higher biospheric values, the willingness to sacrifice for hybrid/electric cars in terms of performance, luxury, and quality features is more and for customers low on biospheric values the willingness to sacrifice is significantly lower.

Egoistic value significantly predicted consumers' hybrid/electric car purchase intention. More specifically, the higher the egoistic value, the higher is the purchase intention of hybrid/electric cars. Similar to wines, cars can also be regarded as a high involvement product (Molesworth & Suortti, 2002). Cars are also commonly used to signify status. The effect of egoistic value on hybrid/electric car embracement shows a possibility of costly signaling taking place. In particular, it can be denounced that consumers are using hybrid/electric cars to enhance their statuses that shows that consumers are incurring more costs to be environment-friendly. This effect can also be resulting from the personal benefits derived from hybrid/electric car consumption. Although hybrid cars can be initially expensive, over the course of time consumers can save a lot through increased mileage (De Haan et al., 2006). As, egoistic value causes people to safeguard aspects of the environment that have an effect on them personally, it can be concluded that costly signaling as well as the effect of direct personal benefits are evident in this case.

However, a closer look makes the case for direct personal benefits more evident. It was proposed that egoistic value would influence willingness to sacrifice for hybrid/electric cars such that higher the egoistic value, higher is the willingness to sacrifice. The effect of egoistic values on the willingness to sacrifice for hybrid/electric cars turned out to be in the opposite direction as

hypothesized. Consumers, in particular, expect cars to have great performance, quality, and luxury associated with them. As such, consumers high in egoistic value are not willing to sacrifice these features for hybrid/electric cars, even though the effect was not significant. The same consumers, as shown before, are significantly intending to purchase green cars. Thus, there is an opportunity for manufacturers to come up with hybrid/electric models that offer the power/performance, quality, and luxury of equivalent non-hybrid/non-electric cars. Manufacturers are responding well to these opportunities and already there are a number of models in the market meeting these needs. However, most of these cars come with a premium price that can often be substantially higher than the price of comparative non-hybrid/non-electric models.

It was postulated that egoistic value would significantly influence willingness to pay more for hybrid/electric cars such that higher the egoistic value, higher is the willingness to pay more. Results showed that consumers high in egoistic value are not willing to pay more for hybrid/electric cars. Although the effect was not significant, it was in the same direction as hypothesized. This further adds that consumers high in egoistic values are not necessarily willing to pay a premium price for hybrid/electric car and are unwilling to sacrifice in terms of performance, quality, and luxury, even though they might be willing to purchase such a car. Sexton and Sexton (2013) showed that consumers endorse the distinctively designed Toyota Prius significantly more compared to other even more luxurious hybrids in green communities and are even willing to pay a premium of \$430 to \$4200 depending on the owner's location. This is because of green signaling emitting out of a theory of conspicuous conservation, a phenomenon related to conspicuous consumption in which individuals seek status through

displays of austerity amid growing concern about environmental protection (Sexton & Sexton, 2013). For a future study, it would be interesting to analyze the effects of three values on different models of hybrid/electric cars separately especially as it applies to the Toyota Prius vs. the rest.

Finally yet importantly, altruistic value did not successfully predict consumers' 1) hybrid/electric car purchase intention, 2) willingness to sacrifice hybrid/electric cars, 3) willingness to pay more for hybrid/electric cars. The results were all in the hypothesized direction. Altruistic values reflect concern for the welfare of others. Consumers' concern for others does not significantly lead them to purchase a hybrid/electric car, to pay a premium price, or to sacrifice luxury, quality, and performance features. Hybrid/electric cars use less or no gasoline, saving the valuable non-renewable resource and have lower emissions, reducing air and noise pollution (Fontaras, Pistikopoulos, & Samaras, 2008). Thus, by endorsing a hybrid/electric car a consumer is benefitting the general population. However, even after these apparent benefits to human beings in general, consumers' altruistic values were not found to significantly influence hybrid/electric car endorsement. As such, these effects were similar to that of organic wines, but not in the case of green hotel. This finding is elaborated in the next section.

Comparing Three Green Products

To give an overall analysis of the findings, a comparison of the results as it relates to the three green products is useful. The three products that were analyzed as part of this study – the green hotel, the organic wine, and the environment-friendly car – differed substantially in different attributes. Not only the product, but also the product class varies considerably in

different characteristics. The following table gives an overview of the relative differences in the product classes:

Table 18: Product Attribute Comparison

Attribute	Hotel	Wine	Car
Price	Medium	Low	High
Purchase Frequency	Medium	High	Low
Use Frequency	Low	Medium	High
Consumption Experience	Private	Private/Public	Public
Type	Hedonic/Functional	Hedonic	Hedonic/Functional
Involvement	Mostly situational	Enduring and/or situational	Enduring and/or situational

The findings of this study show that biospheric value, overwhelmingly, predicts consumers' endorsement, willingness to pay more, and willingness to sacrifice regarding all the three types of environmental products. These strongly support previous literature about the significant and substantial influence of biospheric value, ecocentric value, environmental/ecological concern, environmental attitudes, and environmental behavior on patronage intentions and willingness to pay more (e.g., Barber et al., 2009; Cook et al., 1992; Han et al., 2011; Kang et al., 2012; Mainieri, Barnett, Valdero, Unipan, & Oskamp, 1997; Minton and Rose, 1997). These effects were manifestly stronger in case of green hotels compared to organic wines and hybrid/electric cars.

The green hotel is the only product among these that offers consumers a chance to demonstrate their pro-environmentalism by displaying such behaviors within their consumption experience. Patronizing a green hotel is in itself an act of environmentalism. A guest can carry out a number of other environmentally significant behaviors within their stipulated hotel night experience. They can recycle waste in the hotels, use electricity and water more cautiously, participate in the linen and terry re-use programs, etc. As a result, the consumer might feel more involved environmentally when they stay at a green hotel compared to endorsing a hybrid/electric car or an organic wine. Consumers high in environmental concern or biospheric values might feel a sense of accomplishment through patronizing a green hotel.

The impact hotels have on the environment is staggering. An info graphic prepared by US Green Building Council, American Hotel and Lodging Association, NFL, US Energy Information Association, Energy Star, Environmental Protection Agency, Siemens, and Forbes.com shows the astounding impact of hotels on the environment and how green hotels can certainly reduce the impact (Hotel.info, 2012). For instance, in one year, hotels create 1.9 billion lbs of waste, consume 84.7 billion kwh of energy, use 219 billion gallons of water, and produce 60 million tons of CO₂ (Hotel.info, 2012). Green hotels, in a year, could typically send 50-75% less wastes to landfills, save 65.7 billion gallons of water, and reduce CO₂ and energy use output by 10% (Hotel.info, 2012). Environmentally concerned consumers might be feeling that by participating in environment-friendly initiatives in green hotels, they might be creating a much bigger impact on environmental stewardship than by drinking organic wine or by driving a hybrid/electric car. The different kinds of green practices that one can associate with in a green hotel certainly make the case for green hotels stronger.

The effect of egoistic value on green product patronage was evident for organic wines and hybrid/electric cars, not for green hotels. Unlike organic wines and hybrid/electric cars, green hotels do not have direct personal benefits associated with them for the consumer. Organic wine is perceived to be good for the health and driving a hybrid/electric car results in financial savings for the consumers in terms of increased mileage. Green signaling might also be taking place in the case of organic wines and hybrid/electric cars. According to this theory, people would most likely endorse green products as a way of enhancing their statuses because it signals their ability to incur costs. The nature of the consumption experience is important. When a person drinks an organic wine at a restaurant or at a party, the nature of the consumption experience is pretty much public. Other people also often enquire about the type of drink a person is having. Similarly, driving a hybrid/electric car is an experience that others can see. Staying at a green hotel, on the other hand, is a more private experience, which is hard for others to see. Consumers have been shown to prefer the Toyota Prius over their more luxurious and better-designed hybrid counterparts in green communities because the hybrid name is synonymous with the Prius. Driving a Toyota Camry hybrid or a Honda Civic hybrid does not explicitly signal that a person is driving a hybrid because non-hybrid models with the same designs are available in the market. The Prius, on the other hand, is uniquely designed and successfully signals the environmental identity of a person, which enhances a person's social status and reputation. In summary, I support the view of Elliott (2013) that the predicted relationship between status and green consumption highly depends on the type of products under scrutiny.

The green hotel is probably the only green product in this study through which manufacturers are saving money, at least, in the long run. In practice, all these three green products are associated with a premium price to the consumers. Hybrid/electric cars can be more expensive to manufacture given their underlying technology. Similarly, organic wines have a high cost of farming that justifies a price premium. For the green hotel, it can be argued that some initiatives such as solar panels, light sensors, green amenities, low-flow showerheads, faucets, and toilets, and green certifications, can be expensive. However, other green initiatives such as linen and terry reuse programs, recycling, signs at various strategic locations, natural ventilation, curtains to absorb heat, green roof, usually save more money to practitioners than they cost. The more expensive practices and initiatives that were mentioned will also in the long run most likely end up adding to the cost savings of the practitioners. Thus, while hybrid/electric cars and organic wines are justified with the premium price they charge, green hotels have an opportunity to attract more customers by charging a lower price. There seems to be a predicament as practitioners are saving more money and charging higher prices. As consumers become more and more knowledgeable about environmental consumption, a time might come when they identify this disconnect and likewise abandon green hotels.

Practical Implications

Implications for practitioners ensuing out of his study are aplenty. First, the markedly more robust effect of biospheric values on green hotel behavioral intentions makes a strong case for involving the customers in the environmental management process. By incorporating practices that create a sense of accomplishment for the highly ecocentric consumer, practitioners can improve the customer's patronage intention, willingness to pay more, and willingness to

sacrifice. Green initiatives such as having recycle receptacles in the hotels, signs encouraging green behaviors, and linen and terry reuse programs, can prove to be beneficial for the practitioners not only financially but also in terms of guest satisfaction and loyalty. It is imperative for practitioners to look beyond these practices and think about innovative ways of involving the guests in the environmental management process as most of these practices are increasingly becoming commonplace. That said, there has also been some negative media coverage of late especially about low-cost, easy to install green initiatives, touting them as examples of the *greenwashing* phenomenon. Obviously, hotel managers have to be cautious, as overdoing it might create the impression of greenwashing especially among customers with low biospheric values, high degree of skepticism, or high egoistic value orientation. The challenge for the hotel manager is to strike the right balance with the marketing campaigns and green practices. It will also depend on which type of market segment the hotel aims to target.

This finding also points out to organic wine farmers and hybrid/electric car manufacturers that there might be untapped opportunities to increasingly involve the high biospheric consumer in the environmental management process. Due to the nature of the products, it is not that straightforward for manufacturers, retailers, or vendors to come up with ways to involve the consumer in the environmental management process in regards to these two products. However, for wineries and restaurants it might be possible to offer some initiatives to involve the environmentally concerned customer.

The findings also suggest that there are opportunities to tap the altruistic side of consumers in the environmental management process in regards to green hotels. Altruistic value significantly influenced consumers' willingness to sacrifice for green hotels as per the findings

of this study. As such, practices highlighting corporate social responsibility might prove to be beneficial for the hotel. More specifically, it is important that managers create an impression that they are trying to help the local community and human beings in general through their initiatives. Practices such as donating old furniture to the underprivileged, volunteering, promoting local businesses, etc., can be fruitful. As always, the message needs to be communicated in the right ways so that it reaches the right kind of people. Positive media coverage via efficient public relations, thus, is highly important.

There are numerous takeaways from the influence of egoistic values on green product behavioral intentions. For green products with high personal benefits for the consumers, such as organic wines and hybrid/electric cars, manufacturers should market them as both beneficial for the self as well as for the environment. The results also underscore the nature of the consumption experience. Green signaling might ensue for products that involve a more public consumption experience. For products that involve a more private consumption experience such as the green hotel, there is the corresponding opportunity. Hotel managers must focus on the unique identity of a hotel as being green in order to attract environmentally friendly consumers. For the highly egoistic customer, the green hotel must focus on making the consumption experience more visible. For example, encouraging online check-ins or giving the customers a chance to communicate through social media might entice consumers to share their green hotel consumption experience with the public via social media. This will activate green signaling, which will provide an opportunity to the egoistic consumers to enhance their social status.

Research Implications

The comprehensive review of environmentally related hospitality research by Myung et al. (2012) revealed an apparent shortage of studies in consumer behavior especially in regards to understanding the deeper aspects of consumer behavior. The same researchers also identified the related lack of theory or theoretical perspectives in related literature. A call has also been made that hospitality researchers apply relevant models, theories, and theoretical frameworks from other fields that would help advance environmentally related scholarship and provide practical relevance to the hospitality field and industry (Myung et al., 2012). The findings presented in this dissertation successfully address these gaps and as such makes a contribution to the environmentally related consumer behavior research.

This study utilizes the prominent Schwartz values theory using Stern and De Groot and Steg's (2007, 2008) operationalizations in the context of the environment to predict consumers' behavioral intentions for three environmental products – the green hotel, the organic wine, and the hybrid/electric car. The underlying roles of biospheric, altruistic, and egoistic values are investigated in terms of their predictive power for patronage intentions, willingness to sacrifice, and willingness to pay more for the three environmental products. As such, this study adds to the extant literature by incorporating the environmental concern perspective, the social-altruistic perspective, and the personal benefits and status perspectives of the consumer in embracing green products.

Limitations

This study utilized a self-report survey asking participants to rate their general values and environment-friendly behavioral intentions. Social desirability bias might be an issue, which

might hinder participants from being honest with their responses. The study did not take into account participants' prior knowledge and experience of the three green products. Although teetotalers were screened out for the finalized model, consumers' past experience and knowledge were not assessed. Similarly, a differentiation was not made regarding hybrid vs. electric cars. Participants might have different behavioral intentions regarding these two types of environment-friendly cars. The sample size was arguably somewhat small for some of the analyses. The sample was not large enough to enable invariance tests regarding ethnicity, education, and income of the participants. Lastly, this study used Amazon's MTurk as a platform for data collection. As a result, the limitations of MTurk such as lack of control, deceptive responses, rushed responses, etc., pose a concern.

Conclusion

Green consumerism refers to “purchasing and non-purchasing decisions made by consumers, based at least partly on environmental or social criteria” (Peattie, 1992; pp. 118). Paramount predicaments such as global warming, climatic change, depletion of resources, and overuse of the earth's absorptive capacity, have put the onus on humans and their underlying behaviors. One facet of such behavior through which we can attempt to save our planet is green consumerism. If all hotels in the US go green, the impact would be the same as turning 12 million barrels of oil into 139 million trees and taking 1 million cars off the road (Hotel.info, 2012).

There is no doubt that consumers are increasingly sentient about environmental issues. However, whether consumers are taking enough steps towards environmental stewardship remains a quandary. A 2007 survey of more than 7,000 consumers across the world showed that

as much as 87% consumers were concerned about the environmental and societal impacts of their purchases (Bonini & Oppenheim, 2008). However, when it came to embracing a green product, a survey by Chain Store Age reported only 25% consumers would do so (Wilson, 2007). These numbers make it apparent that there is a strong need to study the underlying green consumer psychology, which would enable manufacturers to better understand the consumer and accordingly better design and market green products that cater to the needs of the consumer while contributing to environmental stewardship at the same time.

This study investigated the deeper facets of green consumer behavior. In particular, the three core environmental values – biospheric, altruistic, and egoistic – were analyzed in terms of their influence on green product behavioral intentions. Three behavioral intentions were studied: purchase intentions, willingness to sacrifice, and willingness to pay more in regards to three environmental products: the green hotel, the organic wine, and the environment-friendly car. Biospheric value was overwhelmingly found to predict all three types of behavioral intentions for all three green products. Altruistic value was only found to influence willingness to sacrifice for green hotels. Egoistic value was only found to influence purchase intentions in regards to organic wine and hybrid/electric cars.

In summary, we found that green products with a certain degree of status associated with them and/or whose consumption is more a public practice must appeal to the consumers as a medium to enhance their social status. Consumers also would increasingly embrace a green product if it can represent some personal benefits for them, which can be health-related and/or economic. However, consumers' egoistic values would neither cause them to pay more nor sacrifice for these products.

For high impact environmental products such as the green hotel that also involve consumers in the environmental management process, altruistic value-oriented consumers are willing to go the distance in support of the environmental efforts and for the people's well-being by sacrificing their own luxury, convenience, and perceptions of quality. Thus, for the green hotel a fitting strategy would be to market the product as not only benefitting the environment but also humanity. Of course backing the marketing claims with actual performance is crucial to a green product's success; otherwise, consumers can increasingly become skeptical about a green product's stated claims. In this modern age of increasing media involvement and social networking, any negative coverage might result in a halo effect in the minds of the consumers. As a result, the consumers might abandon the green movement altogether, which could prove to be detrimental to saving our planet. Therefore, the onus is on businesses to lead the way and strive to produce environmental products that are affordable, rich in quality and performance, and are associated with candid marketing claims. The overarching objective should be to give consumers no reasons to go for an alternative, one that is more harmful to the environment.

By embracing environment-friendly practices and initiatives, green hotels are unquestionably saving a decent amount of their operational costs, even after accounting for the initial investments associated with establishing those practices. However, green hotels are ending up charging more to customers than what their conventional counterparts have in practice. This makes it evident that the cost savings are not transferred back to the customers. The customers, as a result, are not reaping any direct personal benefits from their green hotel patronization. There is clearly an opportunity for environmentally conscious hoteliers to bolster the environmental schema by transferring some of their cost savings to the customers and making

the green hotels more affordable. Reduced prices will increase consumer demand, which, in the long term, will be a more rewarding strategy as sales will escalate contributing more to the bottom line. It is high time hoteliers apply this opportunity and facilitate the case for green hotels. There is no doubt that green hotels are one of the most important green products the world has seen. The plight of the environment would certainly benefit a lot if businesses and consumers work together and embrace green hotels.

Not surprisingly, consumers attribute perceived price premiums for green products as the overarching rationale for their preferences for conventional (not green) products (Cobrda & Hebard, 2010; GreenBiz, 2010). This is probably one of the primary reasons behind the *attitude/behavior gap* or *values/action gap*. Consumers appear to be concerned about environmental issues but struggle to transform their concern into actual purchases (Young, Hwang, McDonald, & Oates, 2010; Thompson & Burton, 1993). In retrospect, consumers want to be environment-friendly but they want businesses to show them the way and be more proactive. As many as 61% consumers as shown by a popular survey want businesses to lead the way in advancing the environmental campaign (Bonini & Oppenheim, 2008). It is high time businesses realize this opportunity and respond accordingly by making green products more reasonably priced, leveraging the buying power of consumers, educating consumers about green products, matching performance and standards of green products with the conventional ones, communicating with the customers more effectively, and last but not least, understanding the needs of the consumer.

REFERENCES

- Achtnicht, M. (2012). German car buyers' willingness to pay to reduce CO₂ emissions. *Climatic Change*, 113(3-4), 679-697.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179-211.
- Ajzen, I. (2005). *Attitudes, personality and behavior* (2nd ed.). Maidenhead, England: Open University Press.
- Ajzen, I. & Fishbein, M. (1980). *Understanding attitude and predicting social behavior*. Englewood Cliffs, NJ: Prentice Hall.
- Allison, P. D. (2002). *Missing data*. Thousand Oaks, CA: Sage Publications.
- Allport, G.W. (1961). *Pattern and growth in personality*. New York: Holt, Rinehart & Winston.
- Álvarez Gil, M.J., Burgos-Jiménez, J., & CéspedesLorente, J.J. (2001). An analysis of environmental management, organizational context, and performance of Spanish hotels. *The International Journal of Management Science*, 29(6), 457-471.
- Amaldoss, W. & Jain, S. (2005). Pricing of conspicuous goods: a competitive analysis of social effects, *Journal of Marketing Research*, 42(1), 30-42.
- Amendah, E. & Park, J. (2008). Consumer involvement and psychological antecedents on eco-friendly destinations: Willingness to pay more. *Journal of Hospitality Marketing and Management*, 17(3-4), 262-283.
- American Hotel & Lodging Association. (2012). *Eco-friendly case studies*. Retrieved November 10, 2012, from <http://www.ahla.com/content.aspx?id=21756>

- Anderson, W. T., Jr. & Cunningham, W.H. (1972). The socially conscious consumer. *Journal of Marketing*, 36(3), 23-31.
- Anderson, J.C. & Gerbing, D.W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103(3), 411-423.
- Anguera, N., Ayuso, S., & Fullana, P. (2000). Implementation of EMSs in seasonal hotels. *ISO 14001: Case studies and practical experiences*, 1(50), 162-172.
- Antil, John H. (1984). Socially responsible consumers: profile and implications for public policy. *Journal of Macromarketing*, 4(2), 18-32.
- Appadurai, A. (1986). *The social life of things: Commodities in cultural perspective*. Cambridge, U.K.: Cambridge University Press.
- Aragon-Correa, J. A. & Sharma, S. (2003). A contingent resource-based view of proactive corporate environmental strategy. *Academy of Management Review*, 28(1), 71-88.
- Axelrod, L. (1994). Balancing personal needs with environmental preservation: Identifying the values that guide decisions in ecological dilemmas. *Journal of Social Issues*, 50(3), 85-104.
- Axelrod, L. J. & Lehman, D. R. (1993). Responding to environmental concern: what factors guide individual action? *Journal of Environmental Psychology*, 13(2), 149-159.
- Ayuso, S. (2006). Adoption of voluntary environmental tools for sustainable tourism: Analyzing the experience of Spanish hotels. *Corporate Social Responsibility and Environmental Management*, 13(4), 207-220.
- Bagozzi, R. P. & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the Academy of Marketing Science*, 16(1), 74-94.

- Bamberg, S. (2003). How does environmental concern influence specific environmentally related behaviors? A new answer to an old question. *Journal of Environmental Psychology*, 23(1), 21-32.
- Bamberg, S. & Moser, G. (2007). Twenty years after Hines, Hungerford, and Tomera: A new meta-analysis of psychosocial determinants of pro-environmental behavior. *Journal of Environmental Psychology*, 27(1), 14-25.
- Bazoche, P., Deola, C., & Soler, L. G. (2008). *An experimental study of wine consumers' willingness to pay for environmental characteristics*. Paper presented at the 12th Congress of the European Association of Agriculture Economists. Retrieved April 1, 2014, from core.kmi.open.ac.uk/download/pdf/6429951.pdf
- Bansal, P. and Roth, K. (2000). Why companies go green: a model of ecological responsiveness. *Academy of Management Journal*, 43(4), 717-736.
- Barber N. (1994). Machiavellianism and altruism: effects of relatedness of target person on machiavellian and helping attitudes. *Psychological Reports*, 75(1), 403-422.
- Barber, N., Taylor, D. C., & Deale, C. S. (2010). Wine tourism, environmental concerns, and purchase intention. *Journal of Travel & Tourism Marketing*, 27(2), 146-165.
- Barber, N., Taylor, C., & Strick, S. (2009). Wine consumers' environmental knowledge and attitudes: influence on willingness to purchase. *International Journal of Wine Research*, 1(1), 59-72.
- Bardi, A. & Schwartz, S. H. (2003). Values and behavior: Strength and structure of relations. *Personality and social psychology bulletin*, 29(10), 1207-1220.

- Batson, C. D. (1991). *The altruism question: Toward a social psychological answer*. Hillsdale, NJ: Erlbaum.
- Batson, C. D. & Coke, J. S. (1981). Empathy: A Source of Altruistic Motivation for Helping? In Rushton, J. P. & Sorrentino, R. M. (Eds.), *Altruism and Helping Behavior: Social, Personality, and Developmental Perspectives* (pp. 167-211). Hillsdale, NJ: Erlbaum.
- Bateson, M., Nettle, D., & Roberts, G. (2006). Cues of being watched enhance cooperation in a real-world setting. *Biology Letters*, 2(3), 412-414.
- Baumeister, R. F. & Leary, M. R. (1995). The need to belong: desire for interpersonal attachments as a fundamental human motivation. *Psychological bulletin*, 117(3), 497-529.
- Becken, S., Frampton, C., & Simmons, D. (2001). Energy consumption patterns in the accommodation sector—the New Zealand case. *Ecological Economics*, 39(3), 371-386.
- Bentler, P. M. (1992). On the fit of models to covariances and methodology to the Bulletin. *Psychological Bulletin*, 112(3), 400-404.
- Bentler, P. M. (1983). Some contributions to efficient statistics in structural models: Specification and estimation of moment structures. *Psychometrika*, 48(4), 493-517.
- Bentler, P. M. (1980). Multivariate analysis with latent variables: Causal modeling. *Annual review of psychology*, 31(1), 419-456.
- Bhattacharya, S. (2011). Consumer attitude towards green marketing in India. *IUP Journal of Marketing Management*, 10(4), 62-71.
- Biao, X., Xiaorong, W., Zhuhong, D. & Yaping, Y. (2003). Critical impact assessment of organic agriculture. *Journal of Agricultural and Environmental Ethics*. 16(3), 297-311.

- Bloch, P. (1981). An exploration into the scaling of consumers involvement with a product class. *Advances in Consumer Research*, 8(1), 61-65.
- Bohdanowicz, P. (2003). *A study of environmental impacts, environmental awareness and pro-ecological initiatives in the hotel industry* (Doctoral dissertation abstract). KTH Royal Institute of Technology, Stockholm, Sweden. Retrieved March 5, 2014 from <http://kth.diva-portal.org/smash/record.jsf?pid=diva2:7627>
- Bohdanowicz, P. (2005). European hoteliers' environmental attitudes: greening the business. *Cornell Hotel and Restaurant Administration Quarterly*, 46(2), 188-204.
- Bohdanowicz, P. (2006). Environmental awareness and initiatives in the Swedish and Polish hotel industries—survey results. *International Journal of Hospitality Management*, 25(4), 662–682.
- Bohdanowicz, P. & Martinac, I. (2003). *Attitudes towards sustainability in chain hotels-results of a european survey*. Paper presented at the International Conference on Smart and Sustainable Built Environment Brisbane, Australia. Retrieved April 1, 2014, from <http://www.greenthehotels.com/eng/BohdanowiczMartinacSASBE2003.pdf>
- Bollen, K.A. (1989). *Structural equations with latent variables*. New York: John Wiley & Sons, Inc.
- Bonini, S. M. J. & Oppenheim, J. M. (2008). Helping 'green' products grow. *The McKinsey Quarterly*, 2008(October). Retrieved April 1, 2014, from <http://www.data360.org/pdf/20081029174901.08-10-29%20McKinley%20Green%20Perception.pdf>

- Boulding, W., Kalra, A., Staelin, R., & Zeithaml, V. A. (1993). A dynamic process model of service quality: from expectations to behavioral intentions. *Journal of Marketing Research*, 30(1), 7–27.
- Brewer, M.B. (1991). The social self: on being the same and different at the same time. *Personality and Social Psychology Bulletin*, 17(5), 475-482.
- Brewer, M.B. (1993). The role of distinctiveness in social identity and group behavior. In M.A. Hogg & D. Abrams (eds), *Group motivation: Social psychological perspectives* (pp. 1-15). London: Harvester Wheatsheaf.
- Brown, M. (1996). Environmental policy in the hotel sector: "green" strategy or stratagem? *International Journal of Contemporary Hospitality Management* 8(3), 18-23.
- Brown, T. A. (2006). *Confirmatory factor analysis for applied research*. New York: The Guilford Press.
- Browne, M.W. & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen & J. S. Long (Eds.), *Testing structural equations models* (pp. 136–162). Newbury Park, CA: Sage.
- British Chamber of Commerce. (1996). *Small firms survey: Energy efficiency*, 20. London: British Chambers of Commerce.
- Buhrmester, M., Kwang, T., & Gosling, S. D. (2011). Amazon's Mechanical Turk a new source of inexpensive, yet high-quality, data? *Perspectives on Psychological Science*, 6(1), 3-5.
- Butler, J. (2008). The compelling “hard case” for “green” hotel development. *Cornell Hospitality Quarterly*, 49(3), 234-244.

- Buysse, K. & Verbeke, A. (2003). Proactive environmental strategies: a stakeholder management perspective. *Strategic Management Journal*, 24(5), 453–470.
- Byrne, B. M. (2013). *Structural equation modeling with AMOS: Basic concepts, applications, and programming*. London: Routledge.
- Calvache, B. & Evra, M. (2008). *Green hotels in Sweden*. (Master's thesis). Umeå University. Retrieved January 1, 2014 from <http://www.diva-portal.org/smash/get/diva2:142204/FULLTEXT01.pdf>
- Carley, S., Krause, R. M., Lane, B. W., & Graham, J. D. (2013). Intent to purchase a plug-in electric vehicle: A survey of early impressions in large US cities. *Transportation Research Part D: Transport and Environment*, 18, 39-45.
- Carman, J. H. (1978). Values and consumption patterns: A closed loop. *Advances in consumer research*, 5(1), 403-407.
- Catton Jr., W. R. & Dunlap, R. E. (1978). Environmental sociology: a new paradigm. *American sociologist*, 13(1), 41-49.
- Chan, E. S. & Wong, S. C. (2006). Motivations for ISO 14001 in the hotel industry. *Tourism Management*, 27(3), 481-492.
- Chang, H. S. C., & Kristiansen, P. (2006). Selling Australia as 'clean and green'. *Australian Journal of Agricultural and Resource Economics*, 50(1), 103-113.
- Charles, K.K., Hurst, E. & Roussanov, N. (2009). Conspicuous consumption and race, *Quarterly Journal of Economics*, 124(2), 425–467.

- Cheung, G. W. & Rensvold, R. B. (2002). Evaluating goodness-of-fit indexes for testing measurement invariance. *Structural Equation Modeling*, 9(2), 233-255.
- Clark, M. E. (1995). Changes in Euro-American values needed for sustainability. *Journal of Social Issues*, 51(4), 63–82.
- Clark, C. F., Kotchen, M. J., & Moore, M. R. (2003). Internal and external influences on pro-environmental behavior: Participation in a green electricity program. *Journal of Environmental Psychology*, 23(3), 237-246.
- Clausing, J. (2008, June 2). Survey: Boomers more likely to go green in business travel. *Travel Weekly*. Retrieved April 1, 2014, from <http://www.travelweekly.com/Travel-News/Corporate-Travel/Survey--Boomers-more-likely-to-go-green-in-business-travel/>
- Clausing, J. (2010, May 5). Green promises kept. *Travel Weekly*. Retrieved March 13, 2013 from <http://www.travelweekly.com/Travel-News/Hotel-News/Green-promises-kept/>
- Cobrda, W. & Hebard, A.J. (2010). Hot spots & hot buttons: The consumer lens into sustainability. Research Proposal by Earthsense for The Sustainability Consortium's Consumer Science Working Group. Retrieved March 14, 2014, from http://www.sustainabilityconsortium.org/wp-content/uploads/Earthsense_Response_to_RFP_May_21_2010.pdf
- Cook, S.D., Stewart, E. & Repass, K. (1992). *Discover America: Tourism and the environment*. Washington DC: Travel Industry Association of America.
- Cooper, I. (1998). Emerging issues in environmental management. In *Facility management: theory and practice* (pp. 111-119). London: Spon Press.

- Corraliza, J. A. & Berenguer, J. (2000). Environmental values, beliefs, and actions A situational approach. *Environment and Behavior*, 32(6), 832-848.
- Cortijo, P. (2003). Solar energy and eco-design in the tourism sector. *Industry and Environment Journal*, 26(2), 29-33.
- Cottrell, C. A., Neuberg, S. L., & Li, N. P. (2007). What do people desire in others? A sociofunctional perspective on the importance of different valued characteristics. *Journal of Personality and Social Psychology*, 92(2), 208-231.
- Crescimanno, M., Ficani, G.B., & Guccione, G. (2002). The production and marketing of organic wine in Sicily. *British Food Journal*, 104(3/4/5), 274-286.
- Crocker, M. (2008, July 28). Among leisure travelers surveyed, nearly everyone professes to be green. *Travel Weekly*. Retrieved November 10, 2012, from <http://apps.travelweekly.com/Multimedia/consumertrends072808/index.html>.
- Cronin, J. J. & Taylor, S. A. (1992). Measuring service quality: a reexamination and extension. *Journal of Marketing*, 56(3), 55–68.
- Dawson, S. A. & Cavell, J. (1987). Status recognition in the 1980s: Invidious distinction revisited. *Advances in Consumer Research*, 14(1), 487-491.
- De Groot J. (2008). *Mean or green? Value orientations, morality and prosocial behavior*. (Doctoral dissertation). University of Groningen, Groningen, The Netherlands. Retrieved March 5, 2014, from <http://dissertations.ub.rug.nl/faculties/gmw/2008/j.i.m.de.groot/?pLanguage=en&pFullItemRecord=ON>

- De Groot, J. I. M. & Steg, L. (2007). Value orientations and environmental beliefs in five countries: validity of an instrument to measure egoistic, altruistic and biospheric value orientations. *Journal of Cross-Cultural Psychology*, 38(3), 318-332.
- De Groot, J. I. M. & Steg, L. (2008). Value orientations to explain environmental attitudes and beliefs: how to measure egoistic, altruistic, and biospheric value orientations. *Environment and Behavior*, 40(3), 330-354.
- De Groot, J. I. M. & Steg, L. (2010). Relationships between value orientations, self-determined motivational types and pro-environmental behavioral intentions. *Journal of Environmental Psychology*, 30(4), 368-378.
- De Haan, P., Mueller, M. G., & Peters, A. (2006). Does the hybrid Toyota Prius lead to rebound effects? Analysis of size and number of cars previously owned by Swiss Prius buyers. *Ecological Economics*, 58(3), 592-605.
- De Lollis, B. (2010, April 26). CEO Chris Nassetta: Hilton launching brand-wide sustainability plan. *USA Today*. Retrieved November 10, 2012, from <http://travel.usatoday.com/hotels/post/2010/04/-ceo-chris-nassetta-hilton-launching-brand-wide-sustainability-plan/89795/1>
- De Young, R. (2000). New ways to promote proenvironmental behavior: expanding and evaluating motives for environmentally responsible behavior. *Journal of Social Issues*, 56(3), 509-526.
- Delmas M. & Toffel, M.W. (2004). Institutional pressure and environmental management practices. In S. Sharma & M. Starik (eds.), *Stakeholders, environment and society: New*

- perspectives in research on corporate sustainability*, (pp. 209-222). Cheltenham, UK: Edward Elgar Publishing.
- DeVilles, R. (1991). *Scale development*. Applied Social Research Methods, Vol. 28. Newbury Park, CA: Sage.
- Dief, M. E. & Font, X. (2010). The determinants of hotels' marketing managers' green marketing behavior. *Journal of Sustainable Tourism*, 18(2), 157-174.
- Dietz, T. & Stern, P. C. (1995). Toward a theory of choice: Socially embedded preference construction. *Journal of Socio-Economics*, 24(2), 261-279.
- Dietz, T., Stern, P. C., & Guagnano, G. A. (1998). Social structural and social psychological bases of environmental concern. *Environment and Behavior*, 30(4), 450-471.
- Drasgow, F. (1984). Scrutinizing psychological tests: Measurement equivalence and equivalent relations with external variables are the central issues. *Psychological Bulletin*, 95(1), 134-135.
- Dunlap, R. E. & Catton, W. R. (1979). Environmental sociology. *Annual Review of Sociology*, 5, 243-273.
- Dunlap, R. E. & Van Liere, K. D. (1978). The 'new environmental paradigm': A proposed measuring instrument and preliminary results. *Journal of Environmental Education*, 9(1), 10-19.
- Dunlap, R. E., Van Liere, K. D., Mertig, A. G., & Jones, R. E. (2000). Measuring endorsement of the new ecological paradigm: A revised NEP scale. *Journal of Social Issues*, 56(3), 425-442.

- Eastman, J.K., Ronald, E. Goldsmith, & Flynn, L.R. (1999). Status consumption in consumer behavior: Scale development and validation. *Journal of Marketing Theory and Practice*, 7(3), 41-51.
- Easton, V. (2010, August 2). Seattle hotel/condo's green roof offers respite from creatures great and small. *The Seattle Times*. Retrieved March 5, 2014, from http://seattletimes.com/html/pacificnw/2009577893_pacificpfootgarden02.html
- Edmunds, D. (2013, October 17). *What are hybrid cars and how do they work?* Edmunds.com. Retrieved March 15, 2014 from <http://www.edmunds.com/fuel-economy/what-is-a-hybrid-car-how-do-hybrids-work.html>
- Elliott, R. (2013). The taste for green: The possibilities and dynamics of status differentiation through "green" consumption. *Poetics*, 41(3), 294-322.
- Enz, C. A. & Siguaw, J. A. (1999). Best hotel environmental practices. *The Cornell Hotel and Restaurant Administration Quarterly*, 40(5), 72-5.
- Fransson, N. & Gärling, T. (1999). Environmental concern: Conceptual definitions, measurement methods, and research findings. *Journal of environmental psychology*, 19(4), 369-382.
- Feather, N. T. (1995). Values, valences, and choice: The influence of values on the perceived attractiveness and choice of alternatives. *Journal of Personality and Social Psychology*, 68(6), 1135-1151.
- Featherstone, M., (1991). *Consumer culture and postmodernism*. London: Sage.
- Fishbein, M. & Ajzen, I. (1975). *Belief, attitude, intention and behavior: An introduction to theory and research*. Reading, MA: Addison-Wesley.

- Fodness, D. & Murry, B. (1997). Tourist information search. *Annals of Tourism Research*, 24(3), 503-523.
- Fontaras, G., Pistikopoulos, P., & Samaras, Z. (2008). Experimental evaluation of hybrid vehicle fuel economy and pollutant emissions over real-world simulation driving cycles. *Atmospheric environment*, 42(18), 4023-4035.
- Forbes, S. L., Cohen, D. A., Cullen, R., Wratten, S. D., & Fountain, J. (2009). Consumer attitudes regarding environmentally sustainable wine: an exploratory study of the New Zealand marketplace. *Journal of Cleaner Production*, 17(13), 1195-1199.
- Ford, J. K., MacCallum, R. C., & Tait, M. (1986). The application of exploratory factor analysis in applied psychology: A critical review and analysis. *Personnel psychology*, 39(2), 291-314.
- Fornell, C. & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50.
- Fotopoulos, C. & Krystallis, A. (2001). Defining the organic consumer and his willingness to pay for selected food products in Greece: a countrywide survey. In *Proceedings of 51st Atlantic Economic Society Conference*, (pp. 13-20). Athens.
- Fotopoulos, C., Krystallis, A., & Ness, M. (2003). Wine produced by organic grapes in Greece: using means–end chains analysis to reveal organic buyers’ purchasing motives in comparison to the non-buyers. *Food Quality and Preference*, 14(7), 549-566.
- Freeman, L. (1989). Consumers thinking ‘green’ too. *Advertising Age*, 60.

- Gallagher, K.S. & Muehlegger, E. (2011). Giving green to get green? Incentives and consumer adoption of hybrid vehicle technology. *Journal of Environmental Economics and Management*, 61(1), 1-15.
- Gan, A. (2006). The impact of public scrutiny on corporate philanthropy. *Journal of Business Ethics*, 69(3), 217-236.
- Gardyn, R. (2002). Oh, the good life. *American Demographics*, 24(10), 30-35.
- Gärling, T., Fujii, S., Gärling, A., & Jakobsson, C. (2003). Moderating effects of social value orientation on determinants of proenvironmental behavior intention. *Journal of environmental psychology*, 23(1), 1-9.
- Geller, E. S. (1989). Applied behavior analysis and social marketing: An integration for environmental preservation. *Journal of Social Issues*, 45(1), 17-36.
- Gilley, O. W. & Leone, R. P. (1991). A two-stage imputation procedure for item nonresponse in surveys. *Journal of Business Research*, 22(4), 281-291.
- Goldman, B.J. & Clancy, K.L. (1991). A survey of organic produce purchases and related attitudes of food cooperative shoppers. *American Journal of Alternative Agriculture*, 6(2), 89-96
- Goldstein, N. J., Cialdini, R. B., & Griskevicius, V. (2008). A room with a viewpoint: Using social norms to motivate environmental conservation in hotels. *Journal of Consumer Research*, 35(3), 472-482.
- Goldstein, N. J., Griskevicius, V., & Cialdini, R. B. (2007). Invoking social norms: A social psychology perspective on improving hotels' linen-reuse programs. *Cornell Hotel and Restaurant Administration Quarterly*, 48(2), 145-150.

- Graci, S. (2008). *Environmental commitment in tourist accommodation industry. The case of Sanya, China*. (Doctoral Dissertation). University of Waterloo, Waterloo. Retrieved March 5, 2014, from <https://uwspace.uwaterloo.ca/bitstream/handle/10012/3536/final%20thesis%20submission%20Jan%2025.pdf?sequence=1>
- Graci, S. & Dodds, R. (2008). Why go green? The business case for environmental commitment in the Canadian hotel industry. *Anatolia, 19*(2), 251-270.
- GreenBiz. (2010, January 26). *Consumers want to buy green, but economic woes stifle the market*. Retrieved March 14, 2014, from <http://www.greenbiz.com/news/2010/01/26/consumers-want-buy-green-economic-woes-stifle-market>
- GreenBiz.com. (2010, April 6). *Marriott promises 300 LEED hotels by 2015*. Retrieved March 5, 2014, from <http://www.greenbiz.com/news/2010/04/06/marriott-promises-300-leed-hotels-2015>
- Green Hotels Association. (2014). *What are green hotels?* Retrieved March 10, 2014, from <http://www.greenhotels.com/>
- Griskevicius, V., Tybur, J. M., Sundie, J. M., Cialdini, R. B., Miller, G. F., & Kenrick, D. T. (2007). Blatant benevolence and conspicuous consumption: When romantic motives elicit strategic costly signals. *Journal of Personality and Social Psychology, 93*(1), 85-102.
- Grunert, S.C. & Juhl, H.J. (1995). Values, environmental attitudes and buying of organic foods. *Journal of Economic Psychology, 16*(1), 63-72.

- Gunther, M. (2009, February 20). *Marriott's queen of green*. Green Biz.com. Retrieved April 10, 2013, from <http://www.greenbiz.com/blog/2009/02/22/marriotts-queen-green>
- Gurven, M., Allen-Arave, W., Hill, K., & Hurtado, M. (2000). It's a wonderful life: Signaling generosity among the Ache of Paraguay. *Evolution and Human Behavior, 21*(4), 263-282.
- Hair Jr, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2009). *Multivariate data analysis* (7th edition). Upper Saddle River, NJ: Prentice Hall.
- Hambrick, D. C. (2007). Upper echelons theory: An update. *Academy of Management Review, 32*(2), 334-343.
- Hambrick, D. C. & Mason, P. A. (1984). Upper echelons: The organization as a reflection of its top managers. *Academy of Management Review, 9*(2), 193-206.
- Han, H., Hsu, L., & Lee, J. (2009). Empirical investigation of the roles of attitudes toward green behaviors, overall image, gender, and age in hotel consumers' eco-friendly decision-making process. *International Journal of Hospitality Management, 28*(4), 519–528.
- Han, H., Hsu, L., Lee, J., & Sheu, C. (2011). Are lodging customers ready to go green? An examination of attitudes, demographics, and eco-friendly intentions. *International Journal of Hospitality Management, 30*(2), 345-355.
- Han, H., Hsu, L., & Sheu, C. (2010). Application of the theory of planned behavior to green hotel choice: Testing the effect of environmental friendly activities. *Tourism Management, 31*(3), 325-334.

- Han, H. & Kim, Y. (2010). An investigation of green hotel customers' decision formation: Developing an extended model of the theory of planned behaviour. *International Journal of Hospitality Management*, 29(4), 659-668.
- Hardy, C. L. & Van Vugt, M. (2006). Nice guys finish first: The competitive altruism hypothesis. *Personality and Social Psychology Bulletin*, 32(10), 1402-1413.
- Harper, G.C. & Makatouni, A. (2002). Consumer perception of organic food production and farm animal welfare. *British Food Journal*, 104(3/4/5), 287–299.
- Hart, S. L. (1995). A natural-resource-based view of the firm. *Academy of management review*, 20(4), 986-1014.
- Haynes, S. N., Richard, D., & Kubany, E. S. (1995). Content validity in psychological assessment: A functional approach to concepts and methods. *Psychological Assessment*, 7(3), 238.
- Heberlein, T. A. (1972). The land ethic realized: Some social psychological explanations for changing environmental attitudes. *Journal of Social Issues*, 28(4), 79–87.
- Heffner, R., Kurani, K., & Turrentine, T. (2007a). *Symbolism in California's early market for hybrid electric vehicles*. Transportation Research Part D: Transport and Environment 12, 396–413.
- Heffner, R., Kurani, K., & Turrentine, T. (2007b). Symbolism and the adoption of fuel- cell vehicles. *World Electric Vehicle Association Journal*, 1, 24–31.
- Henderson, J. C. (2007). Corporate social responsibility and tourism: Hotel companies in Phuket, Thailand, after the Indian Ocean tsunami. *International Journal of Hospitality Management*, 26(1), 228-239.

- Henion, K. E. (1976). *Ecological marketing*. Columbus, OH: Grid, Inc.
- Henning, O. & Karlsson, S. (2011). *Environmental attitudes and how they affect purchase intentions of environmentally friendly automobiles: An empirical study on Chinese students at Jonkoping University*. (Master's thesis). Jonkoping University, Sweden. Retrieved March 10, 2014, from <http://www.hj:diva.org/smash/get/diva2:441677>.
- Hidrué, M. K., Parsons, G. R., Kempton, W., & Gardner, M. P. (2011). Willingness to pay for electric vehicles and their attributes. *Resource and Energy Economics*, 33(3), 686-705.
- Hines, J. M., Hungerford, H. R., & Tomera, A. N. (1987). Analysis and synthesis of research on responsible environmental behavior: A meta-analysis. *The Journal of Environmental Education*, 18(2), 1-8.
- Ho, R. (2006). *Handbook of univariate and multivariate data analysis and interpretation with SPSS*. Boca Raton, FL: CRC Press.
- Homer, P. M. & Kahle, L.R. (1988). A structural equation test of the value-attitude-behavior hierarchy. *Journal of Personality and Social Psychology*, 54(4), 638-646.
- Horn, J. L. & McArdle, J. J. (1992). A practical and theoretical guide to measurement invariance in aging research. *Experimental Aging Research*, 18(3-4), 117-144.
- Hotel.info. (2012, April 12). The future of hotel is green. Retrieved March 12, 2014 from <http://www.hotel.info/en/blog/do-not-disturb-the-future-of-hotels-is-green/>
- Hoyer, W. & MacInnis, D. (2004). *Consumer behavior*, Boston, MA: Houghton Mifflin.
- Hsieh, Y. C. J. (2012). Hotel companies' environmental policies and practices: a content analysis of their web pages. *International Journal of Contemporary Hospitality Management*, 24(1), 97-121.

- Hsu, T. (2009, July 15). Reflective roof paint repels the heat. *Los Angeles Times*. Retrieved March 7, 2014 from <http://articles.latimes.com/2009/jul/15/business/fi-cool-roof15>
- Hu, L.T. & Bentler, P. M. (Eds.). (1995). *Evaluating model fit*: Thousand Oaks, CA: Sage.
- Hughes, D. (1995). Animal welfare: The consumer and the food industry. *British Food Journal* 97(10), 3-7.
- Hutchins, R.K. & Greenhalgh, L.A. (1997). Organic confusion: Sustaining competitive advantage. *British Food Journal*, 99(9), 336-338.
- Inglehart, R. (1997). *Modernization and postmodernization*. Princeton, NJ: Princeton University Press.
- Intercontinental Hotel Group. (2010, February 8). *Inter Continental Hotel Group opens its first hotel in Denmark* [Press Release]. Retrieved November 10, 2013, from <http://www.ihgplc.com/index.asp?PageID=116&Year=2010&NewsID=2423>
- Iredale, W., Van Vugt, M., and Dunbar, R. I. M. (2008). Showing off in humans: Male generosity as a mating signal. *Evolutionary Psychology*, 6(3), 386–392.
- Iwanowski, K. & Rushmore, C. (1994). Introducing the eco-friendly hotel. *Cornell Hotel and Restaurant Administrant Quarterly*, 35(1), 34-38.
- Joreskog, K.G. (1973). A general method for estimating a linear structural equation system. In A.S. Goldberger & O.D. Duncan (eds.), *Structural equation models in the social sciences*. New York, NY: Seminar Press.
- Joreskog, K. G. (1971). Simultaneous factor analysis in several populations. *Psychometrika*, 36(4), 409-426.

- Joreskog, K.G. & Sorbom, D. (1979). *Advances in factor analysis and structural equation models*. Cambridge, MA: Abt Books.
- Judica, F. & Perkins, W. (1992). A means-end approach to the market for sparkling wines. *International Journal of Wine Business Research*, 4(1), 10-19.
- Juholin, E. (2004). For business or for the good of all? A Finnish approach to corporate social responsibility. *Corporate Governance*, 4(3), 20-32.
- Kahle, L.R. (1980). Stimulus condition self-selection by males in the interaction of locus of control and skill-chance situations. *Journal of Personality and Social Psychology*, 38(1), 50-56.
- Kahle, L, R. (1983). *Social values and social change: Adaptation to life in America*. Westport, CT: Praeger Publishers.
- Kahle, L, R, Kulka, R. A., & Klingel, D.M. (1980). Low Adolescent Self-Esteem Leads to Multiple Interpersonal Problems: A Test of Social Adaptation Theory, *Journal of Personality and Social Psychology*, 39(3), 496-502.
- Kahn, M. E. (2007). Do greens drive Hummers or hybrids? Environmental ideology as a determinant of consumer choice. *Journal of Environmental Economics and Management*, 54(2), 129-145.
- Kaiser, F. G., Wölfing, S., & Fuhrer, U. (1999). Environmental attitude and ecological behavior. *Journal of Environmental Psychology*, 19(1), 1-19.
- Kaiser, F. G., Oerke, B., & Bogner, F. X. (2007). Behavior-based environmental attitude: Development of an instrument for adolescents. *Journal of Environmental Psychology*, 27(3), 242-251.

- Kalafatis, S.P., Pollard, M., East, R., & Tsogas, M.H. (1999). Green marketing and Ajzen's theory of planned behaviour: A cross-market examination. *Journal of Consumer Marketing, 16*(5), 441-460.
- Kang, K.H., Stein, L., Heo, C.Y., & Lee, S. (2012). Consumers' willingness to pay for green initiatives of the hotel industry. *International Journal of Hospitality Management, 31*(2), 564-572.
- Kapelianis, D. & Strachan, S. (1996). The price premium of an environmentally friendly product. *South African Journal of Business Management 27*(4), 89-96.
- Karp, D. G. (1996). Values and their effect on pro-environmental behavior. *Environment and behavior, 28*(1), 111-133.
- Kassarjian H. (1971). Incorporating ecology into marketing strategy: the case of air pollution. *Journal of Marketing, 35*(3), 61-65.
- Kim, Y. & Han, H. (2010). Intention to pay conventional-hotel prices at a green hotel – a modification of the theory of planned behavior. *Journal of Sustainable Tourism, 18*(8), 997-1014.
- King, A. A. & Lenox, M. J. (2001). Does it really pay to be green? An empirical study of firm environmental and financial performance: An empirical study of firm environmental and financial performance. *Journal of Industrial Ecology, 5*(1), 105-116.
- Kirk, D. (1995). Environmental management in hotels. *International Journal of Contemporary Hospitality Management, 7*(6), 3-8.
- Kirk, D. (1998). Attitudes to environmental management held by a group of hotel managers in Edinburgh. *International Journal of Hospitality Management, 17*(1), 33-47.

- Kirkpatrick, D. (1990). Environmentalism: The new crusade. *Fortune*, 121(4), 44-52.
- Klein, J. (2007). Why people really buy hybrids. *Topline Strategy Group Report*. Retrieved March 1, 2014, from http://www.cleanenergycouncil.org/files/Topline_Strategy_Report_Why_People_Really_Buy_Hybrids.pdf
- Kline, R. B. (2011). *Principles and practice of structural equation modeling*. New York: Guilford Press.
- Kluckhohn, C. (1951). Values and value-orientations in the theory of action: An exploration in definition and classification. In T. Parsons & E. Shils (Eds.), *Toward a general theory of action* (pp.388-433). Cambridge, MA: Harvard University Press.
- Kohn, M. L. (1969). *Class and conformity*. Homewood, I.L.: Dorsey Press.
- Konar, S. & Cohen, M. A. (1997). Why do firms pollute (and reduce) toxic emissions. *World Bank*. Retrieved April 2, 2014, from <http://www.oecd.org/environment/outreach/33947723.pdf>
- Kortenkamp, K. V. & Moore, C. F. (2001). Ecocentrism and anthropocentrism: Moral reasoning about ecological commons dilemmas. *Journal of Environmental Psychology*, 21(3), 261-272.
- Kuminoff, N. V., Zhang, C., & Rudi, J. (2010). Are travelers willing to pay a premium to stay at a "Green" hotel? Evidence from an internal meta-analysis of hedonic price premia. *Agricultural & Resource Economics Review*, 39(3), 468-484.

- Laroche, M., Bergeron, J., & Barbaro-Forleo, G. (2001). Targeting consumers who are willing to pay more for environmentally friendly products. *Journal of Consumer Marketing*, 18(6), 503-520.
- Lastovicka, J. L. & Gardner, D. M. (1977). Components of involvement. In J. C. Maloney & B. Silverman (Eds.), *Attitude research plays for high stakes* (pp. 53-73). Chicago, IL: American Marketing Association.
- Laurent, G. & Kapferer, J. N. (1985). Measuring consumer involvement profiles. *Journal of Marketing Research*. 22(1), 41-53.
- Lee, J.S., Hsu, L.T., Han, H., & Kim, Y. (2010). Understanding how consumers view green hotels: how a hotel's green image can influence behavioral intentions. *Journal of Sustainable Tourism*, 18(7), 901-914.
- Li, X., Clark, C. D., Jensen, K. L., Yen, S. T., & English, B. C. (2013). Consumer purchase intentions for flexible-fuel and hybrid-electric vehicles. *Transportation Research Part D: Transport and Environment*, 18, 9-15.
- Little, T. D. (1997). Mean and covariance structures (MACS) analyses of cross-cultural data: Practical and theoretical issues. *Multivariate Behavioral Research*, 32(1), 53-76.
- MacCallum, R. C., & Browne, M. W. (1993). The use of causal indicators in covariance structure models: Some practical issues. *Psychological Bulletin*, 114(3), 533-541.
- MacCallum, R. C., Browne, M. W., & Sugawara, H. M. (1996). Power analysis and determination of sample size for covariance structure modeling. *Psychological Methods*, 1(2), 130-149.

- Magnusson, M. K., Arvola, A., Hursti, U. K. K., Åberg, L., & Sjöden, P. O. (2003). Choice of organic foods is related to perceived consequences for human health and to environmentally friendly behaviour. *Appetite*, 40(2), 109-117.
- Mainieri, T., Barnett, E. G., Valdero, T. R., Unipan, J. B., & Oskamp, S. (1997). Green buying: The influence of environmental concern on consumer behavior. *The Journal of social psychology*, 137(2), 189-204.
- Mair, J. & Bergin-Seers, S. (2010). The effect of interventions on the environmental behaviour of Australian motel guests. *Tourism and Hospitality Research*, 10(4), 255-268.
- Manaktola, K. & Jauhari, V. (2007). Exploring consumer attitude and behaviour towards green practices in the lodging industry in India. *International Journal of Contemporary Hospitality Management*, 19(5), 364-377.
- Mason, R.S. (1981). *Conspicuous consumption*. New York: St. Martin Press.
- Mattila, A. (1999). The role of culture in the service evaluation process. *Journal of Service Research*, 1(3), 250-261.
- Maynard, M. (2007, July 4). Say 'hybrid' and many people will hear 'Prius.' *The New York Times*. Retrieved January 20, 2013, from http://www.nytimes.com/2007/07/04/business/04hybrid.html?_r=0
- Mayock, P. (2009, December 9). *Guest satisfaction soars as hotels cut back*. Retrieved April 2, 2014, from <http://www.hotelnewsnow.com/Article/2322/Guest-satisfaction-soars-as-hotels-cut-back>
- McCracken, G. (1988). *Culture and consumption: A new approach to the symbolic character of consumer goods and activities*. Bloomington, IN: Indiana University Press.

- McCarty, J. A. & Shrum, L. J. (1994). The recycling of solid wastes: Personal values, value orientations, and attitudes about recycling as antecedents of recycling behavior. *Journal of Business Research*, 30(1), 53-62.
- Meade, A. W., Michels, L. C., & Lautenschlager, G. J. (2007). Are Internet and paper-and-pencil personality tests truly comparable? An experimental design measurement invariance study. *Organizational Research Methods*, 10(2), 322-345.
- Meinhold, J. I. & Malkus, A. J. (2005). Adolescent environmental behaviors. Can knowledge, attitudes, and self-efficacy make a difference? *Environment and Behavior*, 37(4), 511-532.
- Mensah, I. (2006). Environmental management practices among hotels in the greater Accra region. *International Journal of Hospitality Management*, 25(3), 414-431.
- MGM Resorts International. (2010, July 16). *From yellow to green*. Retrieved on July 24, 2013 from <https://secure03.mgm-mirage.com/employees/StoryBoard//July/friday/071610.htm>
- Milfont, T. L. & Duckitt, J. (2004). The structure of environmental attitudes: A first-and second-order confirmatory factor analysis. *Journal of Environmental Psychology*, 24(3), 289-303.
- Milfont, T. L. & Gouveia, V. V. (2006). Time perspective and values: An exploratory study of their relations to environmental attitudes. *Journal of Environmental Psychology*, 26(1), 72-82.
- Milgram, S., Bickman, L., & Berkowitz, L. (1969). Note on the drawing power of crowds of different size. *Journal of Personality and Social Psychology*, 13(2), 79-82.
- Miller, D. (1987). *Material culture and mass consumption*. New York: Basil Blackwell.

- Millar, M. & Baloglu, S. (2011). Hotel guests' preferences for green guest room attributes. *Cornell Hospitality Quarterly*, 52(3), 302-311.
- Milinski, M., Semmann, D., Krambeck, H. & Marotzke, J. (2006). Stabilizing the Earth's climate is not a losing game: Supporting evidence from public goods experiments. In *Proceedings of the National Academy of Sciences* (pp. 3994–3998), 103(11), USA.
- Mintel. (2012). *Alternative fuel vehicles hit the road in the US, as they reach record high in 2012*, [press release]. Retrieved April 13, 2013, from <http://www.mintel.com/press-centre/press-releases/1002/alternative-fuel-vehicles-hit-the-road-in-the-us-as-they-reach-record-high-in-2012>
- Minton, A. P. & Rose, R. L. (1997). The effects of environmental concern on environmentally friendly consumer behavior: An exploratory study. *Journal of Business Research*, 40(1), 37-48.
- Mittal, B. (1989). Measuring purchase-decision involvement. *Psychology and Marketing*, 6(2), 147-62.
- Moisander J. (2007). Motivational complexity of green consumerism. *International Journal of Consumer Studies*, 31(4), 404-409. DOI: 10.1111/j.1470-6431.2007.00586.x
- Molesworth, M. & Suortti, J. P. (2002). Buying cars online: The adoption of the web for high involvement, high cost purchases. *Journal of Consumer Behaviour*, 2(2), 155-168.
- Molla-Bauza, M. Brujarolas, L. Martinez-Carrasco Martinez, A. Martinez Poveda, & M. Rico Perez. (2005). Determination of the surplus that consumers are willing to pay for an organic wine. *Spanish Journal of Agricultural Research*, 3(1), 43–51.

- Morris, C.W. (1956). *Varieties of human value*. Chicago, I.L.: University of Chicago Press.
- Muñoz, C. & Rivera, M. (2002). *Tourists' willingness to pay for green certification of hotels in Mexico*. Mexico: National Institute of Ecology. Retrieved December 1, 2013, from <http://www.ine.gob.mx/descargas/dgipea/twpgch.pdf>
- Myung, E., McClaren, A., & Li, L. (2012). Environmentally related research in scholarly hospitality journals: Current status and future opportunities. *International Journal of Hospitality Management*, 31(4), 1264-1275.
- Newman, J. and Breeden, K. (1992). Managing in the environmental era: lessons from environmental leaders. *The Columbia Journal of World Business*, 27(3/4), 210-221.
- Nichols, R. (2009, December 03). *The green wine summit: Wine consumers are positive about sustainability*. Retrieved 01, 2014, from <http://www.winebusiness.com/news/?go=getArticle&dataid=69552>
- Nickell, G. S. (1998). The helping attitude scale. In *meeting of the American Psychological Association, San Francisco*.
- Nolan, J. P., Schultz, P. W., Cialdini, R. B., Goldstein, N. J., & Griskevicius, V. (2008). Normative social influence is under detected. *Personality and Social Psychology Bulletin*, 34(7), 913-923.
- Nordlund, A. M., & Garvill, J. (2002). Value structures behind proenvironmental behavior. *Environment and Behavior*, 34(6), 740-756.
- Nunnally, J.C. (1978). *Psychometric theory* (2nd ed.). New York: McGraw-Hill.

- Nyilasy, G., Gangadharbatla, H., & Paladino, A. (2013). Perceived greenwashing: The interactive effects of green advertising and corporate environmental performance on consumer reactions. *Journal of Business Ethics*, 1-15.
- O’Cass, A. & Frost, E. (2002). Status brands: Examining the effects of non-product-related brand associations on status and conspicuous consumption, *Journal of Product and Brand Management*, 11(2), 67–88.
- Ogbeide, G. C. (2012). Perception of green hotels in the 21st century. *Journal of Tourism Insights*, 3(1), 1.
- Oliver, J.D. & Lee, S-H. (2010). Hybrid car purchase intentions: a cross-cultural analysis. *Journal of consumer marketing*, 27(2), 96-103.
- Ong, P. & Hasselhoff, K. (2005). High interest in hybrid cars. *SCS fact sheet*, 1(5). Retrieved March 3, 2014, from <http://escholarship.org/uc/item/1f01d3mr>
- Ottman J.A. (1998). *Green marketing: opportunity for innovation* (2nd ed). Lincolnwood, IL: NTC/Contemporary Books.
- Ottman, J. A., Stafford, E. R., & Hartman, C. L. (2006). Avoiding green marketing myopia: ways to improve consumer appeal for environmentally preferable products. *Environment: Science and Policy for Sustainable Development*, 48(5), 22-36.
- Owens, S. (2000). ‘Engaging the public’: Information and deliberation in environmental policy. *Environment and planning A*, 32(7), 1141-1148.
- Ozaki, R. & Sevastyanova, K. (2011) Going hybrid: An analysis of consumer purchase motivations, *Energy Policy*, 39(5), 2217-2227.

- Park, J., Kim, H. J., & McCleary, K. W. (2014). The impact of top management's environmental attitudes on hotel companies' environmental management. *Journal of Hospitality & Tourism Research*, 38(1), 95-115.
- Peattie, K. (2006). *Green Marketing*. London: Pitman Marketing.
- Phillips, W. J. & Jang, S. C. (2012). Exploring seniors' casino gaming intention. *Journal of Hospitality & Tourism Research*, 36(3), 312-334.
- Potoglou, D. & Kanaroglou, P.S. (2007). Household demand and willingness to pay for clean vehicles. *Transportation Research Part D*, 12, 264-274.
- Piner, K. E. & Kahle, L.R. (1984). Adapting to the stigmatizing label of mental illness: foregone but not forgotten, *Journal of Personality and Social Psychology*, 47(4), 805-811.
- Podolny, J.M. (2005). *Status signals: A sociological study of market competition*. Princeton, NJ: Princeton University Press.
- Pryce, A. (2001). Sustainability in the hotel industry. *Travel and Tourism Analyst*, 6, 3-23.
- Rada, J. (1996). Designing and building eco-efficient hotels. *Green Hotelier*, 4, 10-11.
- Rahman, I., Park, J., & Chi, G. (2012). The negative effect of "greenwashing" phenomenon in hotels. In *proceedings of The 17th Annual Graduate Education and Graduate Student Research Conference in Hospitality and Tourism*.
- Rahman, I., Reynolds, D. & Svaren, S. (2012). How "Green" are North American hotels? An exploration of low-cost adoption practices. *International Journal of Hospitality Management*, 31(3), 720-727.

- Rahman, I., Su, N., & Reynolds, D. (2013). Consumer Perceptions of Green Practices in Hotels: An Exploratory Study. In *The 18th Annual Graduate Education and Graduate Student Research Conference in Hospitality and Tourism*.
- Rahman, I., Stumpf, T., & Reynolds, D. (2014). A comparison of the influence of purchaser attitudes and product attributes on organic wine preferences. *Cornell Hospitality Quarterly*, 55(1), 127-134.
- Randall, D. M. & Fernandes, M. F. (1991). The social desirability response bias in ethics research. *Journal of Business Ethics*, 10(11), 805-817.
- Reed, M. (2010). Fight the future! How the contemporary campaigns of the UK organic movement have arisen from their composting past. *Sociologica Ruralis*, 41(1), 131-45.
- Remaud, H., Mueller, S., Chvyl, P., & Lockshin, L. (2008). *Do Australian wine consumers value organic wine?* In *proceedings of the 4th International Academy of Wine Business Research Conference*. Sienna. Retrieved March 5, 2014, from http://academyofwinebusiness.com/wp-content/uploads/2010/04/Do-Australian-wine-consumers-value-organic-wine_paper.pdf
- Rivera, J. & de Leon, P. (2005). Chief executive officers and voluntary environmental performance: Costa Rica's certification for sustainable tourism. *Policy Sciences*, 38(2-3), 107-127.
- Roberts, J. A. & Bacon, D. R. (1997). Exploring the subtle relationships between environmental concern and ecologically conscious consumer behavior. *Journal of Business Research*, 40(1), 79-89.

- Robinot, E. & Giannelloni, J. L. (2010). Do hotels' "green" attributes contribute to customer satisfaction? *Journal of Services Marketing*, 24(2), 157-169.
- Roccas, S., Schwartz, S. H., & Amit, A. (2010). Personal value priorities and national identification. *Political Psychology*, 31(3), 393-419.
- Rohan, M. J. (2000). A rose by any name? The values construct. *Personality and social psychology review*, 4(3), 255-277.
- Rokeach, M. (1973). *The nature of human values*. New York: The Free press.
- Romer, D., Gruder, C. L., & Lizzadro, T. (1986). A person-situation approach to altruistic behavior. *Journal of Personality and Social Psychology*, 51(5), 101-1012
- Ronksley, P.E., Brien, S.E., Turner, B.J., Mukamal, K.J., & Ghali, W.A. (2011). Association of alcohol consumption with selected cardiovascular disease outcomes: a systematic review and meta-analysis. *BMJ: British Medical Journal*, 342.
- Rucker, D. D. & Galinsky, A. D. (2008). Desire to acquire: Powerlessness and compensatory consumption. *Journal of Consumer Research*, 35(2), 257-267.
- Rushton, J. P. (1980). *Altruism, socialization, and society*. Englewood Cliffs, NJ: Prentice-Hall.
- Rushton, J. P., Chrisjohn, R. D., & Fekken, G. C. (1981). Personality and Individual Differences, 2(4), 293-302.
- Russo, M. V. & Fouts, P. A. (1997). A resource-based perspective on corporate environmental performance and profitability. *Academy of management Journal*, 40(3), 534-559.
- Ryan, R. M. & Deci, E. L. (2002). Overview of self-determination theory: an organismic dialectical perspective. In R. M. Deci, & E. L. Ryan (eds.), *Handbook of self-determination research* (pp. 3-33). Rochester: The University of Rochester Press.

- Saba, A. & Messina, F. (2003). Attitudes towards Organic Foods and Risk/Benefit Perception Associated with Pesticides. *Food Quality Preference*, 14(8), 637–45.
- Sadalla, E. K. & Krull, J. L. (1995). Self-presentational barriers to resource conservation. *Environment and Behavior*, 27(3), 328–353.
- Scanlon, N. L. (2007). An analysis and assessment of environmental operating practices in hotel and resort properties. *International Journal of Hospitality Management*, 26(3), 711-723.
- Schaubroeck, J. (1990). Investigating reciprocal causation in organizational behavior research. *Journal of Organizational Behavior*, 11(1), 17-28.
- Scheffer, M. (1991). Should we expect strange attractors behind plankton dynamics—and if so, should we bother? *Journal of Plankton Research*, 13(6), 1291-1305.
- Schifferstein, H. N. J. & Oude-Ophuis, P. (1998). Health-related determinants of organic food consumption in The Netherlands. *Food Quality and Preference* 9(3), 119-33.
- Schlegelmilch, B. B., Bohlen, G. M., & Diamantopoulos, A. (1996). The link between green purchasing decisions and measures of environmental consciousness. *European Journal of Marketing*, 30(5), 35-55.
- Schultz, P. W. (2001). The structure of environmental concern: Concern for self, other people, and the biosphere. *Journal of Environmental Psychology*, 21(4), 327-339.
- Schultz, P. W. (2002). New environmental theories: Empathizing with nature: The effects of perspective taking on concern for environmental issues. *Journal of social issues*, 56(3), 391-406.

- Schultz, P. W., Nolan, J. P., Cialdini, R. B., Goldstein, N. J., & Griskevicius, V. (2007). The constructive, destructive, and reconstructive power of social norms. *Psychological Science, 18*(5), 429-434.
- Schwartz, S. H. (1973). Normative explanations of helping behavior: A critique, proposal, and empirical test. *Journal of Experimental Social Psychology, 9*(4), 349-364.
- Schwartz, S. H. (1977). Normative influences on altruism. In L. Berkowitz (ed.), *Advances in experimental social psychology* (Vol. 10, pp. 221–279). New York: Academic Press.
- Schwartz, S. H. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. *Advances in experimental social psychology, 25*(1), 1-65.
- Schwartz, S. H. (1994). Are there universal aspects in the structure and contents of human values? *Journal of Social Issues, 50*(4), 19-45.
- Schwartz, S. H. (1996). Value priorities and behavior: Applying a theory of integrated value systems. In C. Seligman, J. M. Olson & M. P. Zanna (Eds.), *The psychology of values* (Vol. 8, pp. 1–24), Mahwah, NJ: Erlbaum.
- Schwartz, S. H. (2006). Basic human values: An overview. Retrieved May 5, 2013, from <http://segr-did2.fmag.unict.it/Allegati/convegno%207-8-10-05/Schwartzpaper.pdf>
- Schwartz, S. H. & Bardi, A. (2001). Value hierarchies across cultures. Taking a similarities perspective. *Journal of Cross-Cultural Psychology, 32*(3), 268-290.
- Schwartz, S. H., Melech, G., Lehman, A., Burgess, S., Harris, M., & Owens, V. (2001). Extending the crosscultural validity of the theory of basic human values with a different method of measurement. *Journal of Cross-Cultural Psychology, 32*(5), 519-542.

- Segars, A.H. & Grover, V. (1993). Re-examining perceived ease of use and usefulness: A confirmatory factor analysis. *MIS Quarterly*, 17(4), 517-525.
- Semmann, D., Krambeck, H. J., & Milinski, M. (2005). Reputation is valuable within and outside one's own social group. *Behavioral Ecology and Sociobiology*, 57(6), 611-616.
- Sexton, S. E. & Sexton, A. E. (2013). Conspicuous conservation: The Prius halo and willingness to pay for environmental bona fides. *Journal of Environmental Economics and Management*.
- Seyfang, G. (2007). Growing sustainable consumption communities: The case of local organic food networks. *International Journal of Sociology and Social Policy*, 27(3-4), 120-34.
- Siegel, D. S. & Vitaliano, D.F. (2007). An empirical analysis of the strategic use of corporate social responsibility, *Journal of Economics & Management Strategy*, 16(3), 773-92.
- Sirieix, L. & Remaud, H. (2010). Consumer perceptions of eco-friendly vs. conventional wines in Australia. In *proceedings of the 5th International Academy of Wine Business Research Conference*. Auckland (NZ). Retrieved March 2, 2014, from <http://academyofwinebusiness.com/wp-content/uploads/2010/04/SirieixRemaud-Consumer-perceptions-of-eco-friendly-wines.pdf>
- Slama, M. & Tashchian, A. (1985). Selected socioeconomic and demographic characteristics associated with purchasing involvement. *Journal of Marketing*, 49(1), 72-82.
- Snelgar, R. S. (2006). Egoistic, altruistic, and biospheric environmental concerns: Measurement and structure. *Journal of Environmental Psychology*, 26(2), 87-99.
- Stabler, M. & Goodall, B. (1997). Environmental awareness, action and performance in the Guernsey hospitality sector. *Tourism Management*, 18(1), 19-33.

- Steg, L., Dreijerink, L., & Abrahamse, W. (2005). Factors influencing the acceptability of energy policies: A test of VBN theory. *Journal of Environmental Psychology, 25*(4), 415-425.
- Stern, P. C. (2000). New environmental theories: toward a coherent theory of environmentally significant behavior. *Journal of Social Issues, 56*(3), 407-424.
- Stern, P. C. & Dietz, T. (1994). The value basis of environmental concern. *Journal of Social Issues, 50*(3), 65-84.
- Stern, P. C., Dietz, T., Abel, T., Guagnano, G. A., & Kalof, L. (1999). A value-belief-norm theory of support for social movements: The case of environmentalism. *Human ecology review, 6*(2), 81-98.
- Stern, P. C., Dietz, T., & Guagnano, G. A. (1995). The new ecological paradigm in social-psychological context. *Environment and behavior, 27*(6), 723-743.
- Stern, P. C., Dietz, T., & Guagnano, G. A. (1998). A brief inventory of values. *Educational and Psychological Measurement, 58*(6), 984-1001.
- Stern, P. C., Dietz, T., Kalof, L., & Guagnano, G. A. (1995). Values, beliefs and proenvironmental action: Attitude formation toward emergent attitude objects. *Journal of Applied Social Psychology, 25*(18), 1611-1636.
- Stern, P. C., Kalof, L., Dietz, T., & Guagnano, G. A. (1995). Values, beliefs, and proenvironmental action: attitude formation toward emergent attitude objects. *Journal of Applied Social Psychology, 25*(18), 1611-1636.
- Stern, P. C., Dietz, T., & Kalof, L. (1993). Value orientations, gender, and environmental concern. *Environment and behavior, 25*(5), 322-348.

- Stevens, R. (1996). *Applied multivariate statistics for the social sciences* (3rd ed.). Mahwah, NJ: Erlbaum.
- Stiff, C. E. & Van Vugt, M. (2008). The power of reputations: The role of third party information in the admission of new group members. *Group Dynamics, 12*(2), 155-166.
- Straughan, R. D. & Roberts, J. A. (1999). Environmental segmentation alternatives: a look at green consumer behavior in the new millennium. *Journal of consumer Marketing, 16*(6), 558-575.
- Tajfel, H. & Turner, J. C. (1979). An intergrative theory of intergroup conflict. In W. G. Austin & S. Worchel (Eds.), *The social psychology of intergroup relations* (pp. 33-47). Monterey, CA: Brooks/Cole.
- Teng, Y., Wu, K. & Liu, H. (2013). Integrating Altruism and the Theory of Planned Behavior to Predict Patronage Intention of a Green Hotel. *Journal of Hospitality and Tourism Research*. DOI: 10.1177/1096348012471383.
- Thach, L. (2011). Wine for Breakfast: Exploring Wine Occasions for Gen Y. In *proceedings of 6th Academy of Wine Business International Conference*, Bordeaux Management School. Retrieved April 2, 2014, from <http://academyofwinebusiness.com/wp-content/uploads/2011/09/3-AWBR2011-Thach1.pdf>.
- Thøgersen, J. (2004). A cognitive dissonance interpretation of consistencies and inconsistencies in environmental responsible behavior. *Journal of Environmental Psychology, 24*(1), 93-103.
- Thøgersen, J. & Ölander, F. (2002). Human values and the emergence of a sustainable consumption pattern: a panel study. *Journal of Economic Psychology, 23*(5), 605-630.

- Thompson, S.C.G. & Burton, M.A. (1994). Ecocentric and anthropocentric attitude toward the environment. *Journal of Environmental Psychology*, 14(2), 149-157.
- Tossell, I. (2009, April 10). Green and greener. *The Globe and Mail*. Retrieved March 1, 2014, from <http://www.theglobeandmail.com/technology/green-and-greener/article1343438/>
- Tregear, A., Dent, J. B., & McGregor, M. J. (1994). The demand for organically grown produce. *British Food Journal*, 96(4), 21-25.
- Tripadvisor. (2009). *Tripadvisor travelers say its not easy being green*. Tripadvisor, LLC. Retrieved May 15, 2012 from <http://multivu.prnewswire.com/mnr/tripadvisor/37869>
- Tzschentke, N., Kirk, D., & Lynch, P. A. (2004). Reasons for going green in serviced accommodation establishments. *International Journal of Contemporary Hospitality Management*, 16(2), 116-124.
- Tzschentke, N. A., Kirk, D., and Lynch, P. A. (2008). Going green: Decisional factors in small hospitality operations. *International Journal of Hospitality Management*, 27(1), 126–133.
- United States Department of Agriculture (USDA). (2012). *Welcome to the National Organic Program*. Retrieved March 2, 2014, from <http://www.ams.usda.gov/AMSV1.0/nop>
- Ureña, F., Bernabéu, R., & Olmeda, M. (2008). Women, men and organic food: differences in their attitudes and willingness to pay. A Spanish case study. *International Journal of consumer Studies*, 32(1), 18-26.
- Van Vugt, M. (2009). Averting the tragedy of the commons using social psychological science to protect the environment. *Current Directions in Psychological Science*, 18(3), 169-173.

- Van Vugt, M., Meertens, R. M., & Lange, P. A. (1995). Car versus public transportation? The role of social value orientations in a real life social dilemma. *Journal of Applied Social Psychology, 25*(3), 258-278.
- Vandenberg, R. J. & Lance, C. E. (2000). A review and synthesis of the measurement invariance literature: Suggestions, practices, and recommendations for organizational research. *Organizational Research Methods, 3*(1), 4-70.
- Veblen, T. (1953). *The Theory of Leisure Class*. New York: New American Library.
- Vermeir, I. & Verbeke, W. (2006). Sustainable food consumption: Exploring the consumer 'attitude-behavioral intention' Gap. *Journal of Agricultural and Environmental Ethics, 19*(2), 169-94.
- Vignoles, V. L., Chryssochoou, X., & Breakwell, G. M. (2000). The distinctiveness principle: Identity, meaning, and the bounds of cultural relativity. *Personality and Social Psychology Review, 4*(4), 337-354.
- Vlosky, R. P., Ozanne, L. K., & Fontenot, R. J. (1999). A conceptual model of US consumer willingness-to-pay for environmentally certified wood products. *Journal of Consumer Marketing, 16*(2), 122-136.
- Vora, S. (2007, June 25). Business travelers go green. *Forbes*. Retrieved March 5, 2014, from, <http://www.msnbc.msn.com/id/19417697/>
- Wang, J. & Wang, X. (2012). *Structural equation modeling: Applications using Mplus*. New York: John Wiley & Sons.
- Washington, K. & Miller, R. K. (2010). Chapter 2: Impact of the recession. *Consumer Behavior, 18-20*.

- Watkins, E. (2010, April 1). Americas Best Value Inn goes green in the bathroom. *Lodging Hospitality*. Retrieved March 2, 2014 from, http://lhonline.com/design/bathroom/americas_best_value_4/
- Wedekind, C. & Braithwaite, V. (2002). The long-term benefits of human generosity in indirect reciprocity. *Current Biology*, 12(12), 1012-1015.
- Werner, C. M. & Makela, E. (1998). Motivation and behaviors that support recycling. *Journal of Environmental Psychology*, 18(4), 373-386.
- Wetlaufer, S. (2001). The perfect paradox of star brands: An interview with Bernard Arnault of LVMH, *Harvard Business Review*, 79(9), 116-123.
- Wiener, J. & Doescher, T. (1991). A framework for promoting cooperation. *Journal of Marketing*, 55(2), 38-47.
- Williams, R. M. Jr. (1979). Change and stability in values and value systems: A sociological perspective. In M. Rokeach (ed.), *Understanding human values*, New York: The Free Press.
- Williams, P. R. D. & Hammit, J.K. (2001). Perceived risks of conventional and organic produce: Pesticides, pathogens, and natural toxins. *Risk Analysis*, 21(2), 319-330.
- Wilson, M. (2007, September 30). Going for the Green. *Chain Store Age*. Retrieved March 07, 2014, from <http://chainstoreage.com/article/going-green>
- Wong, V., Turner, W., & Stoneman, P. (1996). Marketing strategies and market prospects for environmentally-friendly consumer products. *British Journal of Management*, 7(3), 263-281.

- Yiridoe, E. K., Bonti-Ankomah, S., & Martin, R. C. (2005). Comparison of consumer perceptions and preference toward organic versus conventionally produced foods: A review and update of the literature. *Renewable Agriculture and Food Systems*, 20(4), 193-205.
- Young, W., Hwang, K., McDonald, S., & Oates, C. J. (2010). Sustainable consumption: green consumer behavior when purchasing products. *Sustainable Development*, 18(1), 20-31.
- Zahavi, A. (1975). Mate selection: Selection for a handicap. *Journal of Theoretical Biology*, 53(1), 205–214.
- Zaichkowsky, J. L. (1986). Conceptualizing involvement. *Journal of Advertising*, 15(2), 4-14.
- Zeithaml, V. A., Berry, L. L., & Parasuraman, A. (1996). The behavioral consequences of service quality. *Journal of Marketing*, 60(2), 31–46.
- Zerbe, W. J. & Paulhus, D. L. (1987). Socially desirable responding in organizational behavior: A reconception. *Academy of Management Review*, 12(2), 250-264.

APPENDIX

Survey Measures

Values as "Guiding principle in your life" (1 *opposed to my values* to 7 *extremely important*)

Egoistic Value

1. Social power: control over others, dominance
2. Wealth: material possessions, money
3. Ambitious: hard-working, aspiring
4. Authority: the right to lead or command
5. Influential: having an impact on people and events

Altruistic Value

1. Equality: equal opportunity for all
2. A world at peace: free of war and conflict
3. Social justice: correcting injustice, care for the weak
4. Helpful: working for the welfare of others

Biospheric Value

1. Preventing pollution: protecting natural resources
2. Respecting the earth: harmony with other species
3. Unity with nature: fitting into nature
4. Protecting the environment: preserving nature

Ecocentric Attitude (1 *strongly disagree* to 7 *strongly agree*)

1. One of the worst things about overpopulation is that many natural areas are getting destroyed for development

2. Sometimes it makes me sad to see forests cleared for agriculture
3. I enjoy spending time in natural settings just for the sake of being out in nature
4. I prefer wildlife reserves to zoos
5. I need time in nature to be happy
6. It makes me sad to see natural environments destroyed
7. One of the most important reasons to conserve is to preserve wild areas
8. Sometimes animals seem almost human to me
9. Being out in nature is a great stress reducer for me
10. Humans are as much a part of the ecosystem as other animals
11. Sometimes when I am unhappy I find comfort in nature
12. Nature is valuable for its own sake

Anthropocentric Attitude (1 *strongly disagree* to 7 *strongly agree*)

1. It bothers me that humans are running out of their supply of oil
2. Science and technology will eventually solve our problems with pollution, overpopulation, and diminishing resources
3. The most important reason for conservation is human survival
4. One of the best things about recycling is that it saves money
5. The worst thing about the loss of the rain forest is that it will restrict the development of new medicines
6. The best thing about camping is that it is a cheap vacation
7. The thing that concerns me most about deforestation is that there will not be enough lumber for future generations

8. Nature is important because of what it can contribute to the pleasure and welfare of humans
9. We need to preserve resources to maintain a high quality of life
10. One of the most important reasons to conserve is to ensure a continued high standard of living
11. One of the most important reasons to keep lakes and rivers clean is so that people have a place to enjoy water sports
12. Continued land development is a good idea as long as a high quality of life can be preserved

Status Consumption (1 *strongly disagree* to 7 *strongly agree*)

1. I would buy a product just because it has status
2. I am interested in new products with status
3. I would pay more for a product if it had status
4. The status of a product is irrelevant to me
5. A product is more valuable to me if it has some snob appeal

Helping Attitude (1 *strongly disagree* to 7 *strongly agree*)

1. Helping others is usually a waste of time
2. When given the opportunity, I enjoy aiding others who are in need
3. If possible, I would return lost money to the rightful owner
4. Helping friends and family is one of the great joys in life
5. I would avoid aiding someone in a medical emergency if I could.
6. It feels wonderful to assist others in need.

7. Volunteering to help someone is very rewarding.
8. I dislike giving directions to strangers who are lost.
9. Doing volunteer work makes me feel happy.
10. I donate time or money to charities every month.
11. Unless they are part of my family, helping the elderly isn't my responsibility.
12. Children should be taught about the importance of helping others.
13. I plan to donate my organs when I die with the hope that they will help someone else live.
14. I try to offer my help with any activities my community or school groups are doing.
15. I feel at peace with myself when I have helped others.
16. If the person in front of me in the check-out line at a store was a few cents short, I would pay the difference.
17. I feel proud when I know that my generosity has benefited a needy person.
18. Helping people does more harm than good because they come to rely on others.
19. I rarely contribute money to a worthy cause.
20. Giving aid to the poor is the right thing to do.

Green Hotel Visit Intention (1 *strongly disagree* to 7 *strongly agree*)

1. I am willing to stay at a green hotel when traveling
2. I plan to stay at a green hotel when traveling
3. I will make an effort to stay at a green hotel when travelling

Organic Wine Purchase Intention (1 *strongly disagree* to 7 *strongly agree*)

1. I intend to buy organic wine in the near future
2. I will make an effort to buy organic wine in the near future

3. When you purchase your next wine, how likely are you to purchase an organic wine? (1 *extremely unlikely* to 7 *extremely likely*)

Environment-friendly Car Purchase Intention (1 *strongly disagree* to 7 *strongly agree*)

1. I already own or intend to purchase a hybrid/electric car in the near future
2. I will make an effort to buy a hybrid/electric car in the near future
3. When you purchase your next car, how likely are you to purchase a hybrid/electric car?
(1 *extremely unlikely* to 7 *extremely likely*)

Willingness to Pay More (Green Hotel) (1 *strongly disagree* to 7 *strongly agree*)

1. It is acceptable to pay a premium to stay at a hotel that engages in green practices
2. I am willing to pay more to stay at a green hotel
3. I am willing to spend extra in order to stay at an environmentally friendly hotel

Willingness to Pay More (Organic Wine) (1 *strongly disagree* to 7 *strongly agree*)

1. It is acceptable to pay a premium for an organic wine
2. I am willing to pay more to buy an organic wine
3. I am willing to spend extra in order to buy an organic wine

Willingness to Pay More (Environment-friendly Car) (1 *strongly disagree* to 7 *strongly agree*)

1. It is acceptable to pay a premium for a hybrid/electric car
2. I am willing to pay more to buy a hybrid/electric car
3. I am willing to spend extra in order to buy a hybrid/electric car

Willingness to Sacrifice (Green Hotel) (1 *strongly disagree* to 7 *strongly agree*)

1. I am willing to sacrifice value by staying at a green hotel

2. I am willing to sacrifice convenience by staying at a green hotel
3. I am willing to sacrifice luxury by staying at a green hotel

Willingness to Sacrifice (Organic Wine) (1 *strongly disagree* to 7 *strongly agree*)

1. I am willing to sacrifice wine quality by purchasing an organic wine
2. I am willing to sacrifice wine taste by purchasing an organic wine
3. I am willing to sacrifice wine value by purchasing an organic wine

Willingness to Sacrifice (Environment-friendly Car) (1 *strongly disagree* to 7 *strongly agree*)

1. I am willing to sacrifice luxury by purchasing a hybrid/electric car
2. I am willing to sacrifice power/performance by purchasing a hybrid/electric car
3. I am willing to sacrifice quality features by purchasing a hybrid/electric car

Demographics and Product Use

1. What is your gender? (Male, Female, Other)
2. What is your age?
3. What is your ethnicity? (Caucasian/White, African American/Black, Hispanic/Latino, Asian, Middle Eastern, Native American/Alaskan, Mixed, Other)
4. What is the highest level of education you have completed? (Less than High School, High School/GED, Some College, Associate Degree, 4 Year College Degree, Master's Degree, Doctoral Degree, Other)
5. What is your annual income?
6. What is your state of residence?
7. How many nights do you stay in hotels per year?
8. How many miles do you drive per year?
9. How many glasses of wine do you consume per week?