Construction of Revised TPB Model of Customer Green Behavior: Environmental Protection Purpose and Ecological Values Perspectives

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Abstract. This study constructs a comprehensive conceptual model of consumer behavioral intentions in green hotels. For the purpose of protecting the environment, based on Schwartz’s values theory, this study identifies ecological values that influence consumers’ green hotel visit intention. This study aims to develop an extended Theory of Planned Behavior (TPB) research model which includes environmental concern and perceived moral obligation to predict consumers’ intention to visit green hotels. The green hotel behavioral intentions will provide insights to better understand the green consumer and to better manage the green hotel.

1. Introduction
Environmental issues have accompanied the development of human society and also exert different impacts on human beings. Since the onset of the New Environmental Paradigm [1] 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 [2]. Public concern about environmental issues has been on the increase. Many consumers are aware that their buying behavior may do harm to the environment and start to search and purchase eco-friendly products [3]. This increased awareness and interest in sustainable consumption is expected to influence consumer purchase decisions [4]. Moreover, sustainable consumption has drawn more attention from corporate decision-makers due to stricter environmental regulation and growing stakeholder pressures focused on preserving the environment [5]. With more people demanding green travel, this environmental concern has changed into ecologically favorable behaviors and eco-friendly purchasing decisions [6]. Green consumption has become an important force, which can protect the environment. Green consumerism, and one facet of such behavior, began to emerge eventually across different industries and markets.

Energy saving, ecology, science and technology is the development trend of Green Hotel. It is not only the progress and the development of the social, but also the need of human beings to seek harmonious coexistence with nature. Figure 1 shows the hotel industry has to make good cooperation with economic development and environment, make rational utilization of resources, and take environmental protection as the center, therefore, the industry could obtain the sustainable development.
Avoid waste and maximize resources

Heritance hotel
- Use a lot of natural light and save energy
- Equipped with energy cut-off switch
- Use solar hot water to generate electricity
- Collect rainwater and save water

The environmental protection and sustainable development

Tongsa Bay
- Help local residents build “low-carbon concept schools”
- Cooperate with other hotels to protect island scenery and promote sustainable ecological development

Use technology to reduce energy consumption

The GAIA Hotel
- The hall ceiling can collect sunlight and reduce carbon dioxide emissions
- Special pedals outside the hotel can leave the dust outside the door
- Air conditioning can adjust the temperature automatically and save power

Figure 1. The development trend of Green Hotel

The study has four objectives:
- To understand the application of TPB in the hotel industry.
- To construct TPB framework indicators for green hotels.
- To identify which TPB framework indicators are suitable for use in the hotel industry.
- To provide practical and research implications for future green hotel development.

2. Literature Review

A narrative literature review methodology was adopted to enable synthesis of the current knowledge on the topic. Such an approach will allow for a broad perspective to be presented on a particular area. This narrative review of the research literature presents a summary about Green Consumerism, Green Hotel, ecological values, theory of Planned Behavior model. The aim of this review was to consolidate research of the topic that may lead to better outcomes for the Green Hotel.

2.1. Green Consumerism and Green Hotel

Hotels that are nature-oriented, environmentally focused and environment friendly (i.e. eco-friendly) in use of energy, water, and materials that do not exacerbate impacts on the earth and environment. Green hotels refer to “the hotels that are managed based on the concept of sustainable development, which means they adhere to cleaner production, advocate green consumption, protect the ecological environment and make rational use of resources”. [7] Green hotels are committed to the standards of 3Rs (reduce, reuse, recycle) and 2Es (energy, efficiency), whose core content consists of economical principles applied in the energy consumption within the hotels, proper guidance over the consumption of guests, sensible choices of the environment and its influence, re-understanding of employees, responsibility and commitment to the community, and concerns of the hotel proprietors and managers over the course of nature and history.

Green consumerism can be explicated as a particular form of socially conscious or socially responsible consumer behavior, and hence may be referred to as environmentally concerned consumption. Green consumers normally engage in the purchase of products that are considered green, environment friendly, proenvironmental, or sustainable. [8]

2.2. Ecological Values

Values are distinguished from one another by means of the nature of motivational goal they articulate. 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 versus self-enhancement and openness to change versus conservation [9]. 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. Environmental values are enduring, individually defined moral obligations to protect the environment. Both the supply and demand sides of the tourism industry of purchasing and consumption have been shown to be affected by environmental values [10]. Mair’s study on tourists participating in carbon-offset programs found travelers that purchased offsets had positive environmental values [11]. Dolnicar (2010) found environmental values, or a moral obligation to protect the environment, was a strong predictor of environmentally-friendly tourist behavior and environmental behavior at home [12]. Ham and Han (2012) show that purchase-related loyalty, measured as intentions to visit, acceptance of price premiums, and providing recommendations, were amplified by consumers with positive environmental values [13]. However, Millar and Baloglu (2011) suggest values and beliefs may not be consistent with actions when people go into a different mode, and may be less concerned with the long-term impact of their decision-making [14]. The environmental values are positively related to consumers’ motivations to select a hotel based on its sustainability practices [15].

2.3. Theoretical Base- Theory of Planned Behavior model

The Theory of Planned Behavior model, as proposed by Ajzen in 1991[16]. According to Ajzen, intention is predicted by three factors: attitude towards the behavior, perception of social pressure to perform the behavior (subjective norms), and control over performance of the behavior (perceived behavioral control). Consumers’ behavior when staying at a green hotel differs from others in terms of their attitude, subjective norm, perceived behavior control, and intention.

The main basic assumption of the TPB model is that most behavior people engage in is under their own control and is rational. Moreover, the decision factor in a person’s actual behavior is the tendency to behave, that is, behavioral intention. In addition, a person’s personality, age, occupation, gender, etc. have no direct impact on his/her behavioral intention. In fact, these variables can only affect behavioral intention indirectly through attitude and subjective norms [16]. According to the TPB model, an individual’s performance of a specific behavior is determined by his/her behavioral intention to perform the behavior. This behavioral intention is in turn determined by three factors related to the behavior: the person’s attitude, subjective norms, and perceived behavioral control [17]. In view of the fact that perceived moral obligation as an indispensable construct of pro-environmental behavior, this study incorporated perceived moral obligation into the TPB model to form the extended TPB model. As for the antecedent of the components of the extended TPB model, this study pointed that environmental concern would exert some influences on consumers’ pro-environmental behavioral intentions through situation-specific beliefs while believing that environmental concern would have some direct impacts on the components of the extended TPB model. [18]

3. TPB Model Construction Framework

Many tourists prefer destinations that practice environmental protection. This preference translates into tourists’ purchasing and booking lodgings at locations that practice environmental protection and support related local charities are practiced. This is driven by a rise in consumers’ environmental awareness [19]. Green Hotel has a high recognition in the user community. Safety, health and environmental protection is another name of Green Hotel. With the improvement of tourists’ awareness of environmental protection, the requirements of the tourists to the Green Hotel have also changed. (As shown in Figure 2)
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 seems to result from their eco-centric attitudes, which in turn ensue from their biospheric values. Based on the discussions of the concepts and theory, the research framework of this study is depicted in Figure 3. This revised TPB model integrates the environmental concern, ecological values and the moral obligation into the framework, which describes the relationships and influences on consumers’ intention to visit green hotel and purchase behavioral intentions in the future (As shown in Figure 3).

4. Implications

4.1. Practical Implications
The model might provide paramount implications for practitioners. Support for a robust effect of biospheric values on green hotel behavioral intentions will make a strong case for involving customers in the environmental management process. Green initiatives such as recycle receptacles, signs encouraging green behaviors, and linen and terry reuse programs, can prove to be beneficial for the practitioners not only financially, but also for enhancing 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.

4.2. Research Implications
The model we constructed integrates a number of theories such as values theory, value-attitude-behavioral hierarchy, ecocentrism and anthropocentrism ethic, and green signaling. Our model proposes that this unique combination of theories can be used to predict green hotel specific behavioral intentions. Empirical validation will show which particular values and attitudes can influence green consumer behavior on a green lodging context. As a result, providing all our hypotheses are supported, it will become possible to attract all types of consumers to the green hotel. Every consumer has a unique combination of core values and it is possible to strategically trigger each core set of values through various environmental actions. By understanding the prevalent theories and the relationships that our model proposed, the practitioner can certainly understand the hotel guest better. The goal of our study was not to propose new theory but to build a comprehensive model of green hotel consumer behavior based on relevant theories in psychology and mainstream consumer behavior research literature.

5. Conclusions and Future Directions
To help hotel make marketing decisions, this study builds upon prior literature on green consumer behavior and makes two contributions: 1) the paper extends the study of environmental values and environmental self-efficacy to a tourism context, 2) the paper constructs the TPB model of the customer green behavior from the ecological values for the environmental protection purpose. The future research direction is that the TPB model could be applied to the study of hotel customer green behavior intention. The reliability and validity of the model are further verified by the data obtained from the questionnaire.

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