Anticipated Knowledge in Consumers' Intentions to Visit Green Hotels: Extending the Theory of Planned Behaviour.

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Introduction

Public concern about environmental issues has risen quickly over recent decades, and thus, inducing consumers' demands for environmentally friendly products (Tang, Tang, Lam, & Lam, 2017). Consequently all industry sectors have realized that greening has become a necessity that cannot be ignored (Namkung & Jang, 2014). This 'greening' of praxis is also gaining importance in the lodging sector (Han & Yoon, 2015) as this sector has been associated with negative effects on the environment (Rahman & Reynolds, 2016). Therefore, many hotels are making an effort to reduce the level of these negative effects, which has led to the emergence of 'green hotels'. 'Green hotels' are defined as lodging properties that are committed to several pro-environmental practices such as reducing water and energy consumption, and decreasing waste (Rahman & Reynolds, 2016). Recently, many hotels are recognizing the influence of pro-environmental programs and aiming to gain a competitive advantage over their competitors by becoming green (Chen & Tung, 2014). According to a survey conducted by Trip Advisor as many as 79% of respondents indicated that implementing green practices is important to their choice of lodging (TripAdvisor, 2013). Another survey conducted by Deloitte (2015) reported that around 95% of business travellers indicated that the hotels need to take stronger action to encompass green practices.

Hotels may adopt green practices for a number of reasons, including productivity and corporate performance improvement, cost reduction and profit maximisation (McLennan, Becken, & Watt, 2016). Chain hotels are starting to implement environmental initiatives globally (Kang, Stein, Heo, & Lee, 2012). Also several small and medium size lodging properties around the world are participating in green programs to reflect their environmental responsibility (Rahman & Reynolds, 2016). However, most of the hotels' activities are not apparent to customers, as they take place back-of-the-house (Baker, Bradley, & Huyton, 2001). Another barrier for hoteliers incorporating green programs is that consumer perceptions of green practices in hotels remain unclear (Nimri, Patiar, & Kensbock, 2017). For instance, implementing green practices might be perceived by hotel guests as a sacrifice of luxury and comfort (Kang et al., 2012). While some consumers appear reluctant to pay more for green accommodation (Manaktola & Jauhari, 2007), others are willing to do so (Kim & Han, 2010). This fluctuating consumer demand for purchase of green hotel accommodation has attracted the attention of many researchers in the hospitality domain (Kang et al., 2012). Scholars such as Han and Yoon (2015) encouraged researchers to extend their studies of guests' decision-making processes in the green hotel context.

To improve our understanding of the antecedents of green purchase intentions, this study employs the Theory of Planned Behaviour (TPB) as the underpinning theoretical basis. Ajzen (1991) proposed that human behaviour is likely influenced by the one's attitudes, subjective norms and perceived behavioural control. Numerous researchers have applied the TPB theory to explore individuals' pro-environmental behaviour in different contexts. Meanwhile, some researchers, such as Chen and Tung (2014) and Kim and Han (2010) have also used the TPB to explore consumers' behaviour in the green hotel setting. Thus, it is appropriate to employ this theory as the main framework in this research to understand Australians' purchase intentions towards green accommodation.

Despite the TPB's general usefulness, the theory can be deepened through adding additional constructs to enhance the predictive power of behaviour, and after the theory's original variables have been taken into account (Ajzen, 1991). Some scholars further argue that

the effects of green hotel knowledge in association with intention formation are still under explored (Chen & Peng, 2012). This is despite the fact that consumer behaviour literature has shown that knowledge can play a significant role in affecting decision-making.

To fill the void, this study attempts to validate the TPB framework as suggested by Ajzen (1991) with an extended form by including green hotel knowledge to predict consumers' green purchase intention towards green hotels in Australia. The objectives of the study are (1) to test the ability of TPB original constructs (i.e. attitudes, subjective norms, and perceived behavioural control) to predict consumers' intention to visit a green hotel; and (2) to extend the TPB and examine whether the addition of green hotel knowledge will enhance the predictive power of the TPB.

Literature Review

Increased attention to environmental issues has stirred interest in research related to green hotels (Chan, Hsu, & Okumus, 2016). Therefore, green hotels are becoming an emergent niche in the competitive accommodation sector (Kim & Han, 2010). According to The Green Hotels Association (2015, para 4), green hotels are: "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". Similarly, Rahman and Reynolds (2016) define green hotels as lodging properties that aim to protect natural resources, reduce waste and recycle materials. However, whilst some hotels have initiated changes in their practices, less attention has been paid to the role of consumers in the green hotel context. This lack of understanding affects consumer behaviour toward green hotel accommodation (Chen & Peng, 2012). According to a recent meta-analysis, the number of articles on green practices in the hotel sector has grown, yet most of these studies focus on the managers' perspective (Kim, Lee, & Fairhurst, 2017). Additionally, out of the 146 articles reviewed from 2000 to 2014, only 25.3 % were consumer centred (Kim et al., 2017). Therefore, more rigorous research in this field is needed. One way in which researchers can investigate such behaviour is to build on social psychological theories, for example the TPB (Ajzen, 1991; Fishbein & Ajzen, 2010).

The TPB is one of the most widely applied theoretical frameworks used to predict human behavior (Fishbein & Ajzen, 2010). The TPB is based on the idea that people generally take into account implications of their behaviour before they decide whether to engage in a certain behaviour (Ajzen, 1991). The theory assumes that intention is a function of these three conceptually independent constructs: attitude (i.e. the overall positive or negative consequences of a given behaviour), subjective norm (i.e. the perceived pressure of significant others to perform the behaviour) and perceived behavioural control (i.e. the perceived ease or difficulty of performing the behaviour) (Ajzen, 1991).

The TPB has been used in a wide range of contexts, especially pro-environmental behaviour (Fishbein & Ajzen, 2010). According to Armitage and Conner (2001), TPB provides good predictive power, averaging 40% of the variance in intention across different 154 applications. In addition, Chen and Tung (2014) also found that the extended TPB model has a good explanatory power to stay at green hotels. By employing the TPB framework, it is possible to examine the effect of personal factors and social pressure as well as non-volitional factors on intention (Kim, Njite, & Hancer, 2013) and eventually the selection of green hotels.

However, Hsu and Lam (2004) argued that despite the extensive use of the TPB, there are concerns about incompleteness of the TPB framework. Ajzen (1991) indicated that after the existing constructs of the theory have been taken into account, the theory is essentially open to the inclusion of further constructs in a certain setting if they generate a better understanding

of the theoretical mechanism of the framework. Some scholars further suggest that an individual's environmental behaviour can be attributed to additional triggers, such as green hotel knowledge (Chen & Teng, 2014). Further evidence in several studies claim that knowledge often directly predicts future behaviour (Chen & Peng, 2012; Laroche, Bergeron, Tomiuk, & Barbaro-Forleo, 2002). According to Kaplan (1991), individuals' knowledge about a certain issue considerably influences their decision-making regarding that issue. As an example, a person's knowledge about green practices will impact one's decision to choose a business that also incorporates green practices (DiPietro, Cao, & Partlow, 2013). In the green restaurant context, consumer knowledge of environmental initiatives was found to be a significant determinant of intention to visit green restaurants (Jang, Kim, & Bonn, 2011). In order to take a pro-environmental action (i.e. staying at a green hotel), consumers need relevant knowledge regarding the green programs implemented in such hotels. To reiterate, there are both conceptual and empirical grounds for supposing that green hotel knowledge could qualify as a significant additional component in the TPB.

Methodology

The sample for this research comprised Australian travellers 18 years. The survey was distributed online from April through June 2017. Qualtrics™ was employed to administer the questionnaire through an online survey to a quota sample of consumers who intend to stay in a hotel in the near future. A total of 781 usable responses were received from participants. The sample (N = 781) consisted of 463 females and 316 males. The largest percentage of the sample are aged 20–39 (n = 384). Married people (n = 339) outnumbered those who reported being single (n=269). The respondents were also mainly employed full-time (n=330). The respondents were mainly educated because most had achieved an undergraduate degree (n=475).

The survey administered in this study was composed of three sections: the first included the proximal determinants of intention, the second consisted of items designed to assess the respondents' intention to visit a green hotel, and the third contained questions related to demographic information. Scales measuring all variables referenced previous studies (e.g. Fishbein & Ajzen, 2010; Han et al., 2010). While attitude towards visiting green hotels was measured by a seven-point semantic differential scale, the remaining constructs were assessed using a seven-point Likert-type scale (1 = strongly disagree, 7 = strongly agree). Multi-item scales were employed to assess these variables to sufficiently capture the domain of constructs (Han et al., 2010).

The study used SPSS and AMOS V22 to analyse the data. The analysis followed the two-step approach of Structural Equation Modelling (SEM) (Anderson & Gerbing, 1988). The first step involved testing the measurement model using Confirmatory Factor Analysis (CFA). After the assessment of the adequacy of the measurement model, the second step involved finding the best-fitting model and testing the relationships between these constructs.

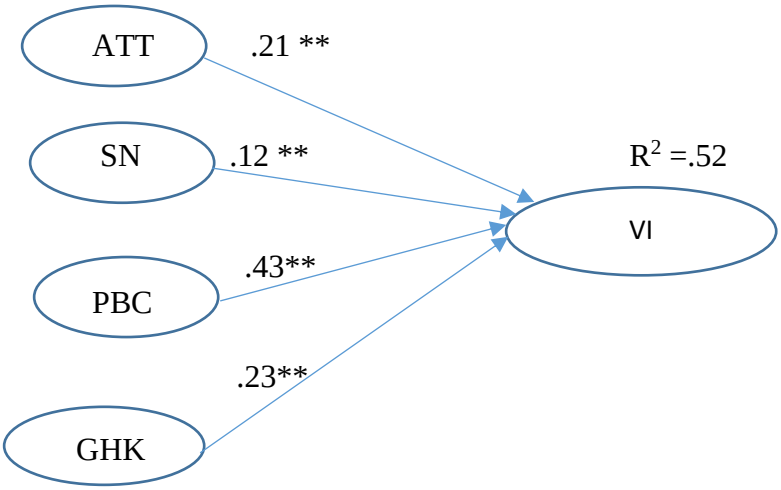
RESULTS

CFA using the maximum likelihood method was used to assess the goodness of fit of the model. The adequacy of the model was determined using the indices of goodness of fit suggested by Hair, Black, Babin, and Anderson (2010). The results revealed that the model fit the data ($\chi^{2=}$ 293.82, df = 108, p<0.001, RMSEA= 0.062, CFI= 0.986, TLI= 0.979). The recommended acceptance level for RMSEA is a value lower than or equal to 0.08 (Hair et al., 2010). Cronbach's alpha of each construct ranged between .877 and .966, which is above the cut-off point minimum of 0.7 recommended by Netemeyer et al. (2003).

Before examining the structural model, model comparisons were conducted. The two models (i.e., TPB original model and the proposed TPB model) were independently tested. The original model was tested without the direct path from green hotel knowledge to visit intention. Compared with the original TPB model, the proposed model showed superior explanatory power (Proposed TPB: adjusted R^2 for visit intention = 0.52, vs. original TPB: adjusted R^2 for visit intention = 0.41) and relatively better fit (Proposed TPB1: χ^2/df = 3.127), RMSEA = 0.055 vs. original TPB: χ^2/df = 3.246, RMSEA = 0.065). Therefore, the proposed model was supported.

In the next step, structural equation modelling (SEM) was conducted to examine whether the theoretical relationships specified are supported by the data. Among the four paths, the t-values of four paths were statistically significant. Attitude (β =0.21, p < .01), subjective norms (β =0.12, p< 0.01), perceived behavioural control (β =0.43, p< 0.01) and green hotel knowledge (β =0.23, p< 0.01) had significant effects on consumer intention.

Figure 1. TPB proposed model



Path analysis for the model. **p<0.01. Note ATT: attitude; SN: subjective norm; PBC: perceived behavioural control; GHK; green hotel knowledge; VI: visit intention.

Conclusion and Discussion

This study proposed and examined a model that explains and predicts the potential factors that influence consumers' intentions to stay at a green hotel. This study investigated the theoretical and empirical evidence for the relationships among the TPB original constructs and examined how the inclusion of green hotel knowledge to the TPB model increases its predictive power.

The applicability of the TPB in the green hotel context was similar to the levels of prediction obtained in other studies examining planned behaviours. More than 50% of the variance in behavioural intentions was explained, which is above the range explained in previous reviews such as Armitage and Conner (2001). In addition, the results indicated that perceived behavioural control had the utmost predictive ability on intentions to stay at a green hotel. Attitudes were also found to have a considerable predictive ability. However, subjective norms had a minimal influence on intentions.

Interestingly, the results indicated that the respondents' intentions to stay in a green hotel are strongly affected by perceived behavioural control, implying that they are not willing to give up their own convenience to protect the environment. A possible reason for this phenomena might be the several barriers perceived by Australian residents, which include cost, location, standardisation, and lack of information (Nimri et al., 2017). There is a message here for hotel marketers: to send carefully selected messages with a focus on the importance of creating conditions to facilitate purchasing green hotel accommodation and of removing any potential barriers.

Attitudes were also found to impact consumers' intention to stay in a green hotel. This finding is consistent with the findings of Kim and Han (2010), indicating that hotel guests' attitudes are one of the major factors affecting their green accommodation purchase decision. Therefore, to attract customers to green hotels, their attitude toward behaviour must be influenced. Marketers of green hotels should actively seek means to increase environmental concerns aiming to contribute to building more favourable attitude toward green purchase behaviour.

As for the impact of social norms, the results indicated that although subjective norms had an impact on intentions, it is worth mentioning that the relationship between subjective norms and behavioural intentions is considered weak ($\beta = 0.12$). This result has been previously reported by a meta-analysis as subjective norms were most often the weakest construct among the TPB original constructs responsible for supporting variation in behavioural intention (Armitage & Conner, 2001). This can also be attributed to the study sample as Australians are considered to have a high level of individualism and this transfers into their consumption patterns reflecting their self-supporting lifestyles, with marginal dependence on others (Hofstede & Hofstede, 2005).

On the other hand, the addition of green hotel knowledge, to the TPB led to a better explanation of behavioural intentions beyond the original TPB constructs in the green hotel setting. This indicates that the TPB should incorporate this factor as it assists in the enactment of intentions. Furthermore, green hotel knowledge was the second significant predictor of intentions and added a modest augmentation in explained variance. This result is consistent with the argument of Fodness and Murray (1999) regarding the significant and conclusive part that knowledge plays in decision making process.

The study concludes that four individual factors (attitude, subjective norms, perceived behavioural control, and green hotel knowledge) are identified as the key elements that impact consumers' purchase decisions towards green accommodation in Australia. Based on these findings, a number of implications can be derived. First, interventions should be designed to encourage guests' intention to select a green hotel through means of enhancing their perceived power. In addition, the results suggest that not only is the TPB not satisfactory for explaining behavioural intentions, but also the mechanisms behind antecedents of consumers 'purchase intentions is more complex. Through the extended TPB framework, green hotel knowledge emerged as a strong predictor of intention, a finding that is consistent with evidence regarding the role of knowledge in the theory of planned behaviour. In recent years, there has been a growing interest in the role of knowledge in relation to consumer behaviour. Currently, however, despite this interest, only one empirical study by Chen and Peng (2012) has assessed green hotel knowledge in relation to hotel guests' behavioural intentions with most researchers only suggesting that it would be a valuable construct to explore further. The results indicated that it might be significant for knowledge to be included in the theoretical model, particularly in relation to green behaviour.

The paper also offers practical implications, because it broadens the knowledge about consumers' decision making process in the green hotel context, which could benefit hotel management. For instance, the study revealed the strong influence of perceived behavioural control; consequently, to attract guests, hotel managers should improve the accessibility of their green hotels and should tailor their promotional methods by underlining their practical benefits, such as having promotional offers and have better value for money when compared to traditional hotels (Chen & Peng, 2012). Moreover, marketing messages should be targeted at changing attitudes towards green hotels. Most significantly, it is vital for hotels actively update their guests about their green programs through multiple information sources to highlight the benefits of their operations for the environment (Nimri et al., 2017).

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