

A PSYCHOGRAPHIC FRAMEWORK FOR DETERMINING SOUTH AFRICAN CONSUMERS' GREEN HOTEL DECISION FORMATION: AUGMENTING THE THEORY OF PLANNED BEHAVIOUR

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ABSTRACT

Although South African consumers are showing increased green purchasing intentions, the factors that will lead to an intended behaviour of selecting green hotels have yet to be researched. Accordingly, this research explores the predictive ability of the Theory of Planned Behaviour (TPB) and then further modifies and develops extended model structures surrounding the TPB, to identify and confirm an independent theoretical model that will be able to better understand South African consumers' intended behaviour towards selecting green hotels. To answer the aim and objectives set, the research positioned itself within a non-experimental quantitative paradigm. An online questionnaire was distributed to South African consumers that stayed at a hotel at least once within a 12-month period. A total of 402 completed responses were used for statistical analysis.

Descriptive statistical analysis derived and assessed the demographic profile of the respondents and determined the respondents' characteristics as South Africans who intend to stay at or visit hotels. Structural equation modelling revealed that the original TPB is a strong predictor of behavioural intention, indicating its applicability to the domain of South African consumers' behavioural intention of selecting green hotels. Furthermore, it was found this can statistically be best explained by expanding the original TPB model to include emotive and non-cognitive predictor variables, namely anticipated regret and perceived moral obligation, as direct constructs to behavioural intention as well as by including environmental knowledge as a direct predictor variable to attitude. In addition, it found that the relationship between behavioural intention and perceived

behavioural control was the most significant in predicting South African consumers' intended behaviour of selecting green hotels.

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A large portion of the information contained in this article stems from a dissertation which was submitted in accordance with the requirements for the degree of Master of Consumer Science by Mr De Freitas: DE FREITAS, D. 2019. *Exploring and predicting South African consumers' intended behaviour towards selecting green hotels: Extending the Theory of Planned Behaviour*. Unpublished Dissertation, University of South Africa (UNISA), Pretoria.

ARTICLE INFO

Received October 2018

Revised June 2019

Accepted November 2019

KEYWORDS

green hotels, South Africa, sustainable tourism, consumer behaviour, Theory of Planned Behaviour

INTRODUCTION

Consumers' perceptions, concerns and awareness about environmental protection have led to changes in their consumption behaviour owing to the discernible impact climate change has on environmental degradation (Gifford & Nilsson 2014; and Skogen, Helland & Kaltenborn 2018). Such changes within consumerism include the progression of conscientious decision-making about the purchase or selection of green products and services (Afonso, Gavilan, Garcia-Madarigia 2018; and Leonidou, Christodoulides & Thwaites 2016). With respect to the service sector, consumers have acknowledged that the service attributes of the hotel industry, such as the release of emissions into the air, water and soil as well as the excessive consumption of non-durable goods, energy and water, do play a major role in environmental damage, while, in turn, the hotel industry relies on the preservation of the environment to attract consumers (Bohadanowicz, Zientara & Novotna 2011; Chan & Hsu 2016; and Han & Yoon 2015). The hotel industry's efforts to implement green practices and initiatives as well as to operate in a responsible manner towards its employees, the local community, the economy, the local culture and the surrounding ecology, set the precedent for the development of green hotels (Chan 2013; Kang, Stein, Heo & Lee 2012; and Luu 2017).

A factor relating to the growth and support of the green hotel sector stems from the increasing interest and awareness regarding sustainable tourism (Chan & Hsu 2016; and Lu & Nepal 2009). The United Nations World Tourism Organisation (UNWTO) (2017:1) defines sustainable tourism as, "tourism that takes full

account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities". For many reasons responses vary and, compared to its international counterparts, southern Africa is not as progressive within the sustainable tourism movement because of its poverty and equality challenges. However, much potential is foreseen especially within one of the region's wealthiest and most bio-diverse countries, namely South Africa, where the sustainability concern is not only focused on environmental protection, but is also aimed at reducing poverty for the nations' people and promoting equality while growing the economy (Amusan 2017; Rogerson & Sims 2012; and Swilling, Musango & Wakeford 2015).

According to a study by PricewaterhouseCoopers (PwC) in 2018, South Africa is a popular tourist destination where foreign overnight visitors increased by a 2.4% change year on year in 2017, building on its 12.8% increase in 2016. Tourism in South Africa is one of the fastest growing sectors of the economy that contributed 9% to South Africa's Gross Domestic Product (GDP) in 2017. With respect to the hotel industry *per se*, revenue from accommodation increased by 4.6% (R16.6 billion) in 2017 (PwC 2018). Against these favourable economic indicators, there are challenges that currently cause stagnation in the potential growth of the green hotel market. Despite the implementation of a national policy commitment to encourage environmental sustainability within South Africa's tourism economy (Department of Tourism 2011), there exists only a low level of national government support, an absence of government regulatory measures, and a lack of responsible tourism initiatives within the hotel industry (Rogerson & Sims 2012; and Van Der Merwe & Wocke 2007).

With respect to the long-standing challenge of poverty and equality issues, the focus on green consumerism in South Africa only became a topic of research interest in the last decade (Bisschoff & Liebenberg 2016; Christie 2018; Dubihlela & Ngxukumeshe 2016; Mkhize & Ellis 2018; Moller 2018; and Nkosi & Dikgang 2016). However, the investigation of the psychographic factors that will determine South African consumers' green hotel decision formation has yet to be considered. To effectively predict and

explore South African consumers' intended behaviour in relation to selecting green hotels, Ajzen (1991)'s Theory of Planned Behaviour (TPB) was adopted as the theoretical framework for the current research.

The TPB is one of the most widely researched models used by social psychologists to predict ecological behavioural intentions (Chen 2016; Chen & Hung 2016; Kim, Njite & Hancer 2013; Moser 2015; and Yadav & Pathak 2016). Within the green hotel context, studies have confirmed that extending the TPB presented statistically powerful models in explaining consumers' intended behaviour towards selecting green hotels (Chen & Tung 2014; Han, Hsu & Sheu 2010; and Han & Kim 2010). Since South Africa is an emerging economy, the assumptions made concerning the contextual factors of a first world country may not be a true reflection of the situation. Theories and models developed in a first world may, thus, not necessarily apply to a developing country due to the potential differences in the underlying assumptions associated with these theories (Christie, Sonnenberg & Gous 2016). Therefore, as part of this study, we critically examine the application of the TPB to the South African green hotel context.

RESEARCH FRAMEWORK AND HYPOTHESES DEVELOPMENT

Theory of Planned Behaviour (TPB)

The Theory of Planned Behaviour (TPB), itself an extended model of the Theory of Reasoned Action (Ajzen 1991; and Ajzen & Madden 1986), is one of the most researched and influential theories for predicting social behaviour (Fielding, Terry, Masser & Hogg 2008; and Ravis, Sheeran & Armitage 2009). From a green behavioural intention perspective, many researchers also take the TPB as an important theoretical basis to understand whether consumers intend to perform eco-friendly behaviour (Chen 2016; Chen & Hung 2016; Kim, Njite & Hancer 2013; Moser 2015; and Yadav & Pathak 2016). As reflected in Figure 1, behavioural intention is, in turn, determined by three direct factors related to the behaviour, namely the consumers' attitudes, subjective norms, and perceived behavioural control (Ajzen 1991).

Where the TPB have been used as is in the South African context, it has not always been with success, however, according to Ajzen (1991) as well as Perugini and Bagozzi (2001), modifying the TPB by including additional predictor variables will contribute towards enhancing the understanding of the theoretical framework and does increase the predictive ability of a framework within a given context. Furthermore, Ajzen and Fishbein (2000) recommend that the measurement of behavioural intention, rather than actual

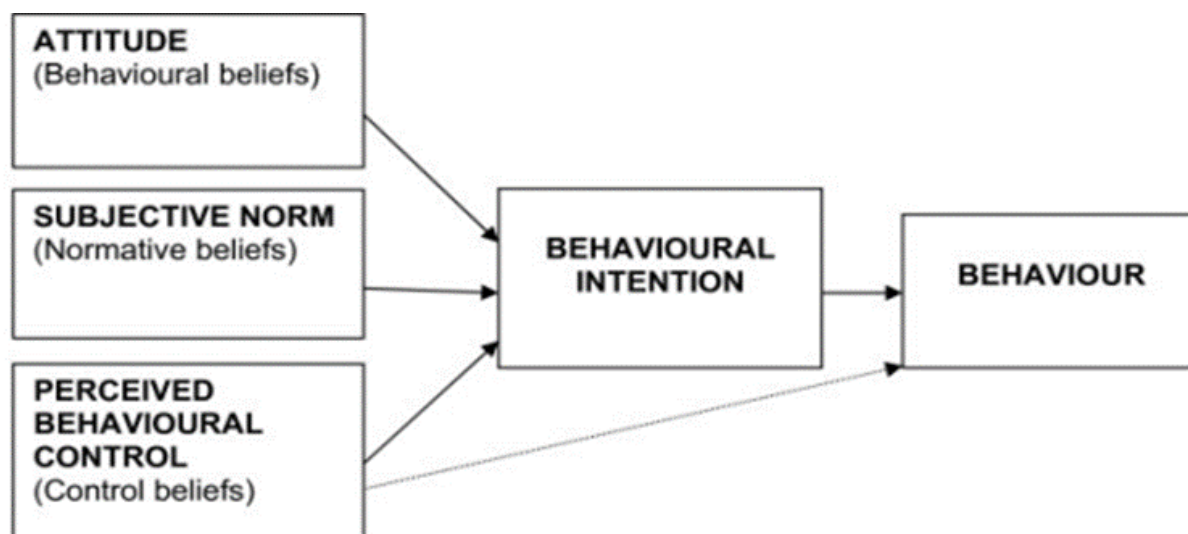


FIGURE 1: THEORY OF PLANNED BEHAVIOUR (TPB) MODEL (AJZEN, 1991)

behaviour, assumes predictive power for the future and, thus, can be assessed independently. Accordingly, the current study applies and extends the TPB to optimally understand the framework that surrounds South African consumers' green hotel decision formation leading to behavioural intention. The section to follow introduces and discusses each of the TPB psychographic predictor variables that the research will explore in order to comprehensively predict South African consumers' intended behaviour towards selecting green hotels.

Role of attitude (ATT) within the TPB

The first important determinant of behavioural intention is attitude (ATT), which is defined by Ajzen (1991:188) as, "the degree to which a person has a favourable or unfavourable evaluation or appraisal of the behaviour in question". Attitude towards behaviour is believed to be a function of one's behavioural beliefs that represent the perceived consequences of the behaviour and one's evaluation of the significance of the consequence. Subsequently, studies have augmented the TPB framework in the context of green hotel selection and have found ATT to exert a significant positive affect on behavioural intention (Chen & Peng 2012; Chen & Tung 2014; Han *et al.* 2010; Han & Kim 2010; Manaktola & Jauhari 2007; and Verma & Chandra 2017).

Role of subjective norm (SN) within the TPB

Within the TPB model, the subjective norm (SN) is postulated as a second determinant of behavioural intention. While attitude refers to a personal factor, SN is categorised as social factors that influence an individual's behaviour and is defined as "the perceived social pressure to perform or not to perform the behaviour" (Ajzen 1991:188). SN is represented as a function of a person's normative beliefs about what salient referents think the person should or should not do, and the person's motivation to comply with those referents (Ajzen & Fishbein 2000). Within the green hotel setting, research has found SN to have a positive significant effect on behavioural intention (Chen & Peng 2012; Chen & Tung 2014; Han *et al.* 2010; Han & Kim 2010; Manaktola & Jauhar 2007; and Verma & Chandra 2017).

Role of perceived behavioural control (PBC) within the TPB

The third determinant of behavioural intention is perceived behavioural control (PBC), defined by Ajzen (1991:188) as, "the perceived ease or difficulty of performing the behaviour". PBC is determined to be a function of control beliefs that refer to one's perception of the presence or absence of resources/opportunities for the achievement of outcomes. PBC includes factors such as the availability of time and money or the possession of required skills and the person's confidence in his/her ability to perform the act (Ajzen & Fishbein 2000; Ajzen & Madden 1986; and Armitage & Conner 2001). Within the green hotel setting, research has found PBC to exert a significant positive effect on behavioural intention (Chen & Peng 2012; Chen & Tung 2014; Han *et al.* 2010; Han & Kim 2010; Manaktola & Jauhari 2007; and Verma & Chandra 2017).

Derivation of the Extended TPB Components

The TPB is in principle open to modification (Ajzen 1991). Findings from previous research suggest that anticipated regret, perceived moral obligation, environmental concern and environmental knowledge are significant predictors within the green decision-making process. Accordingly, the research will explore these respective psychographic variables in order to test their predictive ability regarding the TPB in context of South African consumers' behavioural intention towards selecting green hotels.

Anticipated Regret (AR)

Anticipated regret (AR) is defined by Ravis *et al.* (2009:2987) as "the prospect of feeling positive or negative emotions after performing or not performing a behaviour". In order to more accurately predict and explain ecological decision-making and behaviour, non-cognitive and affective aspects of behaviour also need to be taken into consideration (Schneider, Zaval, Weber & Markowitz 2017). As such, various studies have concluded that the emotive role of AR is a significant predictor of behavioural intention (Brewer, DeFrank & Gilkey 2016; Ha 2018; and Liao, Lin, Luo, Chea 2017). In respect to incorporating AR into the TPB, Kim *et al.*

(2013) found that the inclusion of AR improved the predictive power of consumer behavioural intentions to select eco-friendly restaurants. It is, thus, envisaged that AR may also have a positive effect in explaining consumers' intention towards selecting a green hotel.

Perceived Moral Obligation (PMO)

Perceived moral obligation (PMO) is an emotion of responsibility that is experienced when performing a specific moral behaviour when a person is faced with an ethical situation (Beck & Ajzen 1991). Concurrent to the TPB being criticised for insufficient consideration of emotive influences, criticism towards the insufficient capturing of normative or moral influences on behaviour has also been documented (Armitage & Conner 2001; and Sparks & Shepherd 2010). Subsequently, studies have revealed that moral obligation can be a useful addition into the TPB model and, thus, play a prominent role in predicting behavioural intention (Beck & Ajzen 1991; Cronan, Mullins & Douglas 2018; Kaiser & Scheuthle 2003; Ravis *et al.* 2009; and Shin & Hancer 2016). This is supported by a study by Chen and Tung (2014) who confirmed that PMO does indeed exert a direct positive effect on the intention to select green hotels.

Environmental Concern (EC)

Environmental concern (EC) is the general attitude towards environmental protection, which is an important determinant of making consumers change their behaviour to become more environmentally friendly (Aman, Harun & Hussein 2012; Bamberg 2003; and Hansla, Gamble, Juliusson & Garling 2008). Although studies support the positive relationship between attitude and environmental concern (Shin, Im, Jung & Severt 2017; and Yadav & Pathak 2016), other studies have found EC to also positively affect SN and PBC (Bamberg 2003; Chen & Tung 2014; and Maichum, Parichatnon & Peng 2016). Within the green hotel context, Chen and Tung (2014) found that EC had a positive effect not only on ATT, SN and PBC but also on PMO. Where AR is also augmented within the TPB as a direct predictor variable to behavioural intention, its emotional/affective determinant within the green context makes it valid to also include EC within its direct relationship.

Environmental Knowledge (EK)

Environmental knowledge (EK) is defined by Fryxell and Lo (2003:7) as, "a general knowledge of facts, concepts, and relationships concerning the natural environment and its major ecosystem". EK forms the basis of environmental awareness and beliefs, which suggests that EK will directly influence attitudes towards behaviours (Fryxell & Lo 2003; D'Souza, Taghian & Khosla 2007; and Polonsky, Vocino, Grau, Garma & Ferdous 2012). Essentially, EK can be regarded as the prerequisite to a consumer's environmental attitude and, in turn, environmental attitudes have been commonly found to be a significant influencing factor towards environmental behaviour. Within the green hotel context and TPB framework, environmental knowledge has yet to be investigated.

Research Objectives and Hypotheses

Based on the literature, this research will explore three objectives. The first is to determine and describe the relative ability of the TPB predictor variables, namely ATT, SN and PBC to predict South African consumers' intended behaviour in selecting green hotels. This research objective will be answered according to the analysis of the following derived hypotheses:

- H₁.** Attitude will have a positive and significant influence on South African consumers' intention to select green hotels.
- H₂.** Subjective norm will have a positive and significant influence on South African consumers' intention to select green hotels.
- H₃.** Perceived behavioural control will have a positive and significant influence towards on South African consumers' intention to select a green hotel.

The second research objective is to evaluate whether including AR and PMO into the TPB, as direct predictor variables for behavioural intention, would influence the predictive ability of green hotel selection within South Africa. This research objective will be answered on the analysis of the following hypotheses:

- H₄.** Anticipated regret will have a positive and significant influence on South African consumers' intention to select green hotels.
- H₅.** Perceived moral obligation will have a positive and significant influence on South African consumers' intention to select green hotels.

- H₇.** Environmental knowledge will positively affect attitude towards selecting green hotels.

The third research objective aims to examine whether the relationships between EK and ATT, as well as EC and all the proposed behavioural intentions' direct predictor variables (ATT, SN, PBC, AR and PMO) will contribute to or enhance the predictive ability for South African consumers to select green hotels. This research objective will be answered according to analysis of the following hypotheses:

- H_{6(a-e)}.** Environmental concern will positively affect attitude (a), subjective norm (b), perceived behavioural control (c), anticipated regret (d) and perceived moral obligation (e) towards selecting green hotels.

Figure 2 presents the summary of the theoretical framework used for the current study. Model A, which represents the Theory of Planned Behaviour (TPB) model, will be analysed in order to answer research objective one. Model B is the second model structure surrounding the TPB, and will be assessed in order to answer research objective two. Model C, the final model structure surrounding the TPB, will be assessed in order to answer research objective three.

RESEARCH METHODOLOGY

Research Design

To answer the objectives set for the current study, it was of value for the research to be positioned within a non-experimental quantitative paradigm. The non-experimental and positivist aspect of the research intended to establish and confirm the derived psychographic variables' relationships comprising the Theory of

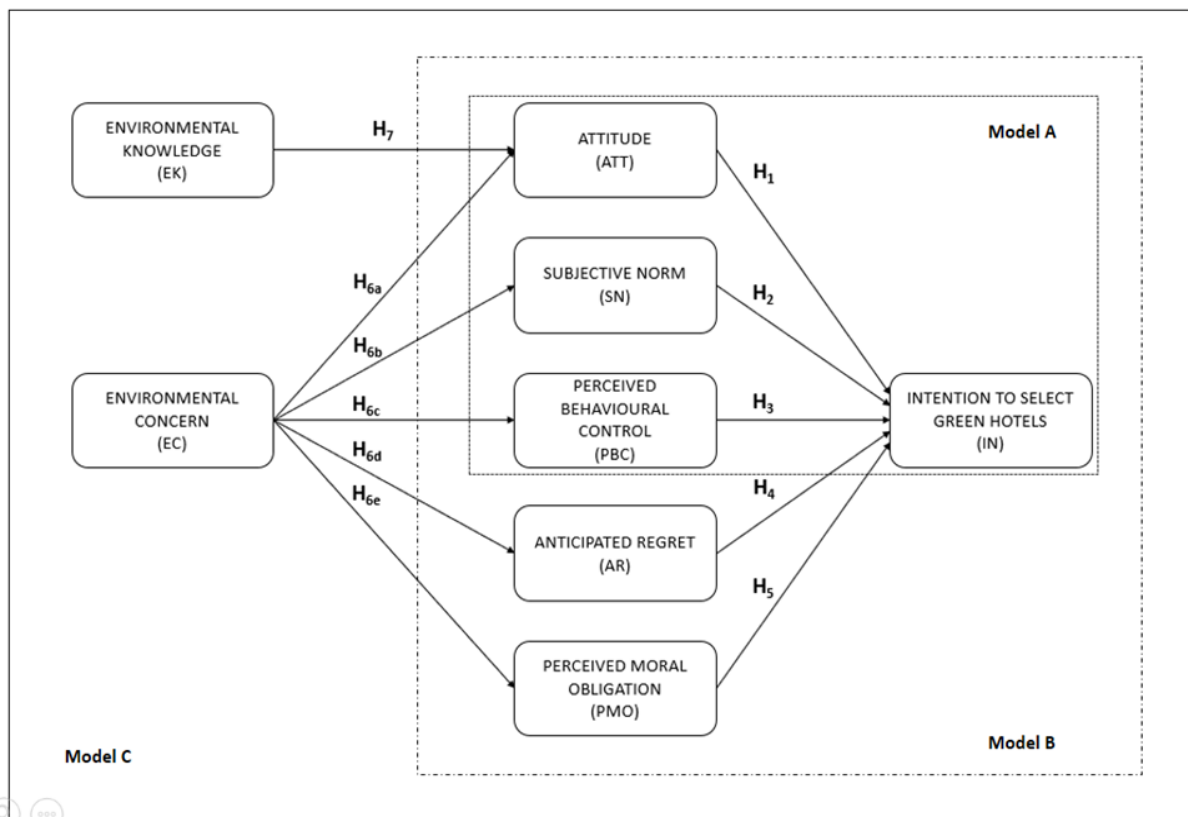


FIGURE 2: SUMMARY OF THE MODEL VARIATIONS REFLECTING HYPOTHESIZED PATHS

Planned Behaviour (TPB), through statistical analysis (Blanche, Durrheim & Painler 2007; and Creswell 2007). Furthermore, the research employed a cross-sectional correlational design, as each variable's magnitude and direction were assessed to identify the dependence and significance between each other within a set of relationships at a given point in time (Polit & Beck 2017; and Tabachnick & Fidell 2013).

Data Collection

For the proposed quantitative study, an online questionnaire was undertaken to acquire the data needed to answer the research objectives. The sample population included South African consumers that stayed at a hotel at least once within a 12-month period, derived through a method of non-probability purposive sampling (Cooper & Schindler 2003; and Saunders & Lewis 2012). The sample population was generated by an online research firm which had the aim of keeping their panel balanced and representative of the South African population. The piloted online questionnaire was distributed to 723 potential respondents of which a total of 450 respondents completed the questionnaire.

The questionnaire comprises four (4) parts, totalling 51 questions. The first part of the questionnaire includes screening questions which confirmed that the respondents are South African and have stayed at or visited a hotel within the last 12 months. The second part of the questionnaire introduced the respondent to the eco-friendly hotel concept and its respective common practices, following with twelve demographic-based questions. The third part of the questionnaire analysed the ATT and AR predictor variables making use of a 7-point semantic differential scale to compute responses. The last part of the questionnaire analysed SN, PBC, PMO, IN, EC and EK where the responses were measured using a 7-point Likert scale ranging from "strongly disagree" to "strongly agree". The established questions were derived from question statements that had been used and validated in previous studies (Fujii 2006; Han *et al.* 2010; Kim & Choi 2005; Lam 1999; Richard, De Vries & Van der Pligt 1998; and Sidique, Joshi & Lupi 2010). The question statements were further revised to suit the South African context as reflected in Appendix A.

Data Analysis

The data generated from the questionnaire was examined and analysed over four steps as reflected in Table 1. In order to effectively and accurately conduct the statistical analysis, the research utilised Version 23.0 of the Statistical Package for the Social Sciences (SPSS) software, as well as its supplement Analysis of Moment Structures (AMOS) software.

RESULTS OF THE STUDY

Data Screening

The screening of respondents' data was first managed to confirm that the data were acceptable for statistical analysis. The incomplete questionnaires, as well as those returned by respondents not meeting the inclusion criteria were discarded. Where no missing data were present, data were screened for normality through z-score and box-plot inspection as well as through skewness, kurtosis and Mahalanobis distance analyses (Kline 2015; Mertler & Vannatta 2004; and Tabachnick & Fidell 2013). The results revealed that by omitting two of the environmental concern (EC) variable indicators (EC7 and EC8) from the dataset, the data were confirmed to be normally distributed from a final dataset of 402 questionnaires.

Sample Profile and Characteristics

The results of the demographic analyses revealed that the demographic profile of the sample population is considered to have belonged to the Generation Y cohort; individuals born between 1986 and 2005; (more than 65%) (Markert 2004), were female (64.4%), African or White (75.4%), well-educated (64.4%) and employed (86.6%). Additional findings revealed that the majority of the respondents did not have a significant other or partner (56.4%) and the home language commonly spoken was English, Zulu or Afrikaans (69.2%). Furthermore, 83.1% of the respondents resided in Gauteng (46.0%), Western-Cape (19.7%) or Kwa-Zulu Natal (17.4%) Provinces. The results are meaningful in that previous research has found that Generation Y cohorts; young females; Africans and well-educated consumers are perceived to

TABLE 1: DATA ANALYSIS STEPS AND PURPOSE

STEPS	ANALYSIS	PURPOSE
STEP 1	Data screening and management	<ul style="list-style-type: none"> - Assess missing data. - Investigate and resolve univariate normality. - Investigate and resolve multivariate normality.
STEP 2	Descriptive analysis	<ul style="list-style-type: none"> - Determine the demographic profile of sample population. - Determine the sample population's characteristics as South African consumers who intend to stay at green hotels.
STEP 3	Measurement scale analysis	<ul style="list-style-type: none"> - Evaluate the reliability (internal consistency) of the research instrument. - Evaluate construct validity (convergent & discriminant) for each of the three TPB model variations.
STEP 4	Structural equation modelling (SEM)	<ul style="list-style-type: none"> - Assess the measurement model, of all three developed TPB model variations, in order to determine individual Goodness-of-fit (GOF) indices (Model fit). - Assess the structural model, of all three TPB model variations, in order to test whether the hypothesised paths are supported or rejected. - To determine and compare the overall variance explained (R^2 of IN) and GOF values of each TPB model variation.

be green consumption-orientated (Anvar & Venter 2014; Borchers, Duke & Parsons 2007; D'Souza *et al.* 2007; Eastman & Liu 2012; Jackson, Stoel & Brantley 2011; and Lee 2009). The results may therefore serve to confirm the predicted profile of a green consumer. However, the significance of language and residency for South African green consumption behaviours requires further investigation.

The results of the respondents' characteristics as South African hotel consumers reveal that they would most likely have stayed at or visited 5-star graded hotels (13.7%), 4-star hotels (37.6%) and 3-star hotels (32.6%). Furthermore, the majority of respondents would most

commonly have stayed at or visited hotels for leisure purposes (84.4%). In addition, more than half the respondents would most likely have consulted environmental information on issues and trends by searching through websites (22.6%), watching television (17.7%), and through browsing social media platforms (16.8%). These results, in turn, allude to the affluent, technological-advanced generation cohort of green consumers and thus may be considered in—as characteristics of South Africans who intend to stay at or visit a green hotel (Anvar & Venter 2014; Lee 2008; and Sullivan & Heitmeyer 2008). The findings also reveal that the majority of the respondents reside in and would commonly visit major South African metropolises.

Measurement Scale Analysis: Reliability and Validity

Analysis of the measurement scales includes assessment of the predictor variables and their respective variable indicators, for each Theory of Planned Behaviour (TPB) model variation discussed, in order to confirm the reliability and validity of the research. Cronbach's alpha (α) test of reliability was used to assess internal consistency of the measurement scales (Cortina 1993; and Zikmund, Babin, Carr & Griffin 2010). As reflected in Table 3, the results of the analysis showed that seven of the eight predictor variables obtained a high to excellent reliability value, ranging from 0.74 to 0.92 (Hair, Black, Babin, Anderson & Tatham 2010; Hinton, Brownlow, McMurray & Cozens 2004; and Kline 2015). With an initial overall low α value of 0.52, an environmental knowledge (EK) variable indicator (EK2) was suppressed from the dataset in order for EK to produce an overall new acceptable α value of 0.74. The Cronbach's alpha value, in respect of the remaining 29 variable indicators, received an overall excellent reliability value of 0.93.

The research examined construct validity, by assessing the measurement scale items' level convergent and discriminant validity, over a series of processes by applying the Exploratory (EFA) and Confirmatory (CFA) Factor Analysis techniques (Hair *et al.* 2010; and Kline 2015). EFA was carried out by examining each of the three TPB models' variation pattern matrix by means of Maximum Likelihood extraction and

Promax rotation. Validity issues with Model C was found in that factors loaded lower than 0.40 within different factor structure groups and cross-loadings, differing by more than 0.20 (Field 2009; and Hair, Sarstedt, Hopkins & Kuppelwieser 2014), were also present. To resolve these latter validity issues, the systematic removal of the variable indicators was undertaken until Model C achieved favourable validity results. The omitted variable indicators included two attitude (ATT) and three environmental concern (EC) indicators, namely ATT3, ATT7, EC1, EC3 and EC4.

Following EFA, CFA was conducted over each TPB measurement model to conclude convergent and discriminant validity. Together with generating a Factor Correlation Matrix, the Average Variance Extracted (AVE), Composite Reliability (CR) and Maximum Shared Variance (MSV) values obtained as reflected in Table 2. Although discriminant validity was satisfactory for Model C, convergent validity issues were present. To resolve the issue, the EC predictor variable was removed from Model C. The revised model was then reassessed for discriminant and convergent validity and the

results then produced favourable values. In confirming that all three of the models surrounding the TPB had satisfactory levels of reliability and validity, the variations of the structural models were considered in order to address the hypotheses of the research.

Structural Equation Modelling (SEM) Results

The structural models for each of the respective TPB model variations were tested by means of Structural Equation Modelling (SEM) to assess the relative proportion of variance explained (R^2), the models' goodness-of-fit (GOF) and finally, to test the hypotheses set for the research (Kline 2015; and Malhotra 2010). Tables 3, 4 and 5 reflect a summary of each of the three model variations' factor loadings, causal relationships, hypotheses outcomes, GOF and R^2 results.

Conclusively, all three TPB model variations produced positive and significant relationships within their corresponding predictor variables. Therefore, all hypotheses were supported except for H_6 which was not tested as the EC predictor variable was removed due to validity

TABLE 2: MEASUREMENT MODEL RESULTS

MODEL A										
	CR	AVE	MSV	ATT	SN	PBC	IN			
ATT	0.87	0.68	0.56	0.83						
SN	0.92	0.63	0.46	0.68	0.79					
PBC	0.90	0.75	0.56	0.75	0.65	0.87				
IN	0.90	0.74	0.43	0.65	0.59	0.57	0.86			
MODEL B										
	CR	AVE	MSV	ATT	SN	PBC	IN	AR	PMO	
ATT	0.92	0.63	0.45	0.79						
SN	0.90	0.75	0.56	0.65	0.87					
PBC	0.90	0.74	0.43	0.59	0.57	0.86				
IN	0.87	0.68	0.56	0.67	0.75	0.65	0.83			
AR	0.81	0.58	0.18	0.40	0.26	0.43	0.40	0.76		
PMO	0.83	0.72	0.31	0.46	0.52	0.37	0.55	0.14	0.85	
MODEL C (Revised: Post EC omission)										
	CR	AVE	MSV	ATT	SN	PBC	IN	AR	PMO	EK
ATT	0.89	0.63	0.46	0.79						
SN	0.890	0.74	0.43	0.59	0.86					
PBC	0.90	0.75	0.56	0.64	0.57	0.87				
IN	0.87	0.68	0.56	0.68	0.65	0.75	0.83			
AR	0.81	0.58	0.18	0.42	0.43	0.26	0.40	0.76		
PMO	0.84	0.72	0.51	0.44	0.37	0.52	0.55	0.14	0.85	
EK	0.75	0.60	0.54	0.65	0.57	0.73	0.72	0.28	0.71	0.77

Validity conditions: AVE > 0.50; CR > 0.70; MSV < AVE; \sqrt{AVE} > Inter-correlation (Bold diagonals)
 (Fornell & Larcker, 1981; Hair *et al.*, 2010; Kline, 2015)

issues. Each model's Chi-square (X^2) and Degrees of Freedom (df) values were used to compute an X^2 difference test in order to determine whether there was a significant difference in estimated construct covariance explained by the compared models (Kline 2015). The results of the X^2 difference test between

TABLE 3: CRONBACH'S ALPHA (A) AND FACTOR LOADINGS RESULTS

*PV	*VI	(α)	(α)!	FACTOR LOADINGS		
				MODEL A	MODEL B	MODEL C
ATT		.92				
	ATT1		.91	.76	.76	.76
	ATT2		.91	.80	.79	.79
	ATT3		.91	.80	.80	*n/t
	ATT4		.91	.76	.76	.75
	ATT5		.91	.82	.82	.82
	ATT6		.91	.84	.84	.84
	ATT7		.91	.77	.77	*n/t
SN		.89				
	SN1		.81	.93	.92	.92
	SN2		.87	.81	.81	.81
	SN3		.86	.84	.84	.84
PBC		.90				
	PBC1		.87	.83	.83	.84
	PBC2		.84	.91	.92	.91
	PBC3		.86	.85	.85	.85
IN		.86				
	IN1		.79	.82	.82	.82
	IN2		.83	.80	.80	.80
	IN3		.81	.86	.85	.86
AR		.81				
	AR1		.73	.77	.78	.78
	AR2		.74	.76	.75	.75
	AR3		.74	.76	.76	.76
PMO		.83				
	PMO1		-	.82	.80	.80
	PMO2		-	.87	.88	.88
EC		.74				
	EC1		.72			*n/t
	EC2		.68			*n/t
	EC3		.73			*n/t
	EC4		.69			*n/t
	EC5		.69			*n/t
	EC6		.69			*n/t
EK		.52				
	EK1		.35			.62
	EK2		.74			
	EK3		.34			.72
Notes*	PV: predictor variables VI: variable indicators (α)!: value if VI is to be deleted n/t: not tested (indicator omission)					

TABLE 4: HYPOTHESES TESTING RESULTS

	PATH (HYPOTHESIS)	(β)	t-VALUE	OUTCOME
Model A	ATT -> IN	0.23	3.92***	Supported
	SN -> IN	0.27	5.05***	Supported
	PBC -> IN	0.45	7.56***	Supported
Model B	ATT -> IN	0.16	2.76**	Supported
	SN -> IN	0.22	4.11***	Supported
	PBC -> IN	0.40	6.56***	Supported
	AR -> IN	0.12	2.49*	Supported
	PMO -> IN	0.17	3.49***	Supported
Model C	ATT -> IN	0.17	2.91**	Supported
	SN -> IN	0.22	4.18***	Supported
	PBC -> IN	0.40	6.83***	Supported
	AR -> IN	0.12	2.56*	Supported
	PMO -> IN	0.17	3.35***	Supported
	EK -> ATT	0.75	11.58***	Supported
	EC -> ATT	n/a	n/a	Not tested
Model notes... *** $p < 0.001$ ** $p < 0.01$ * $p < 0.05$ n.s Not Significant				

TABLE 5: GOF AND R2 RESULTS

Fit Indices	Model A	Model B	Model C	*MFC
X^2	154.72	262.04	253.21	
df	96	172	172	> 0
X^2/df	1.61	1.52	1.47	< 3
GFI	0.95	0.94	0.94	> 0.90
TLI	0.98	0.98	0.98	> 0.90
IFI	0.99	0.98	0.98	> 0.90
CFI	0.99	0.98	0.98	> 0.90
RMSEA	0.04	0.04	0.03	< 0.08
Variance Explained (R ²)(%)	0.66 (66%)	0.69 (69%)	0.70 (70%)	
*Model fit criteria: CFI, IFI, TLI & GFI > 0.90; $X^2/df < 3$ (Hu & Bentler, 1999). RMSEA < 0.05 (Browne & Cudeck, 1993)				

Model A and Model B reveal that there was a significant difference between the two models ($\Delta df=76$, $\Delta X^2=107.312$, critical value of X^2 at $df=1$ is 3.84). Therefore, Model B was considered more favourable than Model A. However, the results of the test between Model B and Model C revealed that a significant difference between the two models was also present ($\Delta df=1$, $\Delta X^2=8.825$, critical value of X^2 at $df=1$ is 3.84), of which Model C was supported and favoured. Figure 3 reflects the structural model of Model C which is, thus, concluded as

the psychographic framework towards determining South African consumers' green hotel decision formation.

DISCUSSION AND CONCLUSION

Discussion of Outcomes of the Research Objectives

The first research objective set for the study concluded that ATT, SN and PBC all have a positive and significant influence in predicting South African consumers' intended behaviour of selecting green hotels. In addition, it was found that PBC exerts the strongest relationship with behavioural intention, followed by SN and ATT, respectively. Essentially, it was found that Ajzen (1991)'s original TPB is concluded as a strong predictor of behavioural intention, indicating its applicability to the domain of South African consumers' behavioural intention on selecting green hotels. The second research objective concluded that including emotive and non-cognitive predictor variables, such as AR and

PMO, into the TPB can enhance the predictive ability in terms of environmentally conscious behaviour. This finding is significant in that it includes AR into the TPB in context to green hotels. Regarding the third research objective, H₆ was not tested due to convergent validity concerns. However, the examination of the relationship between EK and ATT produced positive and highly significant results.

It is thus concluded that South African consumers' intended behaviour on selecting green hotels can statistically be best explained by including AR and PMO as direct constructs to behavioural intention (IN), as well as by including EK as a direct predictor variable to ATT, within the TPB model respectively (Model 3). It was further found that the relationship between IN and PBC was the strongest and most significant, followed by SN, ATT, PMO and AR, respectively.

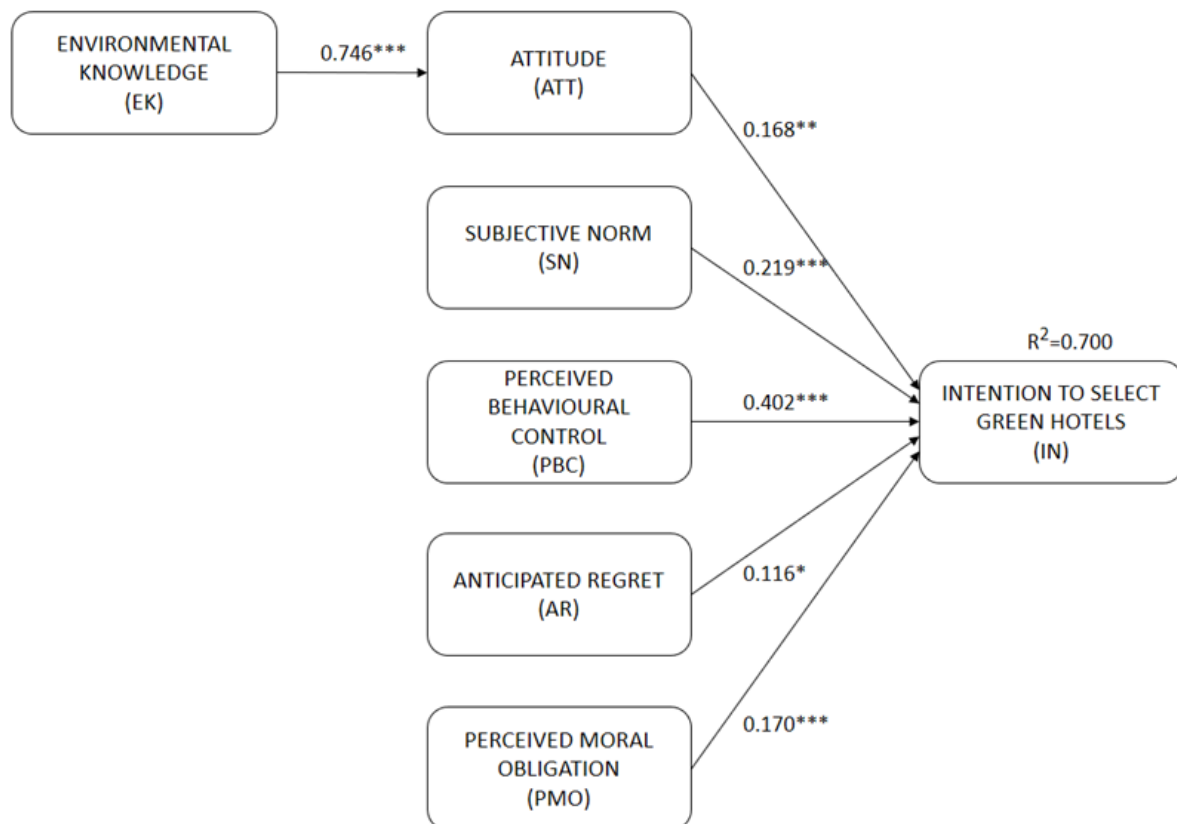


FIGURE 3: PSYCHOGRAPHIC FRAMEWORK TOWARDS DETERMINING SOUTH AFRICAN CONSUMERS' GREEN HOTEL DECISION FORMATION

Implications and Recommendations of the Study

Where PBC is regarded as the perceived ease or difficulty to perform a behaviour (Ajzen 1991), the relationship significance with IN implies that consumers' perception of agreeing they have the choice, authority, resources, time and opportunities to stay at or visit a green hotel are important determinants of their intention to select a green hotel. Thus, and based on this sample, if green hotels are accessible to a consumer, they would most likely have the intended behaviour to stay at or visit one. However, within South Africa, only a limited number of green hotels exists nationally (Mbasera 2015). In order for more green hotels to be established and accessible to consumers, it is recommended that conventional hotels be revolutionised into green hotels through simple adaptations to certain green practices and standards. Such conversions would be possible if the South African government adequately and effectively initiates the support, measures, initiatives and commitment to encourage hotels to become green. Creating the provision to offer funds and grants to hotels that want to be green is one approach.

The relationship where SN produced a stronger relationship with IN rather than ATT confirmed that the respondents, as South African green hotel consumers, are regarded as collectivist in nature (Ajzen 1991; Frank, Enkawa & Schvaneveldt 2015; and Han *et al.* 2010). That is, the respondents have a stronger need for conformity and are susceptible to interpersonal influence and prestige, which are concerned with other members' evaluation. However, it is interesting to note that the majority of the respondents were found to not have a significant other or partner to consult regarding environmental decisions about whether to stay at or visit a green hotel. It is, thus, envisaged that the perceived social pressure of significant others who are important to the respondent and who will influence their green consumption behaviours, does not necessarily rely on significant partners, but may rely on the evaluations from other important referents such as family, friends, colleagues and social media.

Where the demographic characteristics and the collectivist nature of the respondents allude to

the affluent nature and leisure purpose of visiting or staying at a hotel, it is recommended that management of green hotels consider setting average to premium rates to emphasise the prestige nature of such operations. In contrast, where budgetary constraints are usually considered, management of green hotels should consider offering special rates or discounts to corporate markets. Green marketing appeals should further be presented to the public through television, online and social platforms, which are considered the most likely sources of information the respondents would consult regarding environmental issues and trends. The positive and significant relationship with PMO and AR towards behavioural intention reveals that South African consumers do consider ecological decision-making as an emotional and moral appeal of what is right and wrong rather than mere rational choice. It is, thus, recommended that marketers specifically channel these emotions and ecological goal-directed behaviours into their persuasive appeals.

The results of the study further suggest that marketers, businesses, hotel management, regulatory authorities and government should recognise that increasing consumers' environmental knowledge (EK) will, in turn, increase their level of attitude (ATT), which will ultimately favourably influence their intention to select green hotels. Therefore, it is recommended that the stakeholders pay attention to promoting and supporting the concept of environmental protection in order to heighten the public's environmental knowledge.

Lastly, the research presented additional findings that can assist stakeholders to induce strategies to effectively target South African consumers who intend to stay at or visit a green hotel. The newly established South African green hotel target market would include those consumers who would most commonly belong to the Generation Y cohort, are female, are African or White, are well-educated and employed and would most likely stay at or visit 3-star and higher graded hotels. Other findings reveal that the respective target market will most likely speak English, Zulu and/or Afrikaans, and lastly, would reside in and commonly visit Gauteng, Western-Cape and KwaZulu-Natal Provinces within South Africa.

Research Limitations and Avenues for Future Research

Due to the nature of the purposive sampling technique the research employed, the results of the research cannot be generalised to the entire South African population and, thus, future research should consider adopting quota sampling to better understand the hotel guest population more generally. The quota will include the demographic properties of the general South African population, which can be generated from South Africa's general census statistics. In respect of the research design of the study, it is further recommended that a qualitative approach also be undertaken. It would be of value to interview respondents to understand fully consumers' perceptions and previous decision-making considerations of selecting green hotels. A theoretical limitation stems from the consideration that the current research did not measure the latent belief variables for each ATT, SN and PBC predictor variable as well as include the relationship between intended behaviour and actual behaviour. In consideration of future research, these relationships might detect significant relationships within the range of psychological factors for green consumption behaviours.

Lastly, upon further investigation, it was found that the EC variable indicators, utilised within the current study, possess measurement scale items, which are derived from the New Environmental (NEP) scale (Dunlap & Van Liere 2000). Research conducted within the South African context utilising the NEP scale has confirmed that its analysis has presented validity issues and concerns (Christie 2018; Sonnenberg 2014; and Taljaard 2015). As such, the current research confirms that the NEP scale is not recommended for use in assessing green consumption behaviours within the South African context. Future research should, thus, consider assessing different measurement scale items of environmental concern, when analysing environmental conscious behaviour within the South African context.

TABLE 6: (APPENDIX A) REFLECTION OF TPB STATEMENTS AND SCALES INCLUDED WITHIN THE QUESTIONNAIRE

QUESTION STATEMENTS (Measurement Scale items)	
ATTITUDE	
Source (Han <i>et al.</i> , 2010)	
ATT1	If you were to stay at/visit the eco-friendly hotel, do you believe that it would be...bad-good
ATT2	If you were to stay at/visit the eco-friendly hotel, do you believe that it would be...undesirable-desirable
ATT3	If you were to stay at/visit the eco-friendly hotel, do you believe that it would be... unpleasant-pleasant
ATT4	If you were to stay at/visit the eco-friendly hotel, do you believe that it would be... foolish-wise
ATT5	If you were to stay at/visit the eco-friendly hotel, do you believe that it would be...unfavourable-favourable
ATT6	If you were to stay at/visit the eco-friendly hotel, do you believe that it would be...unenjoyable-enjoyable
ATT7	If you were to stay at/visit the eco-friendly hotel, do you believe that it would be... negative-positive
ATT6	If you were to stay at/visit the eco-friendly hotel, do you believe that it would be...unenjoyable-enjoyable
ATT7	If you were to stay at/visit the eco-friendly hotel, do you believe that it would be... negative-positive
SUBJECTIVE NORM	
Source (Han <i>et al.</i> , 2010)	
SN1	Most people who are important to me would personally feel and think that I should stay at/visit an eco-friendly hotel.
SN2	Most people who are important to me would insist and would want me to stay at or visit an eco-friendly hotel.
SN3	Those people whose opinions I value when it comes to making moral decisions would prefer that I stay at or visit an eco-friendly hotel.
PERCEIVED BEHAVIOURAL CONTROL	
Source (Han <i>et al.</i> , 2010)	
PBC1	If I have a choice, staying at/visiting the eco-friendly hotel is a decision which is completely up to me.
PBC2	I am confident that if I had a choice, I will be able to stay at or visit the eco-friendly hotel
PBC3	I can agree that I have the resources, time and opportunities to stay at/visit the eco-friendly hotel.
INTENDED BEHAVIOUR	
Source (Han <i>et al.</i> , 2010)	
IN1	I am willing to stay at/visit the hotel that offers eco-friendly products and services.

TABLE 6: (APPENDIX A) REFLECTION OF TPB STATEMENTS AND SCALES INCLUDED WITHIN THE QUESTIONNAIRE - continued

QUESTION STATEMENTS (Measurement Scale items) - continued	
IN2	I plan to stay at/visit a hotel based on the condition that it offers eco-friendly products or services.
IN3	I will make an effort to stay at/visit a hotel that offers eco-friendly products or services.
ANTICIPATED REGRET Source (Richard <i>et al.</i> , 1998)	
AR1	If you had no choice but to stay at/visit the non-eco-friendly hotel, how would you feel If you were aware of the eco-friendly hotel? worried- not worried
AR2	If you had no choice but to stay at/visit the non-eco-friendly hotel, how would you feel If you were aware of the eco-friendly hotel? regretful-not regretful
AR3	If you had no choice but to stay at/visit the non-eco-friendly hotel, how would you feel If you were aware of the eco-friendly hotel? tense/relaxed
PERCEIVED MORAL OBLIGATION Source (Lam, 1999)	
PMO1	I believe that everybody is obligated to treasure and look after the earth's natural resources.
PMO2	I believe that everybody should save the earth's natural resources because they are limited.
ENVIRONMENTAL CONCERN Source (Kim & Choi, 2005 [EC1-EC5]; Fujii, 2006 [EC6-EC8])	
EC1	I am not worried about the state of South Africa's environment and what it will mean for my future.
EC2	I believe that mankind is not abusing the environment.
EC3	I believe that when mankind interferes with the natural state of the environment, it will most likely produce disastrous consequences.
EC4	I believe that the balance of the natural environment is very delicate and can be easily unsettled/upset.
EC5	I believe that mankind does not need to live in harmony with the natural environment in order to survive.
EC6	I believe that environmental problems in South Africa are not very important
EC7	I believe that environmental problems cannot be ignored and should be taken seriously in South Africa.
EC8	I believe that South Africans should care more about environmental problems.
ENVIRONMENTAL KNOWLEDGE Source (Sidique <i>et al.</i> , 2010)	
EK1	I believe that staying at/visiting an eco-friendly hotel is an important way to reduce air, water and soil pollution.

TABLE 6: (APPENDIX A) REFLECTION OF TPB STATEMENTS AND SCALES INCLUDED WITHIN THE QUESTIONNAIRE - continued

QUESTION STATEMENTS (Measurement Scale items) - continued	
EK2	I believe that staying at/visiting an eco-friendly hotel is not a good approach to reduce wasteful use of natural resources.
EK3	I believe that staying at/visit an eco-friendly hotel is a good approach to conserve earth's natural resources.
Note: The question statements provided are revised from the question statements produced by the respective sources provided	

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