



## Does Religiosity Matter for Green Hotel Selection? An Empirical Investigation on Chinese Religious Consumers<sup>1</sup>

**Lei WANG**

Xuzhou University of Technology, Faculty of Hospitality and Tourism, School of Management,  
[drleiwang@foxmail.com](mailto:drleiwang@foxmail.com)

**Zi-Xu WANG**

City University College of Science and Technology, Business School, [wangzixu526@163.com](mailto:wangzixu526@163.com)

**Qi ZHANG**

Xuzhou University of Technology, School of Management, [492518725@qq.com](mailto:492518725@qq.com)

**Philip Pong Weng WONG**

Sunway University, Malaysia, School of Hospitality, [philipw@sunway.edu.my](mailto:philipw@sunway.edu.my)

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### ABSTRACT

Previous investigation of green purchase attitude-behavior gap has shown inconclusive or even controversial results. Researchers appear to have under-estimated or ignored religiosity as an individual's fundamental belief and core values that influence a consumer's decision-making process. The purpose of this study is to examine the relationship between religiosity, consumers' green purchase attitudinal characteristics, and behavioral aspects i.e., consumer attitudinal loyalty. A total of 418 usable questionnaires were collected to empirically test the hypotheses using SPSS and Structural Equation Modeling. The results showed that religiosity positively influenced perceived consumer effectiveness, environmental concern, environmental knowledge, and ultimately, leading to consumer loyalty. In addition, religiosity displays negative influence on consumer loyalty. This study expanded the existing knowledge based on green hotel selection among Chinese religious consumers in the tourism literature. The empirical findings would greatly benefit hotel managers and other key stakeholders in the hospitality industry.

## 1. INTRODUCTION

Environmental problems have received widespread attention and concern at all levels of society, business organizations, and government (Wang et al., 2020b). Various activities related to marketing like manufacturing, logistics, and sourcing have negative impacts on the environment, further affecting the individual's living quality (Wang et al., 2020c). More and more consumers are becoming increasingly concerned on environmental issues and are committed to integrate green options with ecofriendly-related products or services in their purchasing behaviour (Teeroovengadam, 2019). Consumers are even willing to pay more for environmentally friendly products and services (Sutikno et al., 2020).

A greater awareness towards green products and services has resulted in consumers developing positive purchasing intention and participating in green campaigns (Rahman & Reynolds, 2016). However, certain studies showed, that

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although consumers claimed that they are concerned about environmental issues, their purchasing behaviours have not reflected this preoccupation (Wang & Wong, 2020; Wang et al., 2020c). The differences among consumers' green purchase patterns are caused by an attitude-behaviour gap (Mas'od & Chin, 2014; Wang et al., 2019). This is an unresolved gap on the preconditions that influence consumers in choosing green hotels (Mohamad et al., 2014).

The theory of reasoned action (TRA) and theory of planned behaviour (TPB) are the most popular theories used by researchers in green hotel selection literature (Wang, 2020a). Nevertheless, past studies' results often showed inconclusive or even controversial outcomes (Wang et al., 2019). More importantly, there appears to be a lack of a systematic and integrative framework in indicating the correlation between an individual's fundamental values, beliefs, attitudes, and behaviours in hospitality literature (Wang & Wong, 2020). Even though consumers' beliefs and attitudes do affect behaviour, there are other components affecting behaviours as well (Chatzidakis et al., 2007). If individuals' beliefs are not fully internalized, incongruence occurs between those core values or beliefs and the behaviours a person takes (Wang & Wong, 2020).

Religiosity as an individual's fundamental belief and core value, which is an extremely important cultural factor that plays a vital role in influencing one's attitude and behaviour (Madni et al., 2016). Also, it has tremendous potential in affecting one's purchasing predisposition due to its role as a determinant factor from the perspective of demand, religious values, and stipulations (Anuar et al., 2020; Madni et al., 2016). Although academics have recognized the importance of religiosity in sociology and psychology contexts, the impact of consumer consumption directly influenced by different aspects of religiosity has rarely been investigated (Lari et al., 2019). Researchers appear to have under-estimated the relativity between consumer behaviour and the influence of religiosity (Khraim, 2010). There is a lack of knowledge and understanding regarding the influence of religiosity as an antecedent to green purchasing behaviour (GPB) in tourism literature (Anuar et al., 2020; Martin & Bateman, 2014; Wang & Wong, 2020).

Ulker-Demirel and Ciftci (2020) stated that the existing conceptual and empirical studies of TPB were dominated by western samples, including those on green hotel selection (Wang et al., 2020b), resulting in the lack of a standardized definition and coherent foundation for Chinese consumers' green hotel selection (Wang & Wong, 2020). Furthermore, the majority of literature on religiosity is centered around consumer behaviour with a particular focus on Christianity and Judaism on American consumers (Wang et al., 2020c). There are limited empirical studies that focus on the potential effectiveness of religiosity as a precursor in understanding consumer behaviour in non-western countries (Wang, 2020b). In summary, the results of earlier studies may not be appropriate for China where Buddhism and Taoism are two of the main religions practiced there, and has received sparse attention from the literature. Therefore, this study attempts to bridge the relationship between religiosity, attitudinal aspects and behaviour gap for Chinese green hotel consumers and extend the understanding of religiosity as an antecedent that affect Chinese consumers' attitudinal characteristics and loyalty toward green hotel selection.

## 2. LITERATURE REVIEW

### 2.1. The Underpinning Theory

The TRA and TPB are used in this study as the underpinning theories to propose a theoretical research model (See Figure 1). There is a direct relationship between one's belief/value-attitude-intention-behaviour (Ajzen, 1991), and attitude is a relatively enduring organization of beliefs, feelings, and behavioural tendencies toward socially significant objects or events (Hogg & Vaughan, 2002). The central construct of the two theories is intention, which refers to an individual's motivation in cognition to utilize the effort in performing a giving behaviour (Ajzen & Fishbein, 1975). Thus, intention has a high reliability for predicting consumer behaviour (Paul et al., 2016), and is has been postulated as the single most important predictor for one's actual behaviour (Wang, 2020a).

Attitude and subjective norm (SN) are two variables that determine an individual's intention in TRA (Wang, 2020a). These variables toward intention are correlated with behaviour and normative foundation and beliefs, and most individual behaviours are under the control of volition and intention (Wang et al., 2021a). However, an individual cannot perform a giving behaviour purely based on high degree control of volition from among other alternatives. Thus, TPB constitutes perceived behavioural control (PBC) into the model to overcome an individual's perception of the presence/absence of resources required to perform particular behaviours (Wang et al., 2021b). Many researchers have adopted TRA and TPB as the fundamental scheme to investigate consumer attitude and behaviour toward green hotel selection (Bashir et al., 2019; Nimri et al., 2019).

However, a persistent problem remains in using SN and PBC as an antecedent of consumer GPB (Wang et al., 2019; Wang & Zhang, 2020). Some studies' results showed there is an insignificant relationship between SN and GPB (Botetzagias et al., 2015; Wang & Wong, 2020), and certain studies showed that attitude plays a mediating role in the relationship between SN and GPB (Wang & Wong, 2020; Wang et al., 2019). Similarly, certain studies revealed PBC

does not determine GPB (Han & Yoon, 2015; Paul et al., 2016). In contrast, attitude consistently plays the most important role in influencing GPB (Paul et al., 2016), and it seems to be the only consistent factor in determining GPB (Wang et al., 2020b). Therefore, considering the lack of agreement in the literature, this study conceptualized attitude as a sole important variable that influence consumer loyalty without taking account of the criteria of SN and PBC toward green hotel selection.

The attitudinal characteristics were adopted from the scale of Ecologically Conscious Consumer Behaviour (ECCB) by Straughan and Roberts (1999) and Wang (2020a). Roberts (1996) argued that consumers who purchase products and services which they perceive to have a positive impact on the environment are ecologically conscious consumers. Thus, ECCB has incorporated both consumer GPB and pro-environmental post-purchase behaviour (Taufique et al., 2016). Prior studies often utilized one or more variables of the ECCB to predict GPB (Tilikidou & Delistavrou, 2005), because ECCB provides a comprehensive explanation for certain key attributes toward GPB (Wang, 2020a). Moreover, ECCB has shown a direct link between attitudinal characteristics and green purchase attitude, which lead to GPB (Wang, 2020a), and the usefulness of attitudinal variables have been manifested in many past studies (Handique, 2014; Kautish & Sharma, 2020; Mas'od & Chin, 2014; Wang, 2020a).

## 2.2. Religiosity

It is challenging to define religiosity due to diverse religious followers having different perspectives of their beliefs (Mokhlis, 2009). Many studies have measured the influence of religiosity subjectively devised by researchers to suit their research objectives (Wang et al., 2020c). Holdcroft (2006) explained that the difficulty in defining religiosity is (1) due to the uncertainty and imprecise nature of the English dialect, there is an excessive number of proportionate words used in the investigation of religiosity which one would term as estimations of religiosity, instead of terms that are relative to religiosity; and (2) when the concept of religiosity crosses a few researchers' trains, each moving toward religiosity from various vantage focuses, and few counselling each other. Recently, many researchers agreed with Worthington et al. (2003) when he defined religiosity as the degree to which individuals adhere to his/her religious values, beliefs, practices and uses in daily living (Khraim, 2010) as this definition does not restrict the scope of individuals who believe in God (Wang et al., 2020c).

Religion, works at the macro level by encouraging religious followers to adopt certain values (Madni et al., 2016). Subsequently, it plays the role as a social institution in shaping culture, norms, values and attitudes in society (Wang & Zhang, 2020). In contrast, religiosity working at micro level encourages followers to adhere to particular values (Wang & Wong, 2020). It represents the values inherent in an individual toward a particular religion which tends to stabilize over a long period (Wang et al., 2020c). Hence, religiosity is a subsection of religion (Madni et al., 2016), and it can be described as one's commitment toward a particular religion (Wang & Wong, 2020). This commitment reflects an individual's adherence to his/her religious convictions and practices (Muhamad & Mizerski, 2010); to the extent which an individual is committed to his/her religion he/she professes and to its teaching (Chai & Tan, 2013). Ultimately, the commitment is reflected in his/her attitudes and behaviours (Ahmad et al., 2015) and religiosity represents the degree to which individuals are committed to a specific religion, and the level in which the individual is religious (Abd Aziz et al., 2015).

Religiosity is conceived as a unidimensional concept with religious affiliation (Mukhtar & Butt, 2012), which is measured through two behavioural aspects: frequency of church attendance and the amount of monetary donations offered to religious groups (Wang & Zhang, 2020). However, this concept lacks psychometric evaluation to measure how religious an individual is (Mokhlis, 2009). Thus, more and more researchers agreed that religiosity should be treated as a multidimensional concept that influence the entire life of any individuals in a particular religion (Ateeq-ur-Rehman & Shabbir, 2010; Muhamad & Mizerski, 2010; Tran et al., 2019). Specifically, the most prevalent concept to measure religiosity is intrinsic and extrinsic religiosity (Wang et al., 2020c). Intrinsic religiosity indicates a complete framework to understand life, and can be determined at the cognitive level (Mukhtar & Butt, 2012). It represents the degree to which one holds and declares his/her religious identity, values and beliefs (Wang et al., 2020c). Extrinsic religiosity refers to religious affiliation, membership within a religious group, and devotional practices (Borzooei & Asgari, 2014). Therefore, researchers can measure an individual's cognitive and behavioural religiosity using this multidimensional concept (Allport & Ross, 1967).

Religiosity has a potential effect on consumers' different attitudinal aspects and is evidenced in various literature. Posri (2014) empirically demonstrated that religious values result in individuals believing they would receive positive consequences for their current living condition and future generations through protecting and preserving the environment. Madni et al. (2016) indicated that religiosity is significant to individuals' perceptions of their giving green purchase behaviours. Kirmani and Khan (2016) stated that the protection of environment can be found in religious scriptures of all major religions of the world; thus, religiosity has been considered as an important predictor of

environmental concern of consumers. Clements et al. (2014) also indicated that religiosity positively influenced perceived environmental dangerousness. Religiosity has an influence on various donation behaviour and social welfare (Simmons & Emanuele, 2012). Individuals with higher religious beliefs are inclined to possess more positive attitudes towards charities and motivation to donate (Casidy et al., 2014). Religiosity has a significant effect on political orientation in Muslim countries; this leads to Muslim women's barriers to travel (Tavakoli & Mura, 2021). Similarly, Sidorova (2015) empirically demonstrated that religiosity could significantly influence one's political orientation and inclination in western countries, and higher religiosity individuals have more political awareness and involvement orientation (Attar-Schwartz & Ben-Arieh, 2012). According to Hassan (2014), religiosity as an antecedent predictor would help to explain the relationship between natural environmental orientation, environmental knowledge, environmental concern, attitude and intention. Also, previous studies' showed that religiosity positively influenced consumers' loyalty toward a particular brand or service. Choi (2010) indicated that religiosity significantly influence consumers switching behaviour. Furthermore, Ahmad et al. (2015) revealed in their research that religiosity has a direct affect towards behaviour on particular products. Considering that there is a lack of studies that postulate religiosity as a significant predictor of consumer GPB, and recent researchers suggesting that religiosity can be considered as antecedent to explain GPB (Kirmani & Khan, 2016; Wang & Wong, 2020), the following hypotheses are proposed.

- H1: Religiosity positively influences perceived consumer effectiveness.
- H2: Religiosity positively influences environmental concern.
- H3: Religiosity positively influences political orientation.
- H4: Religiosity positively influences altruism.
- H5: Religiosity positively influences environmental knowledge.
- H6: Religiosity positively influences consumer loyalty.

### 2.3. Perceived Consumer Effectiveness (PCE)

PCE towards the GPB refers to the individuals' beliefs and their actions and whether they will produce different consequences in helping to solve environmental issues (Albayrak et al., 2011). It reflects an individual's perception and their ability to positively or negatively affect environmental behaviour (Sinnappan & Rahman, 2011). PCE differs from individual to individual, because of contrasts in their knowledge, understanding, as well as direct or indirect life experiences (Wang, 2020a). For instance, an individual that believes that environmental problems can be solved by specific pro-environmental behaviours mirrored their convictions on ecological issues, which subsequently changed their GPB. In other words, a high level of PCE is necessary to enable an individual's positive attitudes to be converted into actual GPB (Wang, 2020a).

Posri (2014) measured the impact of PCE on the decision-making process in consumer GPB in Thailand. The results demonstrated a positive correlation between PCE and green purchase attitude (GPA) and GPB. Han and Yoon (2015) empirically tested the relationship between key constructs and consumer green hotel selection and the outcomes showed that PCE is a significant predictor of eco-friendly behaviour, leading to intention to visit a green hotel. Wang (2020a) also reported similar results in China, where consumers who expressed positive PCE, tend to have positive GPA, which was finally translated into intention to visit green hotels. Thus, the following hypothesis was proposed.

- H7: PCE positively influences consumer loyalty.

### 2.4. Environmental Concern (EC)

EC refers to the degree of an individual's awareness of the environmental problems and their willingness to contribute a personal effort to help solve them (Hu et al., 2010). It reflects the level of an individual's personal emotions and responsibility towards the overall environmental questions (Aman et al., 2012). EC expresses an individual's positive or negative attitude to help in solving a particular environmental issue (Yeung, 2004). Hence, individuals who display worries for environment and hold a favorable GPA show higher green purchase expectations, resulting in his/her greater willingness to exhibit green practices (Paul et al., 2016).

Bahl and Kumar (2019) explored the relationship between EC, components of TPB, and actual GPB among the younger generation. The results showed that EC is the second most important predictor among all antecedents influencing purchase intention, which is then translated into actual GPB. Another study by Jiang and Gao (2019) enquired about the relationship between EC, attitude, overall attitude and intention towards green hotel selection. They analyzed responses from an online sample with 258 respondents which showed that EC positively influenced attitude, overall attitude, and behavioural intention to visit green hotels respectively. Paul et al. (2016) found that EC positively influenced attitude, subjective norm, and perceived behavioural control separately. Therefore, the following hypothesis has been established.

H8: EC significantly influences consumer loyalty.

## 2.5. Political Orientation (PO)

The most essential factor influencing GPA has not been observed to be legitimate government policies, but rather public awareness of government policies that can influence an individual's attitude and expectation (Chen, 2007). Liberal political orientation is understood to be associated with left-leaning political ideologies (Mas'od & Chin, 2014). According to Cornwell and Schwepker (1995), to the extent where the topic of activities is concerned, it was discovered that individuals who are more associated with the community and socially responsible activities may show higher ecologically conscious behaviour. An individual's environmental interests and his/her comments on political issues often results in a common perception of environmental subjects being components of a liberal PO (Awad, 2011). Thus, individuals with a liberal political foundation will probably show a solid responsibility towards green development, in contrast to individuals who are more conservative in their PO (Wang, 2020a). This is because conservative political ideologies consider the restraint of actions that could trample on the rights of others and violate social norms (Grunert & Juhl, 1995).

The influence of PO on GPB has not been well investigated in the tourism literature. However, certain studies' shows promising results which indicate that PO has potential effect on green practices. For example, Straughan and Roberts (1999) proposed that ECCB scale can identify an ecologically conscious consumer, and their empirical results showed that PO is the third most important predictor among others that affects a consumer's GPB and there is a positive relationship between PO and GPA and GPB. Awad (2011) found that PO influenced green consumer segmentation and GPB. More importantly, consumers who have the highest liberalism mean value exhibited the highest commitment toward the environment, thus displaying ambition in helping the government perform pro-environmental practices. However, Wang (2020a) applied ECCB scale to predict consumer GPB and results showed that PO cannot influence hotels' customers intention to visit green hotels. Considering there is a lack of consistency on the influence of PO on green hotel selection in tourism literature, thus, the following hypothesis is proposed.

H9: Political orientation significantly influences consumer loyalty.

## 2.6. Altruism

Altruism refers to not only as an individual's concern about the welfare of others, but is equally concerned about environmental issues and preserving the environment (Wang, 2020a). Human values have particular importance in explaining consumer pro-environmental behaviours (Wang et al., 2020a), as values are used as guiding principles in the lives of individuals which influence various beliefs, attitudes, and behaviours simultaneously (Schwartz, 2009). An individual's environmental values influence his/her beliefs, which in turn, influence subjective norms that result in GPB (Stern, 2000). More importantly, as altruism is a subset of human environmental values, GPB will become more probable when individuals are aware of harmful consequences to others (Schwartz, 1977). Individuals who consider themselves as collectivists feel there is a need to protect the environment for the good of all when compared to individualism (Chen, 2013). Thus, altruism values are reflected in the concern for the welfare of others; biospheres' values emphasize the welfare of the environment and egoism values focus on maximizing the individual's outcome based on their self-interests (Rahman & Reynolds, 2016).

Certain studies showed that various aspects of altruism positively influenced consumer GPB. For instance, Straughan and Roberts (1999) reported that altruism is the second most important predictor in ECCB scale that positively influence consumer GPB. Similarly, Rahman and Reynolds (2016) empirically demonstrated that consumers who have more altruistic values are more willing to sacrifice for the environment and hold more environmental commitment, and thus, are more willing to visit green hotels. Likewise, Wang (2020a) explored the factors that influence consumer green hotel selection and found a positive relationship between altruism and GPA, which subsequently influenced intention. Meanwhile, Wang et al. (2020a) found that various types of altruism positively influenced consumer GPB. Therefore, the following hypothesis is established.

H10: Altruism positively influences consumer loyalty.

## 2.7. Environmental Knowledge (EK)

According to Vazifehdoust et al. (2013), EK is a general knowledge of facts, concepts, and relationships concerning the natural environment and its major eco-systems. It involves what people know about the environment, collective responsibilities necessary for sustainable development, and the key relationships in the environmental aspects of impacts, with an appreciation of whole eco-systems (Kaufmann et al., 2012; Wang, 2020a). Furthermore, Wang et al. (2020a) demonstrated that EK involves two aspects, which are (1) objective EK, where individuals have to be educated to understand the impact of a product or service on the environment; and (2) subjective EK, where individuals'

knowledge of the products or service is formulated in an eco-friendly way. Overall, both types of EK refer to the amount of knowledge a person has acquired related to environmental issues (Kumar et al., 2017).

Past literature showed that EK obviously played an important role in shaping one’s GPB. For example, Suki (2013) explored the factors influencing young consumer ecological behaviour in Malaysia and his study showed that EK positively influenced young consumers’ recycling and buying green products. Another work by Wang et al. (2020a) examined both types of EK on consumer green hotel selection using an online survey with a sample of 248 respondents. The results of that study indicate a positive relationship between both types of EK and consumer GPA and intention to visit green hotels, respectively. In addition, Wang (2020a) adopted the ECCB scale and found that EK is the third most important predictor of consumer GPA toward green hotel selection. Thus, the following hypothesis is proposed.

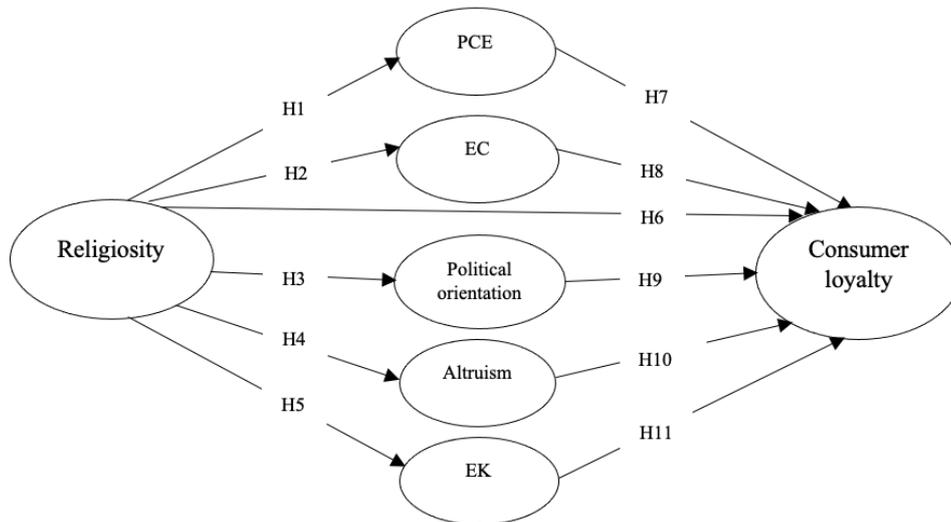
H11: EK positively influences consumer loyalty.

## 2.8. Consumer Loyalty Applied In Tourism Marketing

Consumer loyalty is typically classified with reference to two categories namely as attitudinal and behavioural measurement (Geçti & Zengin, 2013). Attitudinal loyalty refers to the predisposition of the psychological commitment that an individual makes in the purchase act, such as intention to purchase and intention to recommend without necessarily taking the actual repeat purchase behaviour into account (Nam et al., 2011). In contrast, behavioural loyalty is described as the frequency of actual repeat purchasing behaviour (Nam et al., 2011).

In the tourism literature, many researchers are strongly critical of behavioural loyalty and argue that attitudinal loyalty is more appropriate to study travelers’ loyalty as travelers can be loyal to a particular destination, product or service even when they do not visit the place or make decision to do so (Geçti & Zengin, 2013; Nam et al., 2011). Specifically, Rundle-Thiele and Bennett (2001) indicated that attitudinal loyalty would be more useful in service marketing, because collecting behavioural loyalty statistics can be difficult in service markets. Therefore, this study adopts the concept of attitudinal loyalty and defines consumer loyalty as the travelers’ intention to visit and willingness to recommend the green hotels.

Figure 1. Conceptual research model



Note: Perceived consumer effectiveness (PCE). Environmental concern (EC). Environmental knowledge (EK).

## 3. METHODOLOGY

### 3.1. Operationalization

The purposive sampling technique was utilized in this study as it allowed researchers to select cases that will provide the best fit and allow research questions to be answered to meet the research objectives (Neuman, 2002). A close-ended and self-administered questionnaire has been adopted for this study, and all items were adapted from previous studies incorporating a set of verified scales. The questionnaire items were translated into Chinese with the back-translation method using three bilingual experts to ensure the translation accuracy.

The questionnaire has been designed according to four sections. Ten items of the first section were consecutively utilized to assess religiosity; these items were developed by Worthington et al. (2003). The second section included the

attitudinal characteristics: five items of PCE, five items of EC, six items of political orientation, six items of altruism were adapted from Mas'od and Chin (2014) and Wang (2020a). Five items of EK were developed by Aman et al. (2012) and Suki (2013). The third section assessed the attitudinal loyalty, eight items were adapted from Russell-Bennett et al. (2007) and Nam et al. (2011). Last section elicited relevant demographic variables. A five-point Likert scale has been adopted and utilized, as it is associated with a higher likelihood of slightly higher mean scores within the highest possible attainable scores (Dawes, 2008).

### 3.2. Data Collection

The reasonable sample size using Cochran's formula (Cochran, 2007) showed the recommended number of respondents is 384. Researchers also recommend using structural equation modeling sizes of at least 200, and 10 to 20 cases per parameter (Kline, 2015; Tabachnick & Fidell, 2012). A pilot test with 40 respondents has been conducted to ensure that the questionnaire's validity and reduce issues that may occur in the research process. Then, the questionnaire was distributed to all domestic visitors and tourists who have stayed and who were staying at the Wanda Hilton green hotel and Westin green hotel in Xi'an city of Shaanxi province in China. The period of distributing the questionnaires were between January and March, as the local Chinese tourists were most likely to perform tourism activities during Chinese Spring Festival period. This also enable easier data collection and enable greater representativeness of the population. A total of 900 questionnaires were distributed to respondents, out of which 864 questionnaires were returned; 446 questionnaires are incomplete or non-processable (e.g., respondents are not religious). Therefore, 418 usable questionnaires were utilized in this study, resulting in a 46% response rate.

## 4. DATA ANALYSIS AND RESULTS

### 4.1. Descriptive Statistics

Table 1 shows the demographic characteristics. Of the 418 respondents, 60.8% were females and 39.2% were males. The majority of the respondents belong to the age group of 18-30 years old (61.7%). In terms of religious background, the largest group (30.1%) belong to the Taoist faith. When monthly income was queried, 34.4% reported incomes below 1700 yuan. A majority described themselves as having completed a 4-years bachelor's degree (45.9%).

**Table 1.** Sample characteristic (N=418)

	Characteristics	Frequency	Percentage (%)
Gender	Male	164	39.2
	Female	254	60.8
Age	Below 18	66	15.8
	18-30	258	61.7
	31-45	70	16.7
	46-60	22	5.3
	Above 61	2	0.5
	Income level	Below 1700	144
1701-3000		98	23.4
3001-4500		92	22.0
4501-6000		54	12.9
Above 6001		30	7.2
Educational level	Middle school	24	5.7
	High school	37	8.9
	Diploma	135	32.3
	Bachelor	192	45.9
	Master and above	30	7.2
Religious affiliation	Buddhism	99	23.7
	Taoism	126	30.1
	Protestantism	75	17.9
	Catholicism	58	13.9
	Islam	60	14.4
	Total	418	100.0

Furthermore, the validity of the data has been checked. According to Byrne (2016), a measure of skewness ranging from -2 to +2 and kurtosis ranging from -7 to +7, would point to a strong deviation from normality. The result of this study show that skewness was ranging from -0.657 to +0.315, and the kurtosis ranging from -0.642 to +0.413. Thus, the

normal data distribution thresholds have not been violated. For assessing reliability, Hair et al. (2010) indicated that a Cronbach's alpha value between 0.6 and 0.7 would be the limit of acceptability for research. The reliability test results showed that Cronbach's alpha values were greater than 0.7 (See Table 2); thus, the reliability of this study was established.

#### 4.2. Confirmatory Factor Analysis

Hair et al. (2010) indicated that the rule of thumb in assessing the practical significance of standardized factor loadings should be greater than 0.5 or ideally more than 0.7. Thus, the items of factor loadings below 0.5 have been removed (i.e., attitudinal loyalty 3, 4, 5). Moreover, considering higher factor loadings for item reliabilities could produce better results (Hulland et al., 2018), the factor loadings below 0.6 were also dropped. The rest of the items' factor loadings range from 0.613 to 0.91 for this study.

For the reliability of the measurement model, Hair et al. (2010) suggested that the composite reliability (CR) of measurement model should be greater than 0.7, while convergent validity should be greater than the average variance extracted (AVE), which should be higher than 0.5 (Hair et al., 2010). Discriminate validity is determined by looking at the maximum shared squared variance (MSV) and the average shared squared variance (ASV). Both MSV and ASV should be less than AVE. Meanwhile, the correlation between different constructs must be less than 0.9 (Meyers et al., 2006). Therefore, the convergent validity (See Table 2) and discriminate validity (See Table 3) have been established, respectively.

**Table 2.** *Construct validity*

Research construct (Cronbach's Alpha)	Item	Item loading	CR	AVE
Religiosity ( $\alpha = 0.737$ )	IR3. Religion is especially important to me because it answers many questions about the meaning of life.	0.736	0.836	0.564
	IR5. Religious beliefs influence all my dealings in life.	0.822		
	IR6. It is important to me to spend periods of time in private religious thought and reflection.	0.813		
	ER3. I enjoy working in the activities of my religious organizations.	0.613		
Perceived consumer effectiveness ( $\alpha = 0.779$ )	PCE1. Each person's behaviour can have a positive effect on society by signing a petition in support of promoting the environment.	0.807	0.870	0.629
	PCE2. I feel I can help solve natural resource problem by conserving water and energy.	0.910		
	PCE3. I can protect the environment by buying products that are friendly to the environment.	0.758		
	PCE5. I feel capable of helping solve the environmental problems.	0.680		
Environmental concern ( $\alpha = 0.776$ )	EC1. I am extremely worried about the state of the world's environment and a what it will mean for my future.	0.794	0.864	0.613
	EC2. Mankind is severely abusing the environment.	0.802		
	EC3. When human interfere with nature it often disastrous consequences.	0.790		
	EC5. Humans must live in harmony with nature to survive.	0.745		
Political orientation ( $\alpha = 0.754$ )	PO2. I am for a federal health insurance program covering men and women for all ages.	0.800	0.845	0.577
	PO3. If unemployment is high, the government should spend to create jobs.	0.745		
	PO4. A government administered health insurance program is necessary to ensure that everyone received adequate medical care.	0.777		
	PO5. I am for less government regulation of business.	0.713		
		0.840		
Altruism ( $\alpha = 0.805$ )	AM1. I have given directions to a stranger.	0.840	0.883	0.603
	AM2. I have given money or donated goods to a charity.	0.773		
	AM3. I have given money to a stranger who needed it.	0.811		
	AM5. I have let a neighbor whom I didn't know too well borrow an item of some value to me.	0.811		
		0.694		

Environmental knowledge ( $\alpha = 0.759$ )	AM6. I have offered my seat on a bus or train to a stranger who was standing.	0.757	0.849	0.585
	EK2. Practically all the pollution in the atmosphere is caused by cars.	0.704		
	EK3. Synthetic pesticide takes about 200 years to deteriorate into harmless chemicals.	0.778		
	EK4. I always update knowledge about ecological products.	0.799		
	EK5. I am very interested in how ecological products are performed.	0.775		
Consumer loyalty ( $\alpha = 0.714$ )	CL2. Purchasing my preferred green hotel brand would be favorable.	0.720	0.812	0.519
	CL6. I will recommend this green hotel brand to someone who seeks my advice.	0.720		
	CL7. Next time I will stay in this green hotel brand.	0.722		
	CL8. I will switch to other green hotel brand if I experience a problem with this green hotel brand.	0.721		

Note: Intrinsic religiosity (IR). Extrinsic religiosity (ER).

**Table 3.** Descriptive statistics and the correlation coefficients

Research construct	1	2	3	4	5	6	7	AVE	MSV	ASV
1. Altruism	<b>.777*</b>							.603	.125	.074
2. Religiosity	.062	<b>.751</b>						.564	.027	.010
3. PCE	.298	.113	<b>.793</b>					.629	.213	.119
4. EC	.317	.082	.462	<b>.783</b>				.613	.221	.130
5. EK	.190	.163	.250	.228	<b>.765</b>			.585	.063	.049
6. PO	.300	.054	.394	.470	.235	<b>.759</b>		.577	.221	.111
7. CL	.353	-.069	.423	.431	.251	.379	<b>.721</b>	.519	.186	.117

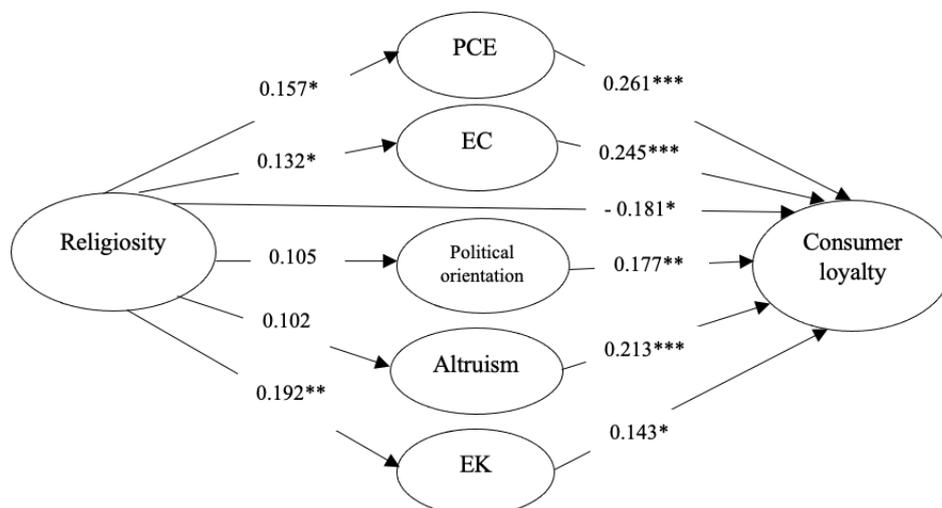
Note: Perceived consumer effectiveness (PCE). Environmental concern (EC). Environmental knowledge (EK). Political orientation (PO). Consumer loyalty (CL). \* denotes the square root of AVE.

The model fit has been checked and the indices of the measurement model are follows: CMIN = 531.108, DF = 356, CMIN/DF = 1.492 (below guidelines of 2-5),  $p < 0.001$ , RMR = 0.034 (below guideline of 0.5), GFI = 0.919, AGFI = 0.901 (both meeting guideline of 0.9), PGFI = 0.752, PNFI = 0.751, PCFI = 0.83 (exceed guideline of 0.5), IFI = 0.948, TLI = 0.939, CFI = 0.947 (exceed guideline of 0.9), RMSEA = 0.034 (below guideline of 0.8). Hence, there are at least three indices that need to meet the recommended thresholds in order to ensure model fit (Ho, 2006).

### 4.3. Structural Equation Modeling (SEM)

The next step required is to perform SEM using the model as shown below and testing the hypotheses accordingly. The resulting overall goodness-of-fit indices as follows: CMIN = 743.051, DF = 393, CMIN/DF = 1.891,  $p < 0.001$ , RMR = 0.086, AGFI = 0.865, PGFI = 0.749, IFI = 0.898, CFI = 0.901, PNFI = 0.728, PCFI = 0.81, RMSEA = 0.046. The indices show a good fit with the structural model, and the results have been shown as per table.

**Figure 2.** The structural model results.



Note: \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$ , Critical ratio (C.R.)  $> 1.96$ . Perceived consumer effectiveness (PCE). Environmental concern (EC). Environmental knowledge (EK).

**Table 4.** Structural relationships and hypotheses testing

Items	Parameter	Estimate	P	C.R.	Decision
H1	Religiosity → PCE	0.157	0.013	2.476	Supported
H2	Religiosity → EC	0.132	0.04	2.052	Supported
H3	Religiosity → Political orientation	0.105	0.107	1.612	Not supported
H4	Religiosity → Altruism	0.102	0.104	1.623	Not supported
H5	Religiosity → EK	0.192	0.004	2.879	Supported
H6	Religiosity → Consumer loyalty	-0.181	0.012	-2.519	Supported
H7	PCE → Consumer loyalty	0.261	***	3.853	Supported
H8	EC → Consumer loyalty	0.245	***	3.592	Supported
H9	Political orientation → Consumer loyalty	0.177	0.009	2.629	Supported
H10	Altruism → Consumer loyalty	0.213	***	3.268	Supported
H11	EK → Consumer loyalty	0.143	0.034	2.122	Supported

Note: Perceived consumer effectiveness (PCE). Environmental concern (EC). Environmental knowledge (EK).

## 5. DISCUSSION AND CONCLUSION

This research offered results that show the validity of the theoretical foundations used in this study, by demonstrating a positive relationship between consumers' green purchase attitudinal characteristics and consumer attitudinal loyalty towards green hotel selection. PCE, EC, political orientation, altruism and EK positively influenced consumer loyalty, respectively. In line with the previous studies, they revealed that PCE (Chen & Chang, 2012; Sinnappan & Rahman, 2011), EC (Maichum et al., 2016; Paul et al., 2016), political orientation (Barber et al., 2012; Mas'od & Chin, 2014), altruism (Rahman & Reynolds, 2016; Wang et al., 2020a), EK (Vicente-Molina et al., 2013; Wang et al., 2020a) have a positive effect on consumer GPB.

Religiosity has been proven to have a significant influence on attitudinal and behavioural aspects in green marketing and also has a significant influence on the consumer decision-making process (Clements et al., 2014; Wang & Wong, 2020; Wang et al., 2020c). Our results also showed that religiosity positively influenced consumers' PCE, EC and EK simultaneously. However, this study revealed that religiosity has no role in influencing an individual's political orientation and altruism towards green hotel selection. These results contradict previous studies' findings that showed religiosity positively influenced political orientation and altruism (Casidy et al., 2014; Sidorova, 2015).

According to Wang et al. (2020c), religious activities were discouraged during the period from the founding of the People's Republic of China in 1949 to the termination of the Cultural Revolution in 1976, because the Chinese Communist Party adheres closely to Marxism and Leninism dogmas. Thus, it is not surprising that religiosity's influence on political orientation in China seems to be very minimal. Meanwhile, Chinese culture is highly influenced by Confucianism, which strongly emphasized collectivism in a society (Chan & Lau, 2000). Kim and Choi (2005) indicated that collectivism emphasized interdependence, group-orientation goals, cooperation, and minimal competition. This somewhat overlaps with certain religious doctrines, such as Islam's emphasis on 'the Earth is a sacred and holy place'; Catholic and Protestantism's emphasis on 'Nature and human responsibility'; Taoism's emphasis on 'Man and nature'; and Buddhism's emphasis on 'Karma'. Thus, religiosity may play a role in determining one's altruism, and culture has a major influence in shaping one's overall attitude and behaviour in Chinese society.

More specifically, this study's results showed that religiosity significantly influenced consumer loyalty, but negatively. In contrast, previous studies showed that religiosity positively influenced consumer purchasing intention and behaviour (Wang & Wong, 2020; Wang & Zhang, 2020). Wang et al. (2020c) stated that the research on green hotels in China is still in its preliminary stage and Chinese understanding of the concept of green hotels is still low when compared to the U.S and other western countries' consumers. Chinese potential customers may be willing to patronize green hotels due to the attributes of hedonism, novelty, etc., but not because of environmental concerns and awareness. Therefore, they may not continue to visit green hotels after they experienced initial visitation or did not receive positive pro-environmental responses.

More importantly, religiosity, means that individuals adhere to a particular religion, which tends to stabilize over a long period of time (Khraim, 2010). Chinese religious consumers may express that they are willing to patronize green hotels by themselves based on their religious tenets, but they hesitate to patronize a particular green hotel brand and recommend the brand to others consistently at this stage. This could be due to the fact that Chinese consumers do not understand the concept of green hotels very well and the promotion of green hotels is weak. Although certain hotels announced that they have implemented green strategies in their operations, and they have been certified as green hotels in China, this is still insufficient for consumers to be loyal towards particular green hotel brands. Overall, religious doctrines teach

followers to perform certain pro-environmental behaviours, but Chinese religious followers do not really understand what a green hotel is or do not believe visiting green hotels can protect the environment. This helps to explain the finding on a negative relationship between religiosity and consumer loyalty towards green hotel selection among Chinese consumers.

### 5.1. Theoretical Contributions

There is a significant assemblage of extant literature that has concentrated on religiosity and its effect on different aspects of consumer behaviour over the past three decades. However, there are limited examples that incorporate the role of religiosity as an antecedent to consumer GPB in tourism literature (Wang & Wong, 2020). The first theoretical contribution of this study is to enrich the process by constructing a model based on TRA or TPB of consumer GPB, and the results confirmed that religiosity can be considered as an important predictor for explaining consumers' green purchase behavior based on the attitudinal aspect and behavioural aspect. This corresponds with the foundation of TRA and TPB that there is a causal relationship between an individual's value/belief-attitude-intention and behaviour.

Second, this study has established that a consumer's attitudinal aspects and behavioural aspects of green purchase behavior are influenced by religiosity. This implies that religiosity plays an important role as a determinant of major green consumers' purchasing decision making process. However, there is a lack of deep understanding of how religiosity affects consumers' GPB. This study's results showed that religiosity would influence one's PCE, EC, EK, and consumer loyalty toward green hotel selection, and the findings can enhance the green hotel selection literature in tourism marketing.

Third, the ECCB scale provides a comprehensive explanation (i.e., PCE, EC, political orientation, altruism) for predicting consumer GPB. However, few researchers adopted this scale to measure consumer GPB in tourism literature (Mas'od & Chin, 2014; Taufique et al., 2016). This study is the first to explain consumer GPB toward green hotel selection by incorporating ECCB with EK. Therefore, the research model in this study provides a basic understanding of the linkages among the important constructs to explain the influences of religiosity on consumer green hotel selection.

### 5.2. Practical implications

The research findings have several practical implications of potential significance for green hotel marketing. The multidimensional religiosity can provide a reliable and valid estimation of consumer attitude and loyalty towards green hotel selection, where religiosity would prove helpful to explain the differences in consumer green hotel selection. Religiosity was found to have significant relationships with certain pro-environmental consciousness variables, such as PCE, EC and EK, which ultimately leads to consumer loyalty.

More importantly, highly religious consumers can be characterized as potential loyal customers for green hotels. Ideally, a positive correlation can be proposed between religiosity and GPB because certain religions emphasized the important role of nature in their religious doctrines. For example, Buddhism focuses on "Karma"; Islam views earth as "a sacred and holy place"; Taoism stresses on the notion of "human and nature"; and the Protestantism and Catholic's emphasis on "nature and human responsibility" (Wang & Wong, 2020). However, this study's findings showed that there is a negative relationship between religiosity and consumer loyalty. Thus, green hotel operators should pay more attention to advertising their implementation of green practices in their hotels, and how environmental issues can be ameliorated through consumers' visitation of green hotels.

Once green hotel customers are segmented based on religiosity, marketing tactics may then be designed to appeal to the characteristics of green consumers. For example, to target the highly religious segment, green hotels should develop promotional messages that emphasize their excellent environmental concern, and their higher perceived ability to protect the environment.

### 5.3. Limitations and future research

This research was unable to fully utilize the TPB model to provide more insight to the consumer GPB aspect of consumer loyalty. Some researchers highlighted that SN and PBC are poor predictors for consumer GPB. However, if the entire TPB model were to have been adopted, it would have provided a better analysis of the current research model. Secondly, this study was only conducted in the city of Xi'an in Shaanxi province, China. Results may vary across other regions or countries due to cultural differences, acceptance of green concept, and many other factors. Also, many previous studies showed that an individual's religiosity of different religions has a different influence on their attitudes and behaviors (Minton et al., 2015; Wang & Zhang, 2020). Therefore, this research should be replicated and tested in other regions or countries to further confirm its validity and usefulness. Furthermore, studies on the influence of religiosity on consumer

GPB is quite new in China. Recent empirical results showed that there is a different predictive capacity between two aspects of religiosity (i.e., intrinsic religiosity and extrinsic religiosity) on consumer GPB. (Wang & Wong, 2020; Wang et al., 2020c). There is need for further research to investigate the influence of religiosity on Chinese consumers' GPB in China.

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