

# Factors affecting behavioral intentions and responsible environmental behaviors of Chinese tourists: a case study in Bangkok, Thailand

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## Abstract

This study examined factors related to behavior intentions and responsible environmental behaviors of tourists who were travelling to Bangkok. Based on theory of the reasoned action(TRA); the theory of planned behaviour and the model of responsible environmental behaviour, the key to eliminating environmental problems depends on how much individuals are motivated to change Chinese tourists' behavior intentions and responsible environmental behavior. The aim of this case study was to examine the ways in which the eco-friendly behavior intentions of Chinese tourists are affected by their attitude and subjective norms towards the environment, and to observe how their eco-friendly behavior intentions induce these tourists into exhibiting environmentally responsible behaviors when visiting Bangkok, Thailand. Primary data was collected via questionnaires, which were sent out to and completed by 400 tourists. The data collected was then processed using both multiple and linear regression methods. It was found that (i) these tourists' attitudes towards the environment had a significant effect on their eco-friendly behavioral intentions; (ii) their subjective norms, which include descriptive norms and personal norms, could influence their intentions to some extent; and, (iii) their behavioral intentions significantly influenced the extent to which they demonstrated environmentally responsible behaviour.

**Keywords:** environmental attitude, injunctive norms, descriptive norms, personal norms, environmentally responsible behavior.

**Paper type:** research paper



## Introduction

Thailand is one of the most popular tourist destinations in the world. Bangkok is the capital of and most populous city in Thailand. Thailand is especially popular among Chinese tourists, and was ranked “Asia’s second-most popular city” by Boonsong Kositchitethana (Jon Fernquest, 2016). Tourists are lured by the country’s natural resources and its unique Buddhist culture, including its tropical islands, tropical rainforests and temples. The extraordinary growth of China’s economy has enriched many of its citizens, who can thus afford to travel abroad on vacation. Thousands of prosperous Chinese citizens visit Thailand each year; they are drawn by affordable travel and accommodation prices, and Thailand’s pleasant climate. However, Thailand’s growing tourism industry, which drives economic development in the country, has also wrought environmental damage.

In recent decades, many governments, companies and communities throughout the world have taken steps to control the risks and extent of environmental damage, a problem that can escalate in industrialised, consumerist economies. In order to maintain and protect the country’s ecological tourist attraction, the Thai government is trying to promote and build an eco-friendly image of its tourism industry for international tourists. However, the creation of eco-friendly tourism involves more than simply redressing environmental problems; the people who are responsible for causing damage to the environment need to be persuaded to modify their behavior (Kaiser, 1996). However, the extent to which Chinese tourists visiting Thailand are motivated into adopting more eco-friendly behaviors is unknown. It is probable that among them there is a lack of necessary subjective norms, and that these tourists might not transfer good environmental attitudes into eco-friendly actions (or environmentally responsible behaviors). Researchers have investigated

the links between environmental attitude and subjective norms with responsible environmental behavior.

A consumer exhibits environmentally responsible behaviour when he or she makes an effort to protect the environment. According to some researchers, this includes taking actions so as to minimize any negative environmental impact. An individual who seriously considers the future environmental consequences of his or her actions tends to show more responsibility towards the environment and makes conscientious choices (Kollmuss and Agyeman, 2002; Meijers and Stapel, 2011). The aim of this paper is to discuss whether Chinese tourists carry out environmentally responsible behavior while on vacation in Thailand.

## Literature Review

### Environmental attitude

So far, environmental attitudes are not clearly defined. This concept has been similarly declared to be environmental affection, environmental awareness, and environmental consciousness. In the 1970s, Piaget showed that environmental attitudes were composed of affection, perception, and ability (Averhart et al., 1997). In the 1990s, Webber suggested that environmental attitudes could be divided into three parts: belief, affection, and behavior. In addition, Kaiser et al. (1999) demonstrated that environmental attitudes were composed of environmental values, environmental knowledge, and ecological behavior intentions. At the same time, Lu et al. (2004) divided environmental attitudes into four dimensions: environmental resource, environmental study, environmental protection and environmental sustainability.

In this paper, measuring environmental attitudes used the New Environmental scale. Charles A (2013) found that of these

environmental attitudes measures, the New Environmental paradigm scale could stand out as being the most widely accepted with documented validity and reliability. The New Environmental Paradigm (NEP) scale is the most widely used measure to investigate the overall relationships between humans and nature and attention to the ecological environmental and faith. (Milfont and Duckitt, 2004). It is important to statistically validate potential discrepancies between the theoretical conceptualization proposed and the empirical relations that are observed. The NEP may help to understand how environmental attitudes are organized cognitively with belief systems, and how measure individuals think about the self in relation to environmental problems. Further validation testing empirical level for responsible environmental behavior (Dunlap, 2000; Dunlap, 2008; Jonathan W., et al. 2011). These constructs were focused on resident attitudes toward resource use and management of tourism development. In order to assess tourists' environmental attitude, the NEP scale (consisting of 15 items), was used in its entirety to measure the environmental attitude (Bjerke et al., 2006).

### **The effect of environmental attitude on behavioral intention**

It has been reported in previous research studies that 'eco-tourists', or environmentally responsible tourists, are more environmentally conscious of showing eco-friendly behavior and have heightened eco-friendly intentions. Such tourists choose to stay in 'green' hotels with good environmental standards, drive eco-friendly vehicles, and support organizations implementing eco-friendly programs (Han et al., 2010). Many tourists also take the initiative at home by recycling or reusing materials in their efforts to protect the

environment. In environmental regulation, priority should be given to preventing environmental damage. One strategy for this is to adjust people's environmental attitudes and subjective norms. A number of factors dictating an individual person's responsible environmental behavior have been identified, including his or her age, gender, income, education, as well as his or her environmental attitude, subjective norm and behavior intention. A tourist's environmental attitude can influence the extent to which he or she exhibits eco-friendly behaviors, as well as his or her valuation of environmentally responsible tourism initiatives.

Follows, S.B., & Jobber, D., (2000) identified a positive relationship between the environmental attitude and environmentally responsible behavioral intention of tourists, once the people be interest to act eco friendly intention to purchase a specific environmentally responsible product, the environmental attitude must relate specifically to that act. Han et al. (2010) showed that one's behavioral intentions are influenced by one's attitude toward green issues: a tourist who receives information via word-of-mouth about a 'green' hotel and who has a more environmentally responsible attitude is likely to pay more on account of the hotel's positive environmental image. It has been shown in some studies that tourists with more environmentally responsible attitudes are more likely to adopt an eco-friendly behavior than those who feel indifferent towards the natural environment (Xinyu, Cao., & Patricia, L Mokhtarian., 2005). Specifically, a tourist's environmental attitude has a significantly positive effect on (i) his or her intention to perform a more eco-friendly behavior (Han and Hsu, 2010), (ii) his or her sustainability intention, which then affects his or her behavior (Halder *et al.*, 2013; Swaim *et al.*, 2013), and (iii) his or her willingness to select eco-friendly transportation in destination countries (Xinyu, Cao., & Patricia, L Mokhtarian., 2005).

## Subjective norms

In recent years, researchers started to look into the subjective norm in the context of environmentally friendly behavior, and this approach as a new one to recognized (Moon & Sun-Jung,2009). The subjective norm construct refers to the belief that significant referents think that one should carry out the behavior and the motivation to comply with these referents (Nilsson et al.2004). Cialdini,Reno, & Kallgren(1990) found that subjective norm focus theory distinguishes three types of norms: descriptive, injunctive, and personal norms. Descriptive norms that refer to the popularity of a certain act and provide information about what appears to be the most appropriate behavior based on the perception of what other people usually do. Injunctive norms that refer to social approval of the act and beliefs about how one ought to act based on expectations of what other people would morally approve. Personal norms refer to individuals' beliefs regarding the popularity of the behavior in question among those who have the self-concept and experienced as feelings of a moral obligation to perform a certain behavior (Cialdini et al.,1991).

## The effect of subjective norms on behavioral intention

Many studies addressing subjective norms relate to the theory of planned behaviour (or TPB model). Bamberg *et al.* (2007) suggested that subjective norms partly explains the variance in tourists' behavior intentions, as well as the way in which environmentally responsible attitudes dictate behavior intentions and environmentally responsible behavior. Han et al., (2010) demonstrated that subjective norms also determine a tourist's behavioral intentions to choose a green hotel and his or her willingness to behave in an environmentally responsible manner at tourist sites (Ong and Musa, 2011).

Ajzen (1991) claimed that subjective norms dictate a tourist's motivation to perform a behavior by implanting certain expectations and opinions regarding that particular behavior. David and Straub,(2003) claimed that subjective norms have a significant influence on behavioral intention. Subjective norms form a component of the theory of reasoned action (Ajzen and Fishbein, 1980), one which was extended in the theory of planned behavior (Ajzen, 1991). According to both theories, subjective norms pressure behaviors in a certain way and play their part in shaping behavioral intentions, which themselves constitute the major determinant of environmentally responsible behavior.

## Behavior intention and responsible environmental behaviour

Most of the studies found that the attitude-behavior model as a theoretical basis for studying the relationship between environmental attitude and behavior intention to the responsible environmental behavior by the theory of reasoned action (TRA; Fishbein and Ajzen,1980) and the theory of planned behavior (TPB; Ajzen, 1991). Environmental attitude and subjective norms are an important precedent variable of behavioral intention. The behavioral intention can explain the variance of the behaviors. Responsible environmental behavior as behavior has received considerable attention in the context of sustainable tourism and environmental education. (Lee W & Moscardo G, 2005; Han et al.,2010; Han et al., 2011; Kim & Han, 2010; environmental education: Kaiser et al., 1999; Milfont & Duckitt, 2010).

Responsible environmental behavior (REB) has been defined in a variety of ways. Most of researchers have used a variety of behavior criteria including recycling, purchase green product, writing to legislators and supporting environmental groups. Hines et al. (1986)

defined REB as action initiated by the individual with the intention of remediating an identified environmental problem. (Kaiser et al.,1999; Gross,2001; Lee&Moscardo, 2005)

To mitigate environmental impacts, several studies of responsible environmental behavior have focused on promoting individual responsible environmental behavior in different areas, such as environmental education, environmental consumer, environmental consumer behavior, recreation activities and green hotel choice (Gatersleben et al., 2002; Ballantyne et al., 2005; Luchs et al., 2010; Chen, 2010; Han et al., 2010).

Kaiser and Wilson (2004) found that numerous studies have engaged in developing a scale for measuring Responsible environmental behavior with the ultimate goal of measuring an individual's responsible environmental behavior. Responsible environmental behavior has been measured by only one dimension of the environmental problem (Chang, 2010). Recently, Lee et al. (2005) have conceptualized and measured

REB from the perspective of community-based tourists.

### The effect of behavioral intention on responsible environmental behavior

It is imperative for people living today to reduce or eschew actions that lead to environmental damage so that future generations can enjoy a high quality of life and have access to natural resources (Hardin, 1968; Dawes, 1980; Biel and Girling, 1995; Hammitt, 1995; Fransson and Garling, 1999). Arjen (1991) argued that the TPB model could be treated as a theoretical framework for understanding people's behavioral intentions, and so might be used as a medium for the relationship between survey respondents' attitudes and their environmentally responsible behavior. The strength of one's behavioral intention, which is assumed to be an immediate antecedent of behavior, could influence the extent to which one behaves in an environmentally responsible manner (Kaiser,1999; Chao and Lam,2012; Lee and Moscardo, 2005).

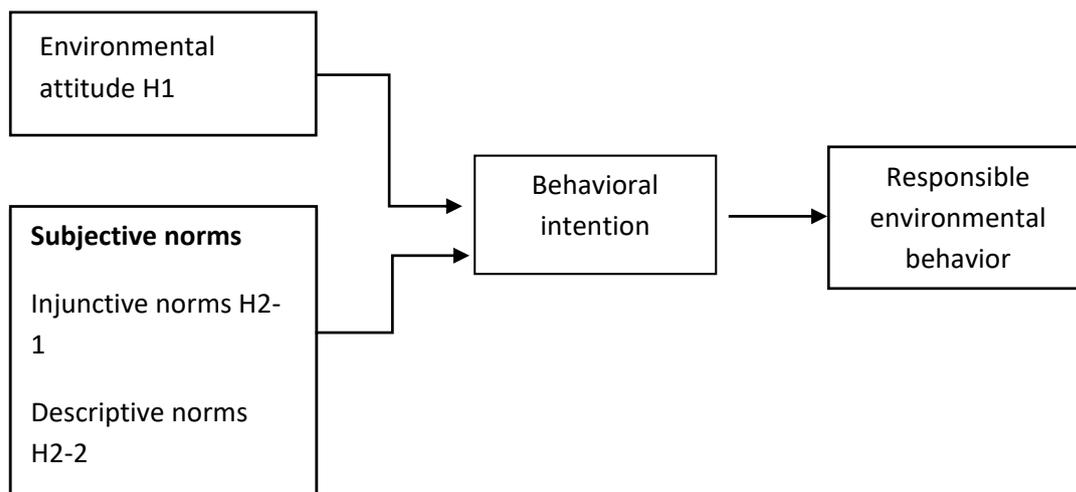


Figure 1 Conceptual Framework



In this case study, the following hypotheses and sub-hypotheses were tested:

**H1:** Environmental attitude has an effect on behavioral intention.

**H2:** Subjective norms have an effect on behavioral intention.

**H2-1:** Injunctive norms have an effect on behavioral intention.

**H2-2:** Descriptive norms have an effect on behavioral intention.

**H2-3:** Personal norms have an effect on behavioral intention.

**H3:** Behavioral intentions influence the extent to which one behaves in an environmental responsible manner.

## Methodology

### Sampling

The target population of this study consisted of Chinese tourists visiting Bangkok, Thailand. The average annual tourist inflow during the past six years (2010 through 2015) was exactly 3,656,458. The sample size for this study was calculated using the formula recommended by Yamane (1973):

$$n = \frac{N}{1 + Ne^2}$$

Whereby:

$n$  = size of sample

$N$  = population of sample

$e$  = probability of error

Therefore, since  $e$  was equal to 5% (or 0.05), the sample size for this study was computed as follows:

$$n \Rightarrow 3,656,458 / 1 + (3,656,458 \times (0.05)^2)$$

$$n = 399.956 \approx 400$$

The sample size was therefore about 400 tourists.

### Research design

In this case study, a quantitative research method was used, whereby primary data was collected from the sample of Chinese tourists who had traveled to Thailand. It contained questions regarding respondents' general background information, questions about environmental attitude (concerning 15 items sourced from the new environmental paradigm (NEP) scale by Dunlap and Van, 2000), questions about subjective norms (adapted from Pradeep, 2012; and Rouven, Daniel and Svein, 2016), and questions about behavioral intention and environmentally responsible behavior (adapted from Lam and Cheng, 2002; and Chao and Lam, 2011). (Follow to the Table 1)

**Table 1** the source of the questionnaire

<b>Environmental attitude</b> (NEP statements)	
1	We are approaching the limit of the number of people the earth can support.
2	Humans have the right to modify the natural environment to suit their needs.
3	When humans interfere with nature, it often produces disastrous consequences.
4	Human ingenuity will insure that we do not make the Earth unlivable.
5	Humans are seriously abusing the environmental.
6	The earth has plenty of natural resources of we just learn how to develop them.
7	Plants and animals have as much right as humans to exist.
8	The balance of nature is strong enough to cope with the impacts of modern industrial nations.
9	Despite our special abilities, humans are still subject to the laws of nature.
10	The so-called " ecological crisis" facing humankind has been greatly exaggerated.
11	The earth is like a spaceship with very limited room and resources.
12	Humans were meant to rule over the rest of nature.
13	The balance of nature is very delicate and easily upset.
14	Humans will eventually learn enough about nature works to be able to control it.
15	If things continue on their present cause, we will soon experience a major ecological catastrophe.
<b>Subjective norms</b>	
<b>Most friends think that I should .....</b>	
IN1	Pay more money for a trip if this helps to protect the environmental.
IN2	Purchase environmental friendly tourism products although this might be more expensive.
IN3	Use public transportation or ride a bicycle although this might take more time.
IN4	Read and compare package labels for environmentally safe ingredients when shopping.
IN5	Stay at a green hotel when traveling.



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**I admire people who .....**

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DN1 Pay more money for a trip if this helps to protect the environmental.

---

DN2 Purchase environmental friendly tourism products although this might be more expensive.

---

DN3 Use public transportation or ride a bicycle although this might take more time.

---

DN4 Read and compare package labels for environmentally safe ingredients when shopping.

---

DN5 Stay at a green hotel when traveling.

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**I feel like I have a moral obligation to .....**

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PN1 Pay more money for a trip if this helps to protect the environmental.

---

PN2 Purchase environmental friendly tourism products although this might be more expensive.

---

PN3 Use public transportation or ride a bicycle although this might take more time.

---

PN4 Read and compare package labels for environmentally sage ingredients when shopping.

---

PN5 Stay at a green hotel when traveling.

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**Before I arrive in Bangkok, I plan to .....**

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B11 Shut down the TV before leaving for hours.

---

B12 Turn off the table lamp before leaving temporarily.

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B13 Avoid taking free plastic bags from stores.

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B14 Sort garbage for recycling.

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B15 Collect small Plastic bags for reuse.

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**During the travelling, I .....**

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REB1 Shut down the TV before leaving for hours

---

REB2 Turn off the table lamp before leaving temporarily.

---

REB3 Avoid taking free plastic bags from stores.

---

REB4 Sort garbage for recycling.

---

REB5 Collect small plastic bags for reuse.

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*Note: IN, injctive norms; DN, descriptive norms; PN, personal norms; BI, behavioral intention; REB, responsible environmental behavior.*

## Data Collection

In order to efficiently measure the Chinese tourists' behavioral intentions and extent to which they exhibited environmentally responsible behavior, potential respondents were targeted at three busy locations with high numbers of Chinese tourists: King Power, Don Mueang International Airport and Suvarnabhumi Airport. Potential respondents were targeted during a 28-day period, from 3 June 2016 to 30 June 2016.

## Data analysis

Reliability analysis can measure the quality of an important indicator which measurement

of the particular test are repeatable. (Malhotra & Birks 1999). In this thesis, the internal reliability test was used and based on Cronbach's Alpha coefficient and there are some researchers recommend the Alpha coefficient 0.7 that mean the Alpha of 0.7 is the cutoff value for being acceptable (Nunnally & Bernstein, 1994).

There are 30 questionnaires were collected from King Power Duty-Free in Bangkok used as the pilot research instrument. All of the responders can complete the questionnaire with 10 minutes, and the result of Cronbach's Alpha test for 30 questionnaires sampling is shown as below:

**Table 2** Reliability Statistics

Items	Cronbach's Alpha
Environmental attitude	0.764
Subjective norm	0.907
Behavior intention	0.716
Responsible environmental behavior (REB)	0.798

From the table 2, it shows that reliability of the variable was shown the Cronbach's Alpha score of all variable. It includes environmental attitude, subjunctive norm, behavior intention, and REB. The questionnaire was from the conceptual framework of the thesis. And the all the variables get the standardized definition higher than 0.700. It means the question is reliability or respect.

In this study, descriptive analysis was used to evaluate each item for each background variable. Respondents were asked to state their gender, age, education and monthly

income before taxation. Multiple regression was used to examine the relationships between the independent variables (environmental attitudes and subjective norms) and the dependent variable (behavioral intention). Linear regression was used to measure the influence of behavioral intention on environmentally responsible behavior.

## Results

### Gender

In the sample (N = 400), 55.5% of respondents were female and 44.5% of respondents were male.

### Age profile

The largest age group consisted of people aged between 21 and 30 years old (70.0% of respondents). The secondary age group consisted of people aged between 31 to 40 years old (17.0% of respondents). The third age group consisted of people aged between 41 to 50 years old (6.0% of respondents). The fourth age group consisted of people aged were less than or equal to 20 years old (5.8% of respondents) and the last age group consisted of people aged were more than 50 years old (1.2% of respondents).

### Level of educational attainment

A slim majority of respondents (56.3%) had earned bachelor's degrees. The secondary

group of respondents (20.2%) had earned technical college. The third group of respondents (10.5%) had earned master degree or higher. A small of respondents (1.3%) had eaned secondary school.

### Income

The largest group consisted of people earning between 2000 and 4000RMB per month (29.8% of respondents). The secondary group consisted of people earning between 4001-6000RMB per month (18.5% of respondents). The third group consisted of people earning between 6001-8000RMB per month (10.3% of respondents). The fourth group consisted of people earning more than 10000RMB per month (9.8% of respondent). A small group consisted of people earning between 8001-10000RMB per month (6.8% of respondent).

The reliability of the respondents' answers for each variable was tested using Cronbach's Alpha score. All results exceeded 0.700, and so the questions were deemed to be statistically reliable.

**Table 3** Reliability test results (Cronbach's Alpha).

Items	Cronbach's Alpha
Environmental attitude	0.764
Subjective norm	0.907
Behavior intention	0.716
Responsible environmental behavior (REB)	0.798

### 1. Analysis of agreement

Each question had a statement accompanied by a 5-point Likert scale (1 = strongly disagree; 2 = disagree; 3 = neutral; 4 = agree; and 5 = strongly agree). The average level of agreement for each variable is listed in Table 4. Overall, many respondents were generally in agreement with the statements, although the extent

varies slightly, from a lukewarm 3.67 (for injunctive norms) to a strong 4.40 (for behavior intention). The average level of agreement with statements regarding environmentally responsible behavior was 4.02; thus it was evident that many of the respondents try to behave in an environmentally responsible manner when travelling to Thailand.

**Table 4** respondents' average level of agreement with statements concerning the seven variables.

	EA	SN	IN	DN	PN	BI	REB
Mean	3.79	3.86	3.67	4.00	3.90	4.40	4.02

NB. EA is environmental attitude, SN is subjective norms, IN is injunctive norms, DN is descriptive norms, PN is personal norms, BI is behavioral intention, and ERB is environmentally responsible behavior.

## 2. Hypothesis testing

### *Hypothesis 1 and Hypothesis 2*

Multiple regression results for relationships among the environmental attitude, the three subjective norms and behavioral intention are provided in Table 5. The R Square value is 0.628, thus environmental attitude and subjective

norm explains about 62.8% of the respondents' behavioral intentions.

The F value is 64.225, and the alpha value is below 0.01, and thus substantially less than 0.05. Therefore, among the respondents, environmental attitude and subjective norm does significantly influence behavioral intention.

**Table 5** Summary of multiple regression result on the effect of environmental attitude, injunctive norms, descriptive norm, personal norms on behavioural intention

R	R Square	Adjusted R Square	F	Sig.
0.628	0.394	0.388	64.225	0.000

The influence of environmental attitude, the three subjective norms (injunctive, descriptive and personal) on behavioral intention was tested using multiple regression. Results are provided in Table 6. It was found that the former has a significant effect on the latter: for environmental attitude, the t value is 7.028, and the p value is 0.000 (below 0.05). A positive relationship was detected, thus the better (higher) the environmental attitude, the more eco-friendly the

behavioral intention. Therefore, H1 is supported. Meanwhile, positive relationships were found for descriptive norms ( $t = 2.747$ ,  $p < 0.05$ ) and personal norms ( $t = 5.658$ ,  $p < 0.05$ ), but not for injunctive norms. It was found that, among the respondents, injunctive norms do not significantly influence behavioral intention. Overall, H2 is moderately supported, although H2-1 is not supported.

**Table 6** Multiple regression results on the effects of environmental attitude, injunctive norms, descriptive norm, personal norms on behavioural intention

Model	Unstandardized Coefficients B	Standardized Coefficients Beta	t	Sig.
(Constant)	1.393		6.668	0.000
Environmental attitude	0.384	0.301	7.028	0.000
Injunctive norms	-0.001	-0.001	-0.010	0.992
Descriptive norms	0.100	0.117	1.750	0.006
Personal norms	0.294	0.350	5.157	0.000

*Hypothesis 3*

Linear regression results for the relationship between behavioral intention and environmentally responsible behavior are provided in Table 7. The R Square value is 0.393; thus, behavioral intention determines about 39.3% of change in the dependent variable among the

respondents. It should be noted that the R value is almost double that of R Square. The F value is 257.163, and the p value is below 0.01. Therefore, among the respondents, behavioral intention does significantly influence the extent to which their behavior is environmentally responsible.

**Table 7** Summary of regression results on the relationship between behavioral intention and environmentally responsible behavior.

R	R Square	Adjusted R Square	F	Sig.
0.627	0.393	0.391	257.163	0.000

The linear regression results for the relationship between behavioural intention and environmental responsible behavior are provided in Table 8. It was found that the former has a significant effect on the latter: for behavioural intention, the t value is 16.036, and the p

value is 0.000 (below 0.05). A positive relationship was detected, thus the better (higher) the eco-friendly behavioral intention, the more environmental responsible behavior. Therefore, H3 is supported.

**Table 8** Linear regression results for behavioral intention and environmentally responsible behavior.

Model	Unstandardized Coefficients B	Standardized Coefficients Beta	t	Sig.
(constant)	1.044		5.560	0.000
Behavioral intention	0.677	0.678	16.036	0.000

## Discussion

### The effect of environmental attitude on behavioral intention

The results in this case study are evidence that environmental attitude and at least two kinds of subjective norms influence the behavioral intentions of Chinese tourists visiting Bangkok, Thailand, which in turn determine the extent to which they exhibit environmentally responsible behavior. Follows, S.B., & Jobber, D., (2000) reported that people's attitudes toward eco-friendly products have a significant effect on their purchase intentions. Xinyu, Cao., & Patricia, L. Mokhtarian. (2005) explored various theories in the social psychology area, including the theory of reasoned action (TRA), TPB and TAM (Davis, 1993) models, which have been used to predict consumers' e-shopping behavior through evaluation of their attitudes. The converse is true for benefit and cost measures. Han (2010) reported that a person's attitude has a positive influence on his or her visit intention. There has been research into customer attitudes, and the influence of complex interests or beliefs on people's intentions to pursue environmentally sustainable activities. Dunlap *et al.* (2000) mentioned that the NEP scale is the most widely used one for measuring the extent to which people are concerned about themselves and the environment, and reported that environmental attitude influences behavioral intention. Bjerke *et al.* (2006) demonstrated a link between people's recreational activities and environmental attitude; this was measured using a shortened version of the NEP scale. They also claimed, using their NEP results, that environmental attitude has a positive effect on behavior intention.

### The effect of subjective norm on behavioral intention.

In the sample, no significant influence of injunctive norms on behavioral intention was found; only descriptive norms and personal norms were found to have a significant effect. Smith *et al.* (2012) found that people are more likely to show more environmentally responsible behavioral intentions when conserving energy, and that this pattern does not vary between different countries or cultures. Similar interaction effects are present when subjective norms communicate the urgency of extenuating environmental problems.

Fen, Y.S., & Sabaruddin, N.A., (2009) found that injunctive norms and descriptive norms, but not personal norms, have significant effects on exercise intention. This finding is also similar to those presented by Boldero (1995) and Perugini and Ercolani (2001). Aipanjiguly (2003), in reference to the TRA model, claimed that boaters' subjective norms have a strong connection with their behavioral intentions to abide by the rules in speed zones.

And this research could be applied to designing public education communication.

### The effect of behavioral intention on environmentally responsible behavior

It was found in this case study that behavioral intention has an effect on environmentally responsible behavior. It is therefore likely that if Chinese tourists visiting Thailand have the behavioral intention to be eco-friendly, they will exhibit environmentally responsible behaviour when traveling. Chao and Lam (2011) claimed that behavioral intention has a minimal effect on environmentally responsible behavior, and that connections exist between social desirability and indicators of behavior. However, in a study of



students who participated in the NOLS'WRW outdoor education and behavioral science course, Hammitt (1995) reported that their environmentally responsible behaviour at home was influenced by the course. Kaiser (1999) also found that behavioral intentions could predict up to 94% of reliable variance in behavior. Obviously, ecological behavioral intention is related to general ecological behavior. Lee and Moscardo (2005) demonstrated that positive environmental attitude is associated with one's intention to travel in a more environmentally friendly way, and therefore leads to better environmentally responsible behavior; the findings in this paper reflect this.

## Conclusion

This paper is a case study on the influence of subjective norms (injunctive, descriptive and personal) and environmental attitude on the behavioral intentions, and in turn on the environmentally responsible behavior of a sample of 400 Chinese tourists visiting Bangkok, Thailand. It was found among these Chinese tourists that (i) environmental attitude, descriptive norms and personal norms have a significant effect on behavioral intention; however, no significant effect of injunctive norms on behavioral intention was found. It was found among the respondents that behavioral intention has a significant effect on responsible environmental behavior.

It is asserted that these Chinese tourists generally hold a positive environmental attitude towards the environment and pay due attention to their behavior; they might act improperly because they do not have sufficient means to do so. Therefore, it is important to demonstrate to Chinese citizens the extent to which they are responsible for damage caused to the environment by tourism. It is evident from the results in Table 2 that Chinese tourists feel strongly about

environment problems (environmental attitude). This may be because they believe that people have an obligation to protect the local ecology at tourist destinations.

## Recommendations

Hotel companies, government departments, the Tourism Authority and travel agents in Thailand should make the long-term development of eco-tourism a priority, and should also contribute to maintaining a clean, natural environment and good hygiene standards. The tourism authority should deploy more cleaners to remove litter from tourist attractions, and should plant more trees and other vegetation in order to counter carbon emissions and improve the aesthetic environment. By keeping the grounds free from litter and making the landscape more verdant, the tourism authority might be able to attract more tourists and increase customer satisfaction. Tourists enjoy visiting a clean, natural and green environment, and such environments generate a greater awareness of the need for environmental protection.

The Thai government should improve its environmental services by increasing the rate of waste recycling. Another environmentally beneficial policy could be to instruct retail stores to impose a charge on plastic bags. Stern (2005) found that even though eco-friendly tourists hold positive beliefs, their subjective norms will be hindered by constraints. In other words, if they come from a country with stringent environmental regulations and have not used free plastic shopping bags for a long time, they might renege on their principles when visiting a country where free shopping bags are available. Consequently, in order to prevent this from happening, the Thai government should try to enact environmental policies that are at least as stringent as those in China.



Hotel companies in Thailand should also impose environmental policies and notify tourists what is expected of them. Hotel personnel should hang signs on doors with instructions for saving water and electricity and reducing wastage (e.g. by reusing towels). Hotel managers could also offer incentives to tourists who show environmentally responsible behaviour: they could offer promotions or discounts if tourists perform such eco-friendly activities.

## Limitations and further research

This case study has two limitations. First, the focus was only on Chinese tourists visiting Bangkok, Thailand. Future studies should be focussed on tourists of other nationalities visiting other cities, and comparisons should be made among them. Second, this is a study on the effect of environmental attitude and three kinds of subjective norms on behavioral intention. Other external factors should be explored in future studies, including socio-demographic background, tourists' own perspectives and customer satisfaction.

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