Drivers and Outcomes of Green Tourist Attitudes and Behavior: Sociodemographic Moderating Effects

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ABSTRACT

This article reports the findings of a study, conducted among 234 foreign tourists who visited Cyprus, that aimed to identify the drivers and outcomes of eco-friendly attitudes and behavior. Using structural equation modeling, the authors confirmed that deontological status, law obedience, and political action of tourists positively influence the adoption of an environmentally friendly attitude. In turn, these effects are conducive to eco-friendly behavior, which ultimately enhances tourist satisfaction. Certain sociodemographic characteristics of tourists—namely, gender, age, education, and income—had a moderating effect on the link between deontological status, law obedience, and political action on the one hand and eco-friendly attitudes on the other hand. Tourist nationality also had a control effect on tourist eco-friendly attitudes. © 2015 Wiley Periodicals, Inc.

Attention to green issues has been gaining increasing momentum since the early 1970s, when the first worrying signs about the natural environment began to appear (Chan, Wong, & Leung, 2008). With the intensification of ecological problems on the planet (e.g., soil erosion, water/air pollution, ozone depletion), various stakeholder groups (e.g., governments, activists, shareholders) have increasingly pressured firms to take drastic measures toward protecting and sustaining the environment (Rueda-Manzanares, Aragon-Correa, & Sharma, 2008). In response, many firms, including tourism firms (Carmona-Moreno, Céspedes-Lorente, & Burgos-Jiménez, 2004; Foster, Sampson, & Dunn, 2000), have increasingly adopted eco-friendly measures (e.g., energy conservation, waste minimization, recycling programs). In particular, the tourism industry has recently experienced a shift from emphasizing traditional concerns about recreational opportunities associated with the environment to introducing more unorthodox forms of tourism, such as ecotourism, sustainable tourism, and nature-based tourism (Andereck, 2009). Although tourism provides significant benefits for many countries (e.g., additional income, hard currency, job opportunities), its rapid development in the past decades has had detrimental effects on the biophysical environment (Budeanu, 2007; Choi & Sirakaya, 2005). Some of these negative effects are already visible (e.g., reduction in biodiversity, sea/beach pollution, disruption of wildlife), while more dramatic negative developments are predicted in the near future (Bastić & Golčić, 2012; Gössling & Hall, 2006). The roots of these effects can be found at both the provider and the receiver level of tourism services: while tourism providers (e.g., hotels, restaurants, airliners) have been accused of destroying the environment “silently,” due to an excessive use of energy, water, material, and other resources, tourists themselves are responsible for littering the environment, creating unnecessary waste disposal, and showing little respect for flora and fauna (Chan & Lam, 2002). Although ample research exists on the eco-friendly behavior of providers of tourism services, studies focusing specifically on the environmental behavior of
tourists are still lagging behind (Andereck, 2009; Kim, 2012). However, understanding this behavior is critical on three major grounds: first, evidence indicates that the number of tourists behaving in an environmentally responsible manner is constantly increasing, necessitating particular attention to accommodate their emerging needs (Budeanu, 2007; Fairweather, Maslin, & Simmons, 2005); second, tourists are increasingly visiting foreign country destinations characterized by attractive natural scenery, diverse wildlife, and clean seas/beaches (Andereck, 2009; Mercado & Lassoe, 2002); and third, the role of green consumerism movements has increased dramatically in many countries (especially in more advanced economies), with many citizens acting as watchdogs for the environmental activities of tourism firms (Stone, Barnes, & Montgomery, 1995).

In light of these factors, the aim of this study is to identify the drivers and outcomes of tourist environmental attitudes and behavior. Here, environmentally friendly tourists (also referred to as green tourists or responsible tourists) are those who attempt to minimize their detrimental impacts on the natural environment and contribute to environmental protection by engaging in such activities as water/energy conservation, waste reduction, recycling, and so on (Dolnicar, Crouch, & Long, 2008; Kollmuss & Agyeman, 2002). Specifically, this study addresses five major research questions: (1) What is the role of tourists’ deontological status, law obedience, and political action in shaping their eco-friendly attitudes? (2) What is the connection between tourists’ eco-friendly attitudes and their environmental behavior? (3) What is the contribution of this environmental behavior to satisfaction levels derived by tourists? (4) What is the moderating effect of key sociodemographic variables (i.e., gender, age, education, and income) on the link between deontological status, law obedience, and political action on the one hand and eco-friendly tourist attitudes on the other hand? (5) What is the control effect of tourist nationality on shaping eco-friendly attitudes?

The next section provides a review of the pertinent literature on green tourists and identifies major streams of research. A theoretically anchored conceptual model is then developed and a set of research hypotheses (both main and moderating) formulated. The methodology adopted for the purposes of this study is subsequently explained. The next section presents the statistical method used for analyzing the data collected and test the research hypotheses. The final section draws conclusions, offers policy-making implications, and proposes directions for further research.

GREEN TOURIST LITERATURE

The literature on proenvironmental tourism behavior has taken many and diverse directions. Overall, these directions can be grouped into six streams: (1) nature and types of green tourism, (2) drivers of tourist environ-
the third angle investigated how environmental interpretation affects tourist ecological sensitivity, revealing that, though a well-designed interpretation can significantly increase visitors’ environmental concern (and even alter certain environmental actions), it barely influences the types of environmental behavior that are only achieved with greater effort (Kim, 2012).

The third stream of research, focusing on eco-friendly intentions and predispositions, was largely inspired by the Theory of Planned Behavior (Ajzen, 1991), which posits that actual behavior can be most accurately predicted by behavioral intention, which in turn is determined by attitude toward behavior, subjective norms, and perceived behavioral control. For example, Aipanjiguly, Jacobson, and Flamm (2003) reported a strong relationship between boaters’ subjective norms and their behavioral intentions to follow speed zones. Han, Hsu, and Sheu (2010) found that the intentions to visit a green hotel, engagement in positive word-of-mouth behavior, and paying more for a green hotel are positively associated with the hotel’s overall image, which in turn is affected by attitudes toward green issues. Fielding, McDonald, and Louis (2008) revealed that the intention to engage in environmental activism is also determined by the environmental group membership and self-identity of individuals. Finally, Costarelli and Colloca (2004) found that attitudinal ambivalence (i.e., simultaneous presence of positive and negative evaluations of the same attitude object) has a strong influence on environmentally friendly behavioral intentions.

Tourist environmental attitudes and behavior provided another line of research, with some studies suggesting that visitors with positive environmental attitudes are more likely to engage in proenvironmental behavior than those who are indifferent toward the natural environment. Specifically, research has found that tourist environmental attitudes have a significant positive effect on tourists’ (1) preference for ecologically responsible hotels (Manaktola & Jauhari, 2007; Watkins, 1994), (2) willingness to pay more for green hotels (Choi, Parsa, Sigala, & Putrevu, 2009; Dodds, Graci, & Holmes, 2010; Han, Hsu, & Lee, 2009; Han, Hsu, Lee, & Sheu, 2011), and (3) selection of eco-friendly transportation in destination countries (Cao & Mokhtarian, 2005). However, some studies revealed either a moderate (e.g., Smith, Haugtvedt, & Petty, 1994) or a weak (e.g., Grob, 1995) association between environmental attitudes and behavior. Some of the reasons cited to explain this discrepancy between stated attitudes and actual behavior were the existence of a social desirability bias (Budeanu, 2007; Leggett, Kleckner, Boyle, Duffield, & Mitchell, 2003), the lack of measures at the same level of specificity (Cottrell & Graefe, 1997; Kaiser, Wolving, & Fuhrer, 1999), and the exclusion of effects caused by situational forces (Costarelli & Colloca, 2004).

A few studies have also addressed the role of sociodemographic characteristics of green tourists in shaping their proenvironmental attitudes and behavior. For example, Hvenegaard and Dearden (1998) found that eco-tourists tend to be older and more educated than the general population of tourists. Fairweather, Maslin, and Simmons (2005) also showed that tourists with biocentric values had a higher level of education, but a lower level of income than tourists with ambivalent values, while there was no significant difference between these two groups in terms of gender or age. In another study, Han et al. (2011) revealed that women had a greater willingness to stay in a green hotel than men, while age, education, and income did not influence customers’ intentions. Finally, Kim (2012) reported that female and older tourists had higher levels of intentions toward “not climbing the cliffs” and “removing beach litter” than male and younger tourists.

Several miscellaneous issues pertaining to green tourists were also addressed. For example, in examining environmentally friendly attributes sought by tourists in hotels, Millar and Baloglu (2011) revealed that while green hotel certification was the most influential feature, a refillable shampoo dispenser, energy-efficient light bulbs, and towel/linen reuse policies were also appreciated. Buultjens, Gale, and White (2010) analyzed possible synergies between indigenous tourism and ecotourism in Australia, suggesting that they work in cooperation with each other to provide competitive advantages for the tourism industry. Hillery, Nancarrow, Griffin, and Syme (2001) examined the relationship between measured and perceived environmental impact and concluded that the majority of tourists are capable of identifying relevant ecological threats, with some of them distinguishing between different degrees of impact. Finally, Andereck’s (2009) study on visitors’ attitudes toward eco-friendly practices showed that nature-oriented tourists tend to have more positive views of “green” innovations than their counterparts who are not nature oriented.

MODEL AND HYPOTHESES

The conceptual model consists of four major sets of constructs: the drivers of eco-friendly tourist attitudes and behavior (i.e., deontological status, law obedience, and political action), eco-friendly tourist attitudes and behavior, the satisfaction derived from eco-friendly behavior, and tourist sociodemographic parameters (see Figure 1). Specifically, this study posits that tourists’ deontological status, law obedience, and political action will positively affect their eco-friendly attitudes. Such attitudes will subsequently shape their eco-friendly behavior, which in turn will influence the degree of satisfaction. Four sociodemographic characteristics—namely, gender, age, education, and income—are expected to have a moderating effect on the association between each of the driving forces and eco-friendly attitudes. The role of tourists’ nationality should also have a potential control effect on their eco-friendly behavior. Altogether, the model consists of nine hypotheses, five main and four moderating ones.
Main Hypotheses

This study focuses on three factors with a potential influential role in shaping tourist eco-friendly attitudes: deontological status, law obedience, and political action. Deontological status refers to an ethical philosophy that sets distinct moral rules based on which a certain action is judged as intrinsically right or wrong, regardless of its consequences (Brennan & Lo, 2002). Within the context of ecological issues, deontological principles advocate the intrinsic, inviolable value of all entities on the planet (e.g., animals, plants, soil, water, air), which humans have a moral duty to protect (García-Rosell & Moisander, 2007). Such an approach is responsible for cultivating an environmental attitude among individuals, encouraging them to claim an absolute right to life for humans, animals, plants, and so on (O’Neil & Spash, 2000; Spash, 1997). Tourists who adopt a deontological perspective tend to show greater maturity, understanding, and responsibility toward preserving the environment, because they inherently believe that this is the correct thing to do (Sparks & Merensi, 2000). At the same time, they are likely to condemn any actions that can harm the environment, as well as take retaliation measures (e.g., boycotting purchases of goods/services) against firms that violate the ecosystem’s status quo (Sparks & Merensi, 2000).

Law obedience is the extent to which an individual respects laws, rules, and regulations. In many countries (especially the most advanced ones), a growing body of legislation regulates the behavior of both firms (e.g., using dangerous substances) and individuals (e.g., littering the beaches) with regard to protecting the environment (Gaski, 1999). A law-obedient tourist, apart from conforming to environmental laws, is expected to develop proenvironmental dispositions and initiatives, such as (1) having a favorable stance toward organizations that have policies, processes, and products/services that conform to environmental standards (and condemn those that do the opposite); (2) encouraging eco-friendliness among relatives, friends, neighbors, and other individuals, while avoiding mixing with people who do not show respect for the natural environment; and (3) participating in organizations/associations (e.g., green movements) that closely monitor the ecological practices of firms and suggesting measures for punishing those that violate environmental legislation (Barr, 2007).

Political action is an individual’s desire to be involved in various sociopolitical issues, such as participating in pressure groups, lobbying political representatives, and boycotting irresponsible companies (Braithwaite, 1997). An individual’s political involvement may be influenced by different internal and...
Tourists who are (a) more deontological, (b) more law obedient, and (c) more politically active are more likely to develop a tourist eco-friendly attitude.

Although a proenvironmental attitude incurs inconveniences (e.g., extra effort to recycle goods), additional costs (e.g., more expensive green products), and lower levels of product performance (e.g., cars with lower brake horsepower), individuals having such an attitude are more likely to engage in eco-friendly behavior (Kulafatis, Pollard, East, & Tsogas, 1999; Laroche, Bergeron, & Barbaro-Forleto, 2001; Shabecoff, 1993). In fact, many environmental studies (e.g., Kilbourne & Pickett, 2008; Mostafa, 2007; Roberts & Bacon, 1997; Schlegelmich, Bohlen, & Diamantopoulos, 1996; Schultz & Zelezny, 1999) have empirically proved a positive relationship between environmental attitudes and behavior. Some of the major manifestations of such behavior include (1) conservation activities (e.g., Harland, Staats, & Wilke, 1999; Monroe, 2003), (2) ecologically sound waste management (e.g., waste reduction, reuse, recycling; Barr, 2007), (3) preference for green products/services and willingness to pay extra to obtain them (Han et al., 2011), and (4) efforts to increase public awareness of environmental issues (Fielding, McDonald, & Louis, 2008). Within the context of tourism, individuals acting in an environmentally friendly manner in their homes are also likely to carry their sustainable behavior with them when visiting other places (Dolnicar, Crouch, & Long, 2008).

The more positive tourists’ eco-friendly attitudes, the more likely they engage in proenvironmental behavior.

According to Ottman, Stafford, and Hartman (2006), various benefits come from the adoption of eco-friendly behavior, such as health, safety, and status. Therefore, performing proenvironmental behavior (e.g., paying more for green products) may activate a positive disposition in individuals (e.g., thinking highly of themselves as somebody who cares about the environment), thus increasing their satisfaction (Thøgersen & Crompton, 2009). People who feel good about their green behavior might be more positively predisposed to engage in other green behaviors, which, if materialized, are likely to further increase their overall level of satisfaction (Thøgersen & Crompton, 2009). Notably, several studies have revealed that many consumers increasingly opt for a less wasteful life (e.g., switching off lights, recycling more, buying less) and show a strong interest in green consumption from which they derive more personal satisfaction (Eigner, 2001; Flatters & Willmott, 2009; Nisbet, Zelezník, & Murphy, 2011; Sohr, 2001). Chen (2010, p. 309) recently proposed a novel construct, “green satisfaction,” defined as “pleasurable level of consumption-related fulfillment to satisfy a customer’s environmental desires, sustainable expectations, and green needs.” This satisfaction is attributed not only to the good performance of green products/services, but also to the belief that the individual does not harm the environment but restores it to a healthier state (Bodet, 2008; Chen, 2010).

The more environmentally friendly tourists’ behavior, the greater is the satisfaction they derive from it.

Moderation Hypotheses

Scholars in the environmental literature have treated gender as a key sociodemographic variable influencing consumer green attitudes. Compared with men, women tend to exhibit more concern about the natural environment, participate more frequently in green activities (e.g., recycling products), and are more likely to make green purchasing decisions (Banerjee & McGregor, 1994; Diamantopoulos, Schlegelmich, Sinkovics, & Bohlen, 2003; Laroche, Bergeron, & Barbaro-Forleto, 2001). This can be explained by social theory, which states that men and women play different roles in society because they are differently socialized (Davidson & Freudenburg, 1996). Specifically, women are more responsible, obedient, and passive, while men are more self-reliant, rebellious, and aggressive (Saad & Freudenburg, 1996). This can be explained by social theory, which states that men and women play different roles in society because they are differently socialized (Davidson & Freudenburg, 1996). Specifically, women are more responsible, obedient, and passive, while men are more self-reliant, rebellious, and aggressive (Saad & Freudenburg, 1996). As a result, women are likely to develop greater concerns about the welfare of others, including a greater sensitivity to the detrimental effects of environmental degradation on living entities and the biosphere (Stern, Thomas, & Kalof, 1993; Zelezník, Chua, & Aldrich, 2000). With regard to tourists, Han, Hsu, and Lee (2009), Han et al. (2011), and Kim (2012) consistently found that women displayed stronger attitudes toward green issues than men.

The effects of deontological status, law obedience, and political action on eco-friendly attitudes are stronger for female than male tourists.

Research has also widely used age as a strong criterion to explain differences in environmental attitudes. Specifically, several studies (e.g., Roberts, 1996; Sandahl & Robertson, 1989; Vining & Ebroo, 1990) have found that older people are more ecologically conscious, have a greater tendency to purchase green

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products/services, and engage more in eco-friendly initiatives than younger people. Green tourism research has also examined the moderating role of age but has produced inconsistent findings: while some studies suggest that ecotourists tend to be middle-aged (e.g., Meric & Hunt, 1998), others indicate that younger tourists tend to be more concerned about the environment (e.g., Tao, Eagles, & Smith, 2004). However, the majority of studies (e.g., Han, Hsu, & Lee, 2009; Kim, 2012; Uriely, Reichel, & Shani, 2007) concluded that older tourists have stronger intentions to pay more for visiting a green hotel, as well as to adopt other proenvironmental behaviors. Thus:

**H5:** The effects of deontological status, law obedience, and political action on eco-friendly attitudes are stronger for older than younger tourists.

With regard to education level, most previous research has consistently reported that better educated people are more positively predisposed to environmental issues than those who are less educated (Hampel, Holdsworth, & Boldero, 1996; Laroche, Bergeron, & Barbaro-Forleo, 2001; Shrum, McCarty, & Lowrey, 1995). This is because, through education, individuals acquire the principles, values, and knowledge necessary to appreciate the benefits accrued from environmental friendliness, as well as fully understand the negative consequences of environmental unfriendliness (Hampel, Holdsworth, & Boldero, 1996). Educated people are also more likely to be exposed to books/magazines, television programs, Internet material, and other sources of information relevant to green issues, which will subsequently enhance their environmental concerns (Hampel, Holdsworth, & Boldero, 1996). Within the context of tourism, research has also found that tourists with higher levels of education show more sensitivity to ecological issues than those who are less educated (Eagles & Cascaronne, 1995; Fairweather, Maslin, & Simmons, 2005; Hvenegaard & Dearden, 1998). Thus:

**H6:** The effects of deontological status, law obedience, and political action on eco-friendly attitudes are stronger for highly educated than poorly educated tourists.

Income has also been the object of some studies examining consumer proenvironmental behavior, with most of them reporting that people with a higher income are more conscious of the natural environment (Scott & Willits, 1994; Thompson & Gasteiger, 1985). These findings can be explained by Maslow’s (1954) theory of the hierarchy of needs, which states that lower order material needs must first be fulfilled before people can focus on higher order self-actualization needs, one of which is caring about the environment (Van Liere & Dunlap, 1980). In line with this logic, people with a higher financial status have more opportunities to solve their basic needs and consequently enjoy the luxury of focusing on the satisfaction of “higher” needs (Franson & Garling, 1999). In a tourism setting, the majority of studies indicated that more affluent individuals are more likely to be environmentally conscious (Ballantine & Eagles, 1994; Eagles & Cascagne, 1995). Thus:

**H7:** The effects of deontological status, law obedience, and political action on eco-friendly attitudes are stronger for more affluent than less affluent tourists.

**METHOD**

The study took place among tourists aged 15 years and above, who visited the Republic of Cyprus during the summer of 2011. The island is an attractive tourist destination (ranked 40th in the world or 6th per capita of local population), with the number of foreign visitors exceeding two million in recent years (Cyprus Tourism Organization, 2012). Tourism accounts for 11.8% of its gross national income, which is the equivalent of €1.7 billion (Cyprus Statistical Agency, 2013). Major reasons for visiting Cyprus include (1) its good weather, beautiful landscape, and clean beaches, which makes it an excellent “sea, sun and sand” destination; (2) its rich cultural heritage, which derives from the civilizations of the many different conquerors who passed through the island over its long history; (3) its excellent tourism infrastructure, which is among the most developed in the world; and (4) its convenient geographic location, which is at the crossroads of three continents, where East meets West (Cyprus Tourism Organization, 2012). The British have traditionally been the major source of tourism to the island (representing 42.7% of the total), followed by Russians (15.0%), Germans (6.6%), and Greeks (5.8%) (Cyprus Statistical Agency, 2013). Cyprus provides a representative example for this type of research on five major grounds. First, in the past decade, Cyprus has introduced a series of measures toward protecting the environment that are in line with recent developments in the European Union legislation. Second, it has steadily improved its status as a tourist eco-friendly destination, as demonstrated by the considerable number of Blue Flag beaches relative to its small size. Third, it is visited by a wide variety of tourists, coming mainly from European countries (both Western and Eastern), which facilitates the examination of variability in attitudes and behaviors toward ecological issues. Fourth, it shares many similarities (e.g., tourist profiles and motivations) to other tourist destinations in the Mediterranean Basin, such as Greece, Italy, Spain, and Malta. Fifth, it attracts tourists with different visiting motives, ranging from ecological tourism and heritage tourism to sports tourism and agrotourism (Cyprus Tourism Organization, 2012).

In total, 550 tourists were randomly approached, in line with specific quotas with regard to nationality, age, and gender. Of these, 234 were willing to
participants, resulting in a response rate of 42.5%. Participants in the study represented 32 countries, with the majority coming from Britain (41.5%) and Russia (27.4%). The final sample was broken down in terms of gender (44.0% male, 56.0% female), age (49.3% below 34 years, 35.0% between 35 and 54 years, 15.7% over 54 years), marital status (42.6% single, 50.0% married, 7.4% widow/divorced), education (16.4% up to high school, 24.8% college graduates, 34.5% undergraduate degree, 24.3% postgraduate degree), and income (28.9% below €15,000, 27.4% from €15,001 to €30,000, 19.3% from €30,001 to €45,000, 24.4% over €45,000).

Scale development for the constructs used in the study was based on prior research. With regard to antecedent factors, “deontological status” comprised four items taken from Chan, Wong, and Leung (2008), “law obedience” incorporated four items derived from Gaski (1999), and “political action” was a four-item construct adopted from Bohlen, Schlegelmilch, and Diamantopoulos (1993). Ten items derived from the SUS-TAS scale (Choi & Sirakaya, 2005) comprised the “tourist environmental attitude” scale, and “tourist environmental behavior” included another 10 items based on Kaiser and Wilson’s (2004) General Ecological Behavior. Finally, “tourism satisfaction” included six items adopted from the works of Bodet (2008), Chen (2010), and Flatters and Willmott (2009).

The questionnaire included questions containing lists of precoded items for each of the operationalized constructs, which (with the exception of sociodemographics) were measured on a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree). This was structured in three main parts: (1) driving factors (i.e., deontological status, law obedience, and political action); (2) environmental attitudes, behaviors, and outcomes; and (3) sociodemographic characteristics (i.e., gender, age, marital status, education, income). The questionnaire was developed in English and also translated by qualified translators into three other languages (i.e., Russian, German, and French) to achieve reliable results in the interviews with non-English-speaking tourists. A back-translation procedure also ensured that no problem arose from the meaning of the issues raised in the questionnaire (Craig & Douglas, 2005). Before the full-scale study was launched, all questionnaire versions were pretested with tourists from different nationalities; the pretests revealed no problems with regard to duration, structure, content, flow, and comprehension.

To avoid interviewer bias (especially with regard to accent difficulties), interviewers whose native language was one of the languages used in the questionnaire were employed (Buil, de Chernatony, & Martinez, 2012). Data were gathered through personal interviews with foreign tourists conducted at central locations (e.g., airports, ports, hotels) over a six-week period, with each interview lasting for approximately 10 minutes. The statements operationalizing the various constructs in the questionnaire were read out loud by interviewers to survey participants, who expressed their opinion by choosing one of the seven alternative options (ranging from strongly disagree to strongly agree) written on a special card shown to them. To avoid possible respondent bias, all participants were assured anonymity and confidentiality of the answers given (Chung & Monroe, 2003), were told that the analysis would be restricted to an aggregated level to prevent identification of any individual (Tsai & Ghoshal, 1998), and were told that there were no right or wrong answers for the questions asked (Randall & Gibson, 1990).

Because the questionnaires were completed by tourists from different nationalities, confirmatory factor analysis was used to examine the possibility of measurement invariance (i.e., whether the scales measured the same construct in different tourist groups) (Vandenbergh & Lance, 2000). The analysis revealed that for each construct in the model, the relationships between the indicators and the trait were the same across groups, confirming the existence of measurement invariance. Finally, to ensure that the quality of the information received was suitable for statistical analysis, all completed questionnaires were carefully edited, with some being removed because of incomplete and/or inconsistent answers (Iacobucci & Churchill, 2009).

ANALYSIS, FINDINGS, AND DISCUSSION

The statistical analysis of the data was based on structural equation modeling, using the EQS program. Structural equation modeling provides a suitable analytical method because it allows for assessment of associations between constructs in a holistic manner; it adopts a confirmatory, rather than an exploratory, factor analysis of the empirical data; and it explicitly estimates the measurement error by measuring the fit of the conceptual model (Hair, Black, Babin, & Anderson, 2010).

Purification and Measurement

In line with Gerbing and Hamilton’s (1996) guidelines, the scales of the constructs were first purified through exploratory factor and reliability analyses; in addition, all items were subjected to a confirmatory factor analysis. The results of the exploratory factor analysis were satisfactory, and all the items having high cross-loadings on many factors were excluded from further analysis. The internal consistency of the scales employed was also high, as Cronbach’s alpha (α) scores ranged from 0.74 to 0.86. To check overall associations between the study constructs, a correlation matrix was estimated revealing that no correlation coefficients (r) exceeded 0.59 (see Table 1).

To assess the validity and reliability of the scales used in the conceptual model, a measurement model was estimated (see Table 2). In the confirmatory factor analysis, each item was restricted to load on its a priori specified factor, while the underlying factors were allowed to correlate (Anderson & Gerbing, 1988).
In addition, the elliptical reweighted least squares procedure was used to estimate the model. Although the chi-square statistic was significant ($\chi^2_{89} = 252.91, p < 0.00$) due to the high sensitivity of this index to sample size, all alternative fit indexes were within the commonly accepted critical levels (Byrne, 2013). Specifically, the chi-square divided by the degrees of freedom ($\chi^2/df$) was 2.84, the normed fit index (NFI) was 0.92, the non-normed fit index (NNFI) was 0.94, the comparative fit index (CFI) was 0.95, and the root mean square error of approximation (RMSEA) was 0.09.

Convergent validity was satisfactory, since the $t$-value for each item was significant and greater than 6.0, all standard errors of the estimated coefficients were low, and the average variance extracted for each construct was equal to or above the threshold of 0.50 (Hair et al., 2010). Discriminant validity was also evident because the confidence interval ($\pm 2$ standard errors) around the correlation estimate for each pair of constructs examined never included 1.0 (Anderson & Gerbing, 1988). All factors had composite reliability and Cronbach’s alpha values equal to or greater than 0.70, implying a reliable measurement of the theoretical construct as an element of the structural model (Bagozzi & Yi, 1988). To secure the nonexistence of common method bias, a confirmatory factor analysis was performed in which all indicators included in the structural model were restricted to load on a single factor (Podsakoff & Organ, 1986). The fit indexes obtained indicated a poor model fit ($\chi^2_{485} = 8683.85, p = 0.00; \chi^2/df = 9.19; NFI = 0.51; NNFI = 0.51; CFI = 0.53; RMSEA = 0.15$), implying that common method bias does not appear to be a problem in the study.

Main Effects

The hypothesized links between the constructs were tested by estimating the structural model, revealing an excellent model fit, as demonstrated by the ratio of chi-square to the degrees of freedom ($\chi^2/df = 3.59$) and the results of all alternative fit indexes (NFI = 0.92, NNFI = 0.92, CFI = 0.94, RMSEA = 0.09). Table 3 presents the standardized path coefficients, together with the corresponding $t$-values of the structural model. Notably, all main hypotheses were accepted, with all associations between constructs being significant and in the right direction.

With regard to H1a, deontological status was conducive to the formation of eco-friendly attitudes by tourists ($\beta = 0.14, t = 1.89, p = 0.06$), which is in line with prior studies in the general environmental literature (e.g., O’Neil & Spash, 2000; Sparks & Merenski, 2000) showing that deontological people are more mature and responsible for protecting the environment. The effect of law obedience on eco-friendly attitudes (i.e., H1b) was also confirmed ($\beta = 0.40, t = 4.85, p = 0.00$), giving support to the view that the greater tourists’ conformance to the laws, the greater is the likelihood that they are sensitive to and caring about green issues (Leonidou, Leonidou, & Kvasova, 2010). H1c, which links tourist political action with eco-friendly attitudes, was also supported ($\beta = 0.30, t = 3.35, p = 0.00$), indicating that environmental protection ranks high on the agendas of people involved in political matters (Owen & Videras, 2006).

In accordance with H2, a tourist eco-friendly attitude was a significant predictor of eco-friendly behavior ($\beta = 0.43, t = 5.19, p = 0.00$). Although some tourist studies (e.g., Dickinson & Dickinson, 2006) have revealed that an eco-friendly attitude does not always translate into green behavior, the current examination confirms this positive association. This is consistent with the Theory of Reasoned Action, which states that attitudes are conducive to individuals’ specific behavioral intentions and behaviors (Ajzen & Fishbein, 1980). It is also in harmony with the findings of other studies in the green tourism literature, such as those by Kaiser, Woling, and Fuhrer (1999), Barr (2007), and Manak-tola and Jauhari (2007), which also reported that eco-friendly attitudes have a positive effect on proenvironmental behavior. Notably, the preliminary interviews with tourists revealed that such behavior usually takes the form of waste reduction, beach litter removal, water conservation, towel reuse, and purchasing of eco-friendly products.

The study also confirmed H3, which hypothesized that tourist eco-friendly behavior is positively associated with satisfaction levels ($\beta = 0.56, t = 6.26, p = 0.00$). This finding gives credibility to Chen’s (2010) argument that fulfilling an individual’s desire and action to protect the environment creates a special type of satisfaction (called “green satisfaction”), which is over

Table 1. Correlation Matrix and Descriptive Statistics.

<table>
<thead>
<tr>
<th>Constructs</th>
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<th>3</th>
<th>4</th>
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<th>6</th>
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</thead>
<tbody>
<tr>
<td>1. Deontological status</td>
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<td>2. Law obedience</td>
<td>0.59</td>
<td>1</td>
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<td></td>
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<tr>
<td>3. Political action</td>
<td>0.47</td>
<td>0.26</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Tourist eco-friendly attitude</td>
<td>0.46</td>
<td>0.44</td>
<td>0.34</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Tourist eco-friendly behavior</td>
<td>0.54</td>
<td>0.55</td>
<td>0.34</td>
<td>0.36</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>6. Tourist green satisfaction</td>
<td>0.45</td>
<td>0.33</td>
<td>0.44</td>
<td>0.42</td>
<td>0.46</td>
<td>1</td>
</tr>
<tr>
<td>Mean score</td>
<td>5.75</td>
<td>5.78</td>
<td>3.67</td>
<td>6.08</td>
<td>4.04</td>
<td>5.15</td>
</tr>
<tr>
<td>Standard deviation</td>
<td>1.32</td>
<td>1.38</td>
<td>1.87</td>
<td>1.02</td>
<td>1.71</td>
<td>1.12</td>
</tr>
</tbody>
</table>

Note: All correlations are significant at the 0.01 level.
Table 2. Results of the Measurement Model.

<table>
<thead>
<tr>
<th>Factor</th>
<th>Standardized Loadingsa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deontological status (DES; α = 0.79)</td>
<td></td>
</tr>
<tr>
<td>DES1—I am interested in conserving the natural resources.</td>
<td>0.67b</td>
</tr>
<tr>
<td>DES2—I reduce unnecessary waste.</td>
<td>0.79 (9.13)</td>
</tr>
<tr>
<td>DES3—I try to create and provide a better living environment for future generations.</td>
<td>0.85 (9.65)</td>
</tr>
<tr>
<td>DES4—I am concerned about the environment for my future personal convenience.</td>
<td>0.72 (8.52)</td>
</tr>
<tr>
<td>Law obedience (LOB; α = 0.83)</td>
<td></td>
</tr>
<tr>
<td>LOB1—I try to avoid committing bribery in my transactions.</td>
<td>0.69b</td>
</tr>
<tr>
<td>LOB2—I show respect for the laws and especially those for the environment.</td>
<td>0.87 (10.05)</td>
</tr>
<tr>
<td>LOB3—I abide by the safety laws for the protection of the environment.</td>
<td>0.79 (9.42)</td>
</tr>
<tr>
<td>LOB4—I try to avoid companies that use misleading environmental practices.</td>
<td>0.60 (7.35)</td>
</tr>
<tr>
<td>Political action (POA; α = 0.76)</td>
<td></td>
</tr>
<tr>
<td>POA1—I often intervene with the media in order to combat environmental degradation.</td>
<td>0.57b</td>
</tr>
<tr>
<td>POA2—I support environmental pressure groups in order to combat environmental degradation.</td>
<td>0.71 (6.43)</td>
</tr>
<tr>
<td>POA3—I lobby political representatives to support green issues.</td>
<td>0.70 (6.37)</td>
</tr>
<tr>
<td>POA4—I boycott companies that are not environmentally responsible.</td>
<td>0.60 (5.81)</td>
</tr>
<tr>
<td>Tourist eco-friendly attitude (EFA; α = 0.74)</td>
<td></td>
</tr>
<tr>
<td>EFA1—Tourism must protect the environment now and for the future.</td>
<td>0.83b</td>
</tr>
<tr>
<td>EFA2—The diversity of nature must be valued and protected by tourism.</td>
<td>0.87 (13.76)</td>
</tr>
<tr>
<td>EFA3—I think that tourism should strengthen efforts for environmental conservation.</td>
<td>0.78 (11.84)</td>
</tr>
<tr>
<td>EFA4—Tourism needs to be developed in harmony with the natural environment.</td>
<td>0.71 (10.46)</td>
</tr>
<tr>
<td>EFA5—Proper tourism development requires that wildlife and natural habitats be protected at all times.</td>
<td>0.60 (8.537)</td>
</tr>
<tr>
<td>EFA6—Tourism development must promote positive environmental ethics among all parties that have a stake in tourism.</td>
<td>0.55 (7.59)</td>
</tr>
<tr>
<td>EFA7—Regulatory environmental standards are needed to reduce the negative impacts of tourism development.</td>
<td>0.55 (7.66)</td>
</tr>
<tr>
<td>EFA8—I believe that tourism must improve the environment for future generations.</td>
<td>0.55 (7.67)</td>
</tr>
<tr>
<td>EFA9—I believe that the quality of the environment is deteriorating because of tourism.</td>
<td>–c</td>
</tr>
<tr>
<td>EFA10—As a tourist, I would be willing to reduce my consumption to help/protect the environment.</td>
<td>–c</td>
</tr>
<tr>
<td>Tourist eco-friendly behavior (EFB; α = 0.86)</td>
<td></td>
</tr>
<tr>
<td>EFB1—During my visit to foreign countries as a tourist, I often talk with friends about problems related to the environment.</td>
<td>0.76b</td>
</tr>
<tr>
<td>EFB2—In the past, I have pointed out to someone his or her nonecolological behavior in visiting foreign countries as a tourist.</td>
<td>0.62 (8.20)</td>
</tr>
<tr>
<td>EFB3—When I visit foreign countries as a tourist, I avoid buying goods with unnecessary packaging material.</td>
<td>0.78 (10.47)</td>
</tr>
<tr>
<td>EFB4—I sometimes contribute financially to environmental organizations, when I visit foreign countries as a tourist.</td>
<td>0.63 (8.31)</td>
</tr>
<tr>
<td>EFB5—When I visit foreign countries, I buy/read magazines and listen/watch news which focus on environmental issues.</td>
<td>0.64 (8.55)</td>
</tr>
<tr>
<td>EFB6—During my visit to foreign countries as a tourist, I buy environmentally friendly products, whenever possible.</td>
<td>0.76 (10.17)</td>
</tr>
<tr>
<td>EFB7—When I visit foreign countries as a tourist, I buy organic food, whenever possible.</td>
<td>–c</td>
</tr>
<tr>
<td>EFB8—When I visit foreign countries as a tourist, I use products made from recycled materials.</td>
<td>0.65 (8.59)</td>
</tr>
<tr>
<td>EFB9—I reduce and recycle waste, whenever possible, during my visits to foreign countries as a tourist.</td>
<td>0.64 (8.47)</td>
</tr>
<tr>
<td>EFB10—As a tourist, I always like to visit environmentally friendly countries.</td>
<td>–c</td>
</tr>
<tr>
<td>Tourist green satisfaction (TSA; α = 0.82)</td>
<td></td>
</tr>
<tr>
<td>TSA1—I am satisfied with my decision to choose environmentally friendly destinations for my tourist vacations.</td>
<td>0.71c</td>
</tr>
<tr>
<td>TSA2—I think I do the right thing by deciding to give priority to ecologically friendly countries as my tourist destinations.</td>
<td>0.86 (10.94)</td>
</tr>
<tr>
<td>TSA3—There is a strong probability to continue to visit countries as a tourist who cares about the protection of the environment.</td>
<td>0.85 (10.82)</td>
</tr>
<tr>
<td>TSA4—My general experience as a tourist in countries that have environmentally friendly policies is positive.</td>
<td>0.75 (9.66)</td>
</tr>
<tr>
<td>TSA5—I feel very happy because of taking actions that preserve the environment of the countries that I visited as a tourist.</td>
<td>0.50 (6.42)</td>
</tr>
<tr>
<td>TSA6—Overall, I am satisfied with my environmental behavior in foreign countries, which I visited as a tourist.</td>
<td>0.52 (6.65)</td>
</tr>
</tbody>
</table>

Note: Fit statistics: \( \chi^2 = 252.91; p = 0.000; df = 89; \) ratio chi-square to df \( (\chi^2/df) = 2.84; \) NFI = 0.92; NNFI = 0.94; CFI = 0.95; RMSEA = 0.09.

*Values from the nonstandardized solution are in parentheses.

**Item fixed to set the scale.

***Item deleted.
Table 3. Results of the Structural Model.

<table>
<thead>
<tr>
<th>H</th>
<th>Hypothesized Association</th>
<th>Standardized Estimate</th>
<th>t-Value</th>
<th>p-Value</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1a</td>
<td>Deontological status → Eco-friendly tourist attitude</td>
<td>0.14</td>
<td>1.89</td>
<td>0.06</td>
<td>Accepted</td>
</tr>
<tr>
<td>H1b</td>
<td>Law obedience → Eco-friendly tourist attitude</td>
<td>0.40</td>
<td>4.85</td>
<td>0.00</td>
<td>Accepted</td>
</tr>
<tr>
<td>H1c</td>
<td>Political action → Eco-friendly tourist attitude</td>
<td>0.30</td>
<td>3.35</td>
<td>0.00</td>
<td>Accepted</td>
</tr>
<tr>
<td>H2</td>
<td>Eco-friendly tourist attitude → Eco-friendly tourist behavior</td>
<td>0.43</td>
<td>5.19</td>
<td>0.00</td>
<td>Accepted</td>
</tr>
<tr>
<td>H3</td>
<td>Eco-friendly tourist behavior → Tourist green satisfaction</td>
<td>0.56</td>
<td>6.26</td>
<td>0.00</td>
<td>Accepted</td>
</tr>
</tbody>
</table>

Control effects

- Tourist nationality → Eco-friendly tourist attitude
  - Standardized Estimate: 0.22
  - t-Value: 1.73
  - p-Value: 0.08
  - Status: Accepted

Note: Fit statistics: $\chi^2 = 1724.72; df = 480; \text{ratio chi-square to df} (\chi^2/df) = 3.59; \text{NFI} = 0.92; \text{NNFI} = 0.92; \text{CFI} = 0.94; \text{RMSEA} = 0.09.$

and above that derived from the good performance of green products or services. Such satisfaction is crucial in reinforcing future favorable attitudes toward the environment, as well as sustaining existing eco-friendly behavior and developing new forms of it (Thøgersen & Crompton, 2009).

Moderating Effects

The split-group approach served to examine the moderating effects of tourists’ demographic characteristics on the link between each of the three driving factors (i.e., deontological status, law obedience, and political action) and tourist eco-friendly attitudes. Specifically, the initial sample of tourists was divided into gender (men vs. women), age (younger [≤35 years] vs. older [≥35 years]), education (no university vs. university), and annual income (less affluent [≤$30,000] vs. more affluent [$>30,000]) subgroups (see Table 4). Two models were estimated for each hypothesized moderating effect: a constrained model, in which the path affected by the moderating variable was fixed to 1, and a free model, in which all paths were allowed to be freely estimated. A significant chi-square difference between the two models ($\Delta \chi^2_{(1)} > 3.84, p < 0.05$) indicated that the moderator had a significant impact on the hypothesized association.

The results also provide support for H4a–H4c, indicating that tourist gender had a significant effect on the link between deontological status and eco-friendly attitudes ($\Delta \chi^2_{(1)} > 2.77, p < 0.10$), between law obedience and eco-friendly attitudes ($\Delta \chi^2_{(1)} > 4.21, p < 0.05$), and between political action and eco-friendly attitudes ($\Delta \chi^2_{(1)} > 5.64, p < 0.05$). In all three cases, the effect was stronger in the case of female than male tourists, confirming that, because women are more responsible, sensitive, and soft in their approach, they are more likely to be favorably predisposed toward the environment and activate further the roles of both law obedience and political action in ecological attitude development.

Tourist age also had a moderating effect on the links between deontological status and eco-friendly attitudes ($\Delta \chi^2_{(1)} > 2.81, p < 0.10$) and between law obedience and eco-friendly attitudes ($\Delta \chi^2_{(1)} > 2.94, p < 0.10$). In accordance with H5a and H5b, the association between these drivers and eco-friendly attitudes was more evident in the case of older tourists, which can be partly explained by their more conservative and caring nature, coupled with their better experiential knowledge of the negative consequences of ecological disasters, all of which make them more conscious about preserving the natural environment (Han, Hsu, & Lee, 2009; Kim, 2012; Uriely, Reichel, & Shani, 2007). Contrary to H5c, no moderation effect caused by tourist age was observed on the association between political action and eco-friendly attitudes ($\Delta \chi^2_{(1)} > 0.35, p > 0.10$).

The moderating role of tourist education level was evident in the case of the links between deontological status and eco-friendly attitudes ($\Delta \chi^2_{(1)} > 4.14, p < 0.05$) and between political action and eco-friendly attitudes ($\Delta \chi^2_{(1)} > 5.94, p < 0.05$), in support of H6a and H6c, respectively. Specifically, this effect was more profound among more educated tourists, which is consistent with the findings of prior studies (e.g., Hampel, Holdsworth, & Boldero, 1996; Shrum, McCarty, & Lowrey, 1995) showing that, through education, individuals develop more appreciation of, understanding of, and sensitivity to green issues. However, a nonsignificant moderating effect was observed with regard to the association between law obedience and eco-friendly attitudes ($\Delta \chi^2_{(1)} > 0.83, p > 0.10$).

As for the moderating role of tourist income, the associations between deontological status and eco-friendly attitudes, between law obedience and eco-friendly attitudes, and between political action and eco-friendly attitudes were all stronger in the case of more affluent than less affluent tourists, which confirms H7a ($\Delta \chi^2_{(1)} > 2.82, p < 0.10$), H7b ($\Delta \chi^2_{(1)} > 2.97, p < 0.10$), and H7c ($\Delta \chi^2_{(1)} > 3.08, p < 0.10$). These findings corroborate the results of previous studies (e.g., Cottrell, 2003; Scott & Willits, 1994; Thompson & Gasteiger, 1985) indicating that environmental consciousness increases with the rise of income.

Control Effects

Since there are indications that environmental friendliness is treated differently across countries (Swarbrooke & Horner, 1999), tourist nationality served as a control
variable for eco-friendly attitudes, and indeed such differences were found ($\beta = 0.22, t = 1.73, p = 0.08$). A closer examination of the results shows that tourists from Western European countries (e.g., British) were more environmentally friendly than their Eastern European (e.g., Russian) counterparts. A possible explanation for this is that Western European countries have stricter environmental laws, more powerful environmental pressure groups, and a better established green culture, all of which positively influence their citizens’ environmental thinking and actions. Western and Eastern Europeans have gone through different evolutionary processes, and, according to the postmaterialism hypothesis of Inglehart (1990), as society moves toward widespread material goods, the values of these are decreasing, while post-material values are increasing. Thus, the greater economic development of Western European countries might have led to a wider spread of postmaterial values in these societies, one of which is environmental concern. Conversely, less economically developed Eastern European countries are still dominated by materialistic values (e.g., security, safety).

---

**Table 4. Results of Individual Moderating Effects.**

<table>
<thead>
<tr>
<th>Main Effect</th>
<th>Hypothesized Moderating Effect</th>
<th>Gender as a Moderator</th>
<th>Age as a Moderator</th>
<th>Education Level as a Moderator</th>
<th>Income as a Moderator</th>
</tr>
</thead>
<tbody>
<tr>
<td>DES $\rightarrow$ EFA</td>
<td>$H_{9a}$: Effect is stronger among female than male tourists.</td>
<td>$\beta = 0.09$</td>
<td>$\beta = 0.16$</td>
<td>$\beta = 0.28$</td>
<td>$\beta = 0.02$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$t = 1.01$</td>
<td>$t = 2.16^{**}$</td>
<td>$t = 2.87^{***}$</td>
<td>$t = 2.12^{**}$</td>
</tr>
<tr>
<td>LOB $\rightarrow$ EFA</td>
<td>$H_{9b}$: Effect is stronger among female than male tourists.</td>
<td>$\beta = 0.33$</td>
<td>$\beta = 0.47$</td>
<td>$\beta = 0.32$</td>
<td>$\beta = 0.28$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$t = 2.96^{**}$</td>
<td>$t = 4.31^{***}$</td>
<td>$t = 4.75^{***}$</td>
<td>$t = 2.87^{***}$</td>
</tr>
<tr>
<td>POA $\rightarrow$ EFA</td>
<td>$H_{9c}$: Effect is stronger among female than male tourists.</td>
<td>$\beta = 0.21$</td>
<td>$\beta = 0.39$</td>
<td>$\beta = 0.32$</td>
<td>$\beta = 0.29$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$t = 2.05^{**}$</td>
<td>$t = 2.58^{***}$</td>
<td>$t = 2.60^{***}$</td>
<td>$t = 2.59^{***}$</td>
</tr>
</tbody>
</table>

---

$^{*} p < 0.10; ^{**} p < 0.05; ^{***} p < 0.01.$

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1 This finding is in harmony with the findings of previous studies that also suggest that differences exist in tourist environmental attitudes among different nationalities. For example, Kang and Moscarino (2006) revealed significant cross-cultural differences in attitudes toward responsible tourism among Korean, British, and Australian tourists. Moreover, Berezan, Raab, Yoo, and Love (2013) found that the relative importance of green hotel practices differs between American and Mexican tourists. Finally, Bayyan (2001) reported that German tourists are more environmentally aware than Russian and Turkish tourists.
which might have resulted in lower levels of proenvironmental attitudes.

CONCLUSIONS, IMPLICATIONS, AND DIRECTIONS

This study confirmed that tourist proenvironmental attitudes are critical in shaping an eco-friendly behavior. However, proenvironmental attitudes do not exist in a vacuum, but rather certain background forces are responsible for such attitudes—that is, eco-friendly tourists tend to be highly deontological, law obedient, and politically active. The roles of most of these attributes in developing positive attitudes toward the environment were most evident in the case of tourists who are women, older in age, highly educated, and higher income earners. Tourists behaving in an eco-friendly manner when visiting a foreign destination were also found to be more pleased and satisfied with their behavior. The study also revealed that tourists’ proenvironmental attitudes differ depending on their nationality, with people from certain nations showing a greater concern about the environment than those from other nations.

This study contributes to the tourism literature in four ways. First, it transfers concepts and ideas related to background factors and outcomes of consumer environmental attitudes/behavior developed in the wider environmental literature to the tourism field. Second, in contrast to the fragmented approach of prior research, it provides an all-encompassing picture and simultaneous testing of the antecedents and outcomes of eco-friendly tourist attitudes and behavior. Third, it treats sociodemographic variables as moderating, rather than driving, forces in forming green attitudes and behavior among tourists. Fourth, it elevates the instrumental role of nationality (which has received little attention in prior research) in influencing environmentally responsible tourist attitudes.

Policy Implications

The findings of the study have various implications for both corporate and public policy makers. Managers in the tourism industry should investigate the background characteristics (i.e., deontological status, law obedience, and political action) of their target tourism sources and try to adjust their company offerings according to whether tourists are characterized by eco-friendly attitudes and behavior. A great amount of the satisfaction tourists receive has an environmental flavor, and neglecting this dimension may result in customer losses (especially among those who are ecologically conscious). In addition, managers should carefully segment tourists according to their sociodemographic characteristics and pay particular attention to female, older, educated, and affluent tourists because they are more sensitive to environmental matters. They should also take into consideration different nationalities of tourists; doing so would necessitate the execution of a cross-country study to identify different nations’ specific requirements with regard to ecological concerns, so as to adjust business and marketing strategies accordingly. Designing communication programs in source countries stressing the environmental practices of their firms would also help sensitize tourists to ecological issues and/or attract those who are already sensitive to green initiatives.

Government officials should also try to communicate the eco-friendly nature of their countries as a tourism destination through proper educational, regulatory, communication, and other policies. Before doing so, however, they should take measures to protect the biophysical environment, such as reinforcing environmental legislation, establishing certain green standards for tourism-related firms, and adopting sound sustainability practices. They should also specifically focus on firms in the tourism industry (e.g., hotels, restaurants, airliners) and strive to (1) provide incentives (e.g., tax relief) that will induce them to engage in environmentally friendly activities, (2) assist in obtaining the necessary green accreditation/certification (e.g., ISO 14,001), and (3) reward through prizes and awards those that excel in their environmental practices. It is also vital for government agencies (e.g., the Environmental Agency) to monitor and audit the eco-friendly practices of suppliers of tourism services and, in the case of problems, quickly take corrective actions to maintain a favorable green image. The launching of an advertising campaign promoting the country as an eco-friendly tourism destination, the active promotion of ecological dimensions in international tourist fairs, and the dissemination of press release material related to positive environmental indicators are all crucial in creating such a green image.

Future Directions

Further research could take several directions. First, the importance of the findings at both micro-business and macro levels necessitates the replication of the study in other countries with different economic, sociocultural, and political-legal settings, as well as with different ecological conditions. Such a study would be able to verify whether eco-friendly attitudes and behavior of the same tourists are consistent across destination countries. Second, it is crucial to monitor tourist environmental attitudes and behavior longitudinally, as well as their antecedents and outcomes, because people’s principles, values, and norms regarding ecological issues tend to change over time. Third, it is important to enrich the analysis of the forces driving tourist eco-friendly attitudes/behavior with factors related to cultural (e.g., collectivism), personality (e.g., altruism), or social (e.g., status) characteristics of the individual. Fourth, the strong moderating effects of the
sociodemographic traits on the link between driving forces and tourist eco-friendly attitudes provide a hint that certain psychographic parameters (e.g., lifestyle) may also have such effects, thus warranting investigation. Finally, it would be worthwhile to examine variations in eco-friendly attitudes and behavior among different types of tourists (e.g., leisure travelers vs. business travelers) and to explore their reactions to green services offered by different types of tourism providers (e.g., accommodation vs. catering).

REFERENCES


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