

# What Generation Y in Greece thinks about Green Hotels

George Karavasilis, Dafni-Maria Nerantzaki, Panagiotis Pantelidis,  
Dimitrios Paschaloudis and Vasiliki Vrana

*Department of Business Administration,  
Technological Education Institute of Central Macedonia, Serres, Greece*

## Abstract

**Purpose** – Environmental awareness has significant impact on hotel selection. As hotel customers' become more ecologically conscious tend to prefer hotels that have environmental policies in place. The purpose of this paper is to examine customers' perceptions of what a green hotel should do or should be and exploring intentions to choose a green hotel.

**Design/methodology/approach** – An empirical research study was conducted using an online survey. The questionnaire used investigates what a green hotel should do or should be environmental concerns, eco-friendly attitudes, eco-friendly activities, awareness, overall image, intention to pay more and intention to visit a green hotel. In total, 159 completed and usable questionnaires were received.

**Findings** – Findings reveal that potential customers' are highly environmentally conscious. However, they are not fully aware about green hotels and do not always intent to visit a green hotel, or are willing to pay more.

**Originality/value** – Hotel customers' perceptions towards intention to visit a green hotel are different among various ages and geographic locations. Thus, the study focuses on perceptions of Generation Y in Greece. Hotel managers should be aware of customers' buying behaviour towards green practices and communicate more, green hotel practices.

**Keywords** Sustainability, Tourism, Management

**Paper type** Research paper

## Introduction

In this date and age, as global environmental concerns are growing, environmental laws are increasing in number and pressures from the market are rising; nearly every industry embraces sustainable business practices (DiPietro *et al.*, 2013; Jones *et al.*, 2014; Rahman *et al.*, 2012). Compared to other industries, hospitality industry does not over-pollute the environment and does consume huge amounts of non-renewable resources, even if many of the services provided are highly resource intensive in the vein that hotels are consuming significant amount of energy, non-durable products and water (Bohdanowicz and Martinac, 2003; Chan and Wong, 2006; Chan *et al.*, 2014). Despite this fact, social responsibility has grown in the hotel sector dramatically (Han and Chan, 2013) and hotels have started to carry their environmental and social obligations and to incorporate sustainability efforts and practices into their daily operations (Smerecnik and Andersen, 2011). Sustainability efforts "refer to incorporating sustainability thinking into all its areas of discipline – supply chain, marketing, finance and product development – as well as devising new business models and strategy grounded in sustainability" (Kiron *et al.*, 2013). Sustainability in hospitality industry involves wise use and conservation of resources in order to maintain their long-term viability, minimization of negative impacts and maximization of positive impact (Kapiki, 2012), demonstration of commitment to the community and support of social equality (Albert, 2014). Green hotels are "environmentally friendly properties whose managers are eager to institute programs that save water, save



energy and reduce solid waste – while saving money – to help protect our one and only earth!” (Green Hotels Association, 2008). Kasim (2004, p. 10) mentioned that a green hotel “operates in a responsible manner towards its employees, the local community, the local culture, and the surrounding ecology”. Going green is an attractive trait for companies. They go green for a variety of reasons additional to the protection of environment like legitimization, facing public scrutiny, improve public image, increase brand value, maintain corporate competitiveness, general social good, gain additional edge over competitors, improved investor relations, lowering operating costs, save costs generating a profit, strengthening employee organizational commitment and pleasing the customer (Bansal and Roth, 2000; Choi *et al.*, 2009; Gan, 2006; Graci and Kuehnel, 2010; Jhawar *et al.*, 2012; Juholin, 2004). Thus, implementing environmental programs to manage energy and water consumption and waste are increasing steadily in the hotel industry to save costs and maintain corporate competitiveness (Bowe, 2005; Chen *et al.*, 2005; Dodd *et al.*, 2001).

Thus, one important reason for a hotel to go green is the hotel guest. Guests’ environmental awareness and concerns have rapidly increased after 1990 (Lee *et al.*, 2011). Hotel customers’ understand that their purchasing decisions influence the environment (Lee *et al.*, 2010). Therefore, it is important for them to choose a hotel that integrates the principles of sustainable development and contribute to the preservation of the environment (Robinot and Giannelloni, 2010).

Generation Y also known as Millennials, are people born between 1980 and 1995 or and 2000 according to another group of scientists (PwC, 2013). Generation Ys are civic-minded and socially conscious individuals, and consumers (Kim *et al.*, 2011) want quality goods, are brand loyal, and are willing to pay more for brand names (Sullivan and Heitmeyer, 2008). A study conducted by Maritz Poll (2007) focusing on Generation Y consumers’ found that the majority (77 per cent) of Generation Y claimed that they care about the environment.

The study aims at investigating consumers’ perceptions of what a green hotel should do or should be, attitudes towards green hotels and intentions to choose a green hotel. More specifically it examines perception of what a green hotel should do or should be environmental concerns, eco-friendly activities and attitudes, awareness, overall image, intention to pay more and intention to visit a green hotel. Consumer education and awareness in green practices can force hotels to adopt sustainable services. Thus, it is essential to investigate consumers’ awareness and involvement in sustainable practices of the hotel industry (Sigala, 2014). As age is an important determinant of buying behaviours (Han *et al.*, 2009) and of the environmental purchasing process, it takes only into consideration Generation Y’s perceptions and attitudes.

## Conceptual framework

### *Hotel green practices*

The International Tourism Partnership is a global programme of business in the community that brings together the world’s leading international hotel companies to provide a voice for environmental and social responsibility in the industry. The programme put forward six dimensions of standards that a green hotels should follow in order to increase the sustainability of hotel operations, by minimizing negative impacts on the ecosystems and cultures and increasing positive contributions to cultural heritage preservation, biodiversity conservation and community development. Namely the six dimensions are: policy and framework, staff training and awareness, environmental management, purchasing, people and communities and

destination protection (International Tourism Partnership, 2008). Rahman *et al.* (2012) claimed that consumer do not know how truly green properties are. Han and Chan (2013) reported consumers' perceptions regarding what a green hotel should do or should be. The perception mentioned most frequently is that a green hotel is concerned about saving resources and energy, followed by the perception that a green hotel is using environmentally friendly materials, and not using single-use or individually packed consumables was the third. At their study Millar and Baloglu (2008) tried to identify what three words come to mind, when someone thinks of a green hotel. Efficient/efficiency, recycling, environmental/environmentally friendly, sustainability, clean, conservation, responsible, healthy, conscious/conscientious and air quality, were the more popular words.

#### *Environmental concern*

Nowadays, it is evident that people concern about environmental problems (Takács-Sánta, 2007) and the majority of them have realised that their purchasing behaviour has a direct impact on many ecological problems (Laroche *et al.*, 2001). Environmental concern can be defined as "a general concept that can refer to feelings about many different green issues" (Zimmer *et al.*, 1994, p. 64) and according to Dunlap and Jones (2002, p. 485) it indicates "the degree to which people are aware of problems regarding the environment and support efforts to solve them and/or indicate the willingness to contribute personally to their solution". Previous studies have investigated the relation between environment concern and intention to buy green products. Laroche *et al.* (2001) claimed that consumers who are concerned about the environment are trying to purchase only eco-friendly products. Chan (1999) and Vining and Ebreo (1990) found that knowledge about environmental issues is a significant predictor of environmentally friendly behaviour. Mostafa (2006) who investigated the influence of various attitudinal and psychographic factors on the green purchase behaviour found that environmental concern was positively related to consumers' intention to purchase green products. A recent study conducted by Braga Junior *et al.* (2014) shown that consumers do not demonstrate a direct relationship between environmental concern and declared retail purchase of green products. Khaola *et al.* (2014) examined the relationships among customers' environmental concern, attitudes towards green products and green purchase intentions. According to their findings environmental concern affects green purchase intentions indirectly through attitude towards green products, which in turn directly affects green purchase intentions. Consumers with high environmental concerns do not always buy green products, however they are more likely to make eco-friendly purchasing decisions (Kim and Han, 2010).

#### *Eco-friendly activities and attitudes*

The last few decades, recognizing the seriousness of environmental problems like environmental disasters, damage resulting from the use of various disposable products and environmental unfriendly production processes, an increasing numbers of individuals are engaging in eco-friendly activities (Han *et al.*, 2009, 2010; Kalafatis *et al.*, 1999). Eco-friendly activities or environmentally friendly activities, such as recycling activity or environmental purchasing are activities that are not harmful to the environment. Han *et al.* (2010) argued that hotel customers' eco-friendly activities in everyday life did not have a significant impact on hotel customers' decision-making process. However, customers that adopt eco-friendly activities in their everyday lives are more willing to

make environmentally friendly purchasing decisions. Noor and Kumar (2014) who investigated impact of eco-friendly activities and eco-friendly attitudes on travellers' intention to choose green hotels in Malaysia, found a significant positive relationship of eco-friendly activities and intention to stay at a green hotel among tourists.

### *Overall image*

The creation of a positive green image is a necessity for firms operating in environmentally sensitive industries like hospitality industry (Amores-Salvado *et al.*, 2014) as it may have impact on buying behaviours. Overall image is consumer's sum of beliefs, thoughts and impressions and has an important role in predicting consumer's favourable/unfavourable decisions (Han and Kim, 2010). Han *et al.* (2009, p. 520) defined overall image as the "hotel customers" overall perceptions of a green hotel, formed by processing information and by prior or vicarious knowledge about a green hotel and its attributes. Han *et al.* (2009) found that the overall image of a green hotel is positively associated with intention to buy a green hotel product and Lee *et al.* (2010) that green hotel's overall image, favourably enhances behavioural intentions, including willingness to pay a premium, word-of-mouth and revisiting intentions. Overall image is less powerfully associated with willingness to pay a premium thus can be attributed to selfish altruism. Han and Kim (2010) also found that overall image has positive effect on revisiting intentions.

### *Willingness to pay more*

A positive relationship may also exist between customers' environmental concerns and willingness to pay more for companies' green initiatives (Kang *et al.*, 2012). Laroche *et al.* (2001) claimed that consumers who consider that today's ecological problems are severe are willing to pay more for green products. Also Coddington (1990) and Suchard and Polonsky (1991) mentioned that environmentally conscious consumers are willing to pay more for ecologically compatible or green products. Regarding the hospitality industry, findings are contradictory. Manaktola and Jauhari (2007) found that the consumers would prefer to use lodgings that have adapted green practices but are not willing to pay extra for these services, while Han and Chan (2013) claimed in their study that the majority of responders are willing to pay more for green hotel rooms despite the fact that some of them did not understand why green hotels cost more.

### *Awareness*

A consumer must be aware of the existence of green hotels, their practices and services provided before the intention to visit a green hotel can arise. Measures for awareness have been extensively used to investigate advertising and marketing effectiveness (Yuan and Jang, 2008). If people do not know what are green hotels and what are the services provided there, they will not visit them nor have willingness to pay more. Awareness measures are powerful predictors of consumer choice behaviour (Holden, 1993), thus raising awareness about green hotels is crucial. Choi *et al.* (2009) using data collected in Greece and the USA found that consumers in Greece showed higher awareness on hotels' environmentally responsible practices.

## **Methodology**

An empirical research study was conducted using an online survey. A link to Facebook profiles of the researchers notified users about the online questionnaire web site.

Users willing to participate visited a tailor made web site and responded to the questionnaire. Year of birth was recorded, as the study takes into consideration Generation Y's perceptions and attitudes. From all questionnaires that were received, only those of responders in the age bracket of 1980-2000 were admitted. Finally, 159 completed and usable questionnaires were received.

The questionnaire consists of eight parts called constructs or dimensions. The dimensions are: first, what a green hotel should do or should be (adapted from Han and Chan (2013)); second, environmental concerns (adopted from Chen and Tung (2014)); third, eco-friendly activities (adopted from Han *et al.* (2011)); fourth, eco-friendly attitudes (adopted from Han *et al.* (2011)); fifth, awareness (measures were derived from the literature review. The construct consists of three items "I am aware of green hotels", "I am aware of services provided at a green hotel" and "I am aware of the practices that a green hotel adopts"); sixth, overall image (adopted from Han *et al.* (2009)); seventh, willingness to pay more (adapted from Han *et al.* (2009)). The construct consists of two items: "It is acceptable to pay more for a hotel that engages in green practices" and "I am willing to spend extra in order to stay at an environmentally friendly hotel"); and eighth, intention to visit a green hotel (adopted from Han *et al.* (2010)).

**Findings**

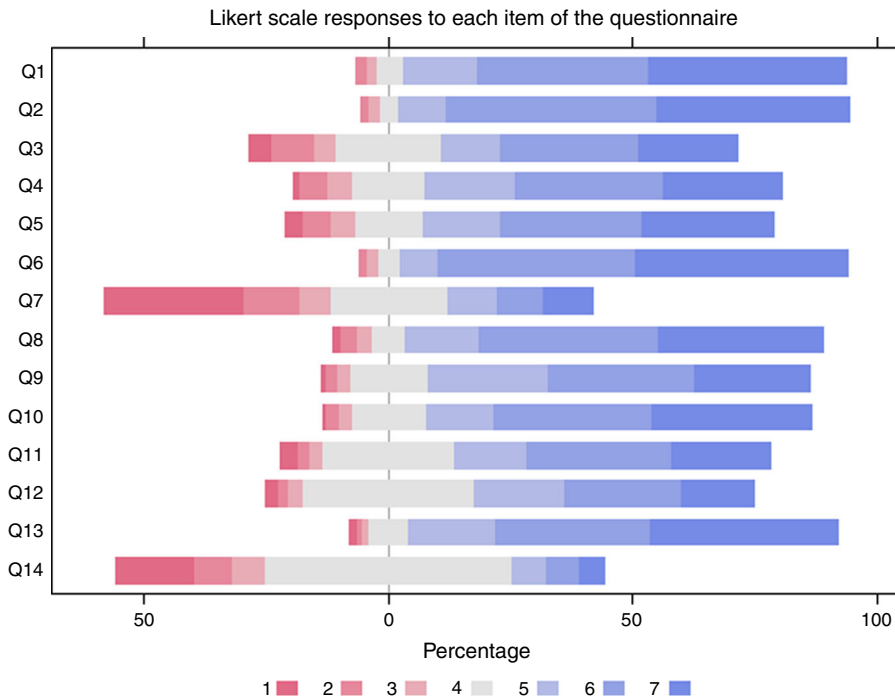
The internal consistency reliability of the questionnaire was tested by Cronbach's  $\alpha$  coefficient. The value of  $\alpha$  for each dimension displayed in Table I is sufficiently high ( $> 0.70$ ).

Responses in the dimension "what a green hotel should do or should be" are depicted in Figure 1 using diverging stacked bar charts (Robbins and Heiberger, 2011). The percentages of responders who have positive opinion about the statement (5, 6 and 7 in Likert scale) are shown to the right of the vertical line which corresponds to zero since the percentages of responders who have negative opinion (1, 2 and 3 in Likert scale) are shown to the left. The function Likert of the HH package (Heiberger, 2013) for R (R Core Team, 2014) was used in order to implement Figure 1. The figure reveals that in general green hotel practices are favourably evaluated.

The higher score was recorded at "Q6: Handling waste in an environmentally responsible way/recycling waste" followed by "Q2: Using environmentally friendly materials" and "Q1: Saving resources and energy" and "Q13: Reducing carbon emissions". Thus, responders described a green hotel as one that conserves resources, handles waste in an environmentally responsible manner and uses materials that pose no harm to the environment. However "Q3: Using single-use or individually packed consumables" was not rated negative despite the fact that the use is wasteful and pollutes

**Table I.**  
Cronbach's  $\alpha$  for the  
questionnaire  
dimensions

| Dimensions                                | Cronbach's $\alpha$ |
|---|---------------------|
| What a green hotel should do or should be | 0.85                |
| Environmental concerns                    | 0.90                |
| Eco-friendly activities                   | 0.87                |
| Eco-friendly attitudes                    | 0.85                |
| Awareness                                 | 0.97                |
| Overall image                             | 0.86                |
| Willingness to pay more                   | 0.73                |
| Intention to visit a green hotel          | 0.83                |



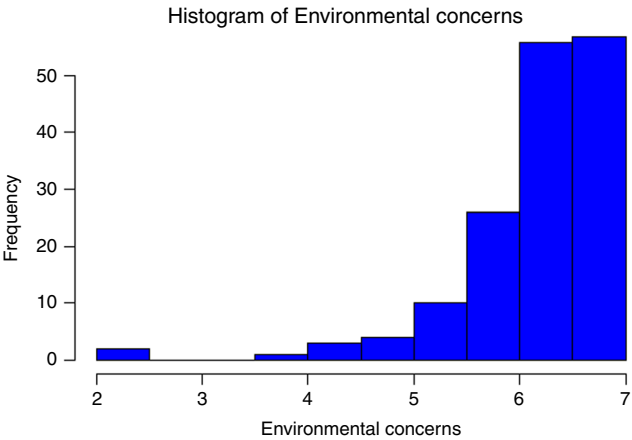
**Figure 1.**  
Likert scale responses to each item what a green hotel should do or should be

the environment. “Q7: Not changing bedding or towels everyday” has a mean value of 3.45 showing a slightly positive opinion. Choi *et al.* (2009) suggested that people in Greece have high awareness and behaviour intention on environmentally responsible practices except “lean reuse option”. The findings suggest that responders have not clear perceptions of what a green hotel should have or should be or that Generation Y are not prepared to accept some inconveniences for being ecologically responsible.

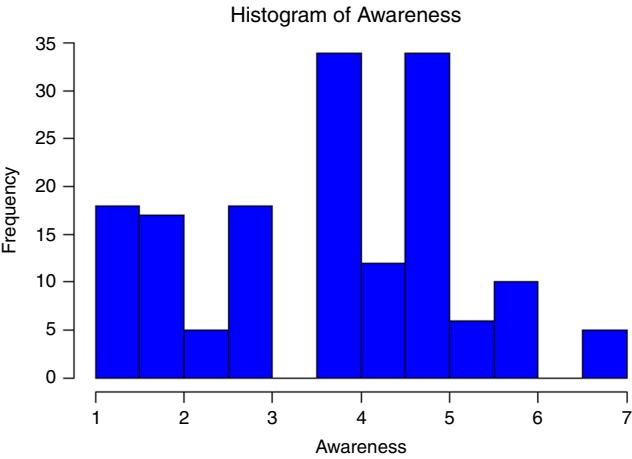
According to the findings participants are highly environmentally conscious as the mean values of questions that investigate environmental concerns are very high and mean values range from 5.71 to 6.49. The higher score was recorded at the question “Humans must live in harmony with nature in order to survive”. As time passes knowledge of individuals is enhanced, and made them more aware that life on planet is special and worthy of being conserved. Responders seem that they have a holistic worldview where all livings are vitally connected and the natural environment should be in balance in order to survive.

Regarding eco-friendly activities and attitudes participants have positive attitudes. They strongly believe that recycling will reduce pollution (mean 6.09) and that is important to save natural resources (mean 6.30). Responders seem that are aware of the fact that the amount of rubbish people create is constantly increasing and that recycling is important to reduce the huge negative impact that waste has on the natural environment. Their eco-friendly activities seem that are aligned with their attitudes. It can be claimed that responders do not believe that recycling is too much trouble for them and moreover they do not bother keeping separate piles of garbage for recycling, as mean value at these questions are 2.72 and 2.58, respectively (the questions were

**Figure 2.**  
Histogram of  
environmental  
concerns dimension



**Figure 3.**  
Histogram of  
awareness dimension



reverse coded). Thus, Greek Generation Y has understood that the impact of recycling can bring massive positive beneficial both for human beings and the environment. Generation Y's are willing to make recycling their way of life and take important steps towards reducing pollution. To motivate customers towards sustainable products hotels may adopt and use eco-footprinting analysis. If hotel customers understand the size of their ecological footprint and its effect on the environment, they may prefer to purchase sustainable products and visit green hotels (Sutcliffe *et al.*, 2008).

Participants, although they have high environmental concerns (Figure 2), it seems that they are not aware about green hotels (average 3.76) and their answers have high variability with standard deviation 1.54. These results are demonstrated by the histogram of the "Awareness" dimension in Figure 3. Garlick (2007, p. 8) defining the Generation Y customer wrote "Gen Y is a savvy generation who knows what they want and if not, can rapidly find the answer using technology". In this vein, green hotel marketers should communicate green campaigns to their potential customers and

emphasize on the importance of various environmental issues. For green hotels, new technology and social media provide a compelling channel to communicate with Generation Y consumers their practices, as they are environmentalists and open-minded enough in order to listen. As a wide variety of social media sites exist, hoteliers may concentrate their attention and marketing efforts on vertically focused networks on social responsibility and the environment. Moreover hoteliers may take advantage of user generated content on social media to identify ways to improve sustainable production practices (Sigala, 2014).

Furthermore, “willingness to pay more” has essentially lower average (3.85) than the “intension to visit” (5.13) a green hotel. This empirical finding is verified by a paired sample *t*-test which has *p*-value < 2.2e-16. Previous studies (Choi *et al.*, 2009; Sigala, 2014) have also identified a gap between attitude and behaviour. Consumers claim to prefer sustainable products and services; however they do not actually buy or use them. Moreover, consumers intent to pay conventional-hotel prices for green hotels (Kim and Han, 2010). In order to enhance Generation Y’s intention to visit a green hotel property, hotel managers should pay more attention to find and use ways to increase positive attitude. One important reason for Generation Y’s hotel customers that can make a green decision is to be aware of benefits and favourable outcomes of engaging in eco-friendly behaviours. Thus, green properties should differentiate themselves from the similar non-green properties, promote their commitment to various ecologically practices and communicated them to their potential customers. By doing so, customers would gain stronger beliefs that they can be more socially responsible for protecting the environment, if they choose to stay at a green hotel (Table II).

### Conclusions and future work

The aim of the paper is twofold. First it aims at examining hotel customers’ perceptions of what a green hotel should do or should be and next at examining the factors involved in eco-friendly decision-making processes and intentions to choose a green hotel. To enable further understanding within the green debate, a generational approach was undertaken, thus Generation Y’s attitudes towards green hotels were investigated. Although Generation Y consumers are highly environmentally conscious a clear gap exists in awareness about green hotels.

|  | Mean | SD   |
|--|------|------|
| Saving resources and energy  | 6.00 | 1.13 |
| Using environmentally friendly materials                             | 6.09 | 1.04 |
| Using single-use or individually packed consumables                  | 4.94 | 1.73 |
| Cultivating a physical environment with plant or green decorations   | 5.31 | 1.50 |
| Reducing unnecessary products or services                            | 5.29 | 1.63 |
| Handling waste in an environmentally responsible way/recycling waste | 6.13 | 1.06 |
| Not changing bedding or towels everyday                              | 3.45 | 2.04 |
| Reducing waste and pollution   | 5.75 | 1.35 |
| Adopting a comfortable and humanistic design                         | 5.45 | 1.28 |
| Environmental publicity  | 5.66 | 1.33 |
| Providing shuttle bus service  | 5.17 | 1.48 |
| Using high-tech products   | 4.96 | 1.37 |
| Reducing carbon emissions  | 5.88 | 1.24 |
| Constructing the hotel on a hilltop                                  | 3.67 | 1.58 |

**Table II.**  
What a green  
hotel should do  
or should be



Responders have not clear perceptions of what a green hotel should do or should be. Their knowledge about green practices is restricted at the macro-level practices, such as handling waste in an environmental friendly manner, saving energy and reducing carbon emissions. While they are not aware about micro-level practices such as changing linen less frequently and not using single-use or individually packed consumables, or they have in mind different living standards and health conditions. It is also possible that they are not always prepared to accept continuous inconveniences despite the fact that they want to be ecologically responsible. As young consumers are becoming more and more aware of environmental issues the hotel industry should not only adopt green practices, sustainable culture and values, but also to communicate them, create awareness, educate consumers on conservation of resources and work on improving customers' perceptions. Green marketing strategies should be adopted by green hotels in order to position them distinctly in the market place. Tilikidou and Delistavrou (2014) identified three clusters of potential customers of green hotels in Greece. Reluctant (26.04 per cent), willing (34.19 per cent) and hesitant (39.77 per cent) customers. Hotels managers should use a creative promotional marketing mix to maximize the green image of a hotel as a competitive advantage in order to turn consumers from "Reluctant" and "Hesitant" to "Willing".

The study points out that Generation Y consumers are not willing to pay more for environmental friendly practices despite a positive disposition towards the environment. Perhaps this happens due to the fact that they are not aware and do not fully understand why green hotels cost more or because they think that a green hotel does not offer an adequate level of service and product quality comparable to a non-green hotel. In this vein, hotel industry should adapt pricing policies to customers' needs and wants and keep prices of green hotels at the same level with conventional-hotel prices and ensure consumers for quality of services. Moreover, hoteliers may create their own sustainable initiatives (Sigala, 2014) and beneficial outcomes not available at non-green hotels. As Generation Y is a technology savvy generation, hotels should adopt strategies, such as use of social media, for enhancing and managing customer involvement.

Even though the study offers a first piece of evidence on factors involved in choosing a green hotel, a Structural Equation Modelling approach should be used to investigate the relationship among the proposed constructs and the intention to visit a green hotel. Moreover the study limits the knowledge on the specific constructs. Further integration of additional constructs is needed in order to investigate in depth consumers perceptions and intention to visit a green hotel.

## References

- Albert, E. (2014), "Sustainable hotels, how the industry is moving beyond green", Occidental College, available at: [www.oxy.edu/sites/default/files/assets/UEP/Comps/2011/Erika%20Albert\\_Sustainable%20Hotels%20How%20the%20Industry%20is%20Moving%20Beyond%20Green.pdf](http://www.oxy.edu/sites/default/files/assets/UEP/Comps/2011/Erika%20Albert_Sustainable%20Hotels%20How%20the%20Industry%20is%20Moving%20Beyond%20Green.pdf) (accessed 6 January 2015).
- Amores-Salvado, J., Martin-de Castro, G. and Navas-Lopez, J. (2014), "Green corporate image: moderating the connection between environmental product innovation and firm performance", *Journal of Cleaner Production*, Vol. 83, November, pp. 356-365.
- Bansal, P. and Roth, K. (2000), "Why companies go green: a model of ecological responsiveness", *Academy of Management Journal*, Vol. 43 No. 4, pp. 717-736.
- Bohdanowicz, P. and Martinac, I. (2003), "Attitudes towards sustainability in chain hotels – results of a European study", *International Conference on Smart and Sustainable Built Environment, CIB 2003, 19-21 November, Brisbane*.

- Bowe, R. (2005), "Going green: red stripe, yellow curry and green hotels", *The Environmental Magazine*, Vol. 16 No. 1, pp. 52-53.
- Braga Junior, S.S., Satolo, E.G., da Silva Gabriel, M.L.D. and da Silva, D. (2014), "The relationship between environmental concern and declared retail purchase of green products", *International Journal of Business and Social Science*, Vol. 5 No. 2, pp. 25-35.
- Chan, E., Hon, A., Chan, W. and Ocumus, F. (2014), "What drives employees' intentions to implement green practices in hotels? The role of knowledge, awareness, concern and ecological behaviour", *International Journal of Hospitality Management*, Vol. 40, July, pp. 20-28.
- Chan, E.S.W. and Wong, S.C.K. (2006), "Motivations for ISO 14001 in the hotel industry", *Tourism Management*, Vol. 27 No. 3, pp. 481-492.
- Chan, K. (1999), "Market segmentation of green consumers in Hong Kong", *Journal of International Consumer Marketing*, Vol. 12 No. 2, pp. 7-24.
- Chen, J.S., Legrand, W. and Sloan, P. (2005), "Environmental performance analysis of german hotels", *Tourism Review International*, Vol. 9 No. 1, pp. 61-68.
- Chen, M.-F. and Tung, P.-J. (2014), "Developing an extended theory of planned behavior model to predict consumers' intention to visit green hotels", *International Journal of Hospitality Management*, Vol. 36, January, pp. 221-230.
- Choi, G., Parsa, H.G., Sigala, M. and Putrevu, S. (2009), "Consumers' environmental concerns and behaviors in the lodging industry: a comparison between Greece and the United States", *Journal of Quality Assurance in Hospitality and Tourism*, Vol. 10 No. 2, pp. 93-112.
- Coddington, W. (1990), "It's no fad: environmentalism is now a fact of corporate life", *Marketing News*, Vol. 24 No. 21, p. 7.
- DiPietro, R., Cao, Y. and Partlow, C. (2013), "Green practices in upscale foodservice operations: customer perceptions and purchase intentions", *International Journal of Contemporary Hospitality Management*, Vol. 25 No. 5, pp. 779-796.
- Dodd, T.H., Hoover, L.C. and Revilla, G. (2001), "Environmental tactics used by hotel companies in Mexico", *International Journal of Hospitality and Tourism*, Vol. 1 Nos 3/4, pp. 111-127.
- Dunlap, R.E. and Jones, R. (2002), "Environmental concern: conceptual and measurement issues", in Dunlap, R.E. and Michelson, W. (Eds), *Handbook of Environmental Sociology*, Greenwood Press, London, pp. 482-542.
- Gan, A. (2006), "The impact of public scrutiny on corporate philanthropy", *Journal of Business Ethics*, Vol. 69 No. 3, pp. 217-236.
- Garlick, R. (2007), "Reaching Gen Y on both sides of the cash register: as customers and retail employees", Achievement Awards Group, available at: [www.awards.co.za/images/extra/reaching\\_gen\\_y\\_ver02.pdf](http://www.awards.co.za/images/extra/reaching_gen_y_ver02.pdf) (accessed 28 December 2014).
- Graci, S. and Kuehnle, J. (2010), "How to increase your bottom line by going green", available at: <http://green.hotelscombined.com/Pages/MainGreen/Downloads/green-hotel-whitepaper.pdf> (accessed 2 January 2015).
- Green Hotels Association (2008), "What are Green Hotels?", available at: [www.greenhotels.com/](http://www.greenhotels.com/) (accessed 6 January 2015).
- Han, H. and Kim, Y. (2010), "An investigation of green hotel customers' decision formation: developing an extended model of the theory of planned behavior", *International Journal of Hospitality Management*, Vol. 29 No. 4, pp. 659-668.
- Han, H., Hsu, L. and Sheu, C. (2010), "Application of the theory of planned behavior to green hotel choice: testing the effect of environmental friendly activities", *Tourism Management*, Vol. 31 No. 3, pp. 325-334.

- Han, H., Hsu, L.T. and Lee, J.S. (2009), "Empirical investigation of the roles of attitudes toward green behaviors, overall image, gender, and age in hotel customers' eco-friendly decision-making process", *International Journal of Hospitality Management*, Vol. 28 No. 4, pp. 519-528.
- Han, H., Hsu, L.-T.J., Lee, J.-C. and Sheu, C. (2011), "Are lodging customers ready to go green? An examination of attitudes, demographics, and eco-friendly intentions", *International Journal of Hospitality Management*, Vol. 30 No. 2, pp. 345-355.
- Han, X. and Chan, K. (2013), "Perception of green hotels among tourists in Hong Kong: an exploratory study", *Services Marketing Quarterly*, Vol. 34 No. 4, pp. 339-352.
- Heiberger, R.M. (2013), "HH: statistical analysis and data display: Heiberger and Holland", R package version 2.3-37, available at: <http://CRAN.R-project.org/package=HH> (accessed 15 July 2014).
- Holden, S. (1993), "Understanding brand awareness: let me give you a clue!", in McAlister, L. and Rothschild, M.L. (Eds), *NA – Advances in Consumer Research*, Vol. 20, Association for Consumer Research, Provo, UT, pp. 383-388.
- International Tourism Partnership (2008), "Going green.minimum standards towards a sustainable hotel", available at: [www.tourismpartnership.org/](http://www.tourismpartnership.org/) (accessed 12 February 2015).
- Jhawar, A., Kohli, G., Li, J., Modiri, N., Mota, V., Nagy, R., Poon, H. and Shum, S. (2012), "Eco-certification programs for hotels in California: determining consumer preferences for green hotels", white paper, Walt Disney Imagineering, Los Angeles, CA.
- Jones, P., Hillier, D. and Comfort, D. (2014), "Sustainability in the global hotel industry", *International Journal of Contemporary Hospitality Management*, Vol. 26 No. 1, pp. 5-17.
- Juholin, E. (2004), "For business or for the good of all? A finnish approach to corporate social responsibility", *Corporate Governance*, Vol. 4 No. 3, pp. 20-32.
- Kalafatis, S.P., Pollard, M., East, R. and Tsogas, M.H. (1999), "Green marketing and Ajzen's theory of planned behavior: a cross-market examination", *Journal of Consumer Marketing*, Vol. 16 No. 5, pp. 441-460.
- Kang, K.H., Stein, L., Heo, C.Y. and Lee, S. (2012), "Consumers' willingness to pay for green initiatives of the hotel industry", *International Journal of Hospitality Management*, Vol. 3 No. 2, pp. 564-572.
- Kapiki, S. (2012), "Implementing sustainable practices in Greek eco-friendly hotels", *Journal of Environmental Protection and Ecology*, Vol. 13 No. 2A, pp. 1117-1123.
- Kasim, A. (2004), "Socio-environmentally responsible hotel business: do tourists to Penang Island, Malaysia care?", *Journal of Hospitality and Leisure Marketing*, Vol. 11 No. 4, pp. 5-28.
- Khaola, P.P., Potiane, B. and Mokheti, M. (2014), "Environmental concern, attitudes towards green products and green purchase intentions of consumers in Lesotho", *Ethiopian Journal of Environmental Studies and Management*, Vol. 7 No. 4, pp. 361-370.
- Kim, H., Chang, H., Lee, J.W. and Huh, C. (2011), "Exploring gender differences on generation y's attitudes towards green practices in a hotel", *16th Graduate Students Research Conference, Houston, TX, 6-8 January*.
- Kim, Y. and Han, H. (2010), "Intention to pay conventional-hotel prices at a green hotel – a modification of the theory of planned behavior", *Journal of Sustainable Tourism*, Vol. 18 No. 8, pp. 997-1014.
- Kiron, D., Kruschwitz, N., Haanaes, K., Reeves, M. and Goh, E. (2013), "The innovation bottom line", Findings from the 2012 Sustainability and Innovation Global Executive Study and Research Report, *MIT Sloan Management Review*, Cambridge, MA, 5 February, available at: <http://sloanreview.mit.edu/reports/sustainability-innovation/> (accessed 5 January 2015).

- Laroche, M., Bergeron, J. and Babaro-Forleo, G. (2001), "Targeting consumers who are willing to pay more for environmentally friendly products", *Journal of Consumer Marketing*, Vol. 18 No. 6, pp. 503-520.
- Lee, J.S., Hsu, L.J., Han, H. and Kim, Y. (2010), "Understanding how consumers view green hotels: how a hotel's green image can influence behavioural intentions", *Journal of Sustainable Tourism*, Vol. 18 No. 7, pp. 901-914.
- Lee, M., Han, H. and Willson, G. (2011), "The role of expected outcomes in the formation of behavioral intentions in the green-hotel industry", *Journal of Travel and Tourism Marketing*, Vol. 28 No. 8, pp. 840-855.
- Manaktola, K. and Jauhari, V. (2007), "Exploring consumer attitude and behaviour towards green practices in the lodging industry in India", *International Journal of Contemporary Hospitality Management*, Vol. 19 No. 5, pp. 364-377.
- Maritz Poll (2007), "Environmentally friendly retail marketing – all hype or consumer preference?" available at: [www.maritz.com/Maritz-Poll/2007/Maritz-Poll-Environmentally-Friendly-Retail-Marketing-All-Hype-or-Consumer-Preference](http://www.maritz.com/Maritz-Poll/2007/Maritz-Poll-Environmentally-Friendly-Retail-Marketing-All-Hype-or-Consumer-Preference) (accessed 5 January 2015).
- Millar, M. and Baloglu, S. (2008), "Hotel guests preferences for green hotel attributes", paper presented at the 26th EuroCHRIE, Dubai, 11-14 October, available at: <http://pc.parnu.ee/~htooman/EuroChrie/Welcome%20to%20EuroCHRIE%20Dubai%202008/papers/hotel%20guests%20preferences%20for%20green%20hotels.pdf> (accessed 12 February 2015).
- Mostafa, M. (2006), "Antecedents of Egyptian consumers' green purchase intentions: a hierarchical multivariate regression model", *Journal of International Consumer Marketing*, Vol. 19 No. 2, pp. 97-126.
- Noor, N.A.M. and Kumar, D. (2014), "ECO friendly 'activities' VS ECO friendly 'attitude': travelers intention to choose green hotels in Malaysia", *World Applied Sciences Journal*, Vol. 30 No. 4, pp. 506-513.
- PwC (2013), "PwC's NextGen: a global generational study evolving talent strategy to match the new workforce reality", available at: [www.pwc.com/en\\_GX/gx/hr-management-services/pdf/pwc-nextgen-study-2013.pdf](http://www.pwc.com/en_GX/gx/hr-management-services/pdf/pwc-nextgen-study-2013.pdf) (accessed 9 December 2014).
- R Core Team (2014), "R: a language and environment for statistical computing", R Foundation for Statistical Computing, Vienna, available at: [www.R-project.org/](http://www.R-project.org/) (accessed 1 December 2014).
- Rahman, I., Reynolds, D. and Svaren, S. (2012), "How 'green' are North American hotels? An exploration of low-cost adoption, practices", *International Journal of Hospitality Management*, Vol. 31 No. 3, pp. 720-727.
- Robbins, N.B. and Heiberger, R.M. (2011), "Plotting Likert and other rating scales", *Joint Statistical Meetings Proceedings, Section on Survey Research Methods. American Statistical Association, Alexandria, VA*, pp. 1058-1066.
- Robinet, E. and Giannelloni, J.L. (2010), "Do hotels' 'green' attributes contribute to customer satisfaction?", *Journal of Services Marketing*, Vol. 24 No. 2, pp. 157-169.
- Sigala, M. (2014), "Customer involvement in sustainable supply chain management a research framework and implications in tourism", *Cornell Hospitality Quarterly*, Vol. 55 No. 1, pp. 76-88.
- Smerecnik, K.R. and Andersen, P.A. (2011), "The diffusion of environmental sustainability innovations in North American hotels and ski resorts", *Journal of Sustainable Tourism*, Vol. 19 No. 2, pp. 171-196.
- Suchard, H.T. and Polonsky, M.J. (1991), "A theory of environmental buyer behaviour and its validity: the environmental action-behaviour model", in Gilly, M., Leigh, T., Richins, M., Venkatesh, A., Dholakia, R.R., Dwyer, F.R., Dubinsky, A., Curry, D., Kotabe, M. and Hills, G. (Eds), *AMA Summer Educators' Conference Proceedings*, Vol. 2, American Marketing Association, Chicago, IL, pp. 187-201.

- Sullivan, P. and Heitmeyer, J. (2008), "Looking at Gen Y shopping preferences and intentions: exploring the role of experience and apparel involvement", *International Journal of Consumer Studies*, Vol. 32 No. 3, pp. 285-295.
- Sutcliffe, M., Hooper, P. and Howell, R. (2008), "Can eco-footprinting analysis be used successfully to encourage more sustainable behaviour at the household level?", *Sustainable Development*, Vol. 16 No. 1, pp. 1-16.
- Takács-Sánta, A. (2007), "Barriers to environmental concern", *Research in Human Ecology*, Vol. 14 No. 1, pp. 26-38.
- Tilikidou, E. and Delistavrou, A. (2014), "Do beliefs affect customers' intentions to choose green hotels?", *International Journal on Strategic Innovative Marketing*, Vol. 1 No. 1, pp. 51-60.
- Vining, J. and Ebreo, A. (1990), "What makes a recycler? A comparison of recyclers and nonrecyclers", *Environment and Behavior*, Vol. 22 No. 1, pp. 55-73.
- Yuan, J. and Jang, S. (2008), "The effects of quality and satisfaction on awareness and behavioral intentions: exploring the role of a wine festival", *Journal of Travel Research*, Vol. 46 No. 3, pp. 279-288.
- Zimmer, M.R., Stafford, T.F. and Stafford, M.R. (1994), "Green issues: dimensions of environmental concern", *Journal of Business Research*, Vol. 30 No. 1, pp. 63-74.

### Further reading

- Roberts, J.A. (1996), "Green consumers in the 1990s: profile and implications for advertising", *Journal of Business Research*, Vol. 36 No. 3, pp. 217-231.

### About the authors

Professor George Karavasilis received his BA in Mathematics from the University of Ioannina, Greece. He holds a PhD in Stochastic Point Processes from the Polytechnic School of Democritus University of Thrace and MEd from the Hellenic Open University. His research interests include time series analysis, statistical software and educational assessment. He is currently an Adjunct Professor at the Business Administration department, Technological Educational Institute of Central Macedonia. Professor George Karavasilis is the corresponding author and can be contacted at: gkaravas@ee.duth.gr

Dafni-Maria Nerantzaki holds a BA in Mathematics and a BA in Informatics. Currently she is an MBA Student at the Technological Education Institute of Central Macedonia. Her research interests include e-government and e-services.

Panagiotis Pantelidis is an Assistant Professor at the Business Administration Department, Technological Education Institute of Central Macedonia. He holds a BA in Economics and a PhD in Finance. His research interests include mergers and acquisitions, internal audit and accounting systems for tourism.

Dimitrios Paschaloudis is a Professor at the Technological Education Institute of Central Macedonia. He studied sociology and marketing and holds a PhD degree in marketing, University Park X Nanterre, France. His research interests include marketing, services in tourism and provision of e-services.

Vasiliki Vrana is an Assistant Professor at the Business Administration department, Technological Education Institute of Central Macedonia. She holds a BA in Mathematics, a Masters in Information Systems and a PhD in Computer Science. Her research interests include the study of the www and web 2.0 in tourism and hospitality industries, e-government adoption and social media.

---

For instructions on how to order reprints of this article, please visit our website:

[www.emeraldgroupublishing.com/licensing/reprints.htm](http://www.emeraldgroupublishing.com/licensing/reprints.htm)

Or contact us for further details: [permissions@emeraldinsight.com](mailto:permissions@emeraldinsight.com)