

Consumers' Willingness to Pay for Green Hotels: The Case of Millennials in Greece

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Abstract

As environmental awareness is increasing, the number of people interested in staying at green hotels is also rising. This paper aims to investigate Greek millennial consumers' willingness to pay for green hotels. Participants' environmental perceptions are measured and analyzed using the NEP scale as well. The research was carried out during the period between 1 February 2022 and, 1 May 2022, while 425 valid questionnaires were analyzed. The main finding of this research shows a positive correlation between respondents' environmental perceptions and their willingness to pay more in order to stay in a green hotel. This result can have significant managerial and policy implications due to the importance of tourism for the Greek economy.

Keywords

Green hotels, eco-friendly hotels, green tourism, sustainable tourism, willingness to pay, environmental awareness, New Environmental Paradigm.

1. Introduction

The growing interest in environmental sustainability has led several firms to adopt practices that are environmentally friendly [1-2]. Environmental sustainability is in the spotlight of academic research and it is linked with the concept of ecotourism [3]. The term “ecotourism”, also known as “green tourism”, first appeared in the 1980s as a result of the global acknowledgement and response of tourism industry to environmentally sustainable practices.

The growth of ecotourism can be primarily attributed to the growing environmental awareness. As societies become more aware of the harm caused on the environment, customers are willing to purchase products and engage in practices that appear to help to protect and preserve the environment, which are labeled as either “green” or “eco-friendly” [4]. Thus, the rising awareness of human activities' negative impact on the environment has led firms, including hotels, to adopt environmentally friendly practices and become environmentally responsible [5].

Various findings on willingness to pay for environmental friendly practices in hotels are reported in the relevant literature. Previous studies show that guests' environmental awareness can influence their willingness to pay for green hotels [6]. As a result, over the last two decades, a large number of hotels incorporate green practices [7]. According to a survey conducted for international green hotels, the percentage of respondents who prefer to stay in green hotels is equal to 90% [8], while in another research this percentage exceeds 92% [9].

However, concerning the issue of how much hotel guests are willing to pay for green hotels, Han (2021) [10] found that guests are willing to pay for regular hotel prices. Similarly, Obgeide (2013) [11] found that even though hotel guests are supportive of green practices, they are largely unwilling to pay

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an extra amount of money to stay in them. Particularly, a 75% of hotel guests are willing to pay the same amount of money or less. In their study, Millar and Mayer (2013) [12] found that the majority of hotel guests are willing to pay up to 10% more. Manaktola and Jauhari (2007) [13] also found that a 40% of guests are willing to pay from 4% to 6% more in order to stay in a green hotel.

Tourism is one the major sectors of the Greek economy. More specifically, tourism accounts about 11% of the national Gross Domestic Product [14]. In Greece, green hotels are increasing every year. Either already existing hotels proceed with significant environmental improvements, or new hotels are built from scratch with environmental protection as their main focus. Based on the existing data, about 370 green hotels (hotels awarded with a Green Key eco-label) already operate in Greece. These data mean that Greece is now ranked as the third country in the world based on the number of green hotels [14]. Thus, green hotels seem to be an in important component of the Greek tourism industry.

Despite the extensive research conducted worldwide, studies regarding willingness to pay for green hotels in the Greek area are limited [15]. Thus, the aim of the present research is to examine Greek consumers' willingness to pay for green hotels through the case of millennials.

The paper is organized as follows. In the second section the research methodology is presented. In the third section the research results are presented and discussed. Last, the conclusions of the research are presented in the fourth section.

2. Research Methodology

To measure respondents' environmental perceptions and willingness to pay for green hotels an empirical study was carried out. More specifically, a structured questionnaire was responded by millennials living in Greece. The questionnaire was distributed electronically, while 425 valid responses were collected during the period between 1 February 2022 and, 1 May 2022.

The sample consists exclusively of millennials. Millennials, also referred as Generation Y or Gen Y, are the people born between and the early 1980s and the 2000s [16]. We have focused in this generation because Millennials are considered as the most socially responsible consumers [17] and, at the same time they will dominate the market for several years [18].

The first part of the questionnaire contained five questions about the environmentally responsible behavior. The second part was dedicated to willingness to pay for green hotels, while the third part of the questionnaire was dedicated to environmental perceptions. Last, the fourth part consisted of six questions regarding the demographic profile of the respondents. The questionnaire consisted of dichotomous questions, multiple choice questions and 5-point Likert type questions.

Environmental perceptions were measured using the New Ecological Paradigm (NEP) scale. The scale's items were coded from 1 referring to "strongly disagree" to 5 referring to "strongly agree". A high score in the NEP scale indicates an ecocentric orientation [19-20]. Furthermore, all the other questions were obtained from the relevant literature [21-23].

Concerning the questionnaire's internal consistency, Cronbach's alpha is applied. The coefficient's results show high internal consistency, since its value for the first part of the questionnaire concerning environmentally responsible behavior is 0.799, while for the second part concerning willingness to pay for green hotels is 0.765 and, for the third part concerning the NEP scale is 0.832.

3. Research Results

3.1. Respondents' Demographics

Initially, respondents' demographics are measured. Concerning their gender, 65.6% of them are females, while 34.4% are males. The majority of respondents belong in the 18-25 age group (49.1%) followed by the 26-35 age group (32.1%) and the 36-45 age group (18.8%). Most of them (81.7%) hold a bachelor's degree, 10.2% of them hold a secondary education or an associate's degree, while 8.1% hold a master's degree. Concerning the place of residence, most of the respondents reside in urban areas (78.6%) and semi-urban areas (18.3%). 3.1% of respondents live in rural areas. Last, as far as the annual income is concerned, most of the respondents (45.8%) reported between 5.001 and 10.000 Euros, 27.5%

reported less than 5.000 Euros, 16% reported between 10,001 and 15,000 Euros, 6.9% reported between 15,001 and 20,000 Euros and, 3,8% reported an annual income higher than 20,001 Euros per year.

3.2. Environmentally Responsible Behavior

The data provided in the following table measure respondents' environmentally responsible behavior based on five different practices.

Table 1
Environmentally responsible behavior

	Totally disagree	Disagree	Neutral	Agree	Totally agree
Limit use of energy	1.20%	7.20%	26.70%	58.00%	6.90%
Recycle	1.10%	2.00%	9.20%	53.40%	34.40%
In the case of two products with the same price and quality choose the green one	1.50%	3.10%	29.00%	47.30%	19.10%
Environmentally sustainable practices influence consumer behavior	1.20%	2.70%	24.00%	58.80%	13.30%

The first four variables indicate a high level of environmentally responsible behavior since positive answers are recorded for the majority of the respondents.

However, the fifth question indicated that most of them (77.10%) do not financially aid or participate in an environmental organization.

3.3. Willingness to Pay for Green Hotels

Willingness to pay for green hotels is examined through the statement “*I would pay more to stay in a hotel which is environmentally friendly*”. As shown in Figure 1, it is revealed that the majority of the participants (61.90%) responded positively, while 30.50% of them were neutral, which indicates a high level of endorsement.

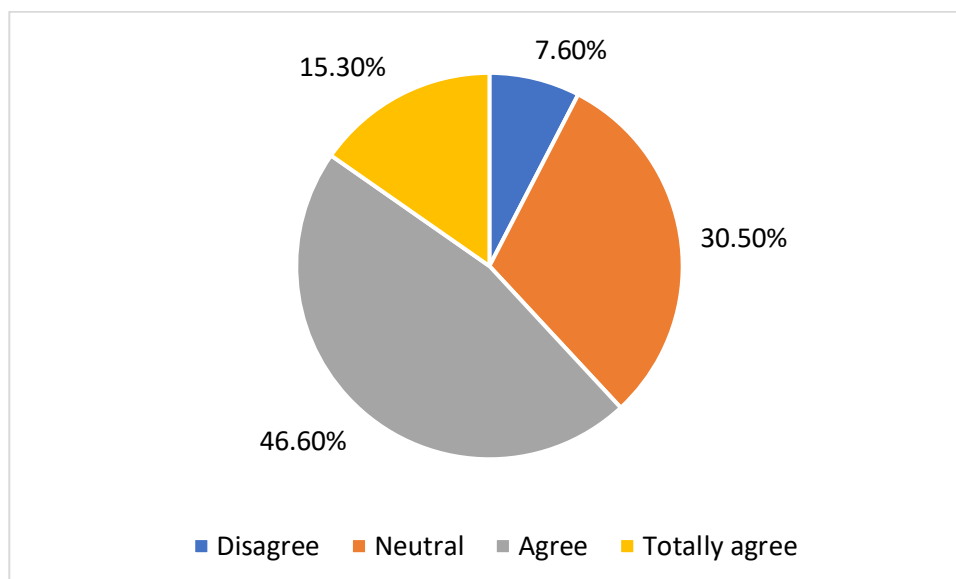


Figure 1: Respondents' willingness to pay more in order to stay in an environmentally friendly hotel.

Furthermore, the participants, were asked to report the extra amount they are willing to pay in order to stay in a green hotel. Based on the following figure, it is obtained that most of them are willing to pay a low extra amount in order to stay in a green hotel. A similar pattern of results was obtained in the study by Kang et al. (2012) [23]. This result could be explained by the low income of the participants.

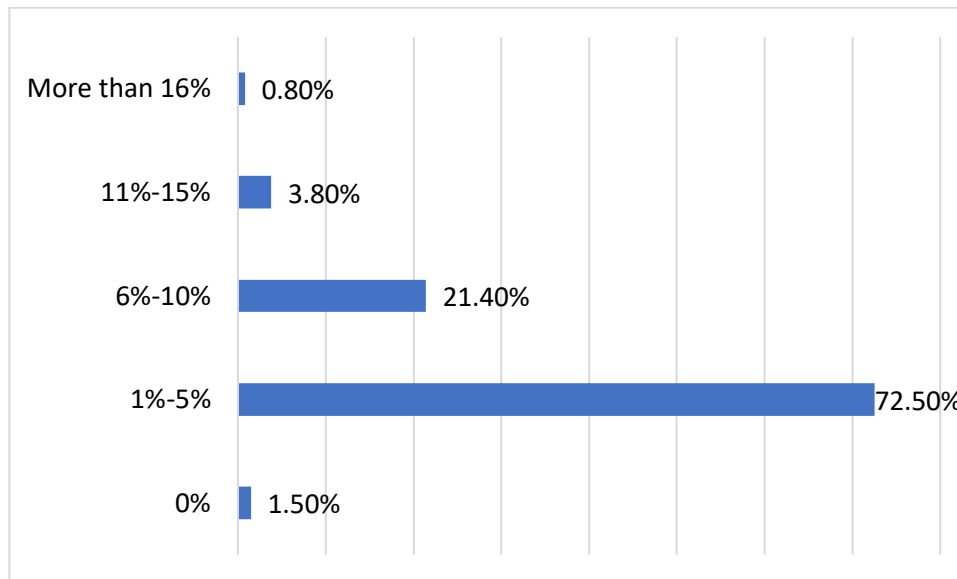


Figure 2: Extra rate respondents are willing to pay in order to stay in a green hotel.

3.4. Environmental Perceptions and Willingness to Pay

As already mentioned, the NEP scale has been used to measure participants' environmental perceptions. Based on the responses, the NEP scale's mean score is equal to 3.38. Thus, taking into consideration the fact that the NEP scale score is measured in a 5-point Likert scale where 1 refers to "strongly disagree" and 5 to "strongly agree", we conclude that most of the respondents are characterized environmentally sensitive [20].

In order to examine the relationship between environmental perceptions and the willingness to pay more in order to stay in a green hotel, Spearman's correlation coefficient is used.

Based on the coefficient's results, we obtain a statistically significant positive correlation (sig. = 0.012). This means that the NEP scale's mean score and the willingness to pay more in order to stay in a green hotel are correlated. This result is in accordance with the findings of the study of Kang et al. (2012) [23] who pointed out a positive relationship between high levels of environmental concern and willingness to pay more for green hotel practices. Additionally, Han et al. (2011) [10] found that the most important reason affecting hotel guests to pay more to stay in a green hotel, is the level of their environmental concern.

3.5. Demographics and Willingness to Pay

To examine the relationship between respondents' demographics and their willingness to pay more in order to stay in a green hotel two different statistical tests have been used.

First, concerning respondents' age, level of education and annual income, Spearman's correlation coefficient is used. Based on the p-values obtained, there is no statistically significant correlation between respondents' age (sig. = 0.981), level of education (sig. = 0.950) and annual income (sig. = 0.472) and their willingness to pay more in order to stay in a green hotel. This result is irrelevant with the results of other researchers [24]. Lastly, the results regarding income level, which was relatively low, are in contradiction with the study by Philippsen et al. (2017) [25] who found people with a higher income to pay more importance on green hotels. This contradiction may be supported by

the fact that the average monthly salary in Greece is low compared to other countries and the fact that most of the respondents have about the same level of annual income.

Furthermore, as far as the respondents' gender, place of residence, profession and financial aid or participation in an environmental organization are concerned, Pearson's chi-square test of independence is used. Based on the test's results, respondents' gender (sig. = 0.013) and financial aid or participation in an environmental protection organization (sig. = 0.005) are found to be correlated with their willingness to pay more in order to stay in green hotel at a statistically significant level. Concerning gender, the above results confirm some findings of the existing literature since they are in line with the results of Fuentes-Moraleda et al. [22] who found that women are more frequent customers of green hotels compared to men.

4. Conclusions

Consumers' awareness and concerns for the environment have grown dramatically, while environmental concerns are now between the most important factors in consumer decision making [26-27]. This trend applies in hotel industry as well.

This paper investigated the relationship between Greek millennials' environmental perceptions and their willingness to pay for green hotels. The results found a positive correlation between the above mentioned variables. Furthermore, most of the participants reported that they are willing to pay an extra amount between 1% and 5% in order to stay in a green hotel.

The findings of this research can be used to develop the understanding of environmental sustainability in hotels in Greece. Given the importance of hotel guests' environmental awareness, it is crucial to make them aware about the concept of environmental sustainability and its application in hotels. Information about green certifications should also be accessible to potential guests as they are found to positively affect their willingness to pay [28]. This also emphasizes the need to encourage hotel guests to take part in reducing their own impact on the environment. The adoption of a greener mindset will protect the environment and boost competitiveness as well [1-2].

It is considered necessary to refer to the limitations of the research. Thus, it should be noted that the obtained results could be representative only of the Millennials. As far as it is concerned it is proposed that a future research should concern all the consumers' generations, since generations like Baby Boomers are still important for the tourism industry [29].

5. References

- [1] Skordoulis, Michalis, Stamatios Ntanos, Grigorios Kyriakopoulos, Garyfallos Arabatzis, Spyros Galatsidas, and Miltiadis Chalikias. "Environmental innovation, open innovation dynamics and competitive advantage of medium and large-sized firms." *Journal of Open Innovation: Technology, Market, and Complexity* 6.4 (2020): 195.
- [2] Skordoulis, Michalis, Grigorios Kyriakopoulos, Stamatios Ntanos, Spyros Galatsidas, Garyfallos Arabatzis, Miltiadis Chalikias, and Petros Kalantonis. "The Mediating Role of Firm Strategy in the Relationship between Green Entrepreneurship, Green Innovation, and Competitive Advantage: The Case of Medium and Large-Sized Firms in Greece." *Sustainability* 14.6 (2022): 3286.
- [3] Kapera, Izabela. "Sustainable development in the hotel industry: Between theory and practice in Poland." *Turyzm* 28.2 (2018): 23-30.
- [4] Vermeir, Iris, and Wim Verbeke. "Sustainable food consumption: Exploring the consumer "attitude-behavioral intention" gap." *Journal of Agricultural and Environmental ethics* 19.2 (2006): 169-194.
- [5] Drosos, Dimitris, and Michalis Skordoulis. "The role of environmental responsibility in tourism." *Journal for International Business and Entrepreneurship Development* 11.1 (2018): 30-39.
- [6] Tzschentke, Nadia A., David Kirk, and Paul A. Lynch. "Going green: Decisional factors in small hospitality operations." *International Journal of Hospitality Management* 27.1 (2008): 126-133.
- [7] Revilla, Guadalupe, Tim H. Dodd, and Linda C. Hoover. "Environmental tactics used by hotel companies in Mexico." *International Journal of Hospitality & Tourism Administration* 1.3-4 (2001): 111-127.

- [8] Lee, Jin-Soo, Hsu Li-Tzang (Jane), Han Heesup, and Kim Yunhi. "Understanding how consumers view green hotels: how a hotel's green image can influence behavioural intentions." *Journal of sustainable tourism* 18.7 (2010): 901-914.
- [9] Papadopoulos, Ioannis, Marios Trigkas, Aikaterini Papadopoulou, Argiro Mallisiova, and Fotini Mpakogiorgou. "Greek Consumers' Awareness and Perceptions for Green Hotels and Green Furniture." *Strategic Innovative Marketing and Tourism*. Springer, Cham, 2019. 583-592.
- [10] Han, Heesup. "Consumer behavior and environmental sustainability in tourism and hospitality: A review of theories, concepts, and latest research." *Journal of Sustainable Tourism* 29.7 (2021): 1021-1042.
- [11] Ogbeide, Godwin-Charles. "Perception of green hotels in the 21st century." *Journal of Tourism Insights* 3.1 (2012): 1.
- [12] Millar, Michelle, and Karl J. Mayer. "A profile of travelers who are willing to stay in environmentally friendly hotel." *Hospitality Review* 30.2 (2013): 5.
- [13] Manaktola, Kamal, and Vinnie Jauhari. "Exploring consumer attitude and behaviour towards green practices in the lodging industry in India." *International Journal of Contemporary Hospitality Management* 19.5 (2007): 364-377.
- [14] S. Koutsos and A. Ikkos, Evolution of tourism volumes and inbound tourism indicators in Greece by market under review, 2017-2019, 2020. URL: https://insete.gr/wp-content/uploads/2020/10/20-10_X-Ray_2017-2019-1.pdf
- [15] Tilikidou, Irene, Antonia Delistavrou, and Christos Sarmaniotis. "Intentions to boycott "unethical" hotels: a conjoint analysis." *Tourismos* 8.3 (2013): 21-37.
- [16] Ng, Eddy S., Sean T. Lyons, and Linda Schweitzer. *Generational career shifts: how matures, boomers, Gen Xers, and millennials view work*. Emerald Group Publishing, 2018.
- [17] Ramasamy, Bala, and Mathew Yeung. "Chinese consumers' perception of corporate social responsibility (CSR)." *Journal of Business Ethics* 88.1 (2009): 119-132.
- [18] Alch, M. L. (2000). The echo-boom generation: A growing force in American society. *The Futurist*, 34(5), 42.
- [19] Dunlap, Riley E., Kent D. Van Liere, Angela G. Mertig, and Robert Emmet Jones "New trends in measuring environmental attitudes: measuring endorsement of the new ecological paradigm: a revised NEP scale." *Journal of Social Issues* 56.3 (2000): 425-442.
- [20] Ntanos, Stamatios, Grigorios Kyriakopoulos, Michalis Skordoulis, Miltiadis Chalikias, and Garyfallos Arabatzis "An application of the new environmental paradigm (NEP) scale in a Greek context." *Energies* 12.2 (2019): 239.
- [21] Millar, Michelle, and Seyhmus Baloglu. "Hotel guests' preferences for green guest room attributes." *Cornell Hospitality Quarterly* 52.3 (2011): 302-311.
- [22] Fuentes-Moraleda, Laura, Carmen Lafuente-Ibáñez, Ana Muñoz-Mazón, and Teresa Villacé-Molinero. "Willingness to pay more to stay at a boutique hotel with an environmental management system. A preliminary study in Spain." *Sustainability* 11.18 (2019): 5134.
- [23] Kang, Kyung Ho, Laura Stein, Cindy Yoonjung Heo, and Seoki Lee "Consumers' willingness to pay for green initiatives of the hotel industry." *International journal of hospitality management* 31.2 (2012): 564-572.
- [24] Gabarda-Mallorquí, Ariadna, Rosa Maria Fraguell, and Anna Ribas. "Exploring environmental awareness and behavior among guests at hotels that apply water-saving measures." *Sustainability* 10.5 (2018): 1305.
- [25] Strieder Philippsen, Juliana, Fábio H. Soares Angeoletto, and Rosangela G. Santana. "Education level and income are important for good environmental awareness: a case study from south Brazil." *Ecología Austral* 27.1 (2017): 39-44.
- [26] Skordoulis, Michalis, Stamatios Ntanos, and Garyfallos Arabatzis. "Socioeconomic evaluation of green energy investments: Analyzing citizens' willingness to invest in photovoltaics in Greece." *International Journal of Energy Sector Management* 14.5 (2020): 871-890.
- [27] Ntanos, Stamatios, Grigorios Kyriakopoulos, Miltiadis Chalikias, Garyfallos Arabatzis and Michalis Skordoulis "Public perceptions and willingness to pay for renewable energy: A case study from Greece." *Sustainability* 10.3 (2018): 687.

- [28] Merli, Roberto, Michele Preziosi, Alessia Acampora, and Faizan Ali "Why should hotels go green? Insights from guests experience in green hotels." *International Journal of Hospitality Management* 81 (2019): 169-179.
- [29] Stončikaitė, Ieva "Baby-boomers hitting the road: The paradoxes of the senior leisure tourism." *Journal of Tourism and Cultural Change* 20.3 (2021): 335-347.