Segmenting the Generation Z Cohort Based on Evaluation of Hotel's Environmental Policy

Irene Kamenidou, Spyridon Mamalis, Evangelia-Zoi Bara, Ifigeneia Mylona, and Stavros Pavlidis

Abstract Tourism consists of a "neuralgic" sector of the economy of many countries, and for it to be viable in the future years, sustainable practices are applied. One area of sustainability in the tourism sector is the interest in sustainable practices that hotels employ. This research focuses on the sustainable practices that hotels use, and specifically, it measures the green hotel practices as evaluated by the Greek Generation Z cohort. Seven statements referring to a hotel's (0–5 star) environmental policy that is easily detected when staying at a hotel room are evaluated by 736 Generation Z members. Criteria for participating in the study were to be an adult member of the Greek Generation Z cohort, thus born 1995–2001 in 2019, have internet access, an email or Facebook account, and stayed at a hotel for at least two nights. Additionally, satisfaction, intention to return, and intention to recommend the hotel are measured based on the hotel's environmentally friendly practices. A web-based questionnaire was utilized for data selection in May 2020, during the country's lockdown, with questions referring to hotel accommodation of the previous year. Data analysis incorporated descriptive statistics, K-Means Cluster analysis, chi-square, and cross-tabulation tests. Cluster analysis is applied to all seven statements, plus the three statements: satisfaction, intention to return, and intention to recommend. K-Means Cluster analysis extracted three segments, precisely the "environmentally indifferent," the "environmentally sensitive," and the "environmentally insensitive but dissatisfied". Marketing directions are provided two-fold: towards the targeted customer group, i.e., the Greek members of the Generation Z cohort for increasing environmental awareness, as well as towards the hoteliers with recommendations referring to low-cost sustainable practices.

I. Kamenidou (✉) · S. Mamalis · E.-Z. Bara · I. Mylona · S. Pavlidis
International Hellenic University, Kavala Campus, Greece
e-mail: rkam@mst.ihu.gr

1 Introduction

From the end of 1980 and onwards, environmental protection and performance have been of great interest by authorities, businesses, and the communities (Erdogan & Tosun, 2009; Lim & McAleer, 2005). The tourism industry relies heavily on the environment since natural, beautiful, and impressive sceneries and places are destination attributes that attract tourists (Chen et al., 2021; Lee et al., 2010; Li et al., 2021). Then again, the tourism industry exploits natural resources in different ways degrading the environment (Kamenidou et al., 2018; Khan et al., 2020; Williams & Ponsford, 2009).

Today, on the one hand, the consequences of climate change and natural resources exploitation have appeared, while consumer parties and organizations take action to maintain sustainability and a sustainable future. On the other hand, tourists have become more educated, thus being more environmentally aware and sensitive (Hsiao et al., 2014). Subsequently, they have an increased preference towards destinations (Lee et al., 2010) and hotels (Warren et al., 2017), that apply environmentally friendly practices (EFP). Consequently, stakeholders in the tourism industry take measures for a sustainable tourism future (Dinica, 2009; Lemy et al., 2019; Lopes et al., 2020) in order to be competitive in the marketplace.

Hotels are a focal point in the tourism industry and more and more hotel managers acknowledge that the application of an environmental policy is a competitive advantage (Chan & Hsu, 2016; Pham et al., 2019; Stylos et al., 2018). This competitive advantage will trigger customers' positive future behavior towards the hotel (Martínez, 2015; Wang et al., 2018), and thus it will increase profitability. Studies referring to the EFP that hotels apply are abundant in literature due to the seriousness of the issue (Dimitiradis et al., 2018; Han et al., 2011; Hsiao et al., 2014; Li et al., 2021).

Also, tourist demographic characteristics, such as age, impact on tourist behavior, and studies have revealed that they play an essential role in choosing hotels that apply environmental policy (Han et al., 2009; Mensah & Mensah, 2013; Rodríguez et al., 2020). Though, a relatively fewer academic papers focus exclusively on young tourists (18–25 years old) and the hotel's EFP (HEFP), most of which are outside the focus of this paper. With respect to age, and specifically generational cohorts as tourists and HEFP, limited studies were found, and to our knowledge, exist, mainly focusing on millennials/generation Y (e.g., Bahja & Hancer, 2021). Only a handful focus solely (or amongst other cohorts) with generation Z (e.g., Dębski & Borkowska-Niszczota, 2020). Thus, the study of the Generation Z cohort (Gen Zers) as tourists and HEFP is in its infancy. This paper has as its aspiration to reduce this gap in the academic literature.

Specifically, it aims to explore if the hotel Gen Zers stayed in during 2019 (before the COVID-19 crisis) implemented EFP (or a green, eco-hotel, or sustainable policy). It also measures based on HEFP, their satisfaction, intention to return, and intention to recommend the specific hotel. Lastly, it segments Gen Zers based on these variables.

This research fills the following gaps in the literature:

1. It deals with an understudied issue, i.e., the combination of generational cohort research and HEFP, which is extremely rare in the academic arena.
2. It measures actual (after consumption) behavior based on HEFP (i.e., satisfaction, intention to return, and intention to recommend as a result of the HEFP experience).
3. It segments Gen Zers based on the chosen HEFP, satisfaction, intention to return, and intention to recommend which up to now, and to our knowledge, no research has been implemented.

The outcome of this study is considered important for hoteliers and officials in charge of implementing sustainable regulations in the tourism and hospitality sector. The research outcomes of this study are valuable for the hotel management, which can benefit from the provided insight from a generational cohort that is the future of the society (Kamenidou et al., 2019), and the information provided may be used to decrease the hotels' environmental problems in order to be in line with their customers' desires (Verma & Chandra, 2018).

This paper is structured as follows. The next section provides the literature review followed by the methodology and the results. Additionally, the discussion based on results, the implications, the conclusions, the limitations, and directions for future research are presented.

2 Literature Review

With respect to age, and specifically generational cohorts as tourists, which are considered as better indicators than age (Kamenidou et al., 2021), 67 studies were found. Thus, to our knowledge, these exist referring to HEFP and generational cohort's behavior. However, these studies mainly refer vaguely to generational cohorts (or are located in the reference section), with few directing research on them. To our knowledge, those that focus on generational cohorts and the hotel's eco-friendly practices are 14 in total. Ten of these emphasize on millennials/generation Y (e.g., Huh & Chang, 2017; Tang & Lam, 2017; Wang et al., 2018). Though, very few deal exclusively (or also) with the Generation Z cohort (Dębski & Borkowska-Niszczota, 2020; Lemy, 2016; Nadanyiová & Gajanová, 2019; Shin & Kang, 2021), generation X (Bahja & Hancer, 2021), or multiple generations (Bahja & Hancer, 2021; Nadanyiová & Gajanová, 2019; Shin & Kang, 2021).

Specifically, regarding the Gen Zers, four studies have been found that deal with HEFP, which are presented in the following.

Shin and Kang (2021) investigated multigenerational cohorts' intentions ($N = 413$) to participate in green P2P (peer-to-peer) accommodations. They found that younger consumers (i.e., Generation Y&Z) are more likely to address environmentally friendly (EF) lodging behavior compared to older generational cohorts. As the authors stated, this is due to that "younger consumers' personal normative goal in green consumption acts as a more effective motivator for creating a positive attitude

toward green traveling compared with the older generation". Dębski and Borkowska-Niszczota (2020), explored the ecological behavior, attitudes, and choices of Gen Zers ($N = 245$, 18–25 years old) in the accommodation business sector. They found that Gen Zers rate highly accommodation facilities that carry out pro-ecological procedures and thus, are willing to stay at EF accommodations. Nadanyiová and Gajanová (2019) through a multigenerational cohort approach ($N = 407$, i.e., Baby Boomers: 46 respondents, Generation X: 95, Generation Y: 163, and Gen Zers: 103 respondents) explored consumers' perceptions of green marketing as a source of competitive advantage in the hotel industry. They found that: Gen Zers tend to give more attention to environmental protection by e.g., noticing the hotel's ecolabel.

Furthermore, half of Gen Zers consider that a hotel's green activities are a criterion for potentially selecting it and perceive saving water, energy, and recycling as the most essential hotel practices that promote environmental protection. Though, even if they consider the hotel's green activities as a criterion for selecting it, when asked about the importance of a hotel's green activities to consumers, a large percentage answered that they are not interested in whether a hotel does apply green activities and promotes them accordingly. Lemy (2016) explored Gen Zers perceptions of HEFP effects on service quality through qualitative research (20 students) and specifically focus groups. Findings showed that Gen Zers have favorable perceptions towards the HEFP.

3 Methodology

Seven items were used referring to the HEFP that could be observed by anyone that stayed in the hotel room. The seven items were adopted from Stegerean et al. (2014) and Dimitiradis et al. (2018) and were slightly modified in order to be in line with the aim and objectives of the research. The seven items used were: (1) The hotel follows an environmental certification system (there is a sign at the reception, in the room, or the in-room hotel's leaflets/brochures), (2) The hotel has a written environmental policy (there is a sign at the reception, in the room, or the in-room hotel's leaflets/brochures), (3) The products in the room are ecological, such as soaps and shampoos (the products have eco certifications), (4) The hotel has electricity saving practices (such as key cards to control the electric power in the room), (5) The hotel applies water consumption reduction practices (such as low-flow taps or taps with sensors), (6) The hotel applies selective waste collection practices (has separate bins for glass, plastic, etc. in the room or balcony), (7) The hotel uses cleaning products that do not harm the environment (there is a sign at the reception, in the room, or the in-room hotel's leaflets/brochures). Answers were rated on a 5-point Likert scale, whereas 1 = I totally disagree up to 5 = I totally agree, with the neutral answer 3 = I neither agree/nor disagree.

As to satisfaction measurement, the 5-point satisfaction scale, based on HEFP (Likert-type scale) was used with 1 = totally dissatisfied up to 5 = totally satisfied and the neutral answer point 3 = neither satisfied nor dissatisfied. Referring to intention

to return and intention to recommend based on HEFP, a 5-point probability (Likert-type scale) was used. More precisely, the scale had answers rated as 1 = very unlikely up to 5 = very likely, and the neutral point 3 = neither likely nor unlikely.

In order to participate in the research, criteria were applied. Specifically, they had to be an adult member of the Greek Generation Z cohort (i.e., born between 1995 and 2001), have internet access, an email or Facebook account, and had stayed at a hotel the previous year (before the lockdown due to COVID-19) for at least two nights (in 2019). For data collection, the convenience combined with the snowball sampling procedure was utilized. Specifically, since the targeted group was young tourists and exclusively Gen Zers, an online questionnaire was developed for data collection, and data was collected via the internet. A Facebook account was created that provided the study's aim, the qualified participants, and the link to the questionnaire. When the questionnaire opened, it also provided the purpose, the qualified participants, the instructions, and the consent to use the data. In the questionnaire's instruction section, the participant's above-mentioned qualifications were stated, while the written permission was the first question. The invitation to participate in the research as well as the link of the questionnaire was sent to friends, acquaintances, and students of the researchers. They were also requested to invite other Gen Zers that meet the above criteria. The link was activated for about one month, from 28 April until 31 May 2020. Questionnaires were valid only if they met the before-mentioned criteria and gave consent to use the questionnaire for data analysis. If one of the criteria was not fulfilled, the questionnaire was discarded. In this manner, the final sample size was 736 Gen Zers. Data analysis included descriptive statistics, K-Means Cluster analysis, chi-square, and cross-tabulation tests.

Ethical Approval: There are no ethical issues involved in the processing of the questionnaire data used in the study. The necessary consents have been obtained by the persons involved, and the anonymity of the participants has been secured. All procedures performed in studies involving human participants were in accordance with the ethical standards of the International Hellenic University research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

4 Results

Sample profile

The majority of the participants were females, which were overrepresented in the sample (61.1%). As for age, two highly represented age groups stood out: the 20-year-old (20.7%) and the 22-year-old (17.1%) group. The 18-year-old Gen Zers (6.3%) were the least represented age group, followed by the 21-year-old (11.7%). The overwhelming majority of the sample was single (96.7%), university students (67.7%), and 68.5% had completed secondary education (i.e., lyceum including those that were at present university students). Lastly, as to income, 43.5% had net

family income up to 1000.00€, 37.8% from 1000.01–2000.00€, and 18.7% more than 2000.00€.

Gen Zers tourist behavior

The hotel that Gen Zers stayed at was located in Macedonia, Greece, for 26.9% of the sample (Central Macedonia, Western Macedonia, and Eastern Macedonia and Thrace), Greek islands (34.5%), the rest of Greece (16.3%), and lastly, 22.3% stayed at a hotel abroad/overseas. Moreover, the hotel that Gen Zers chose was found by personal search on the internet, through online booking platforms, such as Booking.com or Trip Advisor (43.5%), or other different websites (20.1%). Additionally, 15.5% found the hotel from friends who recommended it to them, 11.1% found it from travel agents, and 9.8% from other sources. The number of nights Gen Zers stayed at the hotel is 2–3 for the 34.5% and 4–5 nights for the 48.4% of the sample. Additionally, 11.9% of Gen Zers stayed 6–7 nights, and more than seven nights stayed 5.2% of the participants. The reason for staying in the hotel was job-related (5.4%) and tourism and recreation-related (84.8%). Also, 9.8% of the sample stated that they stayed at the specific hotel for work combined with tourism/recreation. Regarding the number of stars the hotel had, 14.4% of the Gen Zers stayed at a hotel with 0–2 stars and 31.3% at a three-star hotel. Moreover, 42.3% of Gen Zers stayed at a four-star hotel and 12.0% at a five-star hotel.

Table 1 presents the HEFP based on Gen Zers' experience during their stay. From the MS, it is evident that no MS > 3.50 on the Likert scale, and thus most hotels that

Table 1 Hotels' environmental policy

Hotel's environmental policy statements	1	2	3	4	5	MS
The hotel follows an environmental certification system (there is a sign at the reception, in the room, or the in-room hotel's leaflets/brochures)	4.6	13.3	37.2	32.3	12.5	3.35
The hotel applies selective waste collection practices (has separate bins for glass, plastic, etc. in the room or balcony)	11.1	16.0	24.7	28.8	19.3	3.29
The hotel has electricity saving practices (such as key cards to control the electric power in the room)	7.6	17.4	35.9	25.8	13.3	3.20
The hotel uses cleaning products that do not harm the environment (there is a sign at the reception, in the room, or the in-room hotel's leaflets/brochures)	7.9	15.2	38.6	25.5	12.8	3.20
The hotel has a written environmental policy (there is a sign at the reception, in the room, or the in-room hotel's leaflets/brochures)	8.7	16.8	35.9	25.3	13.3	3.18
The products in the room are ecological, such as soaps and shampoos (the products have eco certifications)	10.6	16.6	35.1	24.5	13.3	3.13
The hotel applies water consumption reduction practices (such as low flow taps or taps with sensors)	9.0	20.4	36.1	20.9	13.6	3.10

Source The authors

Gen Zers chose did not employ EFP. Also, all MS > 3.00, therefore fall in the range 3.00 < MS < 3.4. Therefore, a concentration of MS around (indifferent) point 3 of the Likert scale is observed. In Table 1, in the first row, the numbers 1–5 represent the answers of the Likert scale, while the numbers in the corresponding columns represent percentages.

As to Gen Zers' future behavior toward the hotel they stayed at, results revealed the following. As to satisfaction based on the HEFP, 74.2% of the Gen Zers were satisfied or very satisfied (MS = 3.97). As to intention to return (based on their experiences of HEFP), only 55.5% considered likely or very likely to return to the specific hotel (MS = 3.52). Lastly, as an intention to recommend the hotel based on their experiences of HEFP, 70.1% considered likely or very likely to recommend the specific hotel (MS = 3.85).

Segmentation of Gen Zers

Segmentation through K-Means Cluster analysis extracted three clusters (Table 2). ANOVA tests showed that all three segments are different in all cases ($p = 0.000$). Table 2 presents the three segments derived from K-Means Cluster analysis, the number of participants per cluster (N), the Final Cluster Centers (FCC, i.e., the numbers in each cluster column), as well as the results of the ANOVA tests (F-statistic and *p*-value).

In addition, chi-square tests were executed in order to explore statistically significant differences ($\alpha = 0.05$) between Gen Zers' demographic characteristics (plus the location of their chosen hotel) and clusters. Results reveal that Gen Zers' age ($\chi_2^2 = 6.709$; $p = 0.035$) and education ($\chi_6^2 = 33.112$, $p = 0.000$) provided statistically significant differences. The Gen Zers were divided into two main age categories: the younger Gen Zers (18–20 years old) and the older Gen Zers (21–24 years old).

Segment No. 1: "The environmentally indifferent." This segment is the largest of the three since it incorporates 312 Gen Zers (i.e., 42.4% of the sample). Gen Zers neither agree nor disagree that the hotel applies these methods (2.6 < FCC < 3.1). It could also be safe to suggest that these Gen Zers probably did not observe if the hotel employs eco practices. This is considered a logical conclusion since if they observed the seven practices stated, they could either agree that they exist or disagree that the hotel practices them.

Furthermore, based on the HEFP, they are satisfied with the hotel, they tend to prefer to come to this hotel in the future, and they are likely to recommend it to others. The profile of this segment has as follows: it is overrepresented by females, compared to the other two groups, it has the most significant percentage of older, single, and university students Gen Zers. Lastly, the hotel they stayed at is located on a Greek Island.

Segment No. 2: "The environmentally sensitive". This segment is the second largest of the three segments since it incorporates 286 Gen Zers (i.e., 38.8% of the sample). The Gen Zers of this group agree that the hotel includes EFP (3.9 < FCC < 4.2). Furthermore, based on the HEFP, they are satisfied with their stay at the hotel, they are likely to stay again at this hotel in the future, and they are likely to recommend it to others. The profile of this group has as follows: it is overrepresented

Table 2 Segments of the Gen Zers based on hotel's environmental practices and Gen Zers' future behavior

Environmentally friendly practices	Cl. 1	Cl. 2	Cl.3	F	Sig.
	N = 312	N = 286	N = 138		
The hotel follows an environmental certification system (there is a sign at the reception, in the room, or the in-room hotel's leaflets/brochures)	3.03	4.08	2.54	214.164	0.000
The hotel has a written environmental policy (there is a sign at the reception, in the room, or the in-room hotel's leaflets/brochures)	2.89	3.94	2.23	188.035	0.000
The products in the room are ecological, such as soaps and shampoos (the products have eco certifications)	2.74	4.05	2.13	277.127	0.000
The hotel has electricity saving practices (such as key cards to control the electric power in the room)	2.79	4.13	2.20	339.499	0.000
The hotel applies water consumption reduction practices (such as low flow taps or taps with sensors)	2.65	3.98	2.29	235.023	0.000
The hotel applies selective waste collection practices (has separate bins for glass, plastic, etc. in the room or balcony)	2.83	4.14	2.57	153.872	0.000
The hotel uses cleaning products that do not harm the environment (there is a sign at the reception, in the room, or the in-room hotel's leaflets/brochures)	2.80	4.03	2.39	227.008	0.000
I am satisfied with this hotel	4.12	4.45	2.65	289.839	0.000
I will continue to prefer the services of this hotel in the years to come	3.68	4.07	2.01	310.587	0.000
I would recommend this hotel to anyone who seeks my advice	4.00	4.45	2.26	411.717	0.000

Source The authors

by females, while the older Gen Zers comprise a little over half of the group (53%) and are also single in the vast majority. Compared to the other two groups, it has the largest percentage of Zers that have finished secondary education. As to their profession, the university student group dominates this segment, their family income is up to 1000.0€ (42.7%), and the hotel is located in Macedonia, Greece.

Segment No. 3: "The environmentally insensitive but dissatisfied." This group is the smallest of the three segments since it incorporates 138 Gen Zers (i.e., 18.8% of the sample), who disagree that the hotel they chose applies EFP (2.1 < FCC < 2.6). Furthermore, based on the experienced HEFP, they tend to be dissatisfied with their stay at the hotel (FCC = 2.65), they are not likely to stay again (FCC = 2.01) at this hotel in the future and they are not likely to recommend it to others (FCC = 2.26).

The profile of this group has as follows. Compared to the other two, this group has the highest percentage of females, married, postgraduates, salaried, and Gen Zers family income up to 1000.0€ (47.8%). Furthermore, compared to the other two groups, it has the smallest percentage of singles, university students, families with income > 2000€. Lastly, the hotel that Gen Zers stayed at is located abroad.

5 Discussion—Conclusion

This study aimed to explore if the hotel that Gen Zers stayed at implemented EFP. The findings of the study, based on the MS of each statement rated, reveal that the chosen by the Gen Zers hotels were EF indifferent. This conclusion is based on the MS from the seven statements examined, which were concentrated around point 3 of the Likert scale (neither agree nor disagree). Gen Zers satisfaction, intention to return, and intention to recommend the specific hotel based on the experienced HEFP were also measured. MS for these statements reveals that Zers are satisfied and are likely to recommend the hotel, but neither likely nor unlikely to return to it in the future. Lastly, it segments Gen Zers on the basis of these variables. Three groups of Gen Zers arose, namely, the "environmentally indifferent," the "environmentally sensitive," and the "environmentally insensitive but dissatisfied."

The findings of this study cannot be directly compared to other studies since we have not found similar research regarding aim and objectives and the targeted sample group. Thus, any comparisons will be made indirectly.

Researchers have asserted that every generational cohort has different values and behavior compared to the others (Kamenidou et al., 2021; Shin & Kang, 2021). For so, stakeholders should implement changes that target these cohorts separately.

As for Gen Zers and HEFP, the findings of this study are partially in line with other studies. For example, Dębski and Borkowska-Niszczota (2020) found that Gen Zers rate highly accommodation facilities that carry out pro-ecological procedures and thus, are willing to stay at environmentally-friendly accommodations. This is partially in line with our findings and specifically with the environmentally sensitive group (38.8% of the Gen Zers), which has chosen a hotel that applies EFP.

Additionally, the findings of this study are partially in line with the results of Nadanyiová and Gajanová (2019). They found that even if Gen Zers consider the hotel's green activities as a criterion for selecting it, they are not interested in whether a hotel does apply green activities and promotes them accordingly. In this study, the environmentally insensitive but dissatisfied and environmentally indifferent group added together comprise 61.2% of the sample. Both groups did not select a hotel based on its EFP. In general, this study is also in line with the study of Haddouche and Salomone (2018), who found that sustainable tourism is not a key concept for Gen Zers and opposes McBride (2016), and Lemy (2016), who stated that Gen Zers value or have favorable perceptions towards hotel's that implement EFP.

As to segmentation analysis, academic research referring directly to Gen Zers and HEFP are not found for comparison. Though, in segmenting Gen Zers based on

sustainable behavior, Kamenidou et al. (2019) found that it is limited in researching Gen Zers university students' sustainable food consumption behavior. The two groups that arose were the "The under-consideration students" and the "negatively positioned students." It also lies in line with Su et al. (2019) results (studying sustainable food consumption), who found that "Gen Z consumers with high environmental consciousness (sustainable activists) and moderate ecological awareness (sustainable believers) considered more eco-friendly and healthy product attributes when purchasing sustainable food, whereas Gen Z consumers with low environmental consciousness (sustainable moderates) considered more extrinsic product attributes (e.g., price and convenience)."

Marketing implications

Gen Zers are born in technology; they spend many hours per day in social media platforms and are the channels where they obtain information (Kamenidou et al., 2021). They have a dominant presence in social networks, and e-WOM is a vital source of information for Gen Zers (Dawson, 2018). Gen Zers widely use social media as part of their identity and spread e-WOM details on their trip (Kamenidou et al., 2021). Gen Zers favor user-generated content over traditional influencer content and are mostly influenced by their peers (Walters, 2021). Thus, in targeting Gen Zers to make them more environmentally conscious, digital communication channels are the most suitable way to access them. Therefore, social networks and hotel websites, and online accommodation platforms are ways to notify Gen Zers about a hotel's EFP (Nadanyiová & Gajanová, 2019).

Mendleson and Polonsky (1995 in Shin & Kang, 2021) point out that Gen Zers are more environmentally conscious than older cohorts since they have obtained environmental education during their school education and because of the environmental issues they have faced. Thus, tourist destination sites must point out the hotels that apply EFP and the EFP practiced by the destination authorities. Hotels that utilize EFP should also target the indirect customers, such as environmental associations to inform their members about the specific hotel and its EFP.

Furthermore, Gen Zers seek memorable experiences (Kamenidou et al., 2021; Törőcsik et al., 2014). Therefore, when applying EFP, hotels must simultaneously offer exceptional service encounters so these two variables will be combined in the Gen Zers subconscious. Previous findings also reveal that Gen Zers are reluctant to discard plastic packages and do not have a positive attitude towards some HEFP, such as prolonged usage of bed sheets or sheets and towels changed only on request (Nadanyiová & Gajanová, 2019). So, these tactics may not be implemented by hotels since they spur negative attitudes towards the hotel.

As for implications for hoteliers, the significance of their eco-friendly policy will become more intense in the coming years (either through consumer demand or government laws), thus defining the hotel's survival in the marketplace. Therefore, several steps should be taken on their behalf, some of which could be the following. To obtain certification for its EFP and take pro-environmental measures (Nadanyiová & Gajanová, 2019) that are not costly, or in the near future, the cost will be covered by the benefits derived. Such measures may well be using key cards in the rooms and

thus reducing the electricity cost, which will lead to a future reduction of operational costs (Fuentes-Moraleda et al., 2019).

Limitations and directions for future research

This research has some unavoidable limitations that should be considered when interpreting its results and could simultaneously serve as a trigger for future research. First, this study did not explore if Gen Zers have engaged up to now in pro-environmental behavior or if they are a member of an ecological organization. Another limitation is that it did not have as a question if Zers searched for an environmentally friendly hotel. Though, this question is answered indirectly two-fold, first from their answers regarding the observed HEFP and secondly, from the K-Means Cluster analysis. The third limitation is the number of variables that are incorporated in the question referring to the HEFP. Other statements/variables that are equally important may have been left out. Another limitation is the targeted group, the sample size, and the research design. More precisely, this research is limited to one generational cohort, Gen Zers, with a sample size of 736, which may be considered small. It also incorporated online data collection channels and a non-probability sampling method, which excludes the generalization of results. Thus, subsequent studies that deal with these limitations would be very beneficial and interesting regarding its outcomes.

All the above considered, this research is important because it provides insight and firsthand information about an issue that is understudied. Specifically, it provides an understanding of the youngest adult generational cohort combined with its chosen HEFP, their satisfaction, their intention to return, and intention to recommend, and segments them on this basis. Therefore, it provides hotel managers with valuable information for future facility adjustments.

References

Bahja, F., & Hancer, M. (2021). Eco-guilt in tourism: Do tourists intend to behave environmentally friendly and still revisit? *Journal of Destination Marketing & Management, 20*, 100602. https://doi.org/10.1016/j.jdmm.2021.100602

Chan, E. S., & Hsu, C. H. (2016). Environmental management research in hospitality. *International Journal of Contemporary Hospitality Management*.

Chen, Q. P., Wu, J. J., & Ruan, W. Q. (2021). What fascinates you? Structural dimension and element analysis of sensory impressions of tourist destinations created by animated works. *Asia Pacific Journal of Tourism Research, 26*(9), 1038–1054. https://doi.org/10.1080/10941665.2021.1941157

Dawson, G. (2018). *"Don't Ignore Generation Z." Restaurant Hospitality*, January 25. Retrieved July 5, 2019, from https://restaurant-hospitality.com

Dębski, M., & Borkowska-Niszczota, M. (2020). Consumer ecological behaviour and attitudes towards pro-ecological activities in accommodation facilities by generation Z. *2*, 43–50.

Dimitiradis, E. D., Kamenidou, I., Mamalis, S., & Bara, E.-Z. (2018). The mediating effect of environmental policy on the relationship between satisfaction and loyalty in the hotel industry. In *TOURMAN 2018 Conference Proceedings* (pp. 74–83). Rhodes.

Dinica, V. (2009). Governance for sustainable tourism: A comparison of international and Dutch visions. *Journal of Sustainable Tourism, 17*(5), 583–603. https://doi.org/10.1080/096695809028 55836

Erdogan, N., & Tosun, C. (2009). Environmental performance of tourism accommodations in the protected areas: Case of Goreme Historical National Park. *International Journal of Hospitality Management, 28*(3), 406–414.

Fuentes-Moraleda, L., Lafuente-Ibáñez, C., Muñoz-Mazón, A., & Villacé-Molinero, T. (2019). Willingness to pay more to stay at a boutique hotel with an environmental management system. *A Preliminary Study in Spain. Sustainability, 11*(18), 5134. https://doi.org/10.3390/su11185134

Haddouche, H., & Salomone, C. (2018). Generation Z and the tourist experience: Tourist stories and use of social networks. *Journal of Tourism Futures, 4*(1), 69–79. https://doi.org/10.1108/JTF-12-2017-0059

Han, H., Hsu, L. T. J., & 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, 28*(4), 519–528. https://doi.org/10.1016/j.ijhm.2009.02.004

Han, H., Hsu, L. T. J., Lee, J. S., & Sheu, C. (2011). Are lodging customers ready to go green? An examination of attitudes, demographics, and eco-friendly intentions. *International Journal of Hospitality Management, 30*(2), 345–355. https://doi.org/10.1016/j.ijhm.2010.07.008

Hsiao, T. Y., Chuang, C. M., Kuo, N. W., & Yu, S. M. F. (2014). Establishing attributes of an environmental management system for green hotel evaluation. *International Journal of Hospitality Management, 36*, 197–208. https://doi.org/10.1016/j.ijhm.2013.09.005

Huh, C., & Chang, H. S. (2017). An investigation of Generation Y travellers' beliefs and attitudes towards green hotel practices: A view from active and passive green Generation Y travellers. *International Journal of Tourism Sciences, 17*(2), 126–139. https://doi.org/10.1080/15980634.2017.1318590

Kamenidou, I. C., Mamalis, S. A., Pavlidis, S., & Bara, E. Z. G. (2019). Segmenting the generation Z cohort university students based on sustainable food consumption behavior: A preliminary study. *Sustainability, 11*(3), 837. https://doi.org/10.3390/su11030837

Kamenidou, I., Mamalis S., & Alexandrou Z. (2018). Tourism and ecologically sensitive areas: The case the prefecture of Preveza from citizens' point of view. In: A. Karasavvoglou, S. Goić, P. Polychronidou, P. Delias (Eds.), *Economy, finance and business in Southeastern and Central Europe. Springer Proceedings in Business and Economics.* Springer. https://doi.org/10.1007/978-3-319-70377-0_36

Kamenidou, I. E., Vassilikopoulou, A., & Priporas, C. V. (2021). New sheriff in town? Discovering Generation Z as tourists. In *Generation Z marketing and management in tourism and hospitality* (pp. 121–140). Palgrave Macmillan.

Khan, A., Chenggang, Y., Hussain, J., Bano, S., & Nawaz, A. (2020). Natural resources, tourism development, and energy-growth-CO2 emission nexus: A simultaneity modeling analysis of BRI countries. *Resources Policy, 68*, 101751. https://doi.org/10.1016/j.resourpol.2020.101751

Lee, C. F., Huang, H. I., & Yeh, H. R. (2010). Developing an evaluation model for destination attractiveness: Sustainable forest recreation tourism in Taiwan. *Journal of Sustainable Tourism, 18*(6), 811–828. https://doi.org/10.1080/09669581003690478

Lemy, D. M., Pramezwary, A., Teguh, F., & Pramono, R. (2019). How sustainable is our destination? A snap-shot from the first Indonesia sustainable tourism destination award. *African Journal of Hospitality, Tourism and Leisure, 8*(1), 1–12.

Lemy, D. M. (2016). The effect of green hotel practices on service quality: The Gen Z perspective. In S. M. Radzi, M. H. M. Hanafiah, N. Sumarjan, Z. Mohi, D. Sukyadi, K. Suryadi, & P. Purnawarman (Eds.), *Heritage, culture and society: Research agenda and best practices in the hospitality and tourism industry*. CRC Press.

Li, C., Gao, L., Liu, Y., & Li, H. (2021). Cluster analysis of China's inbound tourism market: A new multi-attribute approach based on association rule mining of tourist preferences at scenic spots.

Asia Pacific Journal of Tourism Research, 26(6), 654–667. https://doi.org/10.1080/10941665.2021.1887305

Lim, C., & McAleer, M. (2005). Ecologically sustainable tourism management. *Environmental Modelling & Software, 20*(11), 1431–1438. https://doi.org/10.1016/j.envsoft.2004.09.023

Lopes, V., Moreno Pires, S., & Costa, R. (2020). A strategy for a sustainable tourism development of the Greek Island of Chios. *Tourism: An International Interdisciplinary Journal, 68*(3), 243–260. https://doi.org/10.37741/t.68.3.1

Martínez, P. (2015). Customer loyalty: Exploring its antecedents from a green marketing perspective. *International Journal of Contemporary Hospitality Management, 27*(5), 896–917.

McBride, R. (2016), *Designing for the Digital Native: Generation Z* [Online]. Retrieved July 29, 2021, from https://lodgingmagazine.com/designing-for-the-digital-native-generation-z/

Mendleson, N., & Polonsky, M. J. (1995). Using strategic alliances to develop credible green marketing. *Journal of Consumer Marketing, 12*(2), 4–18. https://doi.org/10.1108/07363769510084867

Mensah, I., & Mensah, D. R. (2013). International tourists' environmental attitude towards hotels in Accra. *International Journal of Academic Research in Business and Social Sciences, 3*(5), 444.

Nadanyiová, M., & Gajanová, L. (2019). *Consumers' perception of Green marketing as a source of competitive advantage in the hotel industry.* Retrieved from https://www.littera-scripta.com/wp-content/uploads/2019/05/9_Nadanyiova-1.pdf

Pham, N. T., Tučková, Z., & Jabbour, C. J. C. (2019). Greening the hospitality industry: How do green human resource management practices influence organizational citizenship behavior in hotels? A mixed-methods study. *Tourism Management, 72*, 386–399.

Rodríguez, C., Jacob, M., & Florido, C. (2020). Socioeconomic profile of tourists with a greater circular attitude and behaviour in hotels of a sun and beach destination. *International Journal of Environmental Research and Public Health, 17*(24), 9392. https://doi.org/10.3390/ijerph17249392

Shin, H. W., & Kang, J. (2021). What motivates your environmentally sustainable stay? Exploration of the underlying mechanism of consumers' intentions to use green peer-to-peer accommodations. *Journal of Travel & Tourism Marketing, 38*(4), 413–430. https://doi.org/10.1080/10548408.2021.1921672

Stegerean, R., Petre, A. & Chis, A. (2014). Environmental Strategy and hotel competitiveness evidence from Brasov County. In *Proceedings of the 8th International Management Conference "Management Challenges for Sustainable Development"*, November 6th-7th, 2014, Bucharest, Romania. Retrieved from http://conferinta.management.ase.ro/archives/2014/pdf/58.pdf

Stylos, N., Koroneos, C., Roset, J., González-Sánchez, C., Xydis, G., & Muñoz, F. S. (2018). Exergy as an indicator for enhancing evaluation of environmental management performance in the hospitality industry. *Journal of Cleaner Production, 198*, 1503–1514. https://doi.org/10.1016/j.jclepro.2018.07.107

Su, C. H. J., Tsai, C. H. K., Chen, M. H., & Lv, W. Q. (2019). US sustainable food market generation Z consumer segments. *Sustainability, 11*(13), 3607.

Tang, C. M. F., & Lam, D. (2017). The role of extraversion and agreeableness traits on Gen Y's attitudes and willingness to pay for green hotels. *International Journal of Contemporary Hospitality Management., 29*(1), 607–623. https://doi.org/10.1108/IJCHM-02-2016-0048

Törőcsik, M., Szűcs, K., & Kehl, D. (2014). How generations think: Research on generation z. *Acta universitatis Sapientiae, communicatio, 1*(1), 23–45.

Verma, V. K., & Chandra, B. (2018). An application of theory of planned behavior to predict young Indian consumers' green hotel visit intention. *Journal of Cleaner Production, 172*, 1152–1162. https://doi.org/10.1016/j.jclepro.2017.10.047

Walters, P. (2021). Are generation Z ethical consumers? In *Generation Z marketing and management in tourism and hospitality* (pp. 303–325). Palgrave Macmillan.

Wang, J., Wang, S., Xue, H., Wang, Y., & Li, J. (2018). Green image and consumers' word-of-mouth intention in the green hotel industry: The moderating effect of Millennials. *Journal of Cleaner Production, 181*, 426–436. https://doi.org/10.1016/j.jclepro.2018.01.250

Warren, C., Becken, S., & Coghlan, A. (2017). Using persuasive communication to co-create behavioural change–engaging with guests to save resources at tourist accommodation facilities. *Journal of Sustainable Tourism, 25*(7), 935–954. https://doi.org/10.1080/09669582.2016.1247849

Williams, P. W., & Ponsford, I. F. (2009). Confronting tourism's environmental paradox: Transitioning for sustainable tourism. *Futures, 41*(6), 396–404. https://doi.org/10.1016/j.futures.2008.11.019