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THE MEDIATING EFFECT OF ENVIRONMENTAL POLICY ON THE RELATIONSHIP BETWEEN SATISFACTION AND LOYALTY IN THE HOTEL INDUSTRY

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ABSTRACT

Customer satisfaction and loyalty, according to the literature, are influenced by many factors such as perceived value, corporate image, perceived quality, trust, communication etc. This study investigates the mediating effect of environmental policy in the relationship between satisfaction and loyalty. For this purpose, empirical research on Greek hotels’ customers, with the use of a structured questionnaire, was conducted. In data analysis, the S.P.S.S 20 and LISREL software were used. The results indicate that the degree of perceived, by customers, environmental policy is not related to satisfaction, and moreover to their loyalty towards the hotel.

Key Words: Environmental Policy, Hotel industry, Satisfaction, Loyalty, Tourism marketing management.

INTRODUCTION

Tourism constitutes the central Greek economy developmental pillar. In 2017, Greece received 27.2 million international tourists, having a 9.7% increase compared to 2016, and generating a revenue of 14.2 billion Euros for the country. Thus, tourism's direct contribution to the Greek GDP formation amounted to 10.3% recording an increase of 9.3% compared to 2016. Additionally, the average expenditure per tourist was about 522€, and the total overnight stays were 209.8 million and the average length of stay was 7.7 days. Lastly, tourism generated 630000 jobs, accounting (direct and indirect) for the 37.2-44.8% total employment of the country (Ikkos and Koutsos, 2018). The same source, reports that 45.3% of tourism revenues is due to accommodation revenues; of which the largest possesses the hotels. The total hotel capacity in 2016 was 788.553 beds, corresponding to 407.146 rooms and 9.730 units. There is a remarkable presence of Five and Four-Star units, as they represent
cumulatively 19.1% of the units, 42.3% of the rooms and 43.2% of the beds (Balis, 2017). However, the rapid tourism growth and, by extension, hotel industry growth had burdened the environment and consequently raised the need to take the necessary measures to address the negative effects. The adoption of environmental protection measures by hotels was felt to be necessary and stems primarily from the pressure of laws but also from customers as they increasingly consider their environmental policy as a key criterion for choosing it (Ayuso, 2007; Alonso-Almeida and Rodriguez-Antón, 2011). Thus, the hoteliers in the efforts they made in previous years in the direction of customer satisfaction (prices, staff, quality of food and beverages, facilities, etc.), added the highlighting of their environmental practices and sensitivities.

In Greece, the hotel sector is increasingly activating in the voluntary adoption of environmental practices, especially with the implementation of ISO 14001 environmental certification, which is the most commonly used environmental management model-standard. Many hotels, in addition to ISO 14001, also implement the Eco-Management and Audit Scheme (EMAS), which is a voluntary system for companies and other organizations committed to managing and improving their environmental performance. It offers a systematic approach to the management of the environmental issues that they have to face. In general, appropriate environmental policy contributes to sustainable development (Khanna and Speir, 2013), reduces hotel operating costs, improves business image (Schmidheiny, 1992; Starik and Marcus, 2000), increases demand from environmentally conscious customers (Miles and Covin, 2000), although the relationship between environmental programs and improved customer satisfaction is poor compared to other satisfaction factors. However, hotels are increasingly expected to implement environmental sustainability policies, which are usually geared to cost-saving environmental measures (energy and water saving), while employee training is equally important (Stegerean et al. 2014).

The purpose of this paper is to investigate the degree of which Greek hotel customers perceive the environmental policies applied by the hotels and the impact that they have on their satisfaction and loyalty. In addition, the degree of impact of other factors contributing to satisfaction and loyalty will be explored.

LITERATURE REVIEW AND HYPOTHESES FORMULATION

Several studies that conducted the last few decades have focused on customer satisfaction and the quality of services that were offered (Gundersen, et al., 1996). The level of satisfaction, according to Oliver (1980), is the difference between expected and perceived performance, and it is accepted by numerous researchers that service quality and customer satisfaction are critical success factors for each business. (Gronoos, 1990; Parasuraman et al. 1988), as these two concepts have a strong impact on business performance (Soderlund, 1998; Christou & Sigala, 2002). Customer satisfaction has a positive impact on business profitability (Anderson et al. 1994; Yeung et al., 2002; Luo and Homburg, 2007) like the quality of services (Gundersen et al. 1996) which is positively related to customer satisfaction (Oliver, 1997). In addition, a significant number of surveys have concluded that customer satisfaction is positively related to loyalty (Faullant et al. 2008; Chi and Qu, 2008; Dimitriades, 2006; Kandampully and Suhartanto, 2000).

In the hotel industry, customer satisfaction is an important factor and his/her loyalty depends on a big extent on the quality of the services that he/she received from the hotel (Jana and Chandra, 2016).

A series of surveys have highlighted customer confidence as the main reason that some hotels are prospering, while others do not. Prosperity is based on customer retention, which is ensured by providing quality services on which hotel management is responsible. Since management looks forward to customer loyalty and strives for it, it can improve the hotel's competitiveness (Tsiotsou and Goldsmith, 2012).

The improvement of customer satisfaction with the provision of high quality services is widely regarded as the critical factor that improves the performance of businesses in hotel sector and generally in tourism sector (Oh and Parks, 1997).
In the hotel sector, customer loyalty is enhanced by a combination of efforts by all parties involved to improve the quality of services and products. Significant role in improvement is played by customers whose proposals and comments are accepted (Singh and Dewan, 2009).

In the competitive hotel sector, where the services provided are similar, hoteliers who are able to satisfy their clients better than others stand out (Choi and Chou, 2001).

The direct relationship between perceived value and satisfaction of tourists has emerged from a numerous surveys (Moliner, et al. 2007; Yang et al. 2014), while other surveys have shown that the image of the hotel has a positive effect on customer satisfaction and their loyalty (Ball et al. 2004; Hsu et al. 2006).

Authors, such as Alen and Fraiz (2006) and Howat and Assaker (2013) have shown that quality of service has a significant impact on the customer.

Almost all hotels have special questionnaire forms in which customers have the opportunity to express their level of satisfaction with the services provided and to report any complaints. However, there isn't a sufficient research that has dealt with customer reports and complaints (Karatepe and Ekiz, 2004). It is natural, however, to believe that customers who have had a negative experience with a hotel's service will not keep in touch with it in the future.

Communication with customer is capable to positively influence customer satisfaction and loyalty (Spreng and Mackoy, 1996; Chatzigeorgiou et al., 2017). Thus, communication actions such as telephone calls, correspondence and marketing face-to-face, allow for future customer behavior intentions (Erickson, 1991). Customer surveys have highlighted quality service delivery and communication practices as the critical factors determining loyalty (Dabija and Babut, 2014; Piron, 2001).

From all above mentioned, the following assumptions arise:
H1: Perceived value has a positive effect on satisfaction
H2: The image of the hotel has a positive effect on satisfaction
H3: Customer complaints have a negative impact on satisfaction
H4: Communication with customers is likely to have a positive impact on satisfaction
H5: Perceived quality of services has a positive impact on satisfaction
H6: Customer satisfaction has a positive effect on their loyalty.

The adoption of environmental protection practices by enterprises aims to improve their functionality, such as reducing operating costs (Aragon -Correa et al., 2008) related to water and energy (Chan and Lam, 2003; Chan, 2005; Claver et al. 2010), the improvement of the health and safety of workers (Chan and Hawkins, 2010), the extraction of state subsidies to achieve greener production methods (Boyle, 1999; Christou & Kassianidis, 2002; Mohamed, 2001; Gretzel et al., 2012). In the hotel sector in particular, the implementation of environmental protection practices contributes to improving efficiency (Molina-Azorin et al. 2009) and the hotel's competitiveness, improving its image, thus helping to differentiate (Chan and Wong, 2006; Kirk, 1998). In addition, the adoption of environmental practices aims to attract a new class of customers with greater environmental sensitization (Valachis et al., 2009; Fernandez-Vine et al. 2010).

Tourism demands are constantly increasing and hotels are forced to adopt new services and practices to meet their tastes and preferences, including greater respect for the environment. Thus, with the application of environmental practices, hotels look to improve customer loyalty and public image of the company (Lee et al., 2010; Fraj et al. 2015; Chan and Wong, 2006).

It is easy to see that while the impact of perceived value and quality, image, communication and complaints on customer satisfaction and loyalty have been proven by numerous researches, the impact of environmental protection practices on customer satisfaction and loyalty seems to be unclear or less influential. The following research question arises:

Q1: Does the implementation of environmental practices contribute to improving customer satisfaction and loyalty?

In order to examine the assumptions made and the question raised, an empirical survey focused on Greek hotel customers was carried out.
SAMPLE AND DATA COLLECTION

The population of this study was Greek people who have stayed more than three days in hotels located in Greece. The data collection was done with personal interviews, using a structured questionnaire in the period of May –August of 2017. The final sample size, after the elimination of inconsistent questionnaires, consists of 440 customers. The 42% of the sample were women and the 58% men, with a mean age of 36 years, and the majority was highly educated (51.4%), i.e., 40.5% had a bachelor’s degree, and 13.6% had a master’s or a PhD degree. Lastly, the majority of the sample had incomes falling into three groups: 600.01 – 1250.00€ (36.5%); 1250.01-2000.0€ (26.6%) and exceeding 2000.01€ (20.9%). The average of overnight stays was six. The 76.6% of the sample stayed overnight as tourists, the 9.5% of the sample for working purposes and the 13.9% for both reasons. The hotel for the overnight stay has been chosen via booking sites (Trip Advisor, Booking) from the 40% of the sample. The 20.7% have chosen the hotel after the suggestion of friends, 11.6% via travel agencies and 21.1% through searching independently on the internet. Lastly, 30.2% of the customers stayed overnight in 3-stars hotels; 36,8% in 4 stars hotels, and 17.5% in 5 stars hotels.

RESEARCH INSTRUMENT DEVELOPMENT

Customers’ satisfaction has been studied with a verity of instruments. Among them, the European Customer satisfaction Index (ECSI) developed by European experts, examines seven factors: image, expectation, perceived quality of the products, perceived quality of the service, perceived value, satisfaction and loyalty. In this study, in the instrument used are incorporated all the factors from the ECSI, except perceived quality of the products and expectations. Moreover, from the work of Bayol et al. (2000) was used a factor named “complaints”, from Ball et al. (2004) a factor named “communication” and finally from the work of Stegerean et al. (2014) the factor “environmental policy”. All the factors consist of a number of items and all were measured with a 5- point Likert scale where 1= strongly disagree, 2= disagree, 3= neutral, 4= agree and 5= strongly agree.

VALIDITY AND RELIABILITY OF RESEARCH INSTRUMENT

The examination of the validity of the instrument requires a test for content and constructs validity. As regards content Validity, it is based on the extent to which a measurement reflects the specific intended domain of content (Carmines and Zeller, 1991; Sigala & Christou, 2006; Dermetzopoulos et al., 2009) and is realized by a review of the literature and a pilot test with a panel of experts. As to construct validity and according to Cao and Dowlatshahi (2005) there are three ways it is assessed: unidimensionality of the constructs; convergent validity and discriminant validity. As regards unidimensionality of the constructs, it was examined with the use of confirmatory factor analysis. The initial number of 49 items was reduced to 41 items (8 constructs) after the elimination of 8 items because of loads less than 0,45 or because they loaded in factors in which they do not belong conceptually (Table1).

### Table 1

<table>
<thead>
<tr>
<th>Items</th>
<th>Loadings</th>
<th>Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hotel management follows an environmental certification system</td>
<td>0,78</td>
<td>Environment</td>
</tr>
<tr>
<td>The hotel has a written environmental policy</td>
<td>0,79</td>
<td></td>
</tr>
<tr>
<td>The products offered by the hotel to the customers are ecological</td>
<td>0,84</td>
<td></td>
</tr>
<tr>
<td>Hotel management implements energy-saving practices</td>
<td>0,78</td>
<td></td>
</tr>
<tr>
<td>Hotel management implements water-saving practices</td>
<td>0,82</td>
<td></td>
</tr>
<tr>
<td>Hotel management implements the selective collection of solid wastes</td>
<td>0,77</td>
<td></td>
</tr>
<tr>
<td>Hotel management is focused on purchasing ecological and environmentally respectful products</td>
<td>0,87</td>
<td></td>
</tr>
<tr>
<td>Compared with other hotels, the value of the services of this hotel is good</td>
<td>0,86</td>
<td>Perceived Value</td>
</tr>
<tr>
<td>I positively rate the services of this hotel (snack-bar, cleanliness, contact, etc.)</td>
<td>0,83</td>
<td></td>
</tr>
<tr>
<td>Taking into account the quality of the services I have received as well as what I have done to obtain them, my rating of this hotel is good</td>
<td>0,90</td>
<td></td>
</tr>
</tbody>
</table>
The information obtained previously complies with this hotel’s services 0.89

When I have a problem with the service, even though it is inexpensive, I tend to complain, ask for my money back or an improvement in the service 0.49

I’m concerned about knowing my rights (as a citizen, as a client, as a consumer, etc.) 0.87

I know about the procedure of making a complaint 0.68

I’m interested in knowing the existing alternatives of products and services 0.86

When facing a problem with a hotel, I will make a claim to external organizations (Consumers’ Association) 0.44

The communication exchanged is exact 0.94

The communication exchanged is complete 0.97

The communication exchanged is credible 0.95

The hotel informs about the occurrences and changes that may affect the client 0.83

I distinguish the establishments of this hotel chain perfectly 0.83

I tend to pay attention to this hotel’s advertising 0.79

This hotel is renowned for its good social behavior 0.86

This hotel’s image fits my personality 0.79

The hotel has up-to-date equipment 0.81

This hotel’s staff are well-dressed and have a good appearance 0.85

When this hotel commits itself to doing something, it does it 0.89

This hotel’s staff are always ready to help their clients 0.88

I consider that the global assessment of the quality received is positive 0.93

Compared with other hotels of the same category, this hotel offers me more activities 0.70

This hotel’s staff in general wish to offer the service in the appropriate time and are capable of doing so 0.93

This hotel’s staff are in general competent 0.93

This hotel’s establishments have a pleasant atmosphere in general 0.91

This hotel makes an effort to understand my needs 0.92

I was right to choose to stay in this hotel 0.94

I am satisfied with this hotel 0.96

This hotel is consistent with its promises 0.95

This hotel offers an excellent service 0.92

My experience in this hotel has been positive in general 0.95

I will continue contracting this hotel’s services in the coming years 0.86

I will recommend this hotel to anyone who asks my advice 0.98

Table 2
Test for convergent validity

<table>
<thead>
<tr>
<th>Factor</th>
<th>No of items</th>
<th>Average Variance Extracted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environment</td>
<td>7</td>
<td>65.26%</td>
</tr>
<tr>
<td>Perceived Value</td>
<td>4</td>
<td>75.76%</td>
</tr>
<tr>
<td>Complains</td>
<td>5</td>
<td>50.85%</td>
</tr>
<tr>
<td>Communication</td>
<td>4</td>
<td>85.39%</td>
</tr>
<tr>
<td>Image</td>
<td>4</td>
<td>66.91%</td>
</tr>
<tr>
<td>Perceived quality</td>
<td>10</td>
<td>77.00%</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>5</td>
<td>89.13%</td>
</tr>
</tbody>
</table>
Loyalty
Total items

Total items  41

Discriminant validity was also examined. The way to determine if there is discriminant validity is to show if the correlations among the constructs are lower than the square root of the average variance extracted (Table 3). The study indicates that this condition is satisfied for all the constructs.

Table 3
Test for Discriminant Validity

<table>
<thead>
<tr>
<th>Factors</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environment</td>
<td>0.807*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived Value</td>
<td>0.435</td>
<td>0.870*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complains</td>
<td>0.428</td>
<td>0.330</td>
<td>0.691*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communication</td>
<td>0.434</td>
<td>0.574</td>
<td>0.374</td>
<td>0.924*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Image</td>
<td>0.595</td>
<td>0.450</td>
<td>0.448</td>
<td>0.437</td>
<td>0.817*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived quality</td>
<td>0.497</td>
<td>0.759</td>
<td>0.425</td>
<td>0.643</td>
<td>0.592</td>
<td>0.877*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfaction</td>
<td>0.422</td>
<td>0.765</td>
<td>0.345</td>
<td>0.626</td>
<td>0.520</td>
<td>0.874</td>
<td>0.944*</td>
<td></td>
</tr>
<tr>
<td>Loyalty</td>
<td>0.442</td>
<td>0.691</td>
<td>0.330</td>
<td>0.559</td>
<td>0.577</td>
<td>0.793</td>
<td>0.851</td>
<td>0.921*</td>
</tr>
</tbody>
</table>

*square root of A.V.E

In order to test the instrument for its reliability the composite reliability of the constructs was examined. All the constructs were reliably as their values are more than the acceptance threshold of 0.7 (Table 4).

Table 4
Test for Reliability

<table>
<thead>
<tr>
<th>Factor</th>
<th>No of items</th>
<th>Construct Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environment</td>
<td>7</td>
<td>0.929</td>
</tr>
<tr>
<td>Perceived Value</td>
<td>4</td>
<td>0.925</td>
</tr>
<tr>
<td>Complains</td>
<td>5</td>
<td>0.810</td>
</tr>
<tr>
<td>Communication</td>
<td>4</td>
<td>0.958</td>
</tr>
<tr>
<td>Image</td>
<td>4</td>
<td>0.889</td>
</tr>
<tr>
<td>Perceived quality</td>
<td>10</td>
<td>0.970</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>5</td>
<td>0.976</td>
</tr>
<tr>
<td>Loyalty</td>
<td>2</td>
<td>0.918</td>
</tr>
<tr>
<td>Total items</td>
<td>41</td>
<td></td>
</tr>
</tbody>
</table>

RESULTS

The 53.6% of customers stated that the hotel follows a certified environmental policy system, 29.3% was unsure of this, while 17.1% claimed that they did not perceive that this is the case. Also, 51.2% found that the hotel has a written environmental policy, 23.2% was not sure about it and 25.7% did not ascertain this. Additionally, 49.1% believe that the hotel provides with ecological products (soaps, shampoos, toilet paper, etc.) thus protecting the environment, 29.8% was unsure, and 21.1% do not believe that this is the case. Energy consumption reduction practices were perceived by 56.8% of the sample; 25.2% were unaware if these practices were applied, and 18% stated that they were not. Water consumption reduction practices have been perceived by 40.2% of the sample, 38% were unsure, and 21.8% did not find that such practices were applied. Selective garbage collection was perceived by 56.6% of customers, 16.6% was not sure that this was applied by the hotel, and 26.8% considered that no such practices apply. Similarly, 49.1% believed that the hotel is procuring environmentally friendly cleaning products that protect the environment, 29.8% are unsure and 21.1% did not believe this is true. Overall, the assessment of questions relating to the hotel's environmental policy shows that customers were not very sure or did not have a clear understanding of the practices been applied by the hotels.

Among the seven factors that influence total customer satisfaction (Table 5), the Environmental Policy of the hotels is the factor that less satisfies the customers (M=3.40), followed by the Image factor (M=3.60). On the contrary, they are more satisfied with the Expectation factor (M=4.19), followed by
Perceived Value (M=4.09) and Perceived Quality (M=4.04). Total customer satisfaction is satisfactory (M=4.12), and the level of Loyalty is also significant (M=3.89). However, the high Coefficient of Variation (> 10%) indicates that there are significant differences in customer estimates.

To identify differentiation of customers' estimates ANOVA was used with dependent variables the derived factors and independent variables the hotels' category, and the respondents’ gender, income, and educational level. The results indicated that there is a significant difference in the opinion of the customers on all factors, due to the hotels’ category. Thus, four- and five-star hotel customers were found to be more satisfied compared to the customers of the other hotel categories, at all factors. Customer gender is the cause of differentiation only in the Image factor where women rate it slightly higher (3.7) than men (3.5). Income is a cause of differentiation in Communication, Perceived Quality, and Satisfaction factors. Those with an income of 1,000-2,000,00 € are more satisfied with the level of Communication, while less satisfied are those who earn more than 3,000,01€. Perceived quality is estimated to be lower for those with an income of <350€, probably because they were staying in low-category hotels, while those with higher incomes vary considerably. The same was observed for the Total Satisfaction Level, probably due to the same reason. Finally, the level of education is a cause of differentiation for the dimension Environmental Policy. Those who have a high school diploma evaluate the hotel's environmental policies more positively than holders of a postgraduate or doctorate degree. The eta squared, which is used to measure the effect size (the size of the relationship between the two variables) in an ANOVA statistical test, was also calculated. Eta squared measures the proportion of variance in a dependent variable that is explained by the independent variable. Eta squared values range from 0 to 1 with values of around 0.26 considered large. In all ANOVA that have performed, as shown in the table 6, the eta squared is lower than 0.26 and thus there is not strong dependence of any dependent variable from some independent.

To test the hypotheses of this study, the Structural Equation Modeling technique was used. The assessment of the proposed model consists of three steps. The first one is the assessment of the

### Table 5
**Basic Statistical Measures**

<table>
<thead>
<tr>
<th>Factors</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Coefficient of Variation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Policy</td>
<td>3.40</td>
<td>0.9693</td>
<td>28.44%</td>
</tr>
<tr>
<td>Perceived value</td>
<td>4.09</td>
<td>0.7785</td>
<td>19.01%</td>
</tr>
<tr>
<td>Complains</td>
<td>3.67</td>
<td>0.7978</td>
<td>21.72%</td>
</tr>
<tr>
<td>Communication</td>
<td>3.88</td>
<td>0.9748</td>
<td>25.10%</td>
</tr>
<tr>
<td>Image</td>
<td>3.60</td>
<td>0.9083</td>
<td>25.22%</td>
</tr>
<tr>
<td>Perceived quality</td>
<td>4.04</td>
<td>0.7809</td>
<td>19.31%</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>4.12</td>
<td>0.8774</td>
<td>21.28%</td>
</tr>
<tr>
<td>Loyalty</td>
<td>3.89</td>
<td>0.9859</td>
<td>25.28%</td>
</tr>
</tbody>
</table>

### Table 6
**ANOVA for hotel stars and customers characteristics**

<table>
<thead>
<tr>
<th>Factors</th>
<th>Stars F</th>
<th>Sig.</th>
<th>n²</th>
<th>Gender F</th>
<th>Sig.</th>
<th>n²</th>
<th>Income F</th>
<th>Sig.</th>
<th>n²</th>
<th>Education F</th>
<th>Sig.</th>
<th>n²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Policy</td>
<td>15.726</td>
<td>.000*</td>
<td>.153</td>
<td>1.243</td>
<td>.265</td>
<td>.003</td>
<td>3.555</td>
<td>.956</td>
<td>.007</td>
<td>2.596</td>
<td>.018*</td>
<td>.035</td>
</tr>
<tr>
<td>Perceived value</td>
<td>6.902</td>
<td>.000*</td>
<td>.074</td>
<td>1.051</td>
<td>.306</td>
<td>.002</td>
<td>1.859</td>
<td>.056</td>
<td>.037</td>
<td>1.977</td>
<td>.068</td>
<td>.027</td>
</tr>
<tr>
<td>Complains</td>
<td>7.685</td>
<td>.000*</td>
<td>.081</td>
<td>2.88</td>
<td>.592</td>
<td>.001</td>
<td>1.306</td>
<td>.231</td>
<td>.027</td>
<td>.525</td>
<td>.789</td>
<td>.007</td>
</tr>
<tr>
<td>Communication</td>
<td>7.210</td>
<td>.000*</td>
<td>.077</td>
<td>.002</td>
<td>.962</td>
<td>.000</td>
<td>3.298</td>
<td>.001*</td>
<td>.065</td>
<td>.454</td>
<td>.842</td>
<td>.006</td>
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<tr>
<td>Image</td>
<td>21.596</td>
<td>.000*</td>
<td>.199</td>
<td>4.021</td>
<td>.046*</td>
<td>.009</td>
<td>.867</td>
<td>.555</td>
<td>.018</td>
<td>.306</td>
<td>.934</td>
<td>.004</td>
</tr>
<tr>
<td>Perceived quality</td>
<td>11.721</td>
<td>.000*</td>
<td>.119</td>
<td>.291</td>
<td>.590</td>
<td>.001</td>
<td>2.087</td>
<td>.029*</td>
<td>.042</td>
<td>.953</td>
<td>.457</td>
<td>.013</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>8.452</td>
<td>.000*</td>
<td>.089</td>
<td>.000</td>
<td>.990</td>
<td>.000</td>
<td>2.423</td>
<td>.011*</td>
<td>.048</td>
<td>1.070</td>
<td>.380</td>
<td>.015</td>
</tr>
<tr>
<td>Loyalty</td>
<td>9.555</td>
<td>.000*</td>
<td>.099</td>
<td>.310</td>
<td>.578</td>
<td>.001</td>
<td>.958</td>
<td>.474</td>
<td>.020</td>
<td>.508</td>
<td>.802</td>
<td>.007</td>
</tr>
</tbody>
</table>

To test the hypotheses of this study, the Structural Equation Modeling technique was used. The assessment of the proposed model consists of three steps. The first one is the assessment of the
overall model fit that includes: (a) the Normed $\chi^2$ (for big samples), (b) the Normed Fit Index (NFI), (c) the Comparative Fit Index (CFI) and (d) the Root Mean Square Error of Approximation (RMSEA). In the table 7 are presented the results from the test for overall model and as shown all of them are in acceptable level.

### Table 7

**Overall Model Fit Statistics**

<table>
<thead>
<tr>
<th>Measures</th>
<th>Suggested values</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\chi^2$/d.f</td>
<td>$1 &lt; \chi^2$/d.f $&lt; 3$</td>
<td>2.48</td>
</tr>
<tr>
<td>NFI</td>
<td>$\geq 0.9$</td>
<td>0.98</td>
</tr>
<tr>
<td>CFI</td>
<td>$\geq 0.9$</td>
<td>0.99</td>
</tr>
<tr>
<td>RMSEA</td>
<td>$&lt; 0.08$</td>
<td>0.058</td>
</tr>
</tbody>
</table>

1Hair et al, 1995; 2Bentler and Bonnet, 1980; 3Joreskog and Sorbom, 1993.

The next step is the assessment of the measurement models that requires: (a) A test for the statistical significance of the loadings of all the items, with the use of $t$-values. For a 5% level of significance, $t$-values out of interval $[-1.96, 1.96]$ are considered statistical significant. (b) The construct reliability and (c) the variance extracted for each construct. The values of these two measures should exceed 0.7 and 0.5 (50%) respectively (Hair et al., 1995). In this study the measurement model was assessed in the step of questionnaire’s validation. The final step refers to the assessment of structural model. The evaluation of the structural model includes the significance of calculated coefficients and the calculation of $R^2$ that indicates how well the model is performing (Hair et al., 1995). The results are presented in the table 8.

The six constructs that were used, in order to measure their effect on satisfaction, explain the 88% of the total variance ($R^2=0.88$). Although this percentage is high, it is obvious that the coefficients of only three constructs are significant and contribute to the explanation of satisfaction. These constructs are: Perceived Value ($\gamma=0.29$), Image ($\gamma=0.10$) and Perceived quality ($\gamma=0.69$). The contribution of the other constructs is very low and not significant. Particularly, for the environmental policy of the hotels that is the new factor in the examination of customers’ satisfaction, it is easily perceived that it does not affect it ($\gamma=0.08$ with $t$-value $=1.88$). Thus, the hypotheses H1, H2 and H5 are accepted while the hypotheses H3 and H4 are not supported. Moreover, in the research question about the impact of environmental policy on satisfaction the results indicate that there is no evidence that support it. The 87% ($R^2=0.87$) of the variance of loyalty is explained by satisfaction and environment, but only satisfaction affects strongly the loyalty ($\beta=0.94$) as environment has an impact very low (0.03) and non significant ($t=0.89$). That means that the hypothesis H6 is accepted, while for the second part of research question the results indicate, no impact.

In summary, the results show that the first priority for hotel customers is the quality of services provided, followed by the perceived value and the image of the hotel. The environmental policy does not play yet, any critical role in satisfaction and loyalty of customers.

### Table 8

**Structural Model**

<table>
<thead>
<tr>
<th></th>
<th>Satisfaction $R^2=88%$</th>
<th>Loyalty $R^2=87%$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environment</td>
<td>0.08</td>
<td>0.0</td>
</tr>
<tr>
<td>Perceived Value</td>
<td>0.29*</td>
<td></td>
</tr>
<tr>
<td>Complains</td>
<td>0.07</td>
<td></td>
</tr>
<tr>
<td>Communication</td>
<td>0.03</td>
<td></td>
</tr>
<tr>
<td>Image</td>
<td>0.10*</td>
<td></td>
</tr>
<tr>
<td>Perceived quality</td>
<td>0.69*</td>
<td></td>
</tr>
<tr>
<td>Satisfaction</td>
<td>--</td>
<td>0.94*</td>
</tr>
</tbody>
</table>

*significant at level <5%.

The same conclusion arises if we re-run the model without the environmental policy factor, as the value of $R^2$ for satisfaction is reduced by only 1%, while for loyalty it remains constant.
CONCLUSIONS

The main objective of this work was to investigate the factors that affect clients' satisfaction and loyalty to hotels. Particular emphasis was given to investigating the degree of implementation of the environmental practices applied by hotels and their possible impact on customer satisfaction and loyalty. The results showed that about half of the customers perceive the implementation of environmentally-friendly practices while the other half are unsure or do not believe they are being implemented. It is important that among all the factors studied, environmental policy is the one valued by customers lower. Environmental practices are becoming more apparent in four- and five-star hotels that obviously have more resources to adopt and implement. In conclusion, hotels and especially smaller ones should put more emphasis on environmental protection in their effort to attract more of the growing, environmentally sensitive customers. From the analysis of research results, it is also perceived that hotel customers pay particular attention to providing quality services, perceived value and image of the hotel, which is usually related to the category of the hotel. On the contrary, communication and the ability to express complaints and observations show that it does not contribute much to shaping their level of satisfaction. However, the most important finding of this study is the confirmation of the conclusions of previous surveys that the influence of the hotel's environmental policy on satisfaction and loyalty is negligible. This is probably due to the inadequate implementation of environmental protection rules, the incomplete disclosure of environmental policy to customers, and the recent public awareness-raising effort to protect the environment. Environmental protection today is becoming more imperative than ever, and it is a duty and a duty of every citizen and business to contribute to it. Hotel businesses, the operation of which is burdened the environment, especially during the peak months, will have to adopt self-imposed rules of environmental protection in addition to state instructions. Staff training on environmental issues and customer information is also needed.

REFERENCES


