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**Evaluating the Impact of green practices on company
performance in the Montenegro hotel industry**

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Title Page

Evaluating the Impact of green practices on company performance in the Montenegro hotel industry

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Summary

This study examines the impact of green practices on organisational performance, in the Montenegro hotel industry. A mixed-method approach is employed consisting of two phases a questionnaire-based survey administered to those in managerial positions in the hotel, followed by a qualitative analysis of interviews conducted with hotel managers. The results indicate a significant impact of green practices on hotels' performance observed through three indicators: quality of service, guest satisfaction and financial performance. Interestingly, investment in green marketing strategies did not have any effect on the relationship between green practices and performance. Further, interviews identified financial constraints, lack of support from the state and inadequate employee awareness about sustainability as major barriers to implementation of green practices. Guest awareness of sustainability was seen as an important enabler.

The study is the only study looking at the impact of the adoption of green practices in hotels in Montenegro. The findings can be valuable for policy planners, tourism investors, as well as researchers in this specific industry.

Track

Sustainable and Responsible Business Track

Introduction

There is considerable momentum towards sustainability in the hotel industry. Led by changing customer preferences, stakeholders' expectations to reduce carbon footprint, statutory requirements regulating the industry and the attractiveness of getting green certification, hotels are increasingly adopting a whole raft of 'Green practices' (Han and Yoon, 2015, Kuo, Fang, Le Page 2022, Kasimu et al 2012). These practices are aimed at not just minimising hotels' impact on the environment, but also cutting costs and enhancing competitiveness by catering to consumer demands and improving brand image (Kim, Lee and Fairhurst 2017, Merli et al. 2019; Moise Gill-Saura and Molina 2021). Literature shows that adopting green practices can indeed increase an organisation's competitive advantage and reduce costs (Singjai, Winata and Kummer, 2018).

Even so, there is little consensus yet on what comprises 'green practices' in the hospitality sector (Kim, Lee, and Fairhurst 2017; Abdou, Hassan and Dief 2020). While some authors focus on energy and water conservation, and waste management, others have included the use of environmentally friendly packaging and products, environmentally friendly means of transport, use of organic food, purchasing seasonal and locally produced food, capacity utilization and eco-labelling as a part of green practices (Darvishmotevali & Altinay, 2022a; Elkhwesky, 2022)

Much of the literature on green practices in the hotel sector investigates customer perspectives (Qianqian and Li 2022; Salinero et al 2022) with fewer studies investigating the impact of green practices on the business performance in the hotel sector (Pereira-Moliner et al, 2015; Elkhwesky, 2022).

Publications in the field also tend to focus on a limited range of countries with studies only in the last few years, examining sustainability in hotels located beyond the non-western world (Myung, McClaren and Li, 2012; Rhou and Singal, 2020, Acampora et al, 2022).

This article fills the gap in the literature by investigating if increasing the level of environmental commitment by adoption of 'green practices' can be a source of superior performance.

Further, the study considers the context of Montenegro, which is the first declared ecological state in the world. The country has made significant efforts in terms of promoting sustainable tourism. Yet, the heavy dependence of Montenegro on mass tourism results in a disregard for the enormous potential for building its image as a green destination. Literature on the hospitality sector in this context is limited and no study to date, has explored the link between green practices and performance in the context of Montenegro.

The paper sets out to address the following research questions. First, it aims to determine the impact of green practices on indicators of business performance and establish if there is a difference in the performance of green and non-green hotels. Second, it examines the impact of investing in green practices on the relationship between green practices and business performance. Finally, it explores the enablers and barriers to the implementation of green practices and identifies the reasons for the same. Accordingly, the research objectives are:

1. To investigate the relationship between green practices and performance in Montenegrin hotels.

2. To examine if the level of investment can affect the relationship between green practices and performance.
3. To examine if green hotels achieve higher performance than non-green hotels.
4. To understand the barriers and enablers for adopting green practices in hotels in Montenegro

The study adopts a mixed methods approach to address the objectives. First, using a questionnaire survey, it analyses the relationship between green practices and hotels' business performance. This is followed by interviews with representatives from green and non-green hotels, to allow for an in-depth understanding of underlying issues.

Literature Review

Green operations in hotel industry are becoming increasingly significant in the light of UN Sustainable framework, as it has been recognised as one of the tourism sectors that can leverage and promote SDGs (Jones and Comfort, 2019). Scholarly reviews on sustainability in hotels shows that the most frequently examined theme is that of the study of 'Green practices' (Acampora et al, 2022; Elkhwesky, 2022) and yet there is a lack of consensus on of what comprises green practices and the positive outcomes they generate. Considering the research questions, the subsequent sections focus on literature on green practices and their impact on performance.

Green practices in the hotel industry

The term 'green practice' in hotels has been variously defined. Rahman et al., (2012) characterise green practices as "doing business in a way that reduces waste, conserves energy, and generally promotes environmental health" (pg721). Myung et al., (2012) describe them as using sustainable materials, reducing waste, and employing proactive environmental measures. Based on their review of literature published between 2000-2014, Kim, Lee and Fairhurst (2017) found that green practices were more to do with achieving business benefits rather than fulfilling environmental objectives. Accordingly, the authors defined green practice as "a value-added business strategy that benefits a hospitality operation that engages in environmental protection initiatives" (pg. 236).

In previous works (Ogbeide, 2012; Acampora et al, 2022), green practices adopted by hotels are in three main areas: Energy conservation, Water Conservation and Waste Management which includes reducing and reusing the linen in hotels. Green marketing and green certifications have been included as a green practice (Trang, Lee, and Han, 2019).

Considering that hotels use fossil fuel energy in their various operations, one of the most important aspects of environmental management in the hotel industry is energy minimisation (Abdou et al, 2020; Elkhwesky, 2022). Studies have shown that the pressures to invest and improve practices focusing on energy conservation are driven not just by external stakeholders and regulatory compliance but also due to cost-cutting pressures (Rahman, Reynolds and Svaren, 2012; Pace, 2016; Trang, Lee, and Han 2019).

Water consumption in hotels is high and is determined by the size and capacity of the hotel, the occupancy rate, and the type and grade of services provided (Abdou et al, 2020). Engaging in eco-conscious activities can contribute to positive outcomes for organisations such as increasing guest satisfaction, but it is important for hotels to make their customers aware of

these practices (Han et al, 2018). There are many economical ways to achieve savings through water conservation (Trang, Lee, and Han 2019; Moise et al., 2021). Yet, hotels may not always have the incentives to conserve water (Torres-Bagur et al, 2019).

The hotel sector generates substantial waste (Pham Phu, 2019; Abdou et al., 2020). Yet waste management hasn't received as much attention as energy and water conservation. Limited research that exists focuses on success factors and barriers, processes involved, legislation and more (Molina-Azorín et al, 2009; Reyes-Santiago, Sánchez-Medina and Díaz-Pichardo, 2019; Elkhwesky, 2022) but does not examine the impact on performance indicators.

Finally, green marketing strategies have been studied as a part of the green practices in hotels (Rosenbaum and Wong, 2015; Mbasera et al, 2016). Research shows that these can offer a competitive edge by increasing customer loyalty and thus impacting performance (Punitha and Rasdi, 2013; Chung, 2020)

Green practices and business performance

Myung and others in 2012 recognised the dearth of work examining the impact of green practices on business performance. Since then, several studies have found that environmental practices impact performance (Gupta and Gupta, 2021; Perramon, Oliveras-Villanueva and Llach 2022). Performance, itself, has been studied through different lenses including customer satisfaction, financial performance, and service quality.

For example, literature has extensively examined the relationship between environmentally focused practices and guest satisfaction (Albayrak and Caber, 2015; Juvan and Dolnicar, 2017; Martinez et al. 2018; Han, 2021) and concluded that the positive outcomes motivate hotels to embrace environmental practices (Merli et al, 2019; Trang et al., 2019; Gupta and Gupta, 2021). Interestingly, these studies have yielded mixed results. Berezan et al. (2014), argue that environmental initiatives are important factors influencing guest hotel choice while others found that the fact that the guests may express concern about environmental issues, does not mean they will be happy to pay more for these (Yu et al. 2017).

Similarly, studies discover positive effect of green practices on service quality (Lee and Cheng, 2018; Karimi, 2014). Some found that green practices focussed on energy efficiency and waste management (Kularatne et al., 2019) contribute to a better quality of service. While others, such as Jiang, Wang, and Zhou (2022) found that service quality moderates the impact of green practices on customer satisfaction. Clearly, quality of service has been examined from different lenses in the study of green practices.

Green practices are also shown to impact financial performance by cutting costs and increasing revenues (Miroshnychenko, 2017). Additionally, improvements in hotel efficiency through energy efficiency and waste management (Kularatne et al., 2019) can result in savings. However, the link between green practices and financial performance is contested. While Yenidogan et al., (2021) showed that green management impacts financial performance by improving revenues and lowering costs, another study found a negative impact on financial performance (Gonzalez-Benito and Gonzalez-Benito, 2005). Therefore, it is useful to investigate reasons behind any impact produced.

Based on the discussion above, service, guest satisfaction and financial performance were included as indicators of performance and the first hypothesis was proposed as:

H1: Green practices are associated with higher performance.

Investment in Green practices

Hotels, both green and non-green, are investing in innovative technologies for energy and water conservation and adopting environmental management systems to increase savings and performance (Adbou et al, 2022). However, the Covid19 pandemic brought cost pressures, making it difficult for hotels to continue to invest in green practices. Elkhwesky et al. (2022) reviewed sustainable practices in the pre-covid and amid covid pandemic and found that the intent to invest more in sustainable practices was there but not possible for many in the sector. In other words, the impact of green practices on business performance is determined by the level of investment into green practices. Thus, the following research hypothesis was proposed:

H2: Level of Investment moderates the impact of green practices on performance.

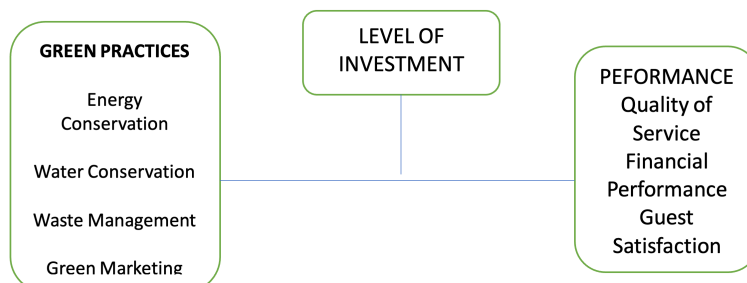
Green certifications

The status of a green hotel comes from internationally recognised certificates of sustainability. Therefore, literature considers green hotels as those that are eco-certified. By obtaining the environmental certification hotels gain access to the expertise and customised information regarding the implementation of sustainability measures (Geerts, 2014). Zhang et al., (2014) found that in comparison to properties with no eco-certifications, certified hotels retain superior operational efficiency as well as greater customer-driven resource efficiency by shifting demand and attracting more eco-friendly guests. Accordingly, the final hypothesis was developed as:

H3: Green hotels achieve higher performance than non-green hotels.

Based on the discussion above, the following conceptual framework was developed (Figure 1)

Figure 1: Conceptual framework



The Montenegrin context

Review of extant literature confirms that much of the research on greening in hotels tends to focus on a limited number of countries (Acampora et al, 2022). Indeed, only two empirical studies have been published in high-ranking journals in the context of Montenegro. One of these focuses on customers' green motivations while the other focuses on attitudes of employees towards green accounting.

Montenegro is a small Mediterranean country which has long held the ambition of joining the European Union. In 2015 Montenegro adopted National Strategy for Sustainable Development (NSSD) which aims to achieve sustainable development by 2030. The strategy focuses on preserving natural resources and introducing green economy, governance, and finance for sustainable development (European Environment Agency, 2020). Montenegro sees adherence to EU Green Deal requirements and implementing greening measures, to achieve its strategic objective of accession to the European Union. Accordingly, several proactive actions are being taken including the implementation of Low Carbon Tourism programme, environmental travel certificates "Travelife" and "EU Ecolabel" which were issued to 27 Montenegrin hotels (Lowcarbonmne.me, no date) aimed at creating differentiation between green and non-green hotels. In 2018, the country was promoted as an eco-friendly destination. Notwithstanding these initiatives there has been moderate progress, and although tourism has been identified as one of the priority industries, most of the regulations are focused on attracting foreign investments that would further develop mass, rather than green tourism (The Second Voluntary National Review in 2022, commissioned by the Government of Montenegro). A UNDP field project (Lowcarbonmne.me, no date) found that Montenegro already has an enviable number of green hotels, without their owners being aware of it and who are not using any green credentials for marketing purposes. In fact, the entire region of Western Balkans recognised the concept of sustainable tourist development but is still far behind in terms of green tourism (Bucar, 2017). These circumstances offer Montenegro the chance to lead in its region and therefore provide an interesting context to examine the role that green practices can play in improving business performance of the hotels.

Methodology

Research Design

The objectives set out for the paper include an inquiry into patterns and relationships between variables as well as an in-depth investigation. Hence the study warranted a mixed-method approach. Previous studies have tended to take a positivist approach towards the study of green practices (Karimi, 2014), but more recent studies have pointed to the need for a mixed approach including sequential mixed method design (Yeşiltaş, Mert and Gökhan, 2022) and therefore this method was adopted for the current study.

Data Collection

The data collection was undertaken during May 2022 to February 2023 in two phases. Following sections explain these in more detail.

Phase one

A deductive approach involved collecting quantitative data, by administering structured online questionnaires to 'green' and 'non-green' hotels, which were in existence for at least two years. Green hotels were those which had one or more green certifications in place and 'non-green'

were those without any green certifications. In Montenegro, there are twenty-seven green hotels, all of which selected for the study. Among, the four hundred non-green hotels, 27 were selected based on convenience sampling to ensure a comparison with the green hotels.

The objective of phase one was to establish the extent to which green practices are associated with higher performance. A questionnaire-based survey was administered to one managerial representative from each hotel (CEO or the marketing manager), who had an oversight of organisational strategy and green practices.

Survey instrument development

Based on previous empirical studies, an 18-items questionnaire was developed. The face validity of the questionnaire was established by pilot testing the questionnaire on a typical respondent and an expert. Based on the feedback, a detailed explanation of each green practice was provided within the questionnaire. Finally, internal consistency between the questionnaire items was checked using Cronbach's alpha. Details of the variables included in the questionnaire are given below.

Dependent Variables- Performance

Performance was assessed using a perceptual scale to measure performance on three indicators- Quality of service, Guest satisfaction and Financial Performance. Perceptual measures offer valid representation of objective performance and have been previously used in literature (Pereira-Moliner et al, 2015; Reyes-Santiago, Sánchez-Medina and Díaz-Pichardo 2019; Perramon, Oliveras-Villanueva and Llach 2022). One item was used to measure Guest satisfaction while three items were used for measuring Quality of service and three were used for measuring financial performance. The scale included a five-point Likert type scale with questions ranging from "To no extent (1) to "A very large extent" (5).

Independent variables

Respondents were asked to report on green practices pertaining to energy conservation, water conservation, waste management and green marketing strategies over three years, using a 4-items scale.

Moderating Variable

One moderating variable was included based on previous literature the level of investment in green practices which measured using a 4-item scale.

Phase two

Following interpretation of results from the first phase, the second phase focused on qualitative interviews, in line with previous research on green practices (Cabral and Dhar, 2019). The interview questions aimed at undertaking in-depth investigation into the importance of green practices in improving business performance. Further these focused on examining success factors for the green and non-green hotels and understanding the barriers in hotels' pursuit of adopting green practices.

In total, eight in-depth semi-structured interviews of about 45-60 minutes were conducted. Hotels with different levels of investment in green practices were selected, to identify enablers

and barriers while implementing green practices. Four participants from green hotels and four from non-green hotels were selected based on convenience sampling. Participants were senior managers who, plan and oversee long-term strategies and had at least two years of service in their current organisation. The hotels were a mix of ratings namely, 3-star as well as 4 and 5 stars. All interviews were conducted in the local language and in a face-to-face setting, except one which was done virtually, as requested by the interviewee.

Sample interview questions are included in Appendix 2.

Data Analysis and Results

Statistical methods using SPSS were used to analyse the data and to address research objectives of the study while a thematic analysis was used to analyse the qualitative interviews.

Analysis of Quantitative data

To understand the data and determine suitability of statistical analyses, frequencies and the distribution was checked.

Normality test

The Shapiro Wilk test for normality was chosen as this test has a greater reliability with smaller sample sizes (Zikmund et al., 2013). The results shown **Table 1.1 and 1.2** indicate that the data is not normally distributed, since the p-value is below .05 ($p < .001$) for dependent variables and slightly below .05 for independent variables $W(52) = .953, p = .041$ and $W(52) = .944, p = .016$, thus indicating a violation of normality and implying that non-parametric tests should be used in further analysis. However, the skewness and kurtosis show the distribution is symmetric especially for the independent variables, indicating that tests like regression analysis could still be chosen.

Frequencies

A total of 55 responses were recorded out of which $n=52$ (94.5%) was used for the analysis, as three green hotels had obtained their certifications less than 2 years ago. Therefore, the final sample consisted of 56% non-green and 44% green hotels.

Further, examining the data using frequency distribution and shown in Figures 2.1 and 2.2, suggests that within green practices, energy efficiency and water conservation dominate over waste management and green marketing. Moreover, investment in green practices continues to focus on energy efficiency and water conservation compared to waste management and green marketing.

Hypotheses testing

Hypotheses were tested using several different methods. Spearman's rank as well as the regression analysis was used to check for an association between green practices and hotels performance (H1). To test H2, PROCESS macro by Hayes was used to check for moderation effect. H3 was assessed using Mann-Whitney U-test to determine the difference between green and non-green hotels, in terms of overall performance.

Following sections report the results of analyses conducted to test the Hypothesis 1.

H1: Green practices are associated with higher performance.

Separate tests were run for the three indicators of performance. Accordingly, the hypothesis 1 was divided in further sub-hypotheses.

H1a. Green practices are associated with higher quality of service.

H1a. Green practices are associated with higher guest satisfaction.

H1c. Green practices are associated with higher financial performance.

Spearman correlation and multiple regression analyses were conducted to examine the relationship between improvement in green practices and performance. The regression was run for the three indicators of performance separately. Table 1.3 displays the summary of correlation between all variables. The results show that green practices are positively and significantly correlated with all three indicators of performance. The multiple regression model, with all the predictors produced similar results. These are discussed in more detail below.

When considering Quality of service, as the dependent variable, the correlation coefficient of $R_s=.766$ indicated a strong positive relationship between green practices and the dependent variable. Further, the model explains 59% of the variance and shows green practices are a significant predictor of quality of service, p-value of less than (Table 1.4).

Similarly, for Guest Satisfaction the correlation coefficient between green practices and the dependent variable is 0.766 indicating a strong positive relationship. Further, as shown in Table 1.5, with a p-value of less than .001, the model explains 59% of the variance indicating a statistically significant relationship between green practices and guest satisfaction.

For financial performance, the correlation coefficient between green practices and the dependent variable is 0.755 and indicates a strong positive relationship. Further, green practices explain 60.1% variance in the outcome variable at a p-value of less than .001 and indicate a statistically significant relationship between these two variables as shown in Table 1.6.

H2: Level of Investment moderates the impact of green practices on performance.

This hypothesis was testing using PROCESS macro by Hayes method. This test is useful while performing moderation analysis to find the solution in one step (Hayes, 2013). Using this method, the impact of investments on each dependent variable was examined.

The overall model showed significance ($p=.0000$), for all three variables. However, individual significance for investments as well as for interaction show different results.

For quality of service both investment (Investment), $p=.0123$ and interaction (Int_1) $p=.2374$ are higher than $p<0.05$, meaning that the impact of moderator variable is statistically not significant. Similar results are obtained for Guest Satisfaction (Investment) $p=.0123$, (Int_1) $p=.2374$ and financial performance (Investment) $p=.0125$, (Int_1) $p=.5665$.

Therefore, the hypotheses 2 that levels of investments moderate the impact of green practices on performance was rejected. Results of tests can be found in Tables 2.1-2.3.

H3: Green hotels achieve higher performance than non-green hotels.

To test this hypothesis Mann-Whitney U-test was used as it allowed comparison of two groups of hotels- Green and Non-Green.

Results (U= 148.5 and P-value of less than 0.001) confirmed that there is a significant difference in the Quality of service between green and non-green hotels. Green hotel category (N=23) had a larger mean rank (34.54) than non-green hotels (N= 29), with mean rank (20.12). Similar results were obtained for Guest satisfaction, with green hotels (U=122.5, p-value <0.001), having a higher mean rank (20.69) than non-green hotels (33.83) indicating that green hotels achieve higher Guest Satisfaction than non-green hotels. Results also indicated that green hotels achieved higher financial performance than non-green hotels, a difference that is statistically significant (U=165 and p<.001), with green hotels having a higher mean rank (35.67) than non-green hotels (19.22).

After testing for all three dependent variables, Hypotheses 3 was accepted establishing that differences in performance of hotels which were non-green and green was significant, with higher indicators of performance associated with green hotels. Details of the Mann-Whitney U Test are given in Table 3.1.

Qualitative analysis

The fourth research objective was focused on getting an in-depth insight into the type of green practices being used by the hotels, and the rationale for these hotels to commit to such practices. The interviewees were asked to first rate their hotel's progress on sustainability, subjectively, on a scale of 1-10. They were then asked follow-up questions aimed at understanding barriers and success factors in achieving sustainability and higher performance.

Based on the analysis of the interviews, the following themes emerged around barriers and incentives.

The interviews identified three main barriers to investing and implementing green practices which are discussed below:

The first is the lack of state support which almost all hotels agreed would otherwise be a major incentive to raise their level of green credentials. This is especially seen in hotels with lower star-ranking. A quote from a respondent from a green hotel explains this:

“If there were special (governmental) funds dedicated to assisting hotels in becoming more sustainable and improving green procedures, it would be much easier for us...we would absolutely strive to be fully sustainable by all standards”.

Secondly, it was observed that, in general, all surveyed hotels invested fewer financial resources in specific green practices and worked more practically to improve daily activities to save energy and water (e.g., daily reminders to the staff to save electricity), as well as in designing free marketing strategies. Lack of financial resources particularly in the context of declined economic activity caused by the Covid lockdown prevented the sustainability and implementation of green practices to be prioritised and instead, investment was directed towards covering basic costs. The predicament was reflected by one of the green hotels:

“In the current economic situation, we try to do more with less, and unfortunately, investing in sustainability suffers due to other priorities.”

“Covid lockdown was a major setback for the entire industry... we are starting from scratch, and if we had previously intended to invest in some innovative practices, now we will have to wait a couple of years to do so.”

Most hotels reported water conservation as their dominant green practice because saving water does not require significant investments. Energy is the second most improved practice. Waste management is mostly neglected by all hotels since it is generally believed that the state should be responsible for solving this issue:

“...the problem of waste is not the hotel's responsibility. We need an organised system that will motivate us to engage in waste management on a much higher level.”

Hotels in the 5-star category, reported initial investments into infrastructure while building the hotel, which implies that they had more financial resources at their disposal in comparison to hotels with lower categorisation. This could also be the reason they now feel a bigger impact on savings.

Employee awareness was seen as another obstacle to implementing green practices. Participants reflected on this and said that this will be their next aspect of investment through educational workshops on the importance and practicality of green operations. In this regard, we can notice certain similarities between hotels based on their categorization. The fact that 5-star hotels are recognising employee awareness could be because they don't struggle with financial constraints the same way as other hotels that mostly cited financial aspects as barriers, and they could be one step ahead after addressing this issue at the level of human resources.

All hotels identified benefits associated with green labelling to be a major incentive. This is particularly seen through customers' intention to save water and energy. For instance, while in green hotels most guests insisted that the linens and towels are not changed every day, in non-green hotels, this is more of an exception than a norm. Non-green hotels, on the other hand, were driven to think about sustainability primarily to improve their economic prospects, as they face pressure from foreign partners to make their operations more environmentally friendly:

“As we have received several offers from various operators for partnership, we will work to obtain a green certificate and therefore allocate more financial resources in greener operations.”

Accordingly, success factors differed among the two hotel groups in one respect. Green hotels believe that it is precisely the fact that they are green that gives them a competitive advantage and brings in more and more guests every year:

“If we operated like most hotels, we would be fully booked only in the peak of the season. However, bearing in mind that our guests are eco-friendly, they specifically want to stay here because we are green, and they can't find that in many other hotels in this locality.”

On the other hand, non-green hotels rely on location, guest loyalty and reputation. However, it is encouraging that all non-green hotels recognize the benefits and necessity of green certifications, and plan to introduce them as a strategy for business expansion, one such hotel saying,

“We understand that green is the future of tourism, and it will be our next strategy.”

Most hotels did see an improvement in financial savings and quality of service after implementing certain green practices, mainly due to water and energy savings. This, in addition to increased competition, is one of the main incentives for introducing green practices.

“...when it comes to green labels, we compete not only with local and regional hotels but also with hotels across Europe, which is extremely motivating.”

Green hotels rated themselves with higher ratings in the context of sustainable business compared to non-green hotels, which is to be expected, although they gave optimistically high ratings considering that green practices are still not entirely implemented and developed.

Table 4.1 lists out the themes and sub-themes, discussed above, along with a sample of quotes from the interviews.

Discussion

The analysis supported the hypothesis that there is an association between green practices and higher performance in hotels. The positive relationship exists for all three performance indicators: financial performance, quality of service and guest satisfaction. One of the most comprehensive studies that demonstrates a positive effect of environmental practices on firm performance by Gupta and Gupta (2021), analyses the relationship both from the theoretical and practical perspective, and encompasses a wide range of firm performance dimensions. The authors found that controlled water and electricity consumption directly contributes to the financial benefits, which is consistent with the present study where hotels reported that water and energy are dominant practices that benefit them. Furthermore, strong positive relationship between green practices and financial performance was established and was observed through revenues, efficiency, and savings. This is in line with a study conducted in Turkey's accommodation industry (Yenidogan et al. 2021) which demonstrated that environmental practices improve performance by lowering energy and water use, hence enhancing resource efficiency. At the same time, it resulted in revenue increase. These findings are comparable to the case of Montenegro since both countries are in the beginning phases of proactive green practices in hotels.

Consistent with previous research (Karimi 2014; Kularatne et al. 2019), the study shows that having an environmental commitment improves not only efficiency, but also quality of service. Indeed, during interviews, both 5-star hotels reported increase in Quality of service primarily because of increased speed of service which was very well appreciated by the guests. These multiplicative effects were emphasised by Lee et al. (2018) that found a considerable moderating function for green practices in the relationship between service quality and customer satisfaction. This is worth noting because the current study found similar results through different conceptual model and a different setting.

The favourable association between the level of green practice and guest satisfaction is also consistent with earlier studies in the hotel sector of Kim et al. (2017) and Claver-Corte's et al. (2007), both showing a considerable impact on consumers' overall ratings and hotel performance. Thus, scholars feel that greening hotels is necessary for attracting and retaining a rising number of environmentally conscious clients who want and are willing to pay for ecologically responsible lodging (Han and Yoon, 2015; Chen and Thung, 2014). This is evidenced in interviews as well, revealing that green hotels rely on their green reputation to attract more visitors each year, given that that most guests targeted their hotel because of their green credentials, further supporting the findings that green practices have a long-term impact on guest loyalty (Han et al., 2011). In summary, results demonstrate an advantage to hotels that have adopted green practices.

The second hypothesis is set as a logical assumption that greater investments in green practices lead to higher impact of green practices on the overall hotel performance. However this was rejected as the levels of investment in green practices did not affect any of the performance indicators. Further interviews provided an explanation for this through a key barrier, namely, financial constraints, as was identified by interviewees.

Across the sectors, hotels had not invested significantly in further green practices, irrespective whether they had green practices to begin with. Those who did report greater investments usually invested in infrastructure. When asked about the reasons for this, they underscored high costs of investing in green practices and hotels veering towards implementing practices that do not require significant financial resources, particularly in the post pandemic period. This has been recognised in previous literature (Jacobs et al., 2010) which shows that hotels instead adopt cost-saving strategies to raise their environmental standards. This also coincides with the recent literature where the high costs of investing in green practices have been cited as one of the main barriers (Yusof and Jamaludin, 2014; Khatter et al., 2021).

Even if one does not consider the Covid situation, one could argue that these results are stemming from a very specific country context of Montenegro which is undergoing a political and economic crisis, redirecting attention to other, more systemic issues. As a result, the state is not building a framework to financially support green operations in tourism.

Research also shows that making investments in environmentally friendly practices may help hotels gain a competitive edge and boost performance, but only if hotels can effectively communicate their eco-friendly features to clients (Merli et al., 2019). Given that the findings indicated that marketing efforts are also largely disregarded, it can be inferred that poor marketing tactics were also to blame for the investment's failure to get the expected effects, especially in guest satisfaction.

The third hypothesis distinguishes between performance of the two categories of hotels based on their certification. The quantitative phase of this research confirmed that green hotels achieve higher performance than non-green hotels. Further interviews helped understand the success factors and revealed that the main reason for the difference in performance between the two categories is because guests prefer eco-certified hotels over others. This is supported by several authors who explored the success factors of green hotels. According to Han (2020) a key element of the success of eco-friendly hospitality businesses is encouraging client green purchasing habits. This means that the performance is driven by changing consumer behaviour and fostering eco-friendly attitudes. Significant impact has been shown of green certifications on both resource efficiency and hotel revenues (Robinson et al., 2016). Zhang et al., (2014)

found that in comparison to properties with no eco-certifications, eco-certified hotels retain superior operational efficiency as well as greater customer-driven resource efficiency by shifting demand and attracting more eco-friendly guests. Interviews confirmed that the green accreditation in Montenegro hotels offered them a competitive advantage over their competitors, which is aligned with the global level where 85.6% of travellers claim they would pay more for a hotel that is environmentally friendly (Operto, 2021).

The interviews also show that non-green hotels employ green practices as well, but they may not always include these during marketing, as it was mentioned in the literature review. This prevents them from applying for eco-certification that otherwise could boost their performance. The findings of Merli (2019) confirm that hotels should proactively communicate their commitment to sustainability, particularly if the hotel has been issued a third-party approved eco-label. In this sense, green certifications increase the value of the hotel giving them the opportunity to differentiate on the market and providing instant advantage in comparison to non-green hotels.

In summary, the study showed a great potential for further greening of hotels in Montenegro.

Limitations and further research

The convenience sample method could be subject to bias and is one of the drawbacks of the research. However, the study has filled a gap in the existing context and literature offering a novel perspective and raising new questions, with a wide range of opportunities for more research. Considering the data collection happened during the latter part of the pandemic, when the industry was in flux, some responses may have been different from what they would have been otherwise.

Given the geographical scope of the analysis, especially in the qualitative phase where most hotels were in the coastal area, future research should broaden the study to compare the results with hotels in the north of the country. It would also be worthwhile expanding the research to the whole concept of green tourism, to examine the impact on competitiveness of the entire country as a green destination. Moreover, findings are limited to the Montenegro context, which is in the early stages of sustainable hotel practice and may be relevant only to similar countries, therefore research could be broadened to the region.

A noteworthy space for further research exists in introducing employee engagement and awareness in the model, as the lack of it was recognised as a barrier to implementing green practices. Finally, more comprehensive research could observe this topic through institutional theory as interviews revealed a great impact of these factors on green developments.

Conclusion

Managing tourist activity while preventing depletion of environment has gained prominence especially considering achieving SDGs. Even so, the literature review indicated the dearth of existing research on green practices in hotels and highlighted an even greater research gap on this topic in Montenegro. This study uses a mixed method approach to capture the essence of the topic not only by testing hypotheses but also by examining the reasons for the results obtained. The purpose is to investigate the impact of green practices on hotels performance, as the positive relationship can encourage this industry to move quickly toward going green.

Furthermore, the study was set to reveal whether green hotels achieve better performance than non-green hotels and understand the reasons for this.

The results confirmed the findings of previous research that highlighted the role of green practices in improving service quality, guest satisfaction and financial performance in the hotel sector (Lee et al., 2018; Han, 2020; Yenidogan et al., 2021). Similarly, the study also corroborates previous scholars' findings indicating hotels with one or more green certifications achieve better performance than non-green hotels, as green certification provides a competitive advantage and attracts more environmentally friendly guests (Geerts, 2014; Zhang et al., 2014).

This study validates that green practices can be used to achieve better performance and better competitive advantage, which is mostly seen through increased guest satisfaction and the fact that environmentally friendly guests are choosing hotels based on green credentials.

It also yielded unexpected results that levels of investments in green practices do not moderate the impact on performance. This was explained in interviews as a consequence of low overall investments as hotels were redirecting their assets to other priorities. Nonetheless, given that hotels were severely impacted by the effects of Covid-19 during the past two years, primarily in the form of decreased revenues, this shouldn't come as much of a surprise.

In addition, other barriers emerged through qualitative analysis. Key factors that hinder the greening of operations are lack of financial funds and lack of state support. Therefore, the study recommends more proactivity from hotels management to shape its environment with their own vision, instead of waiting for better external conditions. In addition, the study also suggests that government should utilise this great potential that one industry is offering to improve the green transformation.

Lack of employee awareness was also highlighted as a weakness in this study. It is therefore recommended that employee awareness and competencies be addressed in order to support greening in hotels.

Despite all the barriers, participants demonstrated that it is feasible to successfully implement green practices and increase performance even with limited finances, thus setting an example that green transformation starts with managing internal resources.

Demonstrating impact on performance is crucial because, the more proof there is about the strong relationship, the more businesses will be inspired to adopt green practices, thus accelerating the greening of the industry, and promoting sustainable growth.

References

- Abdou, A.H., Hassan, T.H. and El Dief, M.M., 2020. A description of green hotel practices and their role in achieving sustainable development. *Sustainability*, 12(22), p.9624.
- Acampora, A., Lucchetti, M.C., Merli, R. and Ali, F., 2022. The theoretical development and research methodology in green hotels research: A systematic literature review. *Journal of Hospitality and Tourism Management*, 51, pp.512-528.
- Ahmed, R.R., Streimikiene, D., Qadir, H. and Streimikis, J., 2022. Effect of green marketing mix, green customer value, and attitude on green purchase intention: evidence from the USA. *Environmental Science and Pollution Research*, pp.1-23.
- Albayrak, T., and Caber, M. (2015). Prioritisation of the hotel attributes according to their influence on satisfaction: A comparison of two techniques. *Tourism Management*, 46, 43–50. <https://doi.org/10.1016/j.tourman.2014.06.009>
- Asadi, S., Pourhashemi, S.O., Nilashi, M., Abdullah, R., Samad, S., Yadegaridehkordi, E., Aljojo, N. and Razali, N.S., 2020. Investigating influence of green innovation on sustainability performance: A case on Malaysian hotel industry. *Journal of cleaner production*, 258, p.120860.
- Berezan, O., Millar, M., and Raab, C. (2014). Sustainable hotel practices and guest satisfaction levels. *International Journal of Hospitality & Tourism Administration*, 15(1), 1–18.
- Claver-Corte's E, Molina-Azori'n JF, and Pereira-Moliner J, (2007). Environmental strategies and their impact on hotel performance. *Journal of Sustainable Tourism* 15(6): 663–679
- Chen, M.F. and Tung, P.J. (2014). Developing an extended theory of planned behavior model to predict consumers' intention to visit green hotels. *International Journal of Hospitality Management* 36: 221–230.
- Chung, K.C., 2020. Green marketing orientation: Achieving sustainable development in green hotel management. *Journal of Hospitality Marketing & Management*, 29(6), pp.722-738.
- Darvishmotevali, M. and Altinay, L., 2022. Toward pro-environmental performance in the hospitality industry: empirical evidence on the mediating and interaction analysis. *Journal of Hospitality Marketing & Management*, 31(4), pp.431-457.
- Elkhwesky, Z., 2022. A systematic and major review of proactive environmental strategies in hospitality and tourism: Looking back for moving forward. *Business Strategy and the Environment*, 31(7), pp.3274-3301.
- Elkhwesky, Z., Salem, I.E., Ramkissoon, H. and Castañeda-García, J.A., 2022. A systematic and critical review of leadership styles in contemporary hospitality: a roadmap and a call for future research. *International Journal of Contemporary Hospitality Management*.
- Elkhwesky, Z., Salem, I.E., Varmus, M. and Ramkissoon, H., 2022. Sustainable practices in hospitality pre and amid COVID-19 pandemic: Looking back for moving forward post-COVID-19. *Sustainable Development*, 30(5), pp.1426-1448.
- Geerts, W. (2014). Environmental certification schemes: Hotel managers' views and perceptions, *international journal of hospitality management*, 39, 87–96. doi: 10.1016/j.ijhm.2014.02.007.
- González-Benito, J., and González-Benito, Ó., 2005. Environmental proactivity and business performance: an empirical analysis. *Omega*, 33(1), pp.1-15.
- Gupta, A. K. and Gupta, N. (2021). Environment practices mediating the environmental compliance and firm performance: An institutional theory perspective from emerging

economies, *Global journal of flexible systems management*, 22(3), 157–178. doi: 10.1007/s40171-021-00266-w.

- Han, H. and Yoon, H.J., 2015. Hotel customers' environmentally responsible behavioral intention: Impact of key constructs on decision in green consumerism. *International Journal of Hospitality Management*, 45, pp.22-33.
- Jiang, W., Wang, L., and Zhou, K.Z., 2023. Green Practices and Customer Evaluations of the Service Experience: The Moderating Roles of External Environmental Factors and Firm Characteristics. *Journal of Business Ethics*, 183(1), pp.237-253.
- Jones, P. and Comfort, D., 2019. Sustainable development goals and the world's leading hotel groups. *Athens Journal of Tourism*, 6(1), pp.1-14.
- Juvan, E., and Dolnicar, S. (2017). Drivers of pro-environmental tourist behaviours are not universal. *Journal of Cleaner Production*, 166, 879–890. Available from: <https://doi.org/10.1016/j.jclepro.2017.08.087> [Accessed: 23 June 2022].
- Karimi, E.K., (2014). *Relationship between green operations practices and operational performance of hotels in the coastal region, Kenya* (Doctoral dissertation, University of Nairobi).
- Kasimu, A.B., Zaiton, S. and Hassan, H., 2012. Hotels involvement in sustainable tourism practices in Klang Valley, Malaysia. *International Journal of Economics and Management*, 6(1), pp.21-34.
- Kim, S.H., Lee, K. and Fairhurst, A., 2017. The review of “green” research in hospitality, 2000-2014: Current trends and future research directions. *International Journal of Contemporary Hospitality Management*.
- Kularatne, T., Wilson, C., Månsson, J., Hoang, V., and Lee, B. (2019). Do environmentally sustainable practices make hotels more efficient? A study of major hotels in Sri Lanka. *Tourism Management*, 71, 213–225. <https://doi.org/10.1016/j.tourman.2018.09.009>
- Kuo, F.I., Fang, W.T. and LePage, B.A., 2022. Proactive environmental strategies in the hotel industry: Eco-innovation, green competitive advantage, and green core competence. *Journal of Sustainable Tourism*, 30(6), pp.1240-1261.
- Lee, S., Sun, K.A., Wu, L. and Xiao, Q., 2018. A moderating role of green practices on the relationship between service quality and customer satisfaction: Chinese hotel context. *Journal of China Tourism Research*, 14(1), pp.42-60.
- Li, H., Li, Y., Sarfarz, M. and Ozturk, I., 2022. Enhancing firms' green innovation and sustainable performance through the mediating role of green product innovation and moderating role of employees' green behavior. *Economic Research-Ekonomska Istraživanja*, pp.1-22.
- Martinez, G.L.P., Herrero Crespo, A., and Gomez Lopez, R. (2018). Customer responses to environmentally certified hotels: The moderating effect of environmental consciousness on the formation of behavioral intentions. *Journal of Sustainable Tourism*, 26(7), 1160–1177. Available from: <https://doi.org/10.1080/09669582.2017.1349775> [Accessed: 23 June 2022].
- Mbasera, M., Du Plessis, E., Saayman, M., Kruger, M. and Mbasera, M., 2016. Green management in hotels: A supply-side analysis. *Journal of Environmental Management and Tourism*, 7(2), pp.205-215.
- Merli, R., Preziosi, M., Acampora, A. and Ali, F., 2019. Why should hotels go green? Insights from guests experience in green hotels. *International Journal of Hospitality Management*, 81, pp.169-179.
- Miroshnychenko, I., Barontini, R. and Testa, F., (2017). Green practices and financial performance: A global outlook. *Journal of Cleaner Production*, 147, 340-351.

- Moise, M.S., Gil-Saura, I. and Ruiz Molina, M.E., 2021. The importance of green practices for hotel guests: does gender matter? *Economic Research-Ekonomska Istraživanja*, 34(1), pp.3508-3529.
- Molina-Azorín, J.F., Claver-Cortés, E., Pereira-Moliner, J. and Tarí, J.J., 2009. Environmental practices and firm performance: an empirical analysis in the Spanish hotel industry. *Journal of Cleaner production*, 17(5), pp.516-524.
- Myung, E., McClaren, A. and Li, L., 2012. Environmentally related research in scholarly hospitality journals: Current status and future opportunities. *International Journal of Hospitality Management*, 31(4), pp.1264-1275.
- Ogbeide, G.C., 2012. Perception of green hotels in the 21st century. *Journal of Tourism Insights*, 3(1), p.1.
- Pace, L.A., 2016. How do tourism firms innovate for sustainable energy consumption? A capabilities perspective on the adoption of energy efficiency in tourism accommodation establishments. *Journal of Cleaner Production*, 111, pp.409-420.
- Pereira-Moliner, J., Font, X., Tarí, J.J., Molina-Azorin, J.F., Lopez-Gamero, M.D. and Pertusa-Ortega, E.M., 2015. The Holy Grail: Environmental management, competitive advantage, and business performance in the Spanish hotel industry. *International Journal of Contemporary Hospitality Management*.
- Perramon, J., Oliveras-Villanueva, M. and Llach, J., 2022. Impact of service quality and environmental practices on hotel companies: An empirical approach. *International Journal of Hospitality Management*, 107, p.103307.
- Pham Phu, S.T., Fujiwara, T., Hoang Minh, G. and Pham Van, D., 2019. Solid waste management practice in a tourism destination—The status and challenges: A case study in Hoi An City, Vietnam. *Waste management & research*, 37(11), pp.1077-1088.
- Punitha, S. and Rasdi, R.M., 2013. Corporate social responsibility: Adoption of green marketing by hotel industry. *Asian Social Science*, 9(17), p.79.
- Rahman, I., Reynolds, D. and Svaren, S., 2012. How “green” are North American hotels? An exploration of low-cost adoption practices. *International journal of hospitality management*, 31(3), pp.720-727.
- Rajić, M.N., Maksimović, R.M. and Milosavljević, P., 2022. Energy Management Model for Sustainable Development in Hotels within WB6. *Sustainability*, 14(24), p.16787.
- Rhou, Y. and Singal, M., 2020. A review of the business case for CSR in the hospitality industry. *International Journal of Hospitality Management*, 84, p.102330.
- Robinson, S., Singh, A.J. and Das, P., (2016). Financial impact of LEED and energy star certifications on hotel revenues. *The Journal of Hospitality Financial Management*, 24(2), 110-126.
- Rosario Reyes-Santiago, M., Sánchez-Medina, P.S. and Díaz-Pichardo, R., 2019. The influence of environmental dynamic capabilities on organizational and environmental performance of hotels: Evidence from Mexico. *Journal of Cleaner Production*, 227, pp.414-423.
- Rosenbaum, M.S., and Wong, I.A., 2015. Green marketing programs as strategic initiatives in hospitality. *Journal of Services Marketing*, 29(2), pp.81-92.
- Salehi, M., Filimonau, V., Ghaderi, Z. and Hamzehzadeh, J., 2021. Energy conservation in large-sized hotels: Insights from a developing country. *International Journal of Hospitality Management*, 99, p.103061.
- Salinero, Y., Prayag, G., Gómez-Rico, M. and Molina-Collado, A., 2022. Generation Z and pro-sustainable tourism behaviors: internal and external drivers. *Journal of Sustainable Tourism*, pp.1-20.

- Singjai, K., Winata, L. and Kummer, T.F., 2018. Green initiatives and their competitive advantage for the hotel industry in developing countries. *International Journal of Hospitality Management*, 75, pp.131-143.
- Su, Q. and Li, F., 2022. Gain or loss? The congruence effect of message framing and mindset on consumers' willingness to pay a premium for pro-environmental hotels. *Journal of Sustainable Tourism*, pp.1-24.
- Tirado, D., Nilsson, W., Deya-Tortella, B. and García, C., 2019. Implementation of water-saving measures in hotels in Mallorca. *Sustainability*, 11(23), p.6880.
- *Towards Carbon-neutral tourism*. (n.d.). Lowcarbonmne.Me. Available from <http://www.lowcarbonmne.me/> [Accessed 10 March 2022].
- Torres-Bagur, M., Ribas, A. and Vila-Subirós, J., 2019. Incentives and barriers to water-saving measures in hotels in the Mediterranean: A case study of the Muga river basin (Girona, Spain). *Sustainability*, 11(13), p.3583.
- Trang, H.L.T., Lee, J.S. and Han, H., 2019. How do green attributes elicit pro-environmental behaviors in guests? The case of green hotels in Vietnam. *Journal of Travel & Tourism Marketing*, 36(1), pp.14-28.
- Yenidogan, A., Gurcaylilar-Yenidogan, T., and Tetik, N., (2021). Environmental management and hotel profitability: operating performance matters, *Tourism & management studies*, 17(3), 7–19. doi: 10.18089/tms.2021.170301.
- Yeşiltaş, M., Gürlek, M. and Kenar, G., 2022. Organizational green culture and green employee behavior: Differences between green and non-green hotels. *Journal of Cleaner Production*, 343, p.131051
- Yu, Y., Li, X., and Jai, T. M. (2017). The impact of green experience on customer satisfaction: Evidence from TripAdvisor. *International Journal of Contemporary Hospitality Management*, 29(5), 1340–1361.
- Yusof, Z. B., and Jamaludin, M. (2014). Barriers of Malaysian green hotels and resorts. *Procedia-Social and Behavioral Sciences*, 153, 501-509.
- Zikmund, W. G., Babin, B. J., Carr, J. C., and Griffin, M. (2013). *Business research methods*. Cengage Learning.
- Zhang, J.J., Joglekar, N., Heineke, J. and Verma, R., (2014). Eco-efficiency of service co-production: connecting eco-certifications and resource efficiency in US hotels. *Cornell Hospitality Quarterly*, 55(3), 252-264.

Table 1.1: Results for test for Normality

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Improvement in Green Practices	0.182	52	<.001	0.944	52	0.016
Investment in Green Practices	0.149	52	0.006	0.953	52	0.041
Quality of Service	0.187	52	<.001	0.887	52	<.001
Guest Satisfaction	0.187	52	<.001	0.887	52	<.001
Financial Performance	0.267	52	<.001	0.877	52	<.001

a. Lilliefors Significance Correction

Table: 1.2- Results for test for skewness and kurtosis

Statistics

		Improvement in Green Practices	Investment in Green Practices	Financial Performance	Quality of Service	Guest Satisfaction	Financial Performance
N	Valid	52	52	52	52	52	52
	Missing	0	0	0	0	0	0
Skewness		-0.227	-0.149	-0.415	-0.311	-0.311	-0.415
Std. Error of Skewness		0.33	0.33	0.33	0.33	0.33	0.33
Kurtosis		0.498	-0.369	0.056	-0.854	-0.854	0.056
Std. Error of Kurtosis		0.65	0.65	0.65	0.65	0.65	0.65

Figure 2.1 Green practices in green and non-green hotels

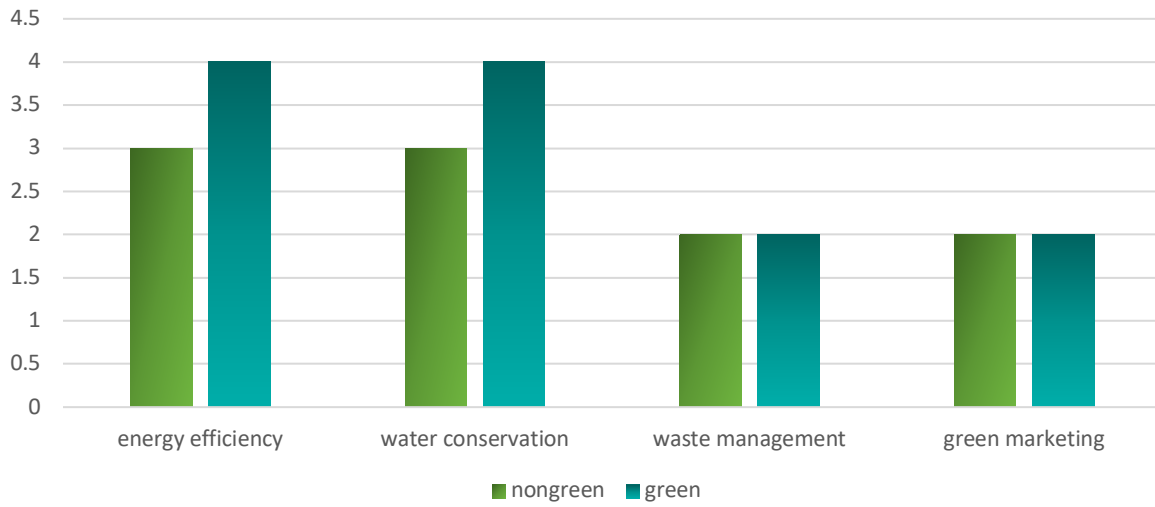


Figure 2.2 – Investments made by green and non-green hotels in green practices related to Energy Efficiency, Water Conservation, Waste Management and Green Marketing

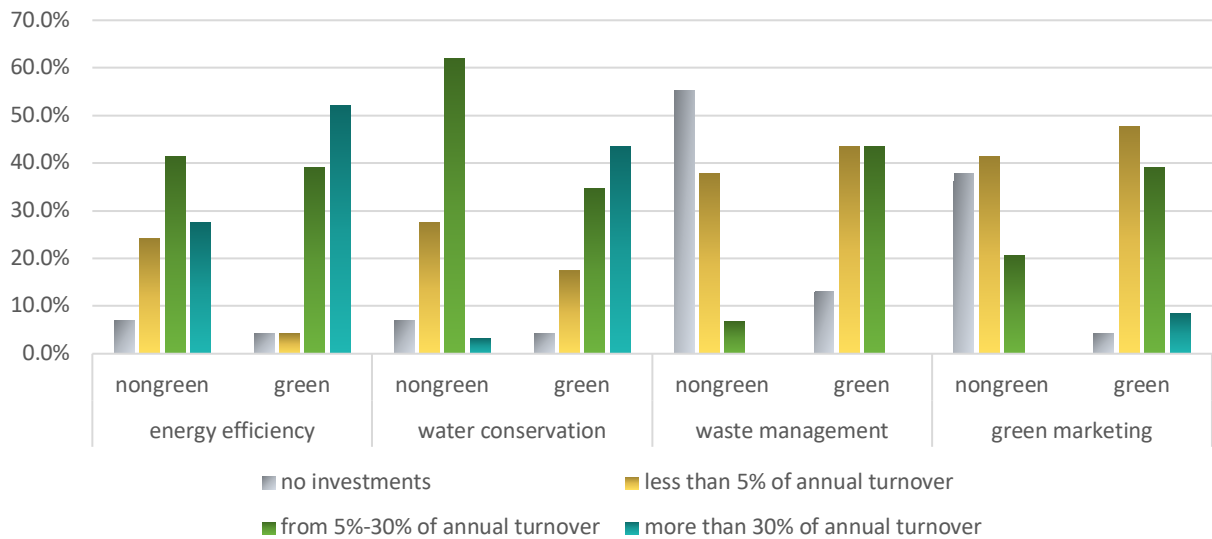


Table: 1.3 Correlation coefficient between variables

		Green Practices	Guest Satisfaction	Quality of Service	Financial Performance
Green Practices	Correlation Coefficient	1	.766**	.766**	.755**
	Sig. (2-tailed)	.	<.001	<.001	<.001
Guest Satisfaction	Correlation Coefficient	.766**	1	1.000**	.775**
	Sig. (2-tailed)	<.001	.	.	<.001
Quality of Service	Correlation Coefficient	.766**	1.000**	1	.775**
	Sig. (2-tailed)	<.001	.	.	<.001
Financial Performance	Correlation Coefficient	.755**	.775**	.775**	1
	Sig. (2-tailed)	<.001	<.001	<.001	.

** . Correlation is significant at the 0.01 level (2-tailed).

Table 1.4- Regression test with Quality of Service as the dependent variable and green practices as the independent variable

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.768 ^a	0.59	0.582	0.71319

a. Predictors: (Constant), Green Practices

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.497	0.383		1.299	0.2
	Green Practices	1.121	0.132	0.768	8.486	<.001

a. Dependent Variable: Quality of Service

Table1.5- Regression test with Guest satisfaction as the dependent variable and green practices as the independent variable

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.768 ^a	0.59	0.582	0.713

a. Predictors: (Constant), Green Practices

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.497	0.383		1.299	0.2
	Green Practices	1.121	0.132	0.768	8.486	<.001

a. Dependent Variable: Guest Satisfaction

Table 1.6- Regression test with Financial Performance as the dependent variable and green practices as the independent variable

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.775 ^a	0.601	0.593	0.57825

a. Predictors: (Constant), Green Practices

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.359	0.31		1.156	0.253
	Green Practices	0.93	0.107	0.775	8.682	<.001

a. Dependent Variable: Financial Performance

Table: 1.7 Multiple regressions for all three dependent variables

Multivariate Tests^a

Effect		Value	F	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	.951	419.373 ^b	2.000	43.000	<.001
	Wilks' Lambda	.049	419.373 ^b	2.000	43.000	<.001
	Hotelling's Trace	19.506	419.373 ^b	2.000	43.000	<.001
	Roy's Largest Root	19.506	419.373 ^b	2.000	43.000	<.001
ImprMed	Pillai's Trace	.774	3.967	14.000	88.000	<.001
	Wilks' Lambda	.285	5.360 ^b	14.000	86.000	<.001
	Hotelling's Trace	2.300	6.899	14.000	84.000	<.001
	Roy's Largest Root	2.206	13.865 ^c	7.000	44.000	<.001

a. Design: Intercept + ImprMed

b. Exact statistic

c. The statistic is an upper bound on F that yields a lower bound on the significance level.

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	guestSat	39.066 ^a	7	5.581	10.680	<.001
	FinanceMedian	25.979 ^b	7	3.711	10.241	<.001
	QualityMedian	39.066 ^a	7	5.581	10.680	<.001
Intercept	guestSat	331.801	1	331.801	634.979	<.001
	FinanceMedian	232.508	1	232.508	641.626	<.001
	QualityMedian	331.801	1	331.801	634.979	<.001
ImprMed	guestSat	39.066	7	5.581	10.680	<.001
	FinanceMedian	25.979	7	3.711	10.241	<.001
	QualityMedian	39.066	7	5.581	10.680	<.001
Error	guestSat	22.992	44	.523		
	FinanceMedian	15.944	44	.362		
	QualityMedian	22.992	44	.523		
Total	guestSat	749.000	52			
	FinanceMedian	498.000	52			
	QualityMedian	749.000	52			
Corrected Total	guestSat	62.058	51			
	FinanceMedian	41.923	51			
	QualityMedian	62.058	51			

a. R Squared = .630 (Adjusted R Squared = .571)

b. R Squared = .620 (Adjusted R Squared = .559)

Table 2.1

Testing the effect of level of investment on the relationship between Green practices and Quality of service

Model : 1

Y : Quality of service

X : Green Practices

W : Level of investment (Level)

OUTCOME VARIABLE:

Quality of service

Model Summary

R	R-sq	MSE	F	df1	df2	p
.8208	.6738	.4218	33.0437	3.0000	48.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	-.7013	.8864	-.7912	.4327	-2.4835	1.0809
<u>G Practice</u>	.9487	.3515	2.6988	.0096	.2419	1.6555
Level	1.1286	.4339	2.6009	.0123	.2561	2.0012
Int_1	-.1544	.1290	-1.1964	.2374	-.4138	.1051

Product terms key:

Int_1 : G Practice x Level

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
X*W	.0097	1.4313	1.0000	48.0000	.2374

Focal predict: G Practice (X)

|
□

Table 2.2

Testing the effect of level of investment on the relationship between Green practices and Guest Satisfaction

Run MATRIX procedure:

***** PROCESS Procedure for SPSS Version 4.1 *****
 Written by Andrew F. Hayes, Ph.D. www.afhayes.com
 Documentation available in Hayes (2022). www.guilford.com/p/hayes3

Model : 1
Y : questSat
X : Green Practices
W : Green Inv

Sample
 Size: 52

OUTCOME VARIABLE:
Guest Satisfaction

Model Summary

R	R-sq	MSE	F	df1	df2	p
.8208	.6738	.4218	33.0437	3.0000	48.0000	.0000

Model

	<u>coeff</u>	se	t	p	LLCI	ULCI
constant	-.7013	.8864	-.7912	.4327	-2.4835	1.0809
<u>G Practices</u>	<u>.9487</u>	.3515	2.6988	.0096	.2419	1.6555
Level	1.1286	.4339	2.6009	.0123	.2561	2.0012
Int_1	-.1544	.1290	-1.1964	.2374	-.4138	.1051

Product terms key:

Int_1 : G Practices x Level

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
X*W	.0097	1.4313	1.0000	48.0000	.2374

Table 2.3

Testing the effect of level of investment on the relationship between Green practices and Financial Performance

Run MATRIX procedure:

***** PROCESS Procedure for SPSS Version 4.1 *****

Written by Andrew F. Hayes, Ph.D. www.afhayes.com

Documentation available in Hayes (2022). www.guilford.com/p/hayes3

Model : 1

Y : FinPer

X G_Practice

W :Level

Sample Size: 52

OUTCOME VARIABLE:

Financial Performance

Model Summary

R	R-sq	MSE	F	df1	df2	p
.8068	.6509	.3049	29.8269	3.0000	48.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	2.9891	.0902	33.1339	.0000	2.8077	3.1704
G_Practice	.5720	.1711	3.3438	.0016	.2281	.9160
Level	.4513	.1739	2.5960	.0125	.1018	.8009
Int_1	-.0633	.1097	-.5772	.5665	-.2839	.1573

Product terms key:

Int_1 : G_Practice x Level

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
X*W	.0024	.3332	1.0000	48.0000	.5665

Focal predict:G_Practice (X) Mod var:Level (W)

Table 3.1: Results from the Mann-Whitney U test

Variable	Group	Mean Rank	Significance (p-Value)	Mann-U Statistic
Quality of Service	Non-Green	20.12	<.001	148.5
	Green	34.54		
Guest Satisfaction	Non-Green	19.22	<.001	122.5
	Green	33.83		
Financial Performance	Non-Green	19.22	<.001	165
	Green	35.67		

Table 4.1

Main theme	Sub-theme	Corresponding quotes
<p>Barriers to improving green credentials and investing in green practices</p>	<p><i>Financial constraints</i></p>	<p><i>“In the current economic situation, we try to do more with less, and investing in sustainability suffers due to other priorities.”</i></p>
		<p><i>“Our financial resources are mostly dedicated to expanding our existing capacities, which requires large investments and prevents us from currently investing in green practices or other operational improvements in the next 2-3 years.”</i></p>
		<p><i>“We try to improve our green credentials as much as possible without investing significant financial resources.”</i></p>
	<p><i>Covid impact</i></p>	<p><i>“Covid lockdown was a major setback for the entire industry... we are starting from scratch, and if we had previously intended to invest in some innovative practices, now we will have to wait a couple of years to do so.”</i></p>
		<p><i>“In the past two years? I have to say no investments were made. We have been struggling after lockdown.”</i></p>
		<p><i>“We were in the process of obtaining the Trevelife certificate, but due to the Covid pandemic, everything was interrupted and postponed until further notice.”</i></p>
<p><i>Business expansion</i></p>	<p><i>“The focus of the investment is on capacity expansion. The number of accommodation units currently is 106, so we are planning to expand to another 200 accommodation units. Other than that, we invest in basic operational tasks, means to improve service, food quality, hotel offers, repairs, furnishing new villas, etc.”</i></p>	
	<p><i>“Our financial resources are mostly dedicated to expanding our existing capacities, which requires large investments and prevents us from currently investing in green practices or other operational improvements in the next 2-3 years.”</i></p>	
<p><i>Lack of state support</i></p>	<p><i>“If there were special funds dedicated to assisting hotels in becoming more sustainable and improving green procedures, it would be much easier, we would absolutely strive to be fully sustainable by all standards”.</i></p>	
	<p><i>“The lack of financial support, particularly from the state, is a factor that demotivates us to push forward with this practice. Given that we are a tiny hotel that suffered serious effects because of the covid shutdown, we expected far more assistance from the state than we received.”</i></p>	
<p><i>Employee awareness</i></p>	<p><i>“Number one obstacle is lack of awareness of employees and the hotel environment. The awareness about green business and sustainability standards in general is unfortunately very low in our hotel, although I would say that all our staff is very skilled and could be trained to operate in this direction. But we see our shortcomings in this sense.”</i></p>	

		<i>“Employees are one of the obstacles we encounter when introducing new environmental practices and this is making us hesitate to invest. First, we need to educate our employees, but also our community about the importance of being green, and then we can talk about more serious investments in green practices.”</i>
Enablers to improving green credentials and investing in green practices	<i>Green label – guest awareness</i>	<i>“If we operated like most hotels, we would be fully booked only in the peak of the season. However, bearing in mind that our guests are eco-friendly, they specifically want to stay here because we are green, and they can’t find that in many other hotels in this locality.”</i>
		<i>“We believe that Green label has brought us new tourists who are ecologically oriented because there are more and more of them every year, and at one point during preseason we had all eco-friendly guests.”</i>
	<i>Savings</i>	<i>“Very soon we noticed that water and energy conservation led us to significant savings financially, which is why we plan to be more proactive and implement innovative systems to elevate this process.”</i>
		<i>“At the end of the day, the financial benefit is one of the main goals that keep us running, and our green behaviour, even though modest, still gives us great results, particularly in savings.”</i>
	<i>Competition</i>	<i>“Our biggest incentive is the pressure from the competition, considering that the hotel management conducts a lot of policies following the trends of competitors. Affects to a large extent, given that most of these practices are done in the image of the Regent hotel which is one of the most successful and most luxurious in this area.”</i>
		<i>“Every year, there are more and more brand-new hotels opening up in Montenegro, raising the bar and essentially dictating our development and forcing us to change. But when it comes to green labels, we compete not only with regional, local, and national hotels, but also with hotels across Europe, which is extremely motivating.”</i>
	<i>New business opportunities and partnerships</i>	<i>“We are planning to engage in cooperation with various serious world-class tour operators like EasyJet and TUI, that are requesting green standards.”</i>
		<i>“Bearing in mind that we have received several offers from various operators for partnership, we will definitely work to obtain a green certificate and therefore allocate more financial resources in greener operations.”</i>

Appendix 1: Questionnaire

I have read the above information and I agree to proceed in accordance with the two documents.

- Agree
- Disagree

1. Please indicate the categorization of the hotel

- 1 star
- 2 stars
- 3 stars
- 4 stars
- 5 stars
- 5+ stars

2. Which of the following, if any, green certifications were implemented in the hotel?

- EU Eco-label
- Travel life
- Green Globe
- Other
- None

3. When was the certification obtained?

- More than 2 years ago
- Approximately 2 years ago
- Less than 2 years ago

4. How much has been invested on average over the past two years in energy efficiency?

- More than 30% of annual turnover
- From 5%-30% of annual turnover
- Less than 5% of annual turnover
- No investments were made.

5. How much has been invested on average over the past two years in water conservation?

- More than 30% of annual turnover
- From 5%-30% of annual turnover
- Less than 5% of annual turnover
- No investments were made.

6. How much has been invested on average over the past two years in waste management?

- More than 30% of annual turnover
- From 5%-30% of annual turnover
- Less than 5% of annual turnover
- No investments were made.

7. How much has been invested on average over the past two years in green marketing?

- More than 30% of annual turnover
- From 5%-30% of annual turnover
- Less than 5% of annual turnover
- No investments were made.

8. To what extent have you noticed an improvement in energy conservation practices in the last 2-3 years?

Energy conservation practices: use of alternative and cheap energy, use of sensors and timers, use of clean AC units, use of energy saving bulbs, etc.

To no extent	To little extent	To a certain extent	To a large extent	To a very large extent
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9. To what extent have you noticed an improvement in water conservation practices in the last 2-3 years?

Water conservation practices: implemented system to detect and repair water leakage in toilets and shower heads, reusing water, etc.

To no extent	To little extent	To a certain extent	To a large extent	To a very large extent
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

10. To what extent have you noticed an improvement in waste management practices in the last 2-3 years?

Waste management practices: Recycling, sewage management, linen reuse, reducing food waste, etc.

To no extent	To little extent	To a certain extent	To a large extent	To a very large extent
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

11. To what extent have you noticed an improvement in green marketing practices in the last 2-3 years?

Green marketing strategies: using ecological arguments in promotion, organising environmental activities in the area, branding hotel as green, etc.

To no extent	To little extent	To a certain extent	To a large extent	To a very large extent
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

12. To what extent have you seen improvement in financial performance (revenues) in the last 2-3 years?

To no extent	To little extent	To a certain extent	To a large extent	To a very large extent
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

13. To what extent have you seen improvement in financial performance (efficiency) in the last 2-3 years?

To no extent	To little extent	To a certain extent	To a large extent	To a very large extent
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

14. To what extent have you seen improvement in financial performance (savings) in the last 2-3 years?

To no extent	To little extent	To a certain extent	To a large extent	To a very large extent
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

15. To what extent have you seen improvement in service quality (flexibility of operations) in the last 2-3 years?

To no extent	To little extent	To a certain extent	To a large extent	To a very large extent
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

16. To what extent have you seen improvement in service quality (speed of service) in the last 2-3 years?

To no extent	To little extent	To a certain extent	To a large extent	To a very large extent
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

17. To what extent have you seen improvement in service quality (variety of service) in the last 2-3 years?

To no extent	To little extent	To a certain extent	To a large extent	To a very large extent
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

18. To what extent have you seen improvement in guest satisfaction in the last 2-3 years?

To no extent	To little extent	To a certain extent	To a large extent	To a very large extent
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Appendix 2: Sample Interview questions

1. What green certificate do you have and when was it obtained?
2. What was the main motivation that led you to apply for this certificate?
3. How much was invested on average in the past two years in green practices, and why?
Can you give me an example of how you achieve this?
4. Which green practices are dominant in your hotel and why?
5. Which performance indicator has been impacted the most by green practices implemented in your hotel: financial aspect, quality of service or guest satisfaction?
6. How would you describe success factors in your hotel?
7. How would you rate your hotel doing business sustainably from 1-10, and why?
8. What do you recognize as main obstacles that stand in the way of implementing those practices?
9. Do you plan to introduce new green practices in the coming period and continue to improve your green credentials?