



UNIVERSIDADE CATÓLICA PORTUGUESA

Impact of Operations Management on Sustainability in Hospitality Industry

Vincent Rosay

Católica Porto Business School

2024



UNIVERSIDADE CATÓLICA PORTUGUESA

Enhancing Sustainability through Operational Management in the Hospitality Industry

Master's Final Work in the modality of Dissertation presented to Universidade Católica Portuguesa to fulfill the requirements for the degree of Master's in management with specialization in Commercial Management

By

Vincent Rosay

Under the orientation of Professor Jorge Manuel Soares Julião

Católica Porto Business School, Universidade Católica Portuguesa September

2024

Acknowledgments

The writing of this university thesis marks the end of many years of study and the close of a chapter. Student life comes to an end, bringing with it a sense of nostalgia. These have been wonderful years that have educated us, helped us discover new things, and allowed us to grow. I cannot say that I have a studious profile, but I have loved my studies for what they have brought me on a human level: the encounters, the discovery of new places, and the dedication of the various teaching staff who have always supported us with great commitment.

As an international student in a double degree program at the Catholic University of Porto, writing this thesis particularly reflects the opportunity I had to complete my final year of Master's studies abroad, especially in Porto. I greatly enjoyed discovering this country, this city, its warm inhabitants, its culture, its waves... Portugal is a beautiful country, rich in culture, with so much to offer. I am very grateful to have had this adventure, which has brought me so much.

In this regard, I would like to especially thank the Catholic University of Porto for its warm welcome, the availability of its facilities, and its high-quality faculty, which made the time spent here very pleasant.

I would also like to thank my thesis supervisor, Mr. Jorge Manuel Soares Liao, who guided me throughout the entire process of creating my thesis and was always present despite my occasional lack of seriousness and rigor.

Finally, I would like to thank my friend Juliet Clard, who supported me greatly in the writing of my thesis, motivating and advising me in this sometimes-thankless task.

Resumo

Esta pesquisa explora como a indústria hoteleira pode melhorar a sustentabilidade por meio de decisões estratégicas e operacionais. Os resultados destacam um progresso significativo na adoção de práticas sustentáveis, especialmente entre as grandes redes hoteleiras que têm integrado sistematicamente tecnologias ecológicas, certificações ambientais e políticas adequadas. No entanto, os estabelecimentos menores enfrentam desafios devido a restrições financeiras, revelando uma disparidade dentro do setor.

O engajamento dos funcionários surge como um fator crucial para o sucesso das iniciativas de sustentabilidade. Hotéis onde a sustentabilidade é um valor compartilhado em todos os níveis alcançam melhores resultados. Além disso, a adaptação às expectativas dos clientes é fundamental; mercados com alta demanda por sustentabilidade apresentam maior retenção de clientes e melhor reputação da marca.

O estudo enfatiza a importância da dimensão humana nos esforços de sustentabilidade, destacando a necessidade de uma abordagem diferenciada que leve em consideração as especificidades locais. Embora a tecnologia e as certificações sejam valiosas, elas devem ser integradas em uma estratégia holística que inclua inovação na gestão e parcerias, especialmente para os hotéis menores.

As limitações desta pesquisa incluem seu foco na gestão operacional e seu escopo geográfico, abrangendo principalmente a Europa e a América do Norte. Estudos futuros devem adotar uma abordagem mais ampla e interdisciplinar, explorando governança, engajamento das partes interessadas e políticas públicas, além de considerar os mercados emergentes para fornecer estratégias mais abrangentes para a sustentabilidade na indústria hoteleira.

Abstract

This research explores how the hotel industry can enhance sustainability through strategic and operational decisions. The findings highlight significant progress in adopting sustainable practices, particularly among larger hotel chains that have systematically integrated eco-friendly technologies, environmental certifications, and policies. However, smaller establishments face challenges due to financial constraints, revealing a disparity within the industry.

Employee engagement emerges as a crucial factor in the success of sustainability initiatives. Hotels where sustainability is a shared value across all levels achieve better outcomes. Additionally, adapting to customer expectations is key; markets with a high demand for sustainability see improved customer retention and brand reputation.

The study emphasizes the importance of the human dimension in sustainability efforts, highlighting the need for a differentiated approach that accounts for local specificities. While technology and certifications are valuable, they must be integrated into a holistic strategy that includes innovation in management and partnerships, particularly for smaller hotels.

Limitations of this research include its focus on operational management and its geographic scope, primarily covering Europe and North America. Future studies should adopt a broader, interdisciplinary approach, exploring governance, stakeholder engagement, and public policy, while also considering emerging markets to provide more comprehensive strategies for sustainability in the hotel industry.

Keywords

Operational management
Hospitality industry
Sustainable development
Sustainable strategies
Eco-friendly practices
Environmental certification
Employee engagement
Resource management
Responsible tourism
Renewable energy
Waste reduction
Sustainable technologies
Regulatory compliance
Supply chain management
Customer demand
Carbon footprint
Water consumption
Financial constraints
Hospitality innovations
Performance indicators

Gestão operacional
Indústria da hospitalidade
Desenvolvimento sustentável
Estratégias sustentáveis
Práticas ecológicas
Certificação ambiental
Engajamento dos funcionários

Gestão de recursos
Turismo responsável
Energia renovável
Redução de resíduos
Tecnologias sustentáveis
Conformidade regulatória
Gestão da cadeia de suprimentos
Demanda do cliente
Pegada de carbono
Consumo de água
Restrições financeiras
Inovações na hospitalidade
Indicadores de desempenho

Introduction.....	12
1.1 General Framework	12
1.2 Objectives and Research Methodology	13
1.3 Macrostructure.....	14
Litterature review.....	16
2.1 The Hospitality Sector and Its Impact on Sustainable Development.....	17
2.2.1 The Growing Desire to Improve Sustainability Impact.....	19
2.2.2 The Role of Standards and Labels.....	20
2.2.3 Sustainable Practices, Policies, and Sustainability Strategies	21
2.2.4 Challenges and Solutions for Environmental Sustainability	23
2.3 The Role of Strategy and Operational Management.....	25
2.3.1 Management in the Hospitality Industry	25
2.3.2 Why Strategy is Important?	25
2.3.3 New Forms of Tourism and the Adoption of Sustainable Practices	26
2.3.4 The Importance of Operational Management	27
MFA – Research Method	28
3.1 Introduction	28
3.2 Recommendation for Research Methodology.....	29
3.3 Survey and Interview Design	30
3.4 Segmentation	30
Results and Data Analysis	32
4.1 Introduction	32
4.2 Data Analysis and Interpretation	33
4.2.1 The Push for Sustainability: An Evolving but Uneven Landscape	33
4.2.2 Effectiveness of Sustainability Initiatives: Beyond the Indicators	34
4.2.3 Customer Demand: A Missed Opportunity or a Strategic Advantage?	35
4.2.4 Challenges and Obstacles: Financial Constraints or Strategic Gaps?.....	36
4.2.5 Operationalizing Sustainability: The Role of Technology and Innovation	36
Conclusion.....	38
5.1 General Conclusion	38
5.2 Research Conclusions	39

5.3 Research Limitations	41
5.4 Recommendations for Future Research.....	41
References	42
Appendix.....	45

Introduction

1.1 General Framework

In recent decades, sustainable development has seemed to be at the heart of all discussions. In 1996, Daly (1996) already said, “It has been nearly a decade since the terms ‘sustainable development’ and ‘sustainability’ ‘rose to the prominence of mantra—or a shibboleth.’” Almost 30 years later, the importance of this concept is ingrained in our customs, becoming a principle integrated into our daily lives (Michel-Guillou & Raymond, 2011). In our economies, the goal of sustainability has become one of the pillars of development and a crucial area of interest for companies across various sectors, including the hospitality industry. In this context, the challenge for the hotel industry is to manage the balance between respecting the major pillars of sustainable development, striving to minimize its environmental footprint and contributing positively to the environment in which it operates, all while ensuring customer satisfaction (Sloan et al., 2022). However, this dynamic that the industry seeks to develop faces multiple obstacles in its pursuit of sustainability, such as the financial cost it can generate and the difficulty in embedding this strategic vision in the minds of both its teams and its customers (Sloan et al., 2022). It requires a reshaping, a rethinking of the market, and although adjustments are being made, we still observe a lack of effectiveness in the sector. Therefore, the hospitality model needs to be rethought, and this involves concrete changes in hotel activities. This is why strategic and operational decisions play a crucial role in advancing sustainability within the hospitality sector (Sufi, 2008).

The notion of hospitality is difficult to simplify and should be analyzed from different angles. However, if we were to extract its most neutral essence, it would resemble a relationship between a host and a guest, where the host generously provides for the well-being of the guest through services such as food, lodging, and entertainment, while ensuring their safety. This relationship can be commercial, with expectations of payment and good behavior, or private, where equality and reciprocity are essential (King, 1995).

The concept of sustainability as we all know it, “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (Cassen 1987), with its three main pillars being economic, social, and environmental (Purvis et al., 2018), is becoming increasingly inseparable from the notion of sustainable development (STOTEN n.d.).

In this context of researching the causal link between the development of the hospitality sector and sustainability, it is also important, and this will be the main objective of our research, to highlight the notions of strategic decisions, which define the conditions under which all organizational activities must occur, thus influencing every aspect of the business (Stevenson, 2021), and Operational Management, which focuses on the planning, coordination, and control of the resources needed to produce a company's goods and services (Stevenson, 2021).

1.2 Objectives and Research Methodology

Through this research, we aim to understand, How the hospitality industry strengthens sustainability by implementing strategic and operational decisions ?

As we develop our subject, we will seek to answer specific reflection objectives related to this issue. Indeed, we aim to identify which strategic and operational initiatives have been developed in the hospitality sector so far. We wish to understand their sustainable impact and evaluate their effectiveness from both a strategic and operational perspective. It also seems crucial to identify the main challenges and obstacles that the hospitality sector may face in its quest for sustainability. Finally, we will aim to develop recommendations to improve the integration of strategic and operational decisions.

More broadly, by examining the intersection between strategic and operational management and sustainability in the hospitality industry, this study aims to provide insights into best practices and opportunities for future improvements in sustainability efforts within the sector.

1.3 Macrostructure

This thesis is structured around several essential sections, beginning with an introduction that establishes the general framework of the study by presenting the growing importance of sustainable development in the hospitality industry. This section highlights the environmental challenges the sector faces and poses the central research question: how can the hospitality industry enhance its sustainability through strategic and operational decisions?

The literature review follows, offering an overview of the theoretical knowledge on the subject. It explores key concepts of sustainable development, strategic and operational management, as well as current practices in the hospitality sector. This section contextualizes the study by drawing on existing work while identifying gaps to be filled.

Next, the methodology section details the approaches chosen to conduct the research. A combination of qualitative and quantitative methods is employed to gather data from industry stakeholders. The methodological choices are justified based on the research objectives, and the tools used are presented in detail.

The results of the research are then presented in the results and data analysis section. This part presents the empirical data collected, analyzes them, and compares them to the initial hypotheses and existing literature. It highlights the progress made by the industry in terms of sustainability while pointing out the disparities between large hotel groups and small establishments.

The thesis concludes with a discussion of the implications of these results, emphasizing the importance of employee engagement and adaptation to customer expectations for the success of sustainable initiatives. The conclusions drawn help identify avenues for improvement to

strengthen sustainability in the hospitality industry. Finally, the study's limitations are addressed, followed by recommendations for future research, which suggest expanding the analysis to other aspects of the sector and other geographic regions.

Litterature review

Introduction

Tourism represents a significant part of the global economy, playing a crucial role in our economies (Ferreira & Sousa, 2020). According to the World Tourism Organization, this sector weight for 10% of global GDP in 2016, showing its economic importance as well as the need to regulate its development to avoid negative effects (WTO, 2016).

Uncontrolled growth of tourism can lead to serious consequences such as environmental and cultural degradation, the destruction of fragile ecosystems, the emergence of pollution, conflicts between tourists and the local population, and overcrowding in host communities, among other issues (Bohdanowicz, 2005).

The tourism sector is vast and encompasses various industries, including hospitality, which plays a central role in promoting sustainable practices (Lickorish & Jenkins, 1997).

In this context, the hospitality industry stands out due to its significant environmental impact and the growing need to adopt more sustainable practices (Soliman, 2020).

2.1 The Hospitality Sector and Its Impact on Sustainable Development

The hospitality industry is one of the main industries negatively affecting the environment. On average, it generates about 1 kg of waste per night per person and approximately 180 kg of carbon dioxide (CO₂) per square meter of room per year. Water consumption is also high, averaging 320 liters per night per person (Sloan et al., 2009).

The global tourism sector is estimated to contribute 5% of global carbon dioxide (CO₂) emissions (UNWTO, UNEP, WMO, 2008). Therefore, managing resource use in the hospitality sector is essential due to its significant environmental impact.

It appears essential to understand what factors cause this environmental degradation and which elements of the daily activities of the hospitality sector are the most impactful.

The main points to consider include energy consumption and emissions, water usage, and waste generation. Hotels are large consumers of energy and significantly contribute to greenhouse gas emissions, particularly through heating, air conditioning, lighting, and laundry services (Gössling et al., 2015). Hotels also use large quantities of water for various operations.

To illustrate this, the graph below shows the distribution of water usage in the daily operations of the hospitality industry:

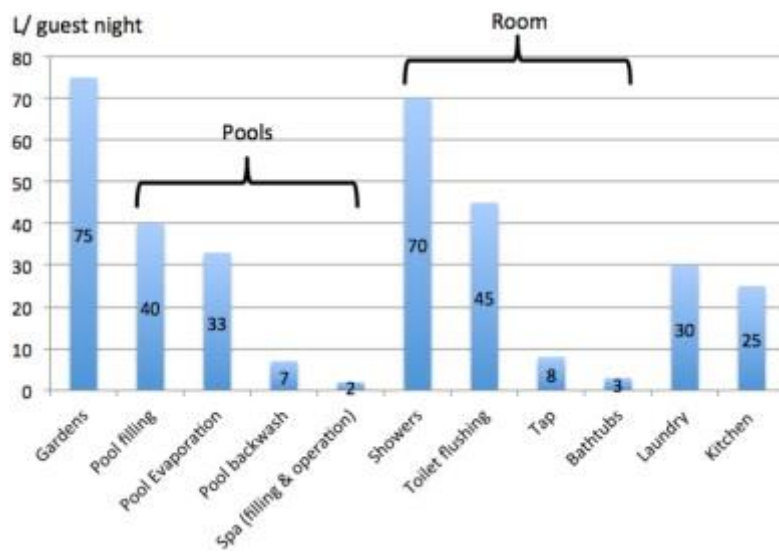


Fig 1- Direct water use in accommodation by end-use (L/guest night) (Gössling, 2015c)

We realize from this graph that the distribution is varied, and while some aspects require more customer awareness (showers, toilet flushing), direct actions from hotel managers could lead to a reduction in certain consumptions (gardens, pool filling) through a more automated system.

The implementation of water-saving measures, such as low-flow devices and greywater reuse, can help mitigate their impact on local water resources (Gössling, 2015).

Beyond water consumption, in terms of waste generation, hotels produce significant amounts of solid waste, including food waste and packaging. Waste reduction, recycling programs, and the use of biodegradable products are essential to minimizing environmental impact (Gössling et al., 2015). To improve water conservation, hotels should develop comprehensive indicators that consider local water availability as well as direct and indirect consumption. Indirect use, through fuels and food, and direct uses, such as gardens, showers, and pools, must be carefully managed (Gössling, 2015).

Higher hotel standards increase water consumption, necessitating new indicators for sustainable measurement. Disaggregated indicators should address different categories of

water use (gardens, pools, rooms, restaurants) and operational phases. Peak consumption, coinciding with low availability, must be considered (Gössling, 2015).

The hospitality and tourism industry, while prosperous, faces significant environmental and social challenges. To address these issues, it is essential to promote a sustainable approach that considers economic, environmental, and social impacts in the short and long term. Institutional and academic initiatives have been implemented to encourage sustainable practices, such as ecological footprint analysis and green certifications. However, it is crucial to continue developing these initiatives, as sustainability in these sectors is dynamic and constantly evolving. The introduction of creativity is proposed as a new approach to enhancing sustainability in hospitality and tourism (Lim, 2016).

2.2.1 The Growing Desire to Improve Sustainability Impact

The hospitality industry is increasingly aware of its environmental impact and is actively seeking to improve its practices. The notion of "sustainable tourism" and "responsible tourism" has gained momentum and is now considered an essential trend in the sector (Khan et al., 2024). This trend is driven by a growing awareness among industry stakeholders who recognize the importance of sustainability for their future and the planet's future (Gardetti, n.d.). Indeed, the rise of "sustainable tourism" is a global phenomenon that reflects a widespread desire to minimize the negative impacts of tourism while maximizing socio-economic benefits for local communities.

Many institutional, political, and strategic initiatives have been put in place to encourage sustainable practices in the sector. Academics and the scientific community have also significantly contributed to this debate, proposing objective measures to address unsustainable practices, such as ecological footprint analysis and green certification (Lim, 2016). These initiatives demonstrate a growing commitment from hotel industry stakeholders to place

sustainable development at the heart of their activities, underscoring the importance of this issue for the entire industry.

Customers play a crucial role in the sustainable transformation of the hospitality industry. More and more travelers are seeking sustainable accommodation options. A 2021 study revealed that 81% of travelers planned to choose a sustainable lodging option in the coming year (Hotel Tech Report, 2021). This shift in customer preferences is driving hotels to adopt more sustainable practices to meet the growing demand. Hotels are investing in energy-saving technologies, water management programs, and waste reduction initiatives to attract environmentally conscious customers (Chen & Tung, 2014).

However, it is crucial to note that customer expectations do not always translate into concrete actions. For instance, some customers may express a preference for sustainable practices but choose non-sustainable hotels due to factors like cost or convenience (Han et al., 2011). This dissonance highlights the importance of further educating customers and encouraging them to align their actions with their stated intentions. This could include financial incentives, sustainability-focused loyalty programs, or more transparent communication about hotels' sustainability efforts.

2.2.2 The Role of Standards and Labels

Standards and labels play a crucial role in signaling hotels' commitment to sustainable development. Hospitality companies use certifications such as ISO 14001 for environmental aspects and ISO 26000 for social aspects to demonstrate their commitment (Cairn.info, 2012). ISO 21401, for example, defines the environmental, social, and economic requirements for implementing a sustainability management system in tourism accommodation establishments (ISO.org, n.d.).

However, despite the usefulness of these labels in standardizing and promoting sustainable practices, their multiplicity and associated costs can pose problems. The diversity of labels can create confusion among consumers and increase costs for hotels, especially smaller establishments (Benoit, 2020). Moreover, some critics argue that these labels can sometimes be used for "greenwashing," where hotels display a superficial commitment to sustainability without adopting truly ecological practices (Clos, 2020).

For example, the "Green Key" label is well-known and widely respected, but there are concerns about the rigor and uniform application of the criteria (Clos, 2020). This criticism highlights the need to improve the transparency and rigor of certification systems to ensure they genuinely reflect hotels' sustainability efforts. A solution could be harmonizing the criteria of different labels or creating a standardized global certification.

2.2.3 Sustainable Practices, Policies, and Sustainability Strategies

Sustainable practices adopted by hotels are often driven by economic considerations. The adoption of energy-efficient technologies, for example, can reduce energy costs by 20 to 30% (Radwan et al., 2012). Implementing waste reduction and water conservation programs can also lead to substantial savings. Additionally, hotels that adopt sustainable practices can enhance their brand image and attract environmentally conscious customers (Han et al., 2011).

The commitment of major hotel chains like Accor to sustainable development initiatives illustrates the growing importance of these practices. Accor has developed several programs aimed at reducing its ecological footprint, particularly in water and waste management, energy efficiency, and promoting the use of local and organic products (Clos, 2020). These initiatives show that even large structures are aware of the long-term benefits of adopting sustainable practices.

However, it is important to note that the implementation of these practices can vary significantly depending on available resources and the hotel's size. For example, luxury hotels may have more resources to invest in costly sustainable technologies, while smaller establishments may focus on less expensive but equally effective practices, such as waste sorting or using eco-friendly cleaning products (Bettley & Burnley, 2008).

Hotels adopt a variety of sustainable practices to improve their environmental performance. These practices include the use of energy-efficient technologies, waste reduction, and water conservation. Adopting these practices not only reduces operational costs but also enhances the hotel's brand image and attracts an increasingly environmentally conscious clientele (Han et al., 2011).

Eco-certified hotels, such as those certified by Green Key and LEED, adopt sustainable practices such as the use of eco-friendly materials and the implementation of energy management programs (Khatter, 2023). For example, some hotels have installed rainwater collection systems and wastewater treatment systems to reuse water in gardens and toilets. These initiatives not only reduce the hotel's environmental footprint but can also lead to substantial financial savings.

Moreover, team engagement in a climate of innovation is crucial for the success of sustainability initiatives. Hotel operations should foster team engagement, allowing service staff to be flexible and adopt innovative behaviors to meet customer needs while ensuring consistent service delivery (Truong et al., 2020). This is particularly relevant in the current context, where customer expectations regarding sustainability are constantly evolving.

Government policies and strategic approaches play a crucial role in promoting sustainable tourism. Strategies such as focusing on nearby markets and strategic demarketing can help manage tourist demand and reduce environmental pressures (Gössling et al., 2015). For example, implementing policies to promote low-carbon tourism can encourage hotels to adopt more sustainable practices.

Furthermore, hotels must integrate sustainable practices into their overall strategy to meet stakeholder expectations and improve their financial and societal performance. This includes adopting environmental standards and labels, as well as implementing training and awareness programs for staff and customers (Bettley & Burnley, 2008). These initiatives not only improve the sustainability of hotel operations but can also enhance the hotel's reputation and increase customer loyalty.

It is also essential for hotels to collaborate with governments and non-governmental organizations to develop effective sustainability policies and strategies. For example, public-private partnerships can help finance costly sustainability projects, such as the installation of renewable energy technologies or the implementation of large-scale waste management systems (Gardetti, n.d.). These collaborations can also facilitate the sharing of best practices and innovations between hotels and other stakeholders in the tourism sector.

2.2.4 Challenges and Solutions for Environmental Sustainability

Hotels face several challenges regarding environmental sustainability, including energy consumption, waste management, water use, and carbon impact. To overcome these challenges, hotels are investing in energy-saving technologies, water management programs, and waste reduction initiatives. For example, some hotels have installed solar panels to reduce their reliance on non-renewable energy sources, while others have implemented rainwater collection systems to reduce their consumption of potable water (Khatter, 2023).

However, there are barriers to adopting these sustainable practices, including high initial costs and a lack of staff awareness and training (Bettley & Burnley, 2008). To overcome these obstacles, hotels must invest in training and awareness programs for staff and customers, as well as in sustainable technologies that offer long-term savings. Additionally, governments and non-governmental organizations can play a crucial role by providing financial incentives and grants to help hotels invest in sustainable practices (Lim, 2016).

The desire to improve sustainable impact in the hospitality sector is driven by several factors, including growing customer expectations, environmental standards and labels, economic benefits, and stakeholder engagement. Despite the challenges, hotels are increasingly adopting sustainable practices to reduce their environmental footprint, improve operational efficiency, and attract environmentally conscious customers. Government policies and strategic approaches also play a crucial role in promoting sustainable tourism, encouraging hotels to adopt more

sustainable practices and facilitating public-private partnerships to finance sustainability projects.

It now makes sense to question how strategic and operational decisions can be optimized to promote sustainability in the hospitality sector. We will examine the importance of strategy and operational management for the success of sustainability initiatives, highlighting best practices and innovations that can help hotels achieve their sustainable development goals.

2.3 The Role of Strategy and Operational Management

2.3.1 Management in the Hospitality Industry

Management in the hospitality sector is a complex discipline that encompasses the organization and management of all the establishment's services. This includes coordinating different departments, managing human relations within the organization, adhering to the establishment's quality standards, as well as hygiene and safety norms. A good manager must not only supervise and train their teams but also maintain constant contact with customers while working to achieve profitability and quality goals (Lim, 2016). The concept of management is broad and encompasses various actions within a company. It involves mobilizing human and material resources to achieve predefined objectives. Management involves organizing individuals' work, motivating and involving them by setting clear goals and establishing performance standards to ensure collective efficiency (Cairn.info, 2012). In the hospitality context, this means not only managing daily operations but also planning and implementing long-term strategies that promote sustainability and efficiency (Khatter, 2023).

2.3.2 Why Strategy is Important?

The adoption of sustainable strategies is crucial for enhancing the competitiveness of tourist destinations. According to Cucculelli and Goffi (2016), integrating sustainable economic, environmental, and social practices can strengthen a tourist destination's competitiveness. In other words, sustainable strategies benefit not only the environment and society but can also improve the competitive position of hospitality businesses by attracting customers who are sensitive to environmental issues (Cucculelli & Goffi, 2016). This perspective aligns with Liberato et al. (2020), who emphasize the importance of stakeholders in implementing sustainable strategies, asserting that their involvement is essential for the success of

sustainability initiatives. For example, effective waste management can not only enhance the hotel's image but also generate economic benefits, whether through cost savings from waste elimination or revenues from selling used oils (Liberato et al., 2020).

Sustainable management decisions, particularly those that are strategic and long-term, are essential for addressing issues at their source. For instance, hotels can significantly reduce their water consumption by implementing towel reuse programs. In Las Vegas, Caesar's Palace saved 30 million gallons of water in one year through such a program. These examples show how strategic decisions can have a significant impact on the sustainability and profitability of hotel operations (Hotel Tech Report, 2021).

2.3.3 New Forms of Tourism and the Adoption of Sustainable Practices

New forms of tourism, such as green tourism and responsible tourism, are increasingly being adopted by hotels, though often on a small scale (Science Direct, 2007). These initiatives are motivated not only by the desire to reduce costs associated with inefficiencies but also by genuine environmental awareness. For example, some hotels have begun adopting environmental management practices aimed at minimizing the negative impact on the environment, both in terms of resource depletion and pollution (Science Direct, 2007). This viewpoint aligns with that of tourism entrepreneurs who, according to the "Journal of Sustainable Tourism" (2000), adopt sustainable practices not only for economic reasons but also out of personal conviction and commitment to sustainability.

However, this trend towards adopting sustainable practices can sometimes be misinterpreted or exploited for marketing purposes, leading to accusations of greenwashing. Some companies may claim to be greener than they actually are by exaggerating their sustainability efforts to attract environmentally conscious customers (Springer Link, 2011). This phenomenon of greenwashing can undermine the credibility of genuine sustainability initiatives and erode consumer trust (ResearchGate, 2016). This confrontation between true sustainable practices

and greenwashing highlights the importance for hotels to engage authentically and transparently in sustainability initiatives to maintain customer trust.

2.3.4 The Importance of Operational Management

Operational management is crucial for implementing sustainable strategies. It involves decisions that determine an operation's long-term capabilities and their contribution to the overall strategy (Emerald Insight, 2002). For example, adopting energy-saving technologies and waste management programs requires careful operational planning and effective resource management (Khatter, 2023). However, this approach can conflict with the financial realities of businesses. The initial investments required for sustainable practices can be significant, but they can also be offset in the long term through economies of scale and efficiency gains (Emerald Insight, 2002).

In conclusion, strategy and operational management are key elements for promoting sustainability in the hospitality sector. Hotels must integrate sustainable practices into their overall strategy and operational management to meet stakeholder expectations, improve their competitiveness, and ensure their long-term profitability. New forms of tourism, such as green and responsible tourism, offer opportunities for hotels to differentiate themselves by adopting genuine sustainable practices. However, it is crucial to avoid greenwashing and genuinely commit to sustainability initiatives to maintain consumer trust and ensure a sustainable future for the hospitality industry.

The confrontation of ideas among authors highlights the complexity of implementing sustainable strategies in the hospitality industry. The varied perspectives, ranging from the importance of stakeholders to the necessity of authentic management of sustainable practices, underscore the importance of an integrated and thoughtful approach to ensure the industry's long-term sustainability and profitability.

MFA – Research Method

3.1 Introduction

In the previous chapter, we examined the situation of the hotel sector within the dynamics of sustainability and the importance of strategic and operational decisions. A thorough analysis allowed us to understand the challenges, driving elements, and limitations of the sector. To answer the question "How does the Hotel Industry enhance sustainability by implementing strategic and operational decisions?", we continue our study with interviews and surveys among hotel industry stakeholders.

These methods are chosen to concretely understand the practices developed by hospitality professionals. Interviews allow for an in-depth exploration of the strategies and operations implemented, while surveys gather a wide range of quantitative data. We have gathered all the collected materials, including interview notes, questionnaires, and specific documents.

The data are summarized and presented to communicate the key characteristics. We explain the descriptive models and seek relationships between different data dimensions. The evidence is treated fairly, without bias, and conclusions are drawn convincingly. This overlay of data collection and analysis improves the overall quality of the research by allowing for continuous adjustments based on initial observations.

This methodology allows us to define a guiding framework based on the practice of hospitality activities, thus enriching the previously studied theory and providing concrete insights into best practices and opportunities for sustainability improvement in the hotel sector. In this chapter, we will further elaborate on how we constructed our research, explaining the specific steps and methods used for data collection and analysis.

3.2 Recommendation for Research Methodology

In our study, we seek to deepen our understanding of hotel establishments' functioning, both in terms of their development strategy and their daily activities. Our objective is to analyze and understand the various methods used, particularly focusing on their impact on sustainable development. Understanding these elements will allow us to measure the impact of activities on sustainable development.

We focus on the implementation, execution, and limitations of practices to optimize actions to meet sustainability objectives. This raises the question of the nature of our research and how we will conduct it. A qualitative approach seems the most suitable, as it will allow us to study in depth the strategies chosen and implemented. We seek to identify the guiding thread of hospitality activities, emphasizing the significance and vision of the companies. Due to the diversity of structures and economic models in hotel establishments, it would not be wise to limit ourselves to a simple comparison of numerical data. We therefore prefer a qualitative approach to highlight differences in practices and results obtained.

Now that the nature of our research is defined, it is necessary to specify how to conduct it. To collect the necessary data for our study, we plan to use a combination of in-depth interviews and surveys. Interviews, designed in advance to make them more relevant, will provide detailed information on practices and strategies, while surveys will provide quantitative data to complement our analysis. Combining these two methods will allow us to obtain a comprehensive and nuanced view of the functioning and impact of hotel establishments on sustainability.

3.3 Survey and Interview Design

In designing our questionnaires and interview guides, we paid particular attention to formulating questions to ensure their relevance and effectiveness in collecting the necessary data for our study. We also conducted informal tests with a focus group to validate the coherence and understanding of our instruments, ensuring they would produce the desired results during data collection.

For our surveys and interviews, we opted for a qualitative approach that allowed us to explore in depth the practices and strategies of hotel establishments regarding sustainability. This approach provided us with detailed information and rich perspectives on the strategic and operational decisions made by these establishments to enhance their sustainability. Moreover, we ensured that the format and conduct of our interviews facilitated a smooth and transparent exchange of information, ensuring the comfort and active participation of the respondents.

In summary, our research methodology combines qualitative and quantitative approaches to gain a comprehensive and nuanced understanding of the role of hotel establishments in promoting sustainability. By highlighting the practices and decisions that contribute to enhancing the sustainability of the hospitality industry, our study aims to provide valuable insights to support sustainable development efforts in this crucial sector.

3.4 Segmentation

Previously, we mentioned the type of research strategy used for data collection, specifically surveys and interviews. Through this, our objective is to analyze and understand the different methods used in the hotel industry to improve sustainability, particularly focusing on the impact of these decisions on sustainable development.

To do this, we have defined a series of clear methodological steps, starting with the planning of our survey. We established precise research objectives, defined the target population, and selected the appropriate methods and resources to ensure the feasibility of our study. We then proceeded with sample selection, choosing accessible and representative elements of the target population to build our sample.

We defined precise criteria for selecting participants for our interviews and surveys. We prioritized individuals holding key positions within the company, having solid experience in the hotel industry, and being heavily involved in sustainability initiatives.

We also considered the ethical aspects of our research. This includes ensuring participant confidentiality and obtaining their informed consent before participating in the study.

Initially, we defined a broad segment comprising professionals working within the strategic and operational divisions of the hospitality sector. Subsequently, we refined our sample by focusing on more influential profiles within this population. Our objective was to engage with decision-makers who have a significant impact on strategy and operational activities to understand how their decisions reflect sustainability through operations.

It is also noteworthy that the type of establishments targeted was chosen thoughtfully. Nowadays, increasingly new forms of hotel establishments are emerging, no longer limited to traditional hotel rooms or classic hotels. New forms, less conventional but equally attractive to customers, are emerging with a strong emphasis on sustainability. Some hotel structures even make it their core business and base their strategy on this main development axis to meet new consumer expectations and address sustainable challenges. It seems essential to pay particular attention to these structures to meet the objectives of our study, which seeks to examine the hotel industry in all its aspects.

Results and Data Analysis

4.1 Introduction

After exploring the theoretical framework and practical challenges of sustainable development within the hospitality industry, this chapter focuses on analyzing the empirical data collected. In previous sections, we identified the major trends and strategies in the sector, as well as the obstacles that hinder the implementation of sustainable practices. However, it is essential to confront these theoretical perspectives with real-world conditions to assess the tangible impact of strategic and operational decisions regarding sustainability.

This chapter aims to provide a critical and nuanced analysis of the data gathered from interviews and surveys conducted with professionals in the hospitality industry. The goal is to go beyond simply describing the initiatives to understand their actual effectiveness, the challenges encountered, and the opportunities for improvement. Based on the collected results, we will seek to identify consistent patterns while also highlighting disparities between different types of establishments.

Rather than only reiterating theoretical findings, this analysis will evaluate how closely the practices observed in the hospitality sector align with the set sustainability goals, and it will determine what adjustments are necessary to enhance their effectiveness. We will examine the factors that either facilitate or hinder the transition toward sustainable practices, using both quantitative and qualitative indicators.

Thus, this chapter serves as a bridge between the theoretical concepts discussed in the literature review and the practical recommendations that will be presented in the conclusion. The data analysis will not only help validate or challenge certain initial hypotheses but also enrich the

discussion on how the hospitality industry can improve its environmental and social impact while maintaining competitiveness.

By adopting this approach, we hope to make an original contribution to understanding the dynamics of sustainability within the hospitality sector, relying on empirical evidence to guide more effective strategic and operational decisions aligned with sustainable development goals.

4.2 Data Analysis and Interpretation

4.2.1 The Push for Sustainability: An Evolving but Uneven Landscape

Integrating sustainability into hotel operations has become a strategic imperative for many players in the industry. Survey data reveals that 60% of respondents believe their company integrates sustainable development principles "moderately" to "well-integrated." This demonstrates that most hotels recognize the importance of sustainability and have begun incorporating it into their practices. However, a significant proportion (20%) indicates that these principles are "not at all integrated" into their operations, revealing a substantial divide between large hotel chains, which typically have the resources to pursue sustainable initiatives, and smaller establishments, which are often limited by financial and organizational constraints.

This divide is partly explained by the financial challenges faced by small hotels. Indeed, around 80% of small establishments say that "financial constraints" are one of the top three obstacles to implementing sustainable practices. These financial limitations prevent small hotels from investing in sustainable technologies and practices, perpetuating a cycle of long-term inefficiency. As a result, they find themselves in a situation where the lack of investment in sustainability reduces their competitiveness in the market, particularly as customers increasingly demand environmentally responsible practices. Furthermore, these establishments risk being perceived as less attractive to investors and financial partners, further exacerbating their resource limitations.

To make the transition to sustainable practices equitable and accessible to all segments of the hospitality industry, it is crucial to develop specific solutions for small establishments. These solutions could include subsidies, tax incentives, or training programs focused on low-cost sustainable practices. Additionally, strategic partnerships between small and large hotels could facilitate resource-sharing and knowledge exchange, helping smaller players more easily integrate sustainability into their daily operations.

4.2.2 Effectiveness of Sustainability Initiatives: Beyond the Indicators

Traditional indicators, such as energy savings or emissions reduction, are often used to assess sustainability initiatives. However, the data suggests that while these indicators are important, they alone are not sufficient to guarantee the success of these initiatives. Employee engagement emerges as an equally critical factor. In hotels where sustainable practices are well integrated, 70% of employees actively participate in these initiatives, compared to just 30% in establishments where such practices are less embedded. This high level of employee engagement is a strong indicator of the success of sustainability initiatives, as it reflects an organizational culture that values and supports these efforts.

When employees are actively involved in sustainability initiatives, it creates an environment where sustainability is seen as a shared priority rather than just a directive imposed by management. This culture of sustainability fosters innovation and continuous improvement, with employees encouraged to propose ideas to reduce the hotel's environmental footprint. In contrast, in hotels where engagement is low, sustainability initiatives risk being perceived as additional tasks, which can limit their effectiveness and long-term adoption.

Additionally, while 40% of hotels have adopted certifications such as Green Key or Green Globe, 60% of small establishments view these certifications as inaccessible due to their costs.

This perception limits the adoption of certified sustainable practices and raises questions about the accessibility of these certifications for smaller players in the sector. If certifications are perceived as prestigious markers reserved for large hotels, they may further widen the gap between small and large establishments in terms of competitiveness. It is therefore essential to rethink certification models to make them more accessible, without compromising the sustainability standards they impose.

4.2.3 Customer Demand: A Missed Opportunity or a Strategic Advantage?

Customer expectations for sustainability vary greatly across different markets. In Europe, 30% of hotels report growing demand for sustainable practices, while 40% of respondents indicate that their customers do not show significant interest in these initiatives. This disparity highlights the need to tailor hotels' communication and marketing strategies according to local markets. In regions where demand for sustainable practices is low, hotels may be tempted not to invest in sustainability, believing that it will not deliver immediate returns.

However, this strategy may prove careless in the long term. Data shows that hotels actively promoting their sustainable initiatives, even in regions where initial demand is low, observe improvements in customer loyalty and satisfaction. This observation underscores the importance of customer education and awareness. By proactively communicating the benefits of sustainable practices, hotels can not only respond to existing demand but also create new demand by influencing customer perceptions. Thus, even in markets less sensitive to environmental concerns, sustainable initiatives can become a strategic advantage by enhancing the hotel's reputation and fostering loyalty among an increasingly eco-conscious customer base.

4.2.4 Challenges and Obstacles: Financial Constraints or Strategic Gaps?

Financial constraints are cited by 80% of surveyed hotels as a major obstacle to implementing sustainability initiatives. However, beyond cost issues, 40% of respondents also highlight the difficulty of measuring the impact of sustainable initiatives as a barrier to their adoption. This difficulty in quantifying the results of sustainability initiatives complicates the justification for the necessary investments, especially for small hotels already grappling with limited resources. Without clear evaluation systems, hotels may struggle to perceive the long-term benefits of sustainability initiatives, reinforcing their reluctance to fully commit to this path.

Hotels that succeed in overcoming these challenges are those that manage to align sustainability with their overall business strategy. By integrating sustainable performance indicators into their decision-making processes, these establishments are better equipped to demonstrate the long-term benefits of these initiatives, both environmentally and financially. Data shows, for instance, that 30% of hotels aligning their sustainability goals with financial performance indicators have seen significant reductions in operational costs. This illustrates the importance of a strategic approach to sustainability, where eco-friendly initiatives are viewed not as additional costs but as profitable long-term investments.

4.2.5 Operationalizing Sustainability: The Role of Technology and Innovation

Technology plays a crucial role in advancing sustainability, but access remains uneven. Among small hotels, 60% report lacking the resources to invest in advanced technologies such as energy management systems or waste reduction technologies. In contrast, large chains, which can afford these investments, report energy savings of up to 25% thanks to the adoption of such technologies. This technological gap creates a situation where small hotels, though more numerous, may have a larger environmental footprint due to their inability to adopt effective sustainable solutions.

To close this gap, it is essential to promote collaborative solutions or targeted support programs that enable small hotels to access sustainable technologies. For instance, forming cooperatives to share technological resources or partnerships with technology providers could equip small hotels with the necessary tools to reduce their environmental footprint while improving operational efficiency. By facilitating access to technological innovations, the entire hospitality industry could achieve more uniform levels of sustainability, thereby enhancing its overall contribution to combating climate change.

These analyses show that sustainability challenges in the hospitality industry are complex and require solutions tailored to the realities of each market segment. By understanding the factors that limit or encourage the adoption of sustainable practices, hotels can better prepare to tackle environmental challenges while remaining competitive in an ever-evolving market. The conclusions drawn from this analysis will serve as a foundation for formulating concrete recommendations to improve the integration of sustainable practices within the hospitality sector.

Conclusion

5.1 General Conclusion

This research offers a clearer understanding of how the hospitality industry is progressing toward sustainability. While sustainability is being increasingly integrated into the strategies of many companies, significant differences remain in how these initiatives are implemented depending on factors such as establishment size, available resources, and geographic location. Larger hotel chains, with their greater financial capacity and access to technology, are better positioned to implement sustainable practices on a larger scale. In contrast, smaller establishments face more significant challenges due to financial constraints and limited technological access.

One of the central findings of this research is the critical role that employee engagement plays in driving the success of sustainability initiatives. Hotels where sustainability is embraced as a core value, with active employee participation, perform better in their environmental efforts. This underscores the need to foster a workplace culture that emphasizes sustainability across all levels of the organization. It's clear that focusing only on technical or operational elements is not enough. Staff motivation and involvement are equally important, or even more, for these initiatives to take hold and succeed.

Additionally, the study reveals considerable variability in customer demand for sustainable practices across different markets. In certain regions, there is a growing appetite for eco-friendly accommodations, while in others, environmental concerns remain secondary, often depending on the level of development of the area but not only, it's also often due to cultural habits and preferences. This highlights the importance of adapting marketing and communication strategies to the specific expectations of each customer base. Hotels in areas where sustainability is not a priority may need to focus on raising awareness and educating

guests, while those in regions with higher demand can emphasize their green initiatives as a way to build stronger customer loyalty.

Furthermore, the research questions the belief that technology and certifications alone are sufficient to achieve sustainability. While undoubtedly useful, these tools are not universally accessible, especially for smaller hotels. Overemphasizing certifications may inadvertently widen the gap between large, well-resourced hotels and smaller establishments. To truly create a sustainable impact, hotels need to adopt a more holistic approach—integrating sustainability into all aspects of their operations and recognizing it as both an environmental necessity and a strategic opportunity for enhancing performance.

This chapter sets the stage for further exploration of these findings, including a deeper discussion of the broader implications. Public policy, certification frameworks, and opportunities for industry collaboration will be examined, alongside further recommendations for advancing sustainability across the hospitality sector. The ultimate aim is to develop practical, inclusive solutions that support the entire industry in moving toward more sustainable practices.

5.2 Research Conclusions

This study has provided key insights into the implementation of sustainability within the hospitality industry. Larger hotel chains, with their greater resources, have made notable strides in incorporating sustainable practices. They've invested in green technologies, earned environmental certifications, and developed internal policies to reduce their environmental footprint. These efforts underscore that for many of the industry's major players, sustainability is no longer optional but rather a fundamental aspect of their broader business strategy.

However, smaller hotels have not been able to match this pace. Despite a clear desire to adopt more sustainable practices, they face significant barriers—primarily financial constraints and

limited access to technology. As a result, the gap between large and small establishments is widening, underscoring the need for targeted solutions such as financial incentives, subsidies, or strategic partnerships to help smaller players adopt sustainable practices more effectively.

A key theme emerging from this research is the importance of employee involvement. Hotels where sustainability is seen as a collective responsibility—shared by staff and management alike—are better equipped to meet their environmental targets. Active engagement from employees fosters not only the effectiveness of green initiatives but also a culture of continuous improvement and innovation. In contrast, in hotels where staff engagement is low, sustainability efforts risk being perceived as an added burden, diminishing their success.

The study also emphasizes the need for hotels to align their sustainability goals with broader business objectives. Many establishments struggle to integrate sustainability into their long-term strategy, seeing it as a cost rather than a competitive advantage. However, by adopting a more strategic approach, where sustainability drives both environmental and business performance, hotels can overcome these challenges.

Additionally, the importance of tailoring sustainability efforts to local markets cannot be overstated. Customer expectations around sustainability vary widely depending on the region, and hotels need to adjust accordingly. In markets where demand for eco-friendly practices is high, investing in sustainability can build customer loyalty and enhance a hotel's reputation. In other markets, where awareness is still low, hotels should take a more proactive role in educating their guests while gradually rolling out sustainable practices.

Smaller hotels, in particular, may benefit from collaborative approaches. Forming cooperatives or establishing partnerships with technology providers or NGOs can help smaller players access the resources and technologies needed to adopt sustainable practices. These partnerships could provide innovative solutions that would otherwise be financially or logistically out of reach for individual establishments.

5.3 Research Limitations

While this study provides valuable insights, it has certain limitations that should be acknowledged. The research focused heavily on operational management within the hospitality sector, which, while informative, narrows the scope. A broader view is necessary to fully understand the complexities of sustainability, which includes factors like public policy, supply chain dynamics, and wider economic influences. Expanding the analysis to incorporate these dimensions would offer a more comprehensive understanding of sustainability within the hospitality industry. Additionally, the study's geographic focus was limited to Europe and North America, meaning the findings may not fully reflect the realities of other regions, further limiting the generalizability of the conclusions.

5.4 Recommendations for Future Research

To address these limitations, future research should take a more holistic and interdisciplinary approach. Studies should go beyond operational management and explore areas such as corporate governance, stakeholder involvement, and interactions with public policies. Understanding how these factors intersect with sustainability efforts would provide a more nuanced understanding of the challenges and opportunities within the industry.

Special attention should also be given to emerging markets, which may offer unique insights into the global sustainability landscape. By focusing on local dynamics in these regions, future research could contribute to a richer, more global understanding of sustainability in hospitality. This broader perspective would allow researchers to propose more tailored, actionable solutions to help the industry address both environmental and social challenges more effectively. By moving beyond current limitations, future research can develop truly sustainable strategies that align with the complex realities faced by the hospitality industry today.

References

- Benoit, P. (2020). **Les activités des palaces et des hôtels de luxe sont-elles compatibles avec la préservation de l'environnement ?** [Thesis]. IPAG Business School. <https://prixdesmemoires.cjdes.org/wp-content/uploads/sites/2/2021/02/Benoit-Pauline.pdf>
- Bettley, A., & Burnley, S. (2008). **Towards Sustainable Operations Management Integrating Sustainability Management into Operations Management Strategies and Practices.** *Springer eBooks*, 875–904. https://doi.org/10.1007/978-1-84800-131-2_53
- Bohdanowicz, P. (2005). **European Hoteliers' Environmental Attitudes: Greening the Business.** *Cornell Hotel and Restaurant Administration Quarterly*, 46*(2), 188–204.
- Cassen, R. (1987). **Our Common Future: Report of the World Commission on Environment and Development.** Oxford University Press.
- Cairn.info. (2012). **La gestion durable dans l'hôtellerie : Enjeux et pratiques.** *Revue Management & Avenir*, 6*, 154-174.
- Chen, A., & Tung, N. (2014). **Examining Chinese consumers' luxury hotel staying behavior.** *International Journal of Hospitality Management*, 39*, 53–56. <https://doi.org/10.1016/j.ijhm.2014.01.002>
- Clos, C. (2020). **Pratiques de développement durable dans l'hôtellerie de luxe : Enjeux et spécificités.** *Téoros*, 39*(1), <https://doi.org/10.7202/1074096ar>
- Cucculelli, M., & Goffi, G. (2016). **Does sustainability enhance tourism destination competitiveness? Evidence from Italian Destinations of Excellence.** *Journal of Cleaner Production*, 111*, 370–382. <https://doi.org/10.1016/j.jclepro.2014.12.069>
- Daly, H. E. (1996). **Beyond Growth: The Economics of Sustainable Development.** Beacon Press.
- Ferreira, J., & Sousa, B. (2020). **Experiential Marketing as Leverage for Growth of Creative Tourism: A Co-creative Process.** In Á. Rocha et al. (Eds.), *Advances in Tourism, Technology and Smart Systems*, (pp. 567-577). Springer, Singapore. https://doi.org/10.1007/978-981-15-2024-2_49
- Gardetti, M. (n.d.). **Sustainability in Hospitality: How Innovative Hotels are Transforming the Industry.** Google Books. <https://books.google.fr>
- Gössling, S., Scott, D., & Hall, C. M. (2015). **Inter-market variability in CO2 emission-intensities in tourism: Implications for destination marketing and carbon management.** *Tourism Management*, 46*, 203–212. <https://doi.org/10.1016/j.tourman.2014.06.021>

- Han, H., Hsu, L. J., & Sheu, C. (2011). ****Are lodging customers ready to go green? An examination of attitudes, demographics, and eco-friendly intentions.**** *International Journal of Hospitality Management*, 30*(2), 345–355. <https://doi.org/10.1016/j.ijhm.2010.07.008>
- Hotel Tech Report. (2021). ****Hotel Sustainability Statistics.**** <https://hoteltechreport.com/fr/news/hotel-sustainability-statistics>
- Khan, N., Acuti, D., Lemarie, L., & Viglia, G. (2024). ****The intention-behaviour gap in sustainable hospitality: A critical literature review.**** *International Journal of Contemporary Hospitality Management*, 36*(5), 1627–1646. <https://doi.org/10.1108/ijchm-06-2023-0840>
- Lickorish, L. J., & Jenkins, C. L. (1997). ****An Introduction to Tourism.**** Butterworth-Heinemann.
- Lim, W. M. (2016). ****Creativity and sustainability in hospitality and tourism.**** *Tourism Management Perspectives*, 18*, 161–167. <https://doi.org/10.1016/j.tmp.2016.02.001>
- Liberato, D., Sousa, B., & Malheiro, A. (2020). ****Sustainability in tourism and hospitality: Trends and challenges.**** 35th IBIMA Conference, Spain. https://www.researchgate.net/publication/343294642_Sustainability_In_Tourism_And_Hospitality_Trends_And_Challenges
- Michel-Guillou, E., & Raymond, R. (2011). ****Durabilité et comportements : Vers une compréhension des choix individuels.**** *Psychologie et Société*, 8*, 58–79.
- Purvis, B., Mao, Y., & Robinson, D. (2018). ****Three pillars of sustainability: In search of conceptual origins.**** *Sustainability Science*, 14*(3), 681–695. <https://doi.org/10.1007/s11625-018-0627-5>
- Radwan, H., Jones, E., & Minoli, D. (2012). ****Solid waste management in small hotels: A comparison of green and non-green small hotels in Wales.**** *Journal of Sustainable Tourism*, 20*(4), 533–550.
- Sloan, P., Legrand, W., & Chen, J. S. (2009). ****Sustainability in the Hospitality Industry: Principles of Sustainable Operations.**** Great Britain: Elsevier.
- Soliman, K. S. (2020). ****Sustainability in Tourism and Hospitality: Trends and Challenges.**** In Á. Rocha et al. (Eds.), *Proceedings of the 35th IBIMA Conference**. <https://sin.akademia.mil.pl/publications/details/i5232>
- Stevenson, W. J. (2021). ****Operations Management (14th ed.).**** McGraw-Hill Education.
- Truong, N., Dang-Pham, D., McClelland, R., & Nkhoma, M. (2020). ****Exploring the impact of innovativeness of hospitality service operation on customer satisfaction.**** *Operations and Supply Chain Management: An International Journal**, 307–319. <https://doi.org/10.31387/oscm0420272>
- UNWTO, UNEP, & WMO. (2008). ****Climate change and tourism: Responding to global challenges.**** UNWTO.

- WTO (World Tourism Organization). (2016). ****Tourism Highlights.**** UNWTO.
<https://www.unwto.org>
- ISO - Organisation internationale de normalisation. (n.d.). ****ISO 21401: Tourism and related services – Sustainability management system for accommodation establishments.****
<https://www.iso.org>

Appendix

The questionnaire used to collect data for this research includes the following questions (Please note that the interviews were generally conducted as open discussions. In some cases, not all of the questions were addressed, while others emerged spontaneously) /

1. Could you briefly introduce your establishment's activities and its key characteristics?
2. What is your company's perception of sustainability, and how is it reflected in your organizational culture?
3. How is your company currently integrating sustainable development principles into its daily operations?
4. What are the main challenges your company faces in balancing operational management with sustainable practices? (Cost, Process, Logistics, Employee Training)
5. Could you provide specific examples of sustainability initiatives implemented by your company and their impact on your overall operations and performance?
6. What measures does your company take to assess and evaluate the economic, social, and environmental impact of its sustainable practices?
7. Have you noticed a growing demand for sustainability within your business? If so, how is your company addressing this?
8. What strategies or programs does your company implement to encourage the adoption of sustainable practices by its employees?
9. How does your company evaluate the profitability of its sustainability initiatives, and how does this influence your operational decisions?
10. Do you consider sustainable development a constraint or a hindrance in the execution of your company's main activities?

Survey Questionnaire

1. On a scale of 1 to 5, to what extent does your company currently integrate sustainable development principles into its daily operations?

1: Not integrated at all

2: Weakly integrated

3: Moderately integrated

4: Well integrated

5: Very well integrated

2. In your opinion, what are the three main challenges your company faces in balancing operational management and sustainable practices? (Select up to three options)

- Financial constraints

- Lack of employee awareness

- Competitive pressures

- Regulatory constraints

- Difficulty in measuring the impact of sustainable initiatives

- Other (please specify)

3. Can you list the three most impactful sustainable development initiatives your company has implemented in recent years? (Select up to three options)

- Reduction of energy consumption

- Use of sustainable materials

- Effective waste management

- Promotion of sustainable tourism

- Raising customer awareness of sustainable practices

- Other (please specify)

4. How would you rate the overall effectiveness of the sustainable initiatives implemented by your company?

- Very effective

- Effective

- Neutral

- Ineffective

- Not effective at all

5. On a scale of 1 to 5, how important is sustainability in your company's organizational culture?

1: Not important at all

2: Slightly important

3: Moderately important

4: Important

5: Very important

6. What tools or indicators does your company primarily use to measure the economic, social, and environmental impact of its sustainable initiatives? (Select all that apply)

- Carbon footprint

- Environmental performance indicators (e.g., water and electricity consumption)

- Social impact assessment (e.g., creation of local jobs)

- Cost-benefit analysis

- Other (please specify)

7. What are the three main obstacles your company has encountered when integrating sustainable practices into your hotel's operations in recent years? (Select up to three options)

- High initial costs

- Resistance to change within the organization

- Lack of support from management

- Lack of internal skills and resources / complex training

- Difficulty raising awareness and mobilizing external stakeholders (customers, suppliers)

- Other (please specify)

8. What are the main competitive advantages you have observed from integrating sustainable practices into your hotel operations? (Select up to three options)

- Improved brand reputation

- Market differentiation

- Attraction and retention of customers

- Long-term cost reduction

- Other (please specify)

9. How does your company collaborate with other players in the hospitality industry to promote sustainability and share best practices? (Select all that apply)

- Participation in industry initiatives or working groups

- Sharing data and results with other hotels

- Cooperation with non-governmental organizations or professional associations

- Organizing or participating in sustainability-related events or conferences

- Other (please specify)

10. How does your company integrate sustainability principles into supply chain management? (Select all that apply)

- Selection of environmentally and socially responsible suppliers

- Assessment and reduction of the carbon footprint of purchased products and services

- Promotion of fair and sustainable practices throughout the supply chain

- Encouragement for suppliers to adhere to sustainability standards

- Other (please specify)

11. What are the main performance indicators your company uses to track the progress of its sustainability initiatives? (Select up to three options)

- Reduction of greenhouse gas emissions

- Energy and water savings

- Waste recycling rate

- Employee satisfaction and engagement indicators regarding sustainability

- Other (please specify)

12. How does your company actively raise customer awareness and involve them in sustainable practices during their stay? (Select all that apply)

- Displaying messages and information on sustainability in rooms and common areas

- Offering responsible consumption options (e.g., choice to reuse towels)

- Organizing sustainability-related activities or events for customers

- Encouraging participation in carbon offset programs

- Other (please specify)