



# Article Green Practices in Hospitality: A Contingency Approach

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Received: 2 May 2019; Accepted: 27 June 2019; Published: 9 July 2019



Abstract: This study focuses on discovering sustainable practices and possible innovative practices according to factors of Contingency Theory. In order to achieve this, a qualitative approach has been conducted. The study analyses 24 independent hotels. Semi-structured interviews were used in this study and conducted in person with the top managers at each hotel. The results show that, in accordance with Contingency Theory, the organizational behaviour is determined by the environment in which the hotel operates, the size of the establishment, where large- and medium-sized hotels are more committed to sustainable development, the environmental technology adopted and implemented by the hotel, and the main type of clientele, with hotels aimed at business travellers who show greater attention to the environment than those aimed at leisure travellers, mainly associated with socio-cultural values. The factors that were not completely decisive in the results analysed were the age of the hotel and the sex of the hotel owner. Considering the achieved results, this study may also contribute to identifying the most sustainable hotels and can help hotel businesses understand and reap the benefits of following a sustainable path.

Keywords: Contingency Theory; contingency factors; size; age; ownership; type of customer

# 1. Introduction

Environmental management of businesses in the tourist industry has grown consistently over the past 20 years, with efforts to identify the most important drivers, the potential benefits, and the degree of implementation [1]. As a result, there is a tendency to generalize about the impact of environmental policies without drawing finer distinctions about how businesses are affected differently, depending on their particular characteristics. The tourism studies in this field have focused on the sizes of tourism businesses [2–4], differentiating among types of tourism business [5–7]. Analyses of the hotel sector have distinguished hotels according to category [2,6], by type of ownership [6], or by age [2,3].

In addition, Myung, McClaren and Li [8] note that the existing research has focused primarily on Europe, with virtually no studies performed in Latin America. In the same vein, these authors asserted that the research in this area has left many topics unaddressed, including, among others, the application of management theories to environmental management. Therefore, delving more deeply into these aspects, and other unresolved questions, could be addressed through Contingency Theory. This theory holds that there are certain factors that account for the different organisational behaviour of companies and, hence, the varying results [9,10]. Doh, Park and Kim [3] asserted that different business contexts, dependant of internal and external conditions, influence both decisions and outcomes. Nevertheless, little specific research in tourism has used this theory to explain strategic decisions and business behaviours. Turner, Way, Hodari and Witteman [11] applied this theory to strategic management accounting, Rey-Marti, Ribeiro-Soriano and Palacios-Marques [12] to entrepreneurial attributes of

human capital in the culinary industry, or Doh, Park and Kim [13] in agrotourism, but according to our best environmental management knowledge it has not been applied to environmental management decisions yet.

Precisely for this reason the present article seeks to shed light on the topic of applied Contingency Theory by identifying the contingent factors most influential in the adoption, implementation, and consequences of environmental practices in the hospitality sector. The aim of helping the sector maximize their proper adoption and minimize their related negative effects. This study may also contribute to providing a specific vision that could help consumers identify possible sustainable hotels.

## Research in Environmental Management in Hospitality and Contingency Theory

Contingency Theory, which has been applied since the mid-1960s, has shown that a number of factors influence how the management practices adopted by business and their method of adoption affect their organisational design and performance in order to adapt to a market's changes [9]. In fact, various authors have noted the causal relationships between contingency factors and adoption of management practices [3,13] providing an important reason to study the general factors that can influence company management specifically in the hotel industry [3].

The first of these factors is the environment in which a company operates, which is shaped by political, economic, legal, and social elements [3,10]. These elements can directly influence organisational behaviour, given that different business environments can inhibit or enhance certain management practices, such as environmentally friendly management. Nowadays, the business environment in tourism could be defined as complex, diverse and, sometimes, hostile [14], but worried about sustainability and climate change. Thus, according to their own business environment and market concern regarding sustainability, hospitality companies could shape their sustainable behaviour [4,15]. In fact, when the business environment is environmentally proactive, it acts with an essential condition of green practices adoption and ecoinnovation [15,16].

The second factor is the company's size, which determines its resources and capabilities and its adoption and implementation of management practices [3,17]. Thus, the largest hotels with the most human and financial resources tend to pioneer the development of environmental practices and implement them more extensively than smaller hotels [18,19]. Nevertheless, later research explains that given the importance of sustainability in tourism, even very small companies are implementing environmental practices [4], although these practices are considered basic [3].

Age is the third factor because a company's age may act as a booster if the company is young. Younger tourist companies can be more innovative and market-oriented than older companies focused in their daily operations [20]. Nevertheless, older tourist companies have more experience to face complex business environments and service [3]. On the other hand, age can also act as an inhibitor in older companies, where there may be more resistance to change [2,3].

The fourth factor is technology. This factor also has two faces. Technological capacity of the company is correlated with technical implementation inside the company, including environmental technology [20]. The environmental technology adopted by a company and its degree of implementation affect the rest of the company's operations and practices [18,21–23], such as the training and skills of the company's human resources [3,5,24], among others.

Another factor is the power in the company. In the modern post-hierarchical structure, it is the client who exercises power over the company and forces the management team to make decisions according to customer demands [20]. In other words, customer demands pull the management practices that the company adopts [25]. The tourism industry has two main categories of clients: leisure travellers and business travellers. The existing literature suggests that leisure travellers are more likely than business travellers to require that their hotel meet environmental criteria [26,27]. This is also reflected in the fact that ecological hotels are located primarily in holiday destinations [23,28].

With regard to ownership, hotels that belong to chains have proved consistently more advanced than independent hotels in terms of management practices [18,28,29]. However, there is no clear

conclusion regarding whether the gender of the hotel manager affects the performance of independent hotels, as the relevant research results are mixed [30]. The tourism industry has been accused of perpetuating dominant gender norms and reinforcing gender divisions and stereotypes [31] despite the prevalence of women in the most tourism industries [12]. However, studies, such as the one by Dreher and Ullrich [32], conclude that contrary to a prerogative of inequality or discrimination, gender-based characteristics, qualities, and challenges present few obstacles to women. In the case of environmental orientation, previous literature has shown the manager's perception of environmental issues differs according to gender, as does the implementation of measures of sustainability in the company. On the one hand, women are better able to integrate social and environmental criteria as demanded by society into the company strategy [33]. On the other, men are more committed to the economic criteria necessary to maintain the sustainability of a company [34]. For the aforementioned reasons, different strategies could be deployed in environmental practices depending of manager gender. Therefore, based on a state-of-the-art review of the factors that shape organisational behaviour with respect to environmental practices in the hotel industry, we proceed to define the following main proposition: Organisational behaviour regarding environmental management, in accordance with Contingency Theory, is determined by the following contingency factors:

- The environment in which the hotel operates;
- The size of the hotel;
- The age of the hotel;
- The environmental technology adopted and implemented by the hotel;
- The type of clientele who use the hotel; and
- The gender of the hotel's owner-manager.

Therefore, based on a state-of-the-art review of the factors that shape organisational behaviour with respect to environmental practices in the hotel industry, we proceed to define the following hypotheses:

Hypothesis 1 (H1): The environment in which the hotel operates influences sustainable practices;

Hypothesis 2 (H2): The size of the hotel determines the incorporation of sustainable practices;

Hypothesis 3 (H3): The age of the hotel determines sustainable practices;

**Hypothesis 4 (H4)**: *The environmental technology adopted by the hotel influences the sustainable practices that it implements;* 

Hypothesis 5 (H5): The type of clients-leisure or business of the hotel influences the sustainable practices adopted;

**Hypothesis 6 (H6)**: The gender of the owner manager of the hotel determines the sustainable practices implemented.

# 2. Materials and Methods

This study used a qualitative method of analysis. The qualitative approach to research seeks to capture in-depth details about the practices and phenomena studied [35]. This research is conceived as a case study. This method permits in-depth knowledge about sustainable practices and decisions implemented by independent hotels. Some authors, such as De Massis and Kotlar [36], advocate the use of case studies, arguing that if the research is performed accurately, this can be a method that leads to a thorough and sophisticated understanding of the organisations involved [37,38]. Yin [39] defines as "an empirical question(s) that investigates a contemporary phenomenon in its real-life context, especially when the limits between the phenomenon and the context are not clearly evident". According to this author, this type of methodological design is appropriate if it is "revealing" that it is not accessible or poorly studied. However, although this technique allows researchers to go into greater depth on a theme, gather more details about the processes involved, and provide new information,

its main drawback is that the results cannot be generalized [40]. Therefore, this study aims to be a contribution in the generation of proposals that can be contrasted in future quantitative research.

This study is based on a sample of cases from a mature destination, Spain, and an emerging destination, Chile. In 2017, distribution and hospitality services' inter-annual growth rate by year according to Gross Domestic Product (GDP) in Madrid was of 3.3% [41]. Additionally, the region of Madrid was the sixth more visited in Spain in 2018, having reached 7,121,590 international arrivals [42]. The economic importance of tourism for Chile is relevant at present. In 2017, this sector ranked fourth in exports of goods, and reported US \$4.2 billion in revenues in foreign currency. Santiago and Valparaíso represent the cities with the highest arrival of tourists, mainly foreigners. Santiago received more than 2.5 million people during 2017, with an average of 10.5 nights in the city. Valparaíso, presented the highest rate of tourism growth in Latin America with 12.8%, followed by Santiago with 12.7% [43].

Only independent hotels were included in the sample, with the intention of contributing to the sparse literature regarding this topic, as many studies about the environmental practices of chain hotels are available [6], in addition to studies that cover both independent and chain hotels [18]. The study focuses on discovering sustainable practices and possible innovative practices in the countries selected according to factors of Contingency Theory. Therefore, the innovative aspect of this study is its analysis of the aforementioned factors in independent hotels to determine whether they are truly influential in the area of environmental practices.

The study was based on primary data [44]. Twenty-four independent hotels, 12 from each country, were chosen at random for the analysis of the national tourist services of each country. Four hotels were taken from each category (three, four, and five stars), which were selected in accordance with the literature on hotel quality and potential differences with respect to sustainable practices among them [18]. The category selection was determined by choosing those that represent the highest proportions of hotels. In Chile, according to the latest official data, there are 1034 hotels, of which 73% have three, four, or five stars, according to the latest update of 2015 [45], while in Spain these same classifications represent 88.08% of the total in 2018 [46].

The hotels were chosen as follows: (1) A database of the tourism agency of each country was requested. TurEspaña [47] was used for Spain and Sernatur [48] for Chile. The hotels in these databases were chosen according to the category of the hotel. (2) Hotels with three, four, or five stars and fewer than 250 employees were included. We excluded chain hotels and those with more than 250 employees since the contribution of this study lies precisely in knowing the experience of independent hotels. The website of each hotel was reviewed to determine if it was a member of the chain and guarantee this aspect, since the website of each hotel specifies any affiliation to the chain. When the website of a hotel could not be found, the information was verified by telephone with the managers. Those belonging to chains were excluded from the databases. Another selection criterion was the number of employees. Hotels with more than 250 employees were excluded from the databases. (3) All the hotels in our databases were contacted by phone to request an interview. (4) On-site interviews were conducted at each hotel. The interview consisted of a commonly used qualitative research instrument [35]. Semi-structured interviews were used in this study because they are an adequate method of data collection, allowing an interpretive approach in which respondents can easily communicate their ideas, concepts and beliefs, and researchers can obtain a more complete understanding of the phenomenon studied [35]. The interviews consisted of 12 open questions that were developed based on the literature [29] (see Appendix A). The interviews were conducted in person with the top managers of each hotel. All interviews were conducted between December 2012 and April 2013. (5) The interviews were complemented with direct observation in each of the hotels that were made at the end of each interview. The different places of the hotels were visited, and they were written down in a complementary form, which was triangulated with the answers given. (6) The interviews were complemented with information on the web pages that, in a significant number of the cases, visualized the sustainable practices of the hotel. (7) To update the sample, in May 2019, a comparison was made of the results obtained in the interviews. (8) An exhaustive search on the

websites of the analysed hotels. (9) Telephone calls to these hotels to see if there have been advances. (10) It has been checked if each hotel has been certified as an "Ecoleader" on the Tripadvisor website. Ecoleader is a recognition to hotels that apply environmentally-friendly practices. This program has been developed with national and international experts from the ecological sector. The highest certification is the gold level.

In the case of the interview phase, audio recordings were made, which were then transcribed. These transcripts were analysed using the Content Analysis technique with the help of the Atlas.ti software package, version 7.0 (Scientific Software Development GmbH, Berlín, Germany). This program makes it possible to incorporate literal transcript data from each interview for detailed analysis, including reading and general interpretation, followed by the reorganization and classification of the data by coding and familiarization. This coding process allows the researchers to analyse the data based on citations taken from the transcripts, and then complement them with the new information collected in the second update phase.

The hotels were labelled by category and country. For example, the first five-star hotel in Spain is labelled "5SpA", while the fourth in the same category is "4SpD". The same applies to Chile, where the first four-star hotel, for example, is labelled "4ChA". The categories were defined according to the dimensions suggested by the contingency theory: environment, size, age, technology, clientele, gender, and category.

## 3. Results

### 3.1. Environment in Which the Hotel Operates

Based on Contingency Theory, the first factor discussed was the environment. Regarding this factor, we note that there are two different contexts in this study. First, we found that Spain's tourism sector expresses growing cultural concern for the environment, and it is possible to develop a culture of quality and environmentalism through voluntary efforts to meet the ISO 9001 and ISO 14001 standards, in addition to the UNE 182001 or Q standard of the Institute for Spanish Tourist Quality (ICTE), which is specific to the hotel industry. There are also legislative measures and specific environmental policies, including the PIMA SOL A plan to promote energy-efficient renovation in the hotel industry, which was approved in 2013 [49]. Regarding external motivations, administration, or legislation is the only external motivator addressed in the analysis, but it was cited by only six of the hotels surveyed, whereas eight cited cost savings. In Spain, only external barriers hindering the implementation of environmental practices in the hotels were observed. Excessive bureaucracy related to legislation was most common, cited by nine of the hotels surveyed: "The biggest barriers are the bureaucratic and operational ones" (3SpA).

Among the operational aspects in the supply chain, the issue of recycling stands out. The majority of Spanish hotels recycle all types of garbage, including batteries, glass, paper, cardboard, plastic, and oils, for example, are separated, with some having their own recycling bins: "We have the green bin, the yellow bin, the blue bin, we separate all types of garbage" (5SpB). In Spain, the majority of the hotels surveyed have implemented a great variety of environmental practices related to reducing water consumption, such as the use of water-conserving dispensers, low-flow shower heads, timed water faucets, low-flow and dual-flush toilets, drip irrigation, and sprinklers. In Spain, there is also strict control of heating and air conditioning: "we regulate everything...we have a central switch in the reception and so, for example, at 9:30 a.m., all air conditioning and heating are turned off in all rooms because we believe that almost everyone has gone out" (3SpD). Much of the hotels surveyed regulate energy use.

This environmental impetus towards concern for the environment propagates down through the entire supply chain. This has caused much of the independent Spanish hotels surveyed to express interest in working with suppliers who provide sustainable products and services. The same is

happening with human resources practices, as nine of the hotels encourage and train their team members about the subject.

The operational impacts of implementing environmental practices are the most far-reaching in the Spanish case, where all of the hotels expressed the belief that implementation of these practices has consequences. They also recognise economic or financial benefits: "we reduced our consumption by 50% from 16 litres to 8 litres, so we save on the water bill" (4SpD). Finally, the majority of the hotels surveyed valued the impact in terms of improved knowledge, capabilities and skills.

In Chile, there is not yet a culture of sustainability that has an impact on the country's awareness of environmental issues. Current policies and regulations have yet to impose any strong environmental requirements of the hotel industry, and green seals and initiatives are still in the fledgling stage. The Chilean case is different, therefore, in that the environment does not foster the implementation of sustainable practices with concrete incentives; the only motivation is internal, i.e., dependent on the desires of hotel entrepreneurs "the idea of sustainable measures is somewhat personal, by wanting to contribute to the world in which we all live; here there are no requirements" (5ChB). Such motives are determined mainly by cultural values or cost savings, which appeared in the majority of the hotels interviewed. The main barrier is the investment that implementing sustainable practices would require from the owners: "the money is the biggest factor, implementation is expensive, even if you recover the cost later" (3ChB).

An analysis of the sustainable practices adopted in the hotels' supply chains revealed that Chilean hotels are recycling, conserving energy and have enacted environmental practices to conserve water. There was no specific demonstrated interest in extending the requirement regarding adoption of environmental practices to suppliers. Half of the Chilean hotels surveyed provide information about environmental measures to their employees, and, because these measures have been implemented recently, the practices are observed to be on the rise: "we have discussions and provide training and try to make it a lifestyle, so they can implement it at home with their families" (5ChA).

The situation regarding organic products supply in Chile is the opposite of that in Spain: where the majority of the Chilean hotels included home-grown, organic and fair-trade products in their kitchens and rooms. One hotel advertises, "our refrigerated minibars contain bottled rainwater from the Valdivia forest, our wines come from small vineyards, our dishes are prepared using carefully chosen locally grown produce and gourmet ingredients" (5ChB); however, there are no specific proposals offered to the clients, such as the option to change towels and sheets. Seven Chilean hotels indicated that the impact of environmentally friendly practices is primarily cost savings. The results related to the environment for the countries are shown in Table 1.

Studied Variables	Studied Variables Spain	
Motivations	Cost-savings	Cost-savings; Cultural values
Barriers	Sociocultural barriers	Costs; Bureaucracy
Suppliers-Supply Chain	Interest in their environmental responsibility	No specific interest
Operations-Supply Chain	Recycling; Save energy consume; Reducing water consumption; Temperature control	Recycling; Save energy consume; Reducing water consumption; Temperature control
Clients-Supply Chain	Use ecological process	Use ecological products in the kitchen to offer to the clients
Human Resources-Supply Chain	Train their team members in environmental subjects	No specific interest
Direct and Indirect Impacts	Operational impact; Cost savings	Cost savings

Table 1. Results related with the environment for countries.

#### 3.2. Size of the Hotel

The second aspect of hotels that was analysed was their size, as measured by the number of guest rooms. For the purposes of this study, hotels with fewer than 100 rooms were considered "small", those with 101–150 rooms were considered "medium", and those with 151–300 rooms were considered "large", according to the classifications of Vallén and Vallén [50], and Camisón [51].

The results indicate a strong internal motivation for cost-saving, especially among medium and large hotels, including the entire sample in both cases. In contrast, cultural reasons meant there was less appreciation among the hotels analysed. Thus, larger hotels placed the most value on these aspects, with all of them expressing concern for this aspect.

Legislation was high on the list of external motivations to implement environmental practices among large hotels, being mentioned by all of them, among the medium-sized hotels. Image is a much less significant incentive to implement environmental practices, being mentioned by only half of the large hotels in the sample.

An analysis of internal barriers to the implementation of environmental measures revealed that cost was the only consideration, being mentioned by the majority hotels "It is still very expensive to implement measures that clients do not value; we have considered it, but it is still very expensive for us because we are a small hotel" (3ChC).

All the medium-sized hotels perform recycling, energy conservation, water conservation and temperature regulation. The results for large hotels are identical, except in the case of temperature regulation, which is implemented only by one Chilean hotel (4ChB). The small hotels engage in all these conservation practices, but to a slightly lesser extent than the large and medium-sized hotels: recycling, energy and water conservation, and temperature regulation.

Green cleaning products and organic products in the kitchen are used to a lesser extent. Organic products are used less. It is noteworthy that only half of the large hotels use organic products in their kitchens, and the rest use them rarely.

Client-oriented environmentally friendly products and processes are used in almost all the large hotels, where organic products are also offered to clients and clients themselves have a propensity for environmentally friendly processes "In the minibars we have bottled water from Valdivian forest rainwater, our wines come from small local producers, and our dishes are based on select products and typical gourmet dishes" (4ChB).

The results indicate that few or none of the hotels, depending on their size, believe implementing environmentally friendly practices will give them a competitive edge or improve their image; only half of the large hotels recognise the potential impact of environmentally friendly practices on their image. All the large hotels indicate that the use of environmental practices has an impact on knowledge, abilities and skills, in addition to operations and finances. The results for medium-sized hotels are similar in terms of the financial and cost-saving aspects. Small hotels place less value on the operational impact and knowledge, abilities, and skills. These results can be seen in Table 2.

Studied Variables	Hotels (rooms)	Spain	Chile	
	<100	Cost-savings		
Motivations	101-150	Cost-savings; legislation	Cost savings; cultural values; values of managers; legislation	
	151-300	Cost-savings; Cultural values	Cost savings; cultural values; values of managers; legislation	
	<100	Sociocultural values	Costs	
Barriers	101-150	Sociocultural values	Sociocultural barriers; bureaucracy barriers	
	151-300	Costs		
	<100	Interest in their environmental responsibility	No specific interest	
Suppliers-Supply Chain	101-150	Interest in their environmental responsibility	No specific interest	
	151-300	Interest in their environmental responsibility	No specific interest	
Operations-Supply Chain	<100	Recycling; save energy consumed; Reducing water consumption; temperature control	Recycling; save energy consumed; reducing water consumption; temperature control	
	101–150	Recycling; save energy consumed; reducing water consumption; temperature control	Recycling; save energy consumed; reducing water consumption; temperature control	
	151-300	Recycling; save energy consumed; reducing water consumption	Recycling; save energy consumed; reducing water consumption	
	<100	Use ecological process for clients	Use ecological products in the kitchen to offer to the clients	
Clients-Supply Chain	101-150		Use ecological products in the kitchen to offer to the clients	
	151-300		Use ecological products in the kitchen to offer to the clients	
	<100	Train their team members in environmental subjects		
Human Resources -Supply Chain	101-150	Train their team members in environmental subjects	Train their team members in environmental subjects	
	151-300	Train their team members in environmental subjects	Train their team members in environmental subjects	
	<100	Human resources impact; operational impact; cost savings	Cost savings	
Direct and Indirect impacts	101-150	Human resources impact; operational impact; cost-savings	Human resources impact; cost savings	
	151-300	Human resources impact; operational impact; cost-savings; image impact	Human resources impact; operational impact; cost savings	

# Table 2. Results related with size, by country.

#### 3.3. Age of the Hotel

Age was defined as the number of years the hotel has been in operation. For the purposes of this article, the sample was divided into hotels that have been in operation for a relatively short time of less than ten years, hotels that have been in operation for between 10 and 50 years, and hotels that have been in operation for more than 50 years [13]. Since all of the hotels surveyed in Spain had been in operation for at least 10 years, only two categories were established: hotels in operation for between 10 and 50 years. Newer hotels were found in Chile, including four hotels that had been in operation for less than 10 years. Another seven hotels were found to have been in operation for between 10 and 50 years, and a single hotel had a history of greater than 50 years.

In Spain, the internal motivations for implementing environmental practices were based on cost savings for the majority of the hotels aged between 10 and 50 years and on cultural values to a lesser extent. In Chile, the majority of the hotels aged less than 10 years considered cost savings an important motivation. The only hotel aged over 50 years also considered this a significant motivation. The cultural values are a significant internal motivation for the Chilean hotels; these were equally relevant for the hotels that had been in operation for ten to 50 years and for the oldest hotel.

Regarding external motivations, the results were similar to the results in Spain: Chilean hotels between 10 and 50 years of age consider legislation and image as an external motivation to implement environmental practices. The legislation was cited as an external motivation by a few new hotels. In Spain, the only barriers cited as challenges to sustainable practices by the hotels surveyed were external ones. With respect to older hotels highlighted sociocultural barriers. Regarding internal barriers in Chile, the hotels aged less than 10 years and the hotels aged between 10 and 50 years cited costs as a limiting factor. Lack of knowledge about sustainability was cited as a limiting factor in hotels of all ages.

An analysis of the supply chain revealed that almost all the Spanish hotels, independent of their age, are prone to consider their suppliers' environmental responsibility "We are interested in having them do it as best as they can" (3SpC); "We make them provide us with certificates. We ask them to comply with legal regulations" (4SsA); In Chile, very few hotels aged between 10 and 50 years choose their suppliers based on sustainability criteria.

Regarding human resources, almost all the Spanish hotels, independent of their age, expressed interest in having their staff trained about environmental issues. It was observed that most of the hotels that have been in operation between 10 and 50 years and the hotels aged over 50 motivate their employees in environmental terms "at the employee level, people are very pleased to know about things they had no knowledge about before...they ask you what should they do, this plastic goes in which container? (4SsA)".

In Chile, regardless of age, very few hotels train their staff on sustainability issues. It emphasizes, nevertheless, the great training of hotels majors to 50 years.

In analysing supply chain operations, it should be underscored that (1) most of the Spanish hotels of both age groups practice recycling; (2) all the Spanish hotels, regardless of their age, are concerned about energy conservation; (3) there is a strong concern for water conservation; and, finally, (4) many Spanish hotels are regulating the temperature, including hotels between 10 and 50 years of age. In Chile, we can highlight that (1) the majority of the newest and hotels between 10 and 50 years of age hotels recycle; (2) almost every newest hotels take steps to conserve energy, as do the majority of hotels between 10 and 50 years of age; (3) the majority newest hotels take steps to reduce the cost of water consumption, although fewer hotels between 10 and 50 years do it. The hotel aged greater than 50 years have taken concrete actions in this regard; (4) similarly, the majority of the hotels that have been in operation for ten years and between 10 and 50 years have taken concrete actions to regulate the temperature in a sustainable manner.

Studied Variables	Hotels (years)	Spain	Chile		
	<10				
Motivations	10–50	Cost-savings; legislation	Cost-savings; cultural values		
	>50	Cultural values; 60% of hotels: image	Cost-savings; cultural values		
	<10		Cost		
Barriers	10–50	Sociocultural barriers	Sociocultural barriers; cost; lack of knowledge		
	>50	Sociocultural barriers			
	<10				
Suppliers-Supply Chain	10–50	Interest in their environmental responsibility			
	>50	Interest in their environmental responsibility	Interest in their environmental responsibility		
	<10				
Operations-Supply Chain	10–50	Recycling; save energy consumed; reducing water consumption; temperature control	Recycling; save energy consumed; reducing water consumption; temperature control		
	>50	Recycling; save energy consumed; reducing water consumption; temperature control	Recycling; save energy consumed; reducing water consumption; temperature control		
	<10				
Clients-Supply Chain	10–50		Use ecological process for clients		
	>50	Use ecological process for clients	Use ecological process for clients		
	<10				
Human Resources-Supply Chain	10–50	Train their team members in environmental subjects	Train their team members in environmental subjects		
	>50	Train their team members in environmental subjects	Train their team members in environmental subjects		
	<10		Human resources impact; operational impact; cost-savings		
Direct and Indirect Impacts	10–50	Human resources impact; operational impact; cost-savings	Human resources impact; operational impact; cost-savings		
	>50	Human resources impact; operational impact; cost savings	Human resources impact; operational impact; cost-savings		

# **Table 3.** Results related with the age for countries.

Regarding the supply chain, all the Spanish hotels older than 50 years of age use only ecological cleaning products. In Chile, ecological cleaning products are used in majority of the newest hotels and in a few of the hotels aged between 10 and 50 years.

Regarding the direct and indirect impacts of the implementation of environmental practices, the operational impacts, cost reduction and the effect on knowledge, abilities, and skills have been most strongly felt by the hotels, regardless of their age. All the hotels in every age category mentioned the operational impacts that resulted from environmental practices; all the hotels between 10 and 50 years of age and almost all the hotels aged over 50 years mentioned the impact in terms of cost reduction; and the effect on abilities, knowledge and skills was underscored by almost all the hotels aged between 10 and 50 years and hotels older than 50.

In Chile, the half of hotels in operation for fewer than ten years mentioned having observed an operational impact resulting from the incorporation of sustainable practices, as did two of the seven hotels aged between 10 and 50 years, and the hotel aged greater than 50 years. Half of the newest hotels claimed to have observed cost reduction as a result of incorporating sustainable practices and this impact was also cited as relevant by four of the seven hotels aged between 10 and 50 years. Finally, half of the hotels in operation for fewer than ten years reported an impact on knowledge, abilities and skills, and this aspect was also deemed valuable by the hotels aged between 10 and 50 years and the oldest hotel. These results can be seen in Table 3.

#### 3.4. Environmental Technology Adopted and Implemented by the Hotel

Sustainable technology refers to equipment, production methods and procedures, product designs, and distribution mechanisms that conserve energy and natural resources, minimise environmental problems caused by human activity, and protect the natural environment [52]. The construction of operations is where aspects related to sustainable technology are most easily observed. Thus, all the hotels analysed in Spain are conscientious about energy conservation and are introducing light-emitting diode (LED) technology in the majority of their facilities: "everywhere we can, we're changing to LED" (4SpC). Only one of the Spanish hotels analysed is using the new alternative of solar energy to reduce energy consumption. In Chile, the adoption of solar panels by virtually all the hotels is notable, including one hotel whose structure is completely clad with solar panels; LED technology is also present in most of the hotels. They mention, for example, "we have a solar panel that significantly reduces our consumption, we use it to heat the pool, and we've also invested heavily in LED bulbs" (3ChB).

In Spain, the majority of hotels are undertaking a wide variety of environmental practices related to water conservation, including the use of dispensers, low-flow shower heads and faucets, low-flow and dual-flush toilets, drip irrigation and sprinkler irrigation, among others. Use of heating and air conditioning is also strictly regulated. In Chile, the situation regarding water conservation is similar, and the same water-saving technology has been implemented in higher-category hotels: "...various things have been implemented, such as faucets that turn off automatically..." (4ChC).

Regarding laundry, it was observed that Spanish hotels use ecological washing machines: "everything we buy is green, the machines are low cost and launder economically, and also consume less soap and electricity" (5SpA). In Chile, although some hotels have introduced energy-saving refrigerators and laundry machines, there seems to be little awareness about the use of detergents and compounds that harm the environment, including just one of the hotels surveyed, which mentioned that: "the truth is, there are very few machines of this type, we have begun introducing the most up-to-date ones" (3ChA).

The training and skills of employees also deserves mention. It was observed that most of the hotels in Spain provide incentives or training for their staff on environmental issues (e.g., recommendations, guidelines, courses, lectures, and meetings), although there are indications that much is transmitted by word of mouth: "No, we don't have anything written down because it's all done informally. It's like you'd do at home" (4SpC). The same happens in Chile, where hotels' employees are involved in the same practices: "we have lectures, training and try to make it into a lifestyle that they apply at home with their families" (5ChA). These results can be seen in Table 4.

Studied Variables	Spain	Chile
Motivations	Cost-savings	Cost-savings; cultural values
Barriers	Sociocultural barriers	Costs; bureaucracy
Suppliers-Supply Chain	Interest in their environmental responsibility	No specific interest
Operations-Supply Chain	Recycling; save energy consumed; reducing water consumption; Temperature control	Recycling; save energy consumed; Reducing water consumption; Temperature control
Clients-Supply Chain	Use ecological process	Use ecological products in the kitchen to offer to the clients
Human Resources-Supply Chain	Train their team members in environmental subjects	No specific interest
Direct and Indirect Impacts	Operational impact; cost savings	Cost savings

Table 4.	Results	related	with	the	age	for	countries
Iuvic I.	ncounto	renacca	VVICIL	unc	use	101	counties

# 3.5. Type of Clientele Who Use the Hotel

Interesting divisions were also found according to the type of clientele hotels serve, i.e., leisure or business travellers. It should be noted that 13 hotels were aimed at business travellers, whereas 11 were aimed at leisure travellers. As with the case of internal motivations, cost-savings were relevant to the majority of hotels aimed at leisure travellers and hotels aimed at business travellers. Sociocultural values were mentioned to a lesser extent in with leisure clientele and almost every hotel with business clientele. Legislation as an external motivation has a differential effect: it is of little importance to hotels aimed at leisure travellers but of greater importance to hotels with a business traveller clientele. The hotel's image is not highly valued by leisure-oriented hotels and only slightly more important to business-oriented hotels.

Cost was cited as an internal barrier by only a few leisure and business hotels. The same happened with the external socio-cultural barriers.

Regarding the hotels' supply chains, the responses about the variable of suppliers varied greatly. The hotels aimed at leisure travellers expressed very little concern for this item "It is difficult to require sustainable suppliers because they are quite expensive" (5ChB), whereas this was of much greater concern to business hotels. Only four of the leisure-oriented hotels train their staff about environmental issues, whereas the majority of the hotels oriented towards business travellers do so. Four of the leisure-oriented hotels reported engaging in recycling, whereas a much larger number of the business-oriented hotels do so. Every all hotels that cater to leisure travellers reported reducing energy consumption, whereas all of the hotels aimed at business clientele do so. The majority of the leisure-oriented hotels engage in water-conserving practices, whereas ten of those aimed at business travellers do so. Half of the leisure-oriented hotels use temperature regulation to conserve energy, as do the majority of the hotels aimed at business travellers. Only a few hotels aimed at leisure travellers use ecological cleaning products, whereas the majority of hotels aimed at business travellers do so. Natural and organic products were used in the kitchens of few leisure-oriented and business-oriented hotels. The use of green products or machinery was mentioned by only the half of hotels aimed at leisure travellers, whereas every all hotels aimed at business travellers described using green products or machinery "our laundry service has a contract with the community of Madrid and they are mandated to use certain environmentally sensitive products" 5SpD. Only a few of the leisure-oriented hotels prioritise sustainable processes, whereas sustainable processes were mentioned by the half of the business-oriented hotels.

Only a few hotels aimed at leisure travellers recognise the benefits that environmental policies add to employees' skills, knowledge and abilities, far fewer than the majority business-oriented hotels that

recognise those benefits. The operational impact of environmentally friendly policies was felt by the half of leisure-oriented hotels, whereas every all business-traveller hotels mentioned the operational impact "We have had important operational changes since the beginning of implementation" (4ChB). The cost savings associated with environmental policies were perceived by the half of leisure-oriented hotels and the majority business-oriented hotels. Just one leisure-oriented hotel claimed environmental management benefited the hotel's image, whereas only a few business-oriented hotels made this claim. There was very little recognition of any impact of environmental policy on competitiveness; this was mentioned by only one leisure-oriented hotel and none of the business-oriented hotels. These results can be seen in Table 5.

Studied Variables	Clients	Spain	Chile
Motivations	Business	Cost-savings; legislation	Cost-savings; sociocultural values; values of managers
	Leisure	Cost-savings	Cost-savings; sociocultural values
Barriers	Business	Sociocultural barriers	Sociocultural barriers; bureaucracy
Durrero	Leisure	Sociocultural barriers	No specific interest
Suppliers-Supply Chain	Business	Interest in their environmental responsibility	
-	Leisure		
Operations-Supply Chain	Business	Recycling; save energy consumed; reducing water consumption; temperature control	Recycling; save energy consumed; reducing water consumption; temperature control
-	Leisure	Save energy consumed; reducing water consumption	Save energy consumed; reducing water consumption; temperature control
Clients-Supply Chain	Business	Use ecologic products or machines for clients	Use ecologic products or machines for clients; use ecological process for clients
	Leisure	Use ecological process for clients	Use ecologic products or machines for clients
Human Resources-Supply Chain	Business	Train their team members in environmental subjects	Train their team members in environmental subjects
chunces suppry chunt	Leisure		
Direct and Indirect Impacts	Business	Knowledge, capacities impact; operational impact; economic impact	Knowledge, capacities impact; economic impact
I	Leisure	operational impact; economic impact	

# Table 5. Results related with the type of clients for countries.

#### 3.6. Gender of the Hotel's Owner-Manager

The variable of gender also reveals some interesting distinctions in terms of sustainable practices. It should be noted that the total sample consisted of 13 hotels managed by women and 11 hotels managed by men.

Among the internal motivations, cost savings represents the major motivations for implementing environmental practices mentioned by women and men. Among the sociocultural values, commitment to the community was mentioned as a reason for adopting environmental practices in majority of the hotels managed by women and only for the half of the hotels managed by men. Regarding internal barriers, implementation costs were cited as a hurdle by only three of the 11 hotels managed by men and by none of the hotels managed by women.

Lack of knowledge and information was observed as an obstacle to the implementation of environmental policies scarcely by hotels managed by men but only one female-managed hotel. The external barriers identified were primarily sociocultural factors. Almost every female hotel managers mentioned such factors, whereas this number was smaller among male mangers. This was the point with the greatest differences.

Regarding the hotels' supply chains, suppliers' commitments to the environment seemed to be less important to women, only few of whom named this as a priority, while five men considered it important "We conduct talks and training sessions and we try to make it a lifestyle, to have them to apply these practices at home with their families" (5ChA). Training employees in environmental issues was considered important by managers of both sexes. Employee training was mentioned as important in the majority hotels managed by women and man.

Recycling efforts such as energy and water conservation and temperature regulation are practiced mostly in hotels managed by women but only some of the hotels managed by men. Almost all the women valued energy conservation, whereas this topic was mentioned by only some of the male hotel managers. Water conservation was a leading practice cited by almost every female hotel manager and by only few male managers. Energy conservation related to temperature regulation was practiced by almost every one of the hotels managed by women and men. Green cleaning products were used in far more hotels managed by women compared with those managed by men. Organic and biodegradable products were used in the kitchens to a lesser extent both in hotels managed by women ("we use products from the area that are ecological, and purchased directly from suppliers", 5SpC), and by a slightly smaller but equally important number of hotels managed by men.

The participation of clients in practices that respect the environment is less in hotels managed by men than as women.

Regarding the impact perceived by the hotels, a majority of the female hotel managers mentioned the impact of environmental practices on employees' abilities and skills, whereas very few male hotel managers noted this. Almost every female manager considered the operational impact significant, as did the male managers. The impact of the perception of cost reduction was important of the female managers and was the same for the male managers. Both genders consider environmental practices to have little impact on the hotel's image. The results can be seen in Table 6.

Studied Variables	Gender	Spain	Chile
Motivations	Woman	Cost-savings	Cost-savings; Sociocultural values
	Man	Cost-savings; sociocultural values; legislation	Cost-savings
Barriers	Woman	Sociocultural barriers	Sociocultural barriers; bureaucracy
	Man	Costs; sociocultural barriers	
Suppliers-Supply	Woman	Interest in their environmental responsibility	
Chain	Man	Interest in their environmental responsibility	
Operations-Supply Chain	Woman	Recycling; Save energy consume; Reducing water consumption; Temperature control	Recycling; save energy consume; reducing water consumption; temperature control
	Man	Recycling; Save energy consumed; Reducing water consumption; Temperature control	Save energy consumed; temperature control
Clients-Supply Chain	Woman	Use ecologic products or machines for clients; Use ecological process for clients	Use ecological products in the kitchen to offer to the clients
	Man	Use ecologic products or machines for clients	Use ecological products in the kitchen to offer to the clients
Human	Woman	Train their team members in environmental subjects	
Resources-Supply Chain	Man	Train their team members in environmental subjects	
Direct and Indirect Impacts	Woman	Knowledge, capacities impact; operational impact; economic impact	Cost-savings
Pacto	Man	Knowledge, capacities impact; operational impact; economic impact	

#### Table 6. Results related with the gender for countries.

## 3.7. Comparison of the Results Obtained with the Present

We have to take account that new tecnologies advance very fast and these last years there has been an increasing number of small- and medium-sized hotels adopt Environmental Management Practices

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(EMPs) [4]. This is why we have analysed the new ecological practices or relevant processes according to sustainability, in general, that the analysed hotels are doing nowadays. In the case of Spain, it is noticed that the four- and five-star hotels are betting more on the investment in the environment. This is reflected in that one of them has been certified as a silver-level "Ecoleader" in Tripadvisor and four of them have information about sustainability in their websites: showing memories, certificates or environmental practices. The most innovative practices are, for example, one hotel, which has inaugurated a restaurant that offers ecological products of their own market garden; other analysed hotel which is organizing events related with sustainability; or another that is using geothermal energy to heat sanitary hot water, and has two parking spaces for recharging electric cars. In the case of Chile, progress can also be observed in different practices that hotels have incorporated. A five-star hotel has reached the gold-level "Ecoleader" rating of Tripadvisor, while another, also five-stars, has incorporated sustainability schools for children and youth of the community where the hotel is located.

The four- and three-star hotels do not show major changes in their sustainable practices.

# 4. Discussion

Based on the findings, the literature can now be discussed in the theoretical framework.

The environment was studied independently in both countries. In Spain, the political and legal environment is characterised by a norm that is increasingly adhered to by hotel managers on a voluntary basis, although it should be noted that whereas the laws regarding the implementation of environmental measures provide a strong external motivation, they also entail excessive bureaucracy.

Regarding the social environment, which is associated with cultural values, hotels are aware of the value of recycling and water and energy conservation and express concern that their suppliers and employees be aware of the environment. This concern for conserving energy and water goes hand-in-hand with the technological aspect of the environment, as the hotels surveyed employ new technology or methods to conserve water, energy, etc. In this sense, [53] indicate that environmental management is based on social values, finding them in hotels designed to collaborate with activities that protect the environment (such as recycling) or make better use of existing resources (such as conserving energy and water).

In the case of Chile, the cultural dimension of the environment was more significant than the political and legal aspects of the environment. Hotel managers clearly desire that employees be trained in environmental issues, that ecological products be offered to clients, and that water and energy be conserved and garbage recycled but, in political terms, there appears to be a lack of norms and efficiency in public and economic administration, and it is expensive for hotel managers to invest in environmental practices. There are also technological initiatives by Chilean hotel managers to use new techniques and tools to become more sustainable.

The situation described above gains strength when one examines the approaches described by [54], who states that among the main benefits sustainability provides to hotels are long-term cost reductions and increased occupancy rates, not only for individual hotels but for the tourist destination. In the same manner, Pereira, Molina, Tarí and Claver [18] assert that environmental management can allow destinations to distinguish themselves because factors such as reduced levels of pollution and adoption of environmentally friendly measures can improve a company's "green" image and attract environmentally-sensitive consumers [55]. Environmental management can, therefore, help businesses achieve a "win-win" situation that benefits both companies and the environment [15]. On the basis of this discussion, this study seems to corroborate what is indicated by Contingency Theory: the behaviour of an organization with respect to environmental management is influenced by the political, legal, economic, cultural, and technological environment, and the cultural and economic dimensions have the greatest positive influence in both countries studied. In our study, the "green" impact is not so valued for the analysed hotels, although cultural dimension has been cited in both countries. Most of these hotels do not consider that using environmental practices could improve the image of the hotel and they are more focused in other kinds of impacts, such as costs reduction,

financial performance improvement, human resources capabilities, and knowledge or environmental performance improvement. This could be because they do not have a feedback of the customers related with their opinions of the use of environmental measures, and then they do not check if the customers are satisfied with this kind of practices.

Regarding the factor of size, this study clearly demonstrates that large and medium-sized hotels tend to be more sensitive to environmental issues. The large and medium-sized hotels surveyed are internally motivated by cost savings and cultural values and externally motivated by legislation; they are responsible in their negotiations with suppliers and their training of employees; they undertake all types of environmental measures and are inclined to offer ecological products and processes (albeit on a small scale); the large and medium-sized hotels also reported that the use of environmental practices has an effect on employees' knowledge, abilities, and skills, and on the hotel's operations and finances. In contrast, the small hotels do not stand out in terms of any of the aforementioned aspects and, moreover, face challenges implementing environmental measures owing to the cost of such measures (a factor that was also mentioned by medium-sized hotels) and a lack of familiarity with them. Therefore, this study corroborates the study performed by, Pereira, Molina, Tarí and Claver [18] who found that larger hotels, with greater human and financial resources, tend to pioneer the development of environmental practices, although the present study found that medium-sized hotels were just as engaged as large hotels in environmental management. This finding is close to that of Buffa, Franch and Rizio [4] who found that small and medium-sized hotels adopted basic communication, organizational, and operational green measures in the Italian Alpine arc, but not complex or expensive measures.

Therefore, the present study, as indicated by Contingency Theory, shows that the size of a hotel is a factor that determines its organizational behaviour in terms of environmental management.

It is more difficult to reach a conclusion regarding age, because it was only possible to establish two age categories for hotels in Spain (hotels with between 10 and 50 years of operation and those with more than 50 years of operation), and most Chilean hotels were also classified into two categories (four were under 10 years old and seven were between 10 and 50 years old). We do not consider the only Chilean hotel over 50 years of age in our analysis.

The analysis found differences in the variable related to motivations to implement environmental practices in Spain. In hotels aged between 10 and 50 years, the most frequently cited internal motivation was cost savings, and the most frequently cited external motivation was the legal aspect, whereas among hotels older than 50 years of age, the most frequently cited internal motivation was cultural values, and the most frequently cited external motivation was the hotel's image. In Chile, the only age-related difference was found in terms of external motivations: the youngest hotels placed more value on the external motivations related to legislation and image. Differences were also found in terms of the barriers to environmental practice, but only in Chile. Cost and bureaucracy were the internal barriers most mentioned by the youngest hotels, while hotels between 10 and 50 years of age most frequently cited a lack of knowledge.

Regarding the supply chain, age-related differences were observed in Chile, but not in Spain. Hotels with fewer than 10 years of operation in Chile are more likely to train their employees, are slightly more likely to develop environmental practices, and have a barely perceptible edge in terms of water conservation, whereas hotels with 10 to 50 years of operating experience are more conscientious about the environmental responsibility of their suppliers. In Spain, the only notable difference was the greater use of client-participation processes in hotels that have been operating for more than 50 years.

The impacts of environmental policies also exhibited few differences in Spain. The operational impacts, cost reduction, and improvements in employees' knowledge, skills, and abilities are felt by all hotels, regardless of their age. In Chile, on the other hand, operational and knowledge impacts were more noticeable in hotels aged less than 10 years.

On this subject, the literature suggests that a hotel's age influences the environmental management of the establishment [52,56]. In this manner, the relationship between a hotel's age and its environmental management is clearly explained by the use of new technologies. Renovation of the premises introduces

more efficient appliances, which conserve energy, water, and materials and pollute less. In this sense, modern facilities produce a smaller environmental impact and, therefore, improve environmental performance [53].

Therefore, no relationship can be established between organizational behaviour with respect to environmental management, according to Contingency Theory, by age, since the current study only detected differences related to age.

An analysis of this study's results shows that the majority of hotels surveyed are using technology to make environmentally friendly improvements in their supply chains. The use of LED technology, solar panels in Chilean hotels, dispensers, water-efficient showerheads, timed faucets and other water-saving mechanisms, energy-efficient systems, and energy-saving refrigeration and laundry machines are among the examples noted in this study.

In light of the results obtained, it can be pointed out that the organizational behaviour with respect to environmental management is determined, according to Contingency Theory, by the environmental technology adopted and implemented by the hotel, because this study showed the use of the technology and employee training, promoting environmental responsibility in organizational terms, as indicated in previous research.

A hotel's clients can be classified as leisure or business travellers. Very noticeable differences found in this regard deserve mention: in all the following cases, the hotels that appeal to business travellers were more environmentally sustainable than those that appeal to leisure travellers.

This was especially noticeable in the supply chain: business-oriented hotels exhibited much greater concern for the actions of their suppliers than did leisure-oriented hotels. The same is true for employee training. Hotels designed for business travellers engage in recycling more often than leisure hotels, conserve more energy, and use more sustainable processes and green products and appliances.

Moreover, regarding the impact of environmental practices, business-oriented hotels observed a greater impact on employees' skills, knowledge, and abilities, in addition to the impact on operations and cost reduction.

Few differences were noted in motivations and barriers, except that legislation was not considered a strong external motivation to implement environmental practices among leisure hotels, but was considered much more important by business-oriented hotels.

The findings of this study show that organizational behaviour with respect to environmental management is determined, according to Contingency Theory, by the type of clientele to which the hotel appeals. A striking difference was observed between business-oriented and leisure-oriented hotels. Therefore, this study is in complete disagreement with the studies conducted by Alonso-Almeida, Rodríguez-Antón and Rubio-Andrada [27] and Best andThapa [23].

According with the obtained results, the fact of business-oriented hotels are more interested in the environment than the leisure-oriented hotels could be due to: (1) The legislation. Business hotels could consider more necessary to improve the hotel quality through the monitoring and implementation of legislation related with environment; and for (2) the relation with the employees, suppliers and even the clients. This kind of hotels could be more implicated with them and they could consider that they must be aware of all the stakeholders in subjects such as sustainability.

Women are more motivated and see fewer barriers to the implementation of environmental measures in their hotels than do men. Women are more motivated by internal factors such as cultural values and see fewer internal barriers related to costs and knowledge, although they are more likely to cite external sociocultural barriers in contrast with the motivation.

In the supply chain, men express greater concern for their suppliers' environmental awareness and for employee training, but the difference is not very marked. Hotels managed by women engaged more frequently in recycling, water and energy conservation, use of green products in cleaning and cooking and engaging clients in green processes, although the difference was not very significant.

In hotels managed by women, the effects were felt to be greater in terms of improving employees' abilities and skills, operations, and cost reduction, but the difference was slight.

	Hypothesis	Results		Variables
H: Organisational behaviour regarding environmental management, in accordance with Contingency Theory, is determined by the following:	<b>H1:</b> The environment in which the hotel operates.	Accepted in both countries studied, with the cultural and economic dimensions having the greatest positive influences in both countries studied	Motivations	Spain: Legislation; cost-savings; growing cultural aspect concern for the environment Chile: Cultural values; cost-savings
	<b>H2:</b> The size of the hotel.	Accepted in both countries studied, large and medium-sized hotels tend to be more sensitive to environmental issues	Barriers	Bureaucracy/costs; lack of knowledge/bureaucracy
	<b>H3:</b> The age of the hotel.	It cannot be accepted, due to any age-related differences detected by the present study.	Suppliers-Supply Chain	Working with suppliers who provide sustainable products and services; Chilean hotels do not have specific interest
	<b>H4:</b> The environmental technology adopted and implemented by the hotel.	Accepted, because this study verified the use of technology and employee training to promote environmental responsibility	Operations-Supply Chain	Recycling, energy conservation, water conservation, and temperature regulation
	<b>H5:</b> The type of clientele who use the hotel.	Accepted, differences were observed between business-oriented and leisure-oriented hotels	Clients-Supply Chain	Use organic products in their kitchens; Chilean hotels included home-grown, organic, and fair-trade products; there are no specific proposals offered to the clients
	<b>H6:</b> The gender of the hotel's owner manager.	Moderate support for hypothesis, the differences were not very marked	Human Resources-Supply Chain	Train their team members about the subject; provide information about environmental measures; hotels employees are involved in the same practices
			Direct & Indirect Impacts	Economic or financial benefits; knowledge, capabilities, and skills; operational impact; economic or financial benefits (cost-savings)

Table 7. Results of the h	nypotheses	proposed.
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Taken together, these results indicate that the behaviour of the organization with respect to environmental management is determined, according to Contingency Theory, by the hotel manager's gender, in which the differences were not very marked. Therefore, the results of this study are consistent with those of studies by Alonso-Almeida [57] and McGehee, Kim and Jennings [58], indicating that women seem to be more concerned with caring for the environment or perceive the tourism industry as a viable path for the community, although the difference detected in this study is very slight.

This minimum difference could be due to both genders tend to have the same vision related with the studied variables, especially in the supply chain and in the knowledge of the impact of use environmental measures, as women and men are aware of the necessity to be up to date with the sustainability subject. This is why they try to implant measures related with it and they know it could have a positive impact in their hotels. The results of the proposed hypotheses can be seen in Table 7.

Finally, it has to be highlighted that, nowadays, the Internet is being used by the analysed hotels in order to show they are worried about the environment and that is why they try to show what they are doing through the new technologies, especially, social media. They expose memories, certificates, or environmental practices. This indicates that technologies and sustainability are holding hands. In Spain hotels continue in the same dynamic: energy-efficient light bulbs, fixed temperature to save energy, illumination control, or recycling, and in Chile the use of solar panels and the incorporation of local products and sustainable work that incorporates the community are some of the features that stand out positively.

#### 5. Conclusions

In view of the importance it has acquired, the tourism sector has faced continuous changes in the industry, the manner in which it is observed by clients and the environment in general, needing to respond to the social demands and responsibilities of the environment in which it operates.

The main results of this study indicate that, in accordance with Contingency Theory, organisational behaviour is determined by the environment in which the hotel operates, the size of the establishment, with large and medium-sized hotels being most committed to sustainable development, the environmental technology adopted and implemented by the hotel, and the primary type of clientele, with hotels oriented to business travellers exhibiting greater care for the environment than those oriented to leisure travellers, mainly associated with sociocultural values.

The factors that were not completely decisive in the outcomes analysed were the age of the hotel and the gender of the hotel's proprietor. Although prior studies have found evidence for differences based on these factors, the findings of the present study provide no significant support for such differences.

It should be noted that because the study considered industries of different countries (Chile and Spain), some significant and acceptable differences emerged owing to the different characteristics of the two contexts. For example, the political and legal environment is much more relevant in Spain than in Chile, as there is a powerful expectation that motivates hotels to meet certain standards of sustainability.

It follows that research regarding the industry in different countries faces limitations in terms of its ability to draw acceptable comparisons among the hotels. For example, regarding the factor of the hotel's age, the establishments' characteristics are not perfectly matched in that the Spanish hotels have been in operation far longer than the Chilean hotels. It is recommended that future studies consider these elements when selecting their samples to create more consistent models. Additionally, and based on the exploratory results of this research, it is proposed to carry out a new investigation that considers a conclusive study, based on a representative sample that is validated by applying multivariate analysis methods that allow deepening the variables that explain the better shape that are the key factors that enhance the development of sustainable practices in hotels.

# Limitations

The present findings are nonetheless subject to a series of limitations. The first is that the information collected comes from the perceptions of a single informant: the main managers of the hotel establishments, which includes a certain degree of subjectivity in their opinions. While executives are considered reliable sources of information in light of their experience and expertise, their opinions may not necessarily be completely objective. This limitation was tried to control through the review of sustainable practices that appeared on the websites of the hotels. Another limitation is that we cannot extrapolate the results obtained as a general overview of sustainable hotels, due to the number of cases studied. However, it is not easy to obtain such information in the hotel industry, mainly due to the limited time that the directors had to answer the interviews, which makes it difficult to collect more objective measurements. Finally, with regard to this aspect, another limitation is that the date of data collection through interviews was carried out between December 2012 and April 2013, this being the main limitation of the study. That is why we conducted an update of the information by telephone in 2019, again asking the questions to the executives. In some cases, the hotel manager had changed. That is why we have checked what they are doing today through the websites of each hotel, whether or not it belongs to the "Eco leader" label on Tripadvisor.

Additionally, the limitations of this research are related to the method used. The qualitative tools used allowed us to explore interesting dimensions with respect to the sustainable practices that will be the base for future quantitative research that allows us to generalize the data obtained in the present article.

**Author Contributions:** C.F.-R., M.C.-P., P.S.-A. and M.A.-A., participated in all the phases and contributed equally to this work, including the establishment and application of the framework, as well as the writing on paper. In particular, C.F.-R. and M.A.-A. focused on the theoretical framework; while P.S.-A. and M.C.-P. in the methodology and results.

Funding: This research received no external funding.

Conflicts of Interest: The authors declare no conflict of interest.

## Appendix A

# Semi-structured interviews

1. Is there an environmental policy established within the company?

Objective: Verify the level of formalisation of environmental practices and the commitment and development of a vision and mission regarding this matter. (Ask if they can give us a copy).

2. What are the reasons and main motivations to implement environmental practices?

Objective: Inquire about the origin of such initiatives to understand the real motivations that lead the industry to consider this option of vision.

3. Currently, what implementations does the hotel have that are oriented towards a lower negative environmental impact? For example:

a. Saving energy (energy-efficient light bulbs, solar panels, etc.)

- b. Saving water (water emission regulators, purification)
- c. Visual impact.
- d. Waste recycling

e. Customers' awareness policies (reduced washing of towels and sheets, separate waste baskets in rooms)

Objective: To determine which dimensions are considered (water, lighting, waste, etc.) and how they are put into practice.

4. What are the main difficulties or barriers associated with this type of implementation?

Objective: To comprehensively understand the main difficulties and barriers that the hotel industry faces when initiating or redirecting efforts towards these quality practices. Furthermore, to inquire into solutions displayed and identification of potential network solutions.

5. What economic impacts (both positive and negative) has the implementation of these policies brought to the business?

Objective: To understand the economic effects of the implemented policies, positively (return), or even negatively (costs incurred).

6. How is the implementation of environmental policies currently managed and developed in your company, and what is the strategy of human resources with respect to these?

Objective: To understand how the transfer is done at the human resources level of implemented environmental policies.

7. In terms of the environment, do you have any certification? If yes, which, since when, and how did the initiative emerge?

Objective: To determine whether some type of certification exists, which type, how they arrived to the certification, and the benefits that the certification offers for the industry in concrete terms.

8. What impact do government policies have on the decision-making process in environmental practices that you carry out in your company? Are they taken into account, and is there a link to some body in particular?

Objective: Determine the influence of public policies on sustainable practices implemented by the hotel, as well as the link of this with public institutions.

9. Could you tell us how customers perceive the performed environmental implementations? Do they receive comments regarding these implementations?

Objective: To determine the level of importance and knowledge that a hotel perceives from its customers. Are customers informed? Does decision-making involve this aspect?

10. What future development opportunities do you visualize in environmental matters in your company?

Objective: To determine the perceived projection.

11. What roles do providers play in terms of environmental policies? Who are they, and how does the provision of supplies and services work?

Objective: To evaluate the commitment and level of disposition of the supply chain to implement such practices successfully.

12. In addition to internal environmental practices, are there such initiatives within the rest of the community such as participation in local or global environmental projects, measurement of the carbon footprint, measures to mitigate the effect of their activities on climate change, etc.?

Objective: To determine whether a superior commitment exists and in what form with respect to the topic of environmental impact, such as a deeper commitment to society that transcends business.

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