SUSTAINABLE TOURISM - A BENCHMARKING STUDY APPLIED TO HOSPITALITY FIRMS

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ABSTRACT

In an era of economic growth, achieving sustainable development is undoubtedly a challenge. Meeting the needs of present generations without compromising the ability to respond to those of future generations may seem more a dream than a real possibility. New choices and innovative new ways of thinking and acting are needed to encourage sustainable development.

This study aims to demonstrate and understand the importance of sustainability in Portugal through a benchmarking study applied to the Tivoli, Vila Galé and Pestana groups. The overall objective consists of the following specific sub-objectives: 1) to present the guidelines and conceptual approaches on issues of sustainability in tourism; 2) to find out about different approaches to sustainable practices in the hospitality industry through case studies; 3) to analyze possible gains resulting from the implementation of sustainable practices.

Case study methodology was used for the empirical research. A questionnaire was directly applied to key respondents (hotel managers, general managers, operational managers and quality managers).

Analysis of the empirical results corroborated the hypotheses tested and confirmed that there were several kinds of sustainable practices in leading Portuguese hotel groups, such as the less important sustainable practices that require higher investment costs and the priority of sustainable practices that allow cost reduction. The discussion of the theoretical approach and empirical results also disclosed important aspects that highlight the relevance of sustainable practices.

KEYWORDS

Benchmarking, Sustainability, Hospitality, Tourism.

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1. INTRODUCTION

The tourism sector is a major economic sector worldwide. This sector plays a significant economic role in Portugal, and its social and environmental impacts require a long-term view in order to guarantee a balanced consumption of the resources involved in this sector.

This study aims to understand the importance of several sustainable practices in Portuguese hospitality groups. For this purpose, a theoretical approach was adopted that revealed guidelines with regard to sustainability in tourism.

The main questions in this study are: "What are the guidelines concerning sustainability in tourism?"; "Can several approaches towards sustainable practices be found in Portuguese hospitality groups?" and "What are the main gains resulting from the implementation of these practices?". The theoretical approach addresses the first question, while the empirical research addresses the other two questions. The hypotheses to be tested are that:

H_1: Major Portuguese hotel groups develop several dimensions of sustainable practices.

H_2: Major Portuguese hotel groups consider sustainable practices that require higher investment costs less important.

H_3: Major Portuguese hotel groups give greater importance to sustainable practices that are easy to implement and enable cost reduction.

H_4: Major Portuguese hotel groups recognize important gains from the implementation of sustainable practices.

This paper is organised in three sections: Introduction, Section 1- the theoretical approach, Section 2 - the empirical research and conclusions.

2. LITERATURE REVIEW

This section presents a set of concepts that are relevant to this study. The conceptual framework involves a literature review that presents several perspectives, as well as the temporal development of some of the concepts under discussion. This section thus allows us to accomplish the first specific goal "Find out the guidelines and various conceptual approaches on issues of sustainability in tourism".

2.1. THE PATH TO SUSTAINABILITY

Development is a multi-dimensional process in which issues related to economic growth, social cohesion and environmental preservation should be considered. However, understanding the best way to achieve these goals, that is to say, the means or instruments to use in the process, has developed considerably in recent years.

Concern about environmental impacts related to economic development began to increase in the 1970s and in 1972 the first major international debate between rich and poor countries, and between different interest groups, took place at the Stockholm Conference (United Nations Conference on the Human Environment). The Declaration of the United Nations Conference on the Human Environment, Stockholm, and the creation of the United Nations Environment Programme (UNEP) are the key outcomes of this conference.

These studies reveal for the first time the importance of preservation development. Consequently, in 1983 the United Nations (UN) created the World Commission on Environment and Development chaired by Gro Harlem Brundtland, the then prime minister of Norway. The main objectives of this commission were connected with : 1) the critical issues concerning the environment, 2) the submission

of new forms of international cooperation, guiding policies and actions that promote the necessary changes and 3) the awareness of individuals, organizations, enterprises, institutes and governments on the issue and encourage them to a firmer position (Our Common Future: Common: Report of the World Commission on Environment and Development, 1987). The final document of these studies - Our Common Future or Brundtland Report, proposes a new concept of sustainable development: "Sustainable development allows answering to the needs of present without compromising the ability of future generations to meet their own needs."

In 1992, the United Nations Conference on Environment and Development in Rio de Janeiro, strengthened this concept and emphasized the idea of a balance between environmental protection and economic development. Agenda 21, which is the most important resolution adopted at the Rio summit, supports the three pillars of any sustainable development strategy – the environment, the economy and the social aspect.

Later in 1997, the Kyoto Protocol was discussed and negotiated. However, while the United Nations Framework Convention on Climate Change, set up following Eco-92 and Agenda 21, was ratified by most countries, the situation changed with the Kyoto Protocol. The Kyoto Protocol (1997 - Japan) established targets for reducing gas, with a particular focus on CO_2. The ratification of the Kyoto Protocol required all countries to acknowledge a need for change and an energy matrix. The high costs of this change led the United States not to ratify the protocol.

In the Johannesburg World Summit on Sustainable Development (2002), the importance of the interdependence and mutuality of the three pillars was reinforced, and economic development, social development and environmental protection were considered key factors for sustainability. Once the difficulties had been identified, challenges then become the eradication of poverty and changes in patterns of consumption, production and protecting natural resources.

Following the Johannesburg Summit, Portugal took the first step towards sustainable development by recognizing this type of development which represented both a challenge and an important opportunity to make Portugal, on the horizon of 2015, one of the most competitive countries of the European Union (EU), while valorising environmental quality and social responsibility.

2.2. TOURISM – A SPECIAL RELATIONSHIP WITH SUSTAINABLE DEVELOPMENT

Sustainable development has an impact on several sectors, especially the tourism sector. Chapter 7 of Agenda 21 (1992) on promoting sustainable human settlement development, states that a priority should be the formulation of environmentally sound and culturally sensitive tourism programmes as a strategy for sustainable development of urban and rural settlements and as a way of decentralizing urban development and reducing discrepancies among regions.

The EU considers tourism to be an important tool for achieving sustainable development (COM, 1995), and that it can also provide value added by taking action to help develop tourism through the creation or development of infrastructures, the upgrading of manpower, the conservation and proper use of the environment and the testing and dissemination of new or diversified tourist products.

The basic principles of sustainable development are clearly stated in the field of tourism. In 2003 the WTO, defined the following principles for sustainable tourism development:

- Natural resources, historical, cultural and other determinants for tourism should be retained to continue to be used in the future;

- Tourism development must be planned and managed in order to avoid environmental or social problems for the tourist area;

- The general environmental quality of space tourism should be maintained and improved where necessary.

In 2004, the Commission set up the Tourism Sustainability Group (TSG) with the aim of creating synergies among stakeholders and contributing towards the process of Agenda 21 and the sustainability of European tourism. In February 2005, the Commission proposed a new start for the Lisbon Strategy that focussed the efforts of the European Union on two areas: stronger and sustainable growth and the creation of more and better jobs.

In fact, the Commission believes that tourism is one of the most important activities that offers a significant contribution for growth and employment in European regions. With a great variety of attractions and the quality of its services in tourism, Europe is the main tourist destination in the world. The rate of job creation in this sector is above the European average as a whole. In the last decade, the annual growth rate of people employed in the hospitality sector (hotels, restaurants and cafes) was almost always higher than the growth rate of total employment (COM, 2006).

In 2007, the Tourism Sustainability Group (COM, 2007a) reinforced its objective to stimulate action for a more sustainable tourism through a continuous process. In its "Action for a more sustainable European Tourism" report the following principles for sustainable tourism were set out: 1) to develop a holistic and integrated approach taking into account all the impacts of tourism; 2) to plan for the long term to ensure the sustainability of the destinations; 3) to achieve an appropriate pace of development that respects the resources and needs of host communities and destinations; 4) to involve all stakeholders and ensure their committed participation in decision making and implementation of actions; 5) to use and share available knowledge in Europe to inform policies and actions; 6) to minimize risk on the principle that "where there is uncertainty about the outcomes, there should be full evaluation preventive actions should be taken to avoid damage to the environment or society; 7) to reflect impacts on cost (user and polluter pays), that is to say, prices should reflect the real costs to society of consumption and production activities; 8) to set and respect limits by recognizing the capacity of destinations (volume and flow of tourists); 9) to undertake continuous monitoring in order to understand and be alert to the impacts of the activity so that changes and improvements can be made where necessary.

The Tourism Sustainability Group identifies eight challenges to European tourism development. These challenges were related to the strategy of the EU Sustainable Development (Sustainable Development Strategy-SDS): climate change and clean energy, sustainable transport, sustainable consumption and production, conservation and management of natural resources, public health, social inclusion, demography and migration and global poverty and sustainable development challenges

In October 2007, the Commission through the "Agenda for a sustainable and competitive European tourism" (COM, 2007b) called for long-term commitment. Consequently, the Commission invited all those involved directly and indirectly in tourism to accept the principles set out in the report "Action for more Sustainable European Tourism" by the Tourism Sustainability Group (2007). The Commission took responsibility for its own commitment and proposed that it would: 1) mobilize actors to produce and share knowledge, 2) promote destinations of excellence, 3) mobilize the EU financial instruments, 4) mainstream sustainability and competitiveness in Commission policies.

Sustainability in tourism involves various stakeholders related with tourism activity. Its performance requires a long-term vision in order to increase tourism competitiveness in Europe.

2.3. DEFINITIONS OF SUSTAINABLE TOURISM: FROM TRADITIONAL TOURISM TO SUSTAINABLE TOURISM

Developments in the tourism sector justify the need to change the traditional concept of tourism to a sustainable one. Tourism as a scientific concept has grown from being a more specific to a more holistic one. The specific concept tries to explain the nature of tourism as an activity (Burkhart and Medlik, 1974) along with more technical definitions including the type of tourists and the type of tourism (Schullard, 1910, Picard, 1971, quoted by Henriques, 2003). Among the more holistic definitions, such as those of Hunziker and Krapf, 1941 (quoted by Henriques, 2003), are ones that conceive of travel and tourism as a prolonged stay of individuals outside their area of residence.

Identifications that recognize tourism as a human activity originate new approaches to the concept. According to Henriques (2003), the two factors - travel itself and the motive to travel and travel – have led to a new interpretation of tourism that is more highly aware of the diversity of possible motivation in the development of tourist movements.

Motivation - as associated with tourist movements - has become relevant in tourism. From the demand perspective, tourism should be aware of the needs and tastes of tourists. From the offer perspective, it should be aware of the needs of the various stakeholders, such as economic agents, public institutions and the community in general.

In fact, tourism motives have changed since the impacts of mass tourism in the 1970s with its high rates of growth and the degradation of the receiving areas of tourism.

The role of tourism in today's society has to be reassessed and sustainability has become central in this process (Archer and Cooper, 1994). A long-term view regarding the economic activity connected to tourism and an assurance of a balanced consumption of the existing tourist destinations are factors advocated by these authors as being crucial to its preservation in the future.

Several approaches towards sustainable tourism have been developed. Many authors refer to the importance of tourism in order to improve the welfare of the local community, to increase the economic aspects and preservation of cultural identity of communities, and respect not only the physical environment but also social values and the community (Murphy, 1997; Middleton and Clarke, 2001). Poon (1989) proposed that traditional tourism was being replaced by a new emerging tourism. For Poon, tourism of the future will be flexible, targeted and integrated in contrast to the "package holidays" of the 1970s.

The various conceptual approaches presented allow us to think about sustainable tourism as a development model and not as a type of tourism. This model relies on a rich triangle, where the economic profitability is crucial, but must be combined with the preservation of ecosystems and social equity, or balanced distribution of wealth.

3. METHODOLOGY

This section seeks to describe, analyze and benchmark practices in sustainability as applied by hospitality firms that belong to three important groups in the tourism sector. By means of empirical research, answers can be found for two important questions of the study, which are "Can one find several approaches towards sustainable practices in Portuguese hospitality groups?" and "What are the main gains that result from the implementation of these practices?"

This empirical research applies case study methodology. According to Bell (1997), this methodology allows the researcher to focus on a specific situation and identify the interactive processes involved. Yin (1994) considers the case study method to be the most appropriate for an investigation that seeks answers to "how" and "why" questions about contemporary phenomena about which the researcher has little or no control.

Following this line of reasoning, a questionnaire was directly applied to key respondents according to the inquiry guide presented in Annex 1. This questionnaire was applied in September and October 2009 to hotel managers (general managers, operational managers and quality managers).

Table 1 shows the number of questionnaires sent to the hotels, the number of answers obtained and the size of the sample.

Table 1 - Hotel groups and hotel units that participated in the questionnaire

Hotel	Regio	N hotels inquired	Nº answers	Size of the sampl
Tivoli Carvoeiro	Algarve	1	1	2,7%
Tivoli Marina Portimão	Algarve	1	1	2,7%
Tivoli Lagos	Algarve	1	1	2,7%
Tivoli Marina Vilamoura	Algarve	1	1	2,7%
Tivoli Coimbra	Coimbra	1	1	2,7%
Tivoli Jardim	Lisboa	1	1	2,7%
Tivoli Lisboa	Lisboa	1	1	2,7%
Tivoli Oriente	Lisboa	1	0	0,0%
Tivoli Palácio de Seteais	Sintra	1	1	2,7%
Tivoli Sintra	Sintra	1	1	2,7%
Total Group Espírito Santo		**10**	**9**	**24,3%**
Hotel Vila Galé Porto	Porto	1	1	2,7%
Hotel Vila Galé Ericeira	Ericeira	1	1	2,7%
Hotel Vila Galé Cascais	Cascais	1	1	2,7%
Hotel Vila Galé Estoril	Estoril	1	0	0,0%
Hotel Vila Galé Opera	Lisboa	1	1	2,7%
Hotel Vila Galé Ampalius	Algarve	1	0	0,0%
Hotel Vila Galé Marina	Algarve	1	1	2,7%
Hotel Vila Galé Tavira	Algarve	1	1	2,7%
Hotel Vila Galé Albacora	Algarve	1	1	2,7%
Hotel Vila Galé Cerro Alagoa	Algarve	1	0	0,0%
Hotel Vila Galé Atlântico	Algarve	1	1	2,7%
Hotel Vila Galé Praia	Algarve	1	0	0,0%
Hotel Vila Galé Náutico	Algarve	1	1	2,7%
Hotel Vila Galé Clube de Campo	Algarve	1	0	0,0%
Total Group Vila Galé		**1**	**9**	**24,3%**
Pestana Palace	Lisboa	1		0,0%
Pestana Cascais	Cascais	1		0,0%
Pestana Sintra Golf	Sintra	1		0,0%
Pestana Porto	Porto	1		0,0%
Pestana Alvor Praia	Algarve	1	1	2,7%
Pestana Alvor Park	Algarve	1	1	2,7%
Pestana Alvor Atlantico	Algarve	1	1	2,7%
Pestana Delfim	Algarve	1	1	2,7%
Pestana Dom Joao II	Algarve	1	1	2,7%
Pestana Levante	Algarve	1		0,0%
Pestana Palm Gardens	Algarve	1		0,0%
Pestana Porches Praia	Algarve	1		0,0%
Pestana Viking Resort	Algarve	1		0,0%
Total Group Pestana		**13**	**5**	**13,5%**
TOTAL		37	23	62,2%

Analysis of the data collected from these managers allowed the two specific goals of this study to be achieved: 1) to find out about the different approaches to sustainable best practices in hospitality through case studies; 2) to analyse possible gains resulting from the implementation of sustainable practices and to test the hypotheses initially formulated. It also allowed the formulated hypotheses to be tested.

The data analysis is based on descriptive statistics and the variables considered were evaluated on a scale between 1 and 5 (1 - very low, 2 - low, 3 - average, 4 - high and 5 - very high). The variables used to identify sustainable best practices are: use of renewable energy (Q6); use of halogen lamps (Q7); electrical system not used at night (Q8), use of a separate electrical circuit on each floor (Q9), preferred use of wood materials for furniture (Q10); use of solar energy for hot water consumption (Q11); collection and reuse of rainwater (Q12); regular monitoring of light and water consumption (Q13); maintenance and regular cleaning of air conditioning filters (Q14); watering outside areas at night (Q15); use of non-toxic paint in interior decoration (Q16); separation and recycling of waste (Q17); biodiversity respected (Q18); cultural heritage and local traditions respected (Q19); buying from local/national suppliers (Q20); clients informed about sustainable practices (Q21); programmes implemented to address employees' health care (Q23); training of employees encouraged and supported (Q24); management system for suggestions and complaints to be made(Q25).

The variables used to analyse possible gains resulting from the implementation of sustainable practices are: increased range of product/service (Q50), entry into new markets (Q51); increased market share (Q52); greater flexibility in production or service delivery (Q53); increased production capacity (Q54); improved service delivery (Q55); reduction of production costs (Q56); reduction of energy consumption (Q57); reduction of environmental impact (Q59), improvement in health, hygiene and safety at work (Q60); response to legal requirements (Q61); improved quality of products/services (Q78), increased employee satisfaction (Q80); reduced employee turnover (Q81).

4. MAIN RESULTS

4.1. DOCUMENTARY ANALYSIS

Documentary analysis allows us to understand the similarities and differences of the groups under study. The Pestana Group can be seen to have chosen a development strategy in the international market (it was the first Portuguese group to have a strategy for internationalisation). However, the group was also focussed on horizontal integration (a strategy reinforced by their management of the Pousadas de Portugal) as well as vertical integration, that is to say, investing in other sub-sectors of tourism.

The Vila Galé Group focuses on the domestic market and has chosen a policy of protecting agents from domestic instead of international players. The group reinforces loyalty to the brand and the product. However, the group also recognizes the importance of distribution channels other than traditional ones, in particular, the internet.

Finally, the Tivoli Group has chosen strategic diversification in 4- and 5-star markets while adapting to the different needs of demand. With its strong presence in the national market, this group seems strongly committed to gradual certification in quality and safety.

Both the Vila Galé and Tivoli groups have started on an international process with regard to important markets.

The Pestana, Vila Galé and Tivoli groups give a great deal of importance to training that reinforces the importance of quality through the training of human resources. All three groups have developed various training programmes in different areas in order to achieve better individual and organizational performances.

These three groups show they are highly aware of the importance of maintaining a sustainable, competitive position. This awareness is clear in the Pestana Group continuing to make new investments, adjusting supply to demand, focussing strongly on planning, training, innovation and, of course, the creation of sustainable value. The Vila Galé Group also shows they are greatly concerned about the adequacy of supply to meet demand. The Tivoli Group also think it important to being able to offer quality at prices that permit an attractive return.

4.2. STATISTICAL ANALYSIS

In order to investigate sustainable practices and their possible gains in major Portuguese hotel groups, the results of the questionnaire were organized according to Tables 2, 3, 4 and 5. According to Table 1, the main groups employ several sustainable practices. However, the ones that are deemed more important (with values that are equal or over 4 or 5) are: preferred use of wood materials in furniture; monitoring of light and water consumption; maintenance of air conditioning filters; watering outside areas at night; use of non-toxic paint in interior decoration; separation and recycling of waste; respect for cultural heritage and local traditions; buying from local/national suppliers; training of employees encouraged and supported; management system for suggestions and complaints.

Table 2- Evaluation of results of sustainable practices (total results)

Name	Q6 use of renewable energy	Q7 use of halogen lamps	Q8 electrical system not used at nigh	Q9 use of a separate electrical circuit on each floor	Q10 preferred use of wood materials for furniture	Q11 use of solar energy for hot water consumption	Q12 collection and reuse of rainwater	Q13 regular monitoring of light and water consumption	Q14 maintenance and regular cleaning of air conditioning filters	Q15 watering outside areas at night	Q16 use of non-toxic paint in interior decoration	Q17 separation and recycling of waste	Q18 biodiversity respected	Q19 cultural heritage and local traditions respected	Q20 buying from local/national suppliers	Q21 clients informed about sustainable practices	Q23 programmes implemented to address employees' health care	Q24 training of employees encouraged and supported	Q25 management system for suggestions and complaints to be made
Tivoli Group	2,2	3,9	2,3	4,4	4,3	1,7	1,8	4,8	4,8	4,1	4,6	4,6	4,3	3,9	4,1	3,8	4,4	5,0	4,8
Vila Galé Group	2,2	3,9	3,3	4,2	3,8	1,2	1,3	4,0	4,4	4,4	3,8	4,3	3,3	4,2	4,6	3,3	3,3	4,6	4,8
Pestana Group	3,2	3,8	3,8	2,2	4,6	1,4	1,4	3,8	3,4	5,0	3,4	3,8	3,8	4,4	4,4	3,6	4,0	5,0	5,0
Total	2,4	3,9	3,0	3,9	4,2	1,4	1,5	4,3	4,3	4,4	4,0	4,3	3,8	4,1	4,3	3,6	3,9	4,8	4,8

According to Table 3, all the groups think that there have been positive gains from the development of sustainable practices. However, the groups in general pointed to "improvement in service delivery" and "improvement of quality of products/services" as the main benefits.

Table 3- Evaluation results of sustainable practices gains (total results)

Name	Q50 Increased range of product / service	Q51 Entering new markets	Q52 Increased market share	Q53 Greater flexibility of production of service delivery	Q54 Increased production capacity	Q55 Improvement in service delivery	Q56 Reduction of production costs	Q57 Reduction of energy consumption	Q59 Reducing the environmental impact	Q60 Improvement in health, hygiene and safety at work	Q61 Response to legal requirements	Q78 Improved quality of products / services	Q80 Increased employee satisfaction	Q81 Reducing the number of employees in turnover
Tivoli	3,4	3,1	3,3	3,6	3,1	3,9	3,2	3,2	3,4	3,7	3,8	4,2	4,0	3,0
Vila Galé	3,3	3,1	3,4	3,4	3,3	4,0	3,3	3,3	3,1	3,7	3,0	4,0	3,6	3,4
Grupo Pestana	3,4	3,4	3,4	4,0	3,4	4,0	4,0	3,0	3,0	4,0	3,6	4,4	3,4	4,0
Total	3,4	3,2	3,4	3,6	3,3	4,0	3,4	3,2	3,2	3,7	3,4	4,2	3,7	3,4

On comparing the results of the groups and their adopted sustainable practices (Table 4 and Table 5), some similarities and differences emerge. With regard to the similarities, all the groups evaluated the following variables between 3 and 4: "use of halogen lamps", "respect for biodiversity", "respect for cultural heritage and local tradition", "dissemination of sustainable practices to clients" and "health care programmes for employees". On the other hand, all the groups evaluated the following variables lower than 3: "use of solar energy for hot water consumption" and "collection and reuse of rainwater". Finally, all the groups evaluated the following variables as higher than 4.5: "training of employees encouraged and supported the training of employees" and "management system for suggestions and complaints".

Several differences should also be pointed out. The Tivoli and Vila Galé groups consider that the "use of renewable energy" variable is unimportant (scored below 3) while the Pestana Group rates it fairly important (over 3 score). The Tivoli Group also also considers the "electrical system not used at the night" variable unimportant while the Vila Galé and Pestana groups considered it important (above 3 score). As for the "use of a separate electrical circuit on each floor", both the Tivoli and Vila Galé groups think it important while the Pestana Group gives it a below 3 score.

Although all three groups consider the already mentioned "training of employees encouraged and supported" and "management system for suggestions and complaints" variables very important, some differences surface in the other variables. For example, the Tivoli Group consider the "monitoring of light and water consumption", "maintenance of air conditioning filters", "use of non-toxic paint in interior decoration" and "separation and recycling of waste" variables also very important. Furthermore, the Vila Galé Group consider the "buying from local suppliers/national" variable very important as well. Finally, the Pestana Group also consider the "preferred use of wood materials in furniture" and "watering outside areas at night" variables to be very important.

Table 4- Evaluation results of sustainable practices per group

Name	Group Name	Q6 Use of renewable energy	Q7 Use of halogen lamps	Q8 Not use the electrical system during the night	Q9 Use a separate electrical circuit on each floor	Q10 Use preferably wood material in the furniture	Q11 energy for hot water consumption	Q12 Collection and reuse of rainwater	Q13 Monitoring of light and water consumption	Q14 Maintenance of air conditioning filters	Q15 Watering outside areas at night	Q16 Use of non-toxic paint in interior decoration	Q17 Separation and recycling of waste	Q18 Respect to biodiversity	Q19 cultural heritage and local tradition	Q20 Buying from local suppliers / national	Q21 sustainable practices to clients	Q23 support the health of employees	Q24 supports the training of employees	Q25 system for suggestions and complaints
H T SA	Tivoli	1,0	3,0	5,0	5,0	5,0	2,0	2,0	5,0	5,0	5,0	5,0	4,0	5,0	5,0	5,0	5,0	5,0	5,0	5,0
Sotal, S.A.	Tivoli	5,0	5,0	3,0	3,0	4,0	2,0	2,0	5,0	5,0	5,0	5,0	5,0	4,0	4,0	4,0	4,0	5,0	5,0	5,0
HT Lisboa	Tivoli	1,0	4,0	2,0	5,0	5,0	1,0	1,0	4,0	4,0	5,0	4,0	4,0	3,0	2,0	4,0	1,0	3,0	5,0	4,0
HT M Vilamoura	Tivoli	5,0	5,0	3,0	3,0	4,0	5,0	2,0	5,0	5,0	5,0	5,0	5,0	4,0	4,0	4,0	4,0	5,0	5,0	5,0
HT M Portimão	Tivoli	2,0	2,0	1,0	5,0	4,0	1,0	2,0	5,0	5,0	1,0	5,0	3,0	5,0	4,0	4,0	5,0	5,0	5,0	5,0
HT Coimbra	Tivoli	1,0	4,0	1,0	5,0	3,0	1,0	1,0	5,0	5,0	5,0	5,0	5,0	5,0	5,0	4,0	5,0	5,0	5,0	5,0
HT Jardim	Tivoli	1,0	4,0	2,0	5,0	5,0	1,0	1,0	4,0	4,0	5,0	4,0	4,0	3,0	2,0	4,0	1,0	3,0	5,0	4,0
Tivoli Lagos	Tivoli	1,0	4,0	1,0	5,0	4,0	1,0	1,0	5,0	5,0	1,0	5,0	5,0	5,0	4,0	4,0	5,0	5,0	5,0	5,0
Turifonte	Tivoli	3,0	4,0	3,0	4,0	5,0	1,0	4,0	5,0	5,0	5,0	4,0	5,0	5,0	5,0	4,0	4,0	4,0	5,0	5,0
	Average	**2,2**	**3,9**	**2,3**	**4,4**	**4,3**	**1,7**	**1,8**	**4,8**	**4,8**	**4,1**	**4,6**	**4,6**	**4,3**	**3,9**	**4,1**	**3,8**	**4,4**	**5,0**	**4,8**
	St Deviation	**1,7**	**0,9**	**1,3**	**0,9**	**0,7**	**1,3**	**1,0**	**0,4**	**0,4**	**1,8**	**0,5**	**0,7**	**0,9**	**1,2**	**0,3**	**1,6**	**0,9**	**0,0**	**0,4**
Vila Galé, SA	Vila Galé	2,0	4,0	2,0	4,0	4,0	1,0	1,0	5,0	5,0	4,0	4,0	5,0	4,0	5,0	5,0	2,0	3,0	4,0	5,0
Vila Galé, SET	Vila Galé	3,0	5,0	5,0	5,0	4,0	2,0	3,0	5,0	5,0	5,0	4,0	4,0	4,0	4,0	4,0	3,0	3,0	5,0	5,0
Vila Galé Marina	Vila Galé	1,0	2,0	5,0	5,0	3,0	1,0	1,0	3,0	5,0	4,0	3,0	3,0	2,0	5,0	5,0	2,0	5,0	5,0	5,0
Vila Gale Ericeira	Vila Galé	2,0	5,0	3,0	4,0	4,0	1,0	1,0	4,0	4,0	4,0	4,0	5,0	4,0	4,0	4,0	5,0	3,0	4,0	5,0
Vila Galé Tavira	Vila Galé	1,0	3,0	4,0	4,0	4,0	1,0	1,0	4,0	4,0	4,0	4,0	4,0	3,0	4,0	4,0	3,0	3,0	4,0	4,0
Vila Galé Porto	Vila Galé	5,0	5,0	1,0	5,0	4,0	1,0	1,0	5,0	5,0	5,0	5,0	5,0	5,0	5,0	5,0	5,0	5,0	5,0	5,0
Vila Galé Albacora	Vila Galé	1,0	3,0	4,0	4,0	4,0	1,0	1,0	4,0	4,0	4,0	4,0	4,0	3,0	4,0	4,0	3,0	3,0	4,0	4,0
Vila Galé Náutico	Vila Galé	2,0	4,0	2,0	3,0	4,0	1,0	1,0	4,0	3,0	5,0	4,0	4,0	3,0	4,0	5,0	4,0	3,0	5,0	5,0
Vila Galé Atlântico	Vila Galé	3,0	4,0	4,0	4,0	3,0	2,0	2,0	5,0	5,0	5,0	4,0	5,0	2,0	5,0	5,0	3,0	2,0	5,0	5,0
	Average	**2,2**	**3,9**	**3,3**	**4,2**	**3,8**	**1,2**	**1,3**	**4,0**	**4,4**	**4,4**	**3,8**	**4,3**	**3,3**	**4,2**	**4,6**	**3,3**	**3,3**	**4,6**	**4,8**
	St Deviation	**1,3**	**1,1**	**1,4**	**0,7**	**0,4**	**0,4**	**0,7**	**1,3**	**0,7**	**0,5**	**0,8**	**0,7**	**1,0**	**0,7**	**0,5**	**1,1**	**1,0**	**0,5**	**0,4**
Alvor Park Hotel	Grupo Pestana	2,0	3,0	3,0	1,0	5,0	1,0	1,0	3,0	3,0	5,0	3,0	3,0	3,0	4,0	4,0	4,0	4,0	5,0	5,0
Delfim Hotel	Grupo Pestana	2,0	3,0	3,0	1,0	5,0	1,0	1,0	3,0	3,0	5,0	3,0	3,0	3,0	4,0	4,0	4,0	4,0	5,0	5,0
Alvor Praia Hotel	Grupo Pestana	2,0	3,0	3,0	1,0	5,0	1,0	1,0	3,0	3,0	5,0	3,0	3,0	3,0	4,0	4,0	4,0	4,0	5,0	5,0
Dom João II	Grupo Pestana	5,0	5,0	5,0	4,0	4,0	2,0	2,0	5,0	4,0	5,0	4,0	5,0	5,0	5,0	5,0	3,0	4,0	5,0	5,0
Alvor Atlântico	Grupo Pestana	5,0	5,0	5,0	4,0	4,0	2,0	2,0	5,0	4,0	5,0	4,0	5,0	5,0	5,0	5,0	3,0	4,0	5,0	5,0
	Average	**3,2**	**3,8**	**3,8**	**2,2**	**4,6**	**1,4**	**1,4**	**3,8**	**3,4**	**5,0**	**3,4**	**3,8**	**3,8**	**4,4**	**4,4**	**3,6**	**4,0**	**5,0**	**5,0**
	St Deviation	**1,6**	**1,1**	**1,1**	**1,6**	**0,5**	**0,5**	**0,5**	**1,1**	**0,5**	**0,0**	**0,5**	**1,1**	**1,1**	**0,5**	**0,5**	**0,5**	**0,0**	**0,0**	**0,0**

With regard to the gains from the implementation of sustainable practices, all groups consider (with an over 3.5 score) the following variables important: "greater flexibility of production or service delivery", "improvement in service delivery", "improvement in health, hygiene and safety at work", "improved quality of products/services" and "increased employee satisfaction". However, the three groups pointed to "improvement in service delivery" and the "improved quality of products/services" variables as providing the most gains.

It should be pointed out that all variables that represent gains when sustainable practices are employed have scores of over 3.

Table 5- Evaluation results of sustainable practices gains per group

Name	Group Name	Q50 Increased range of product / service	Q51 Entering new markets	Q52 Increased market share	Q53 Greater flexibility of production of service delivery	Q54 Increased production capacity	Q55 Improvement in service delivery	Q56 Reduction of production costs	Q57 Reduction of energy consumption	Q59 Reducing the environmental impact	Q60 Improvement in health, hygiene and safety at work	Q61 Response to legal requirements	Q78 Improved quality of products / services	Q80 Increased employee satisfaction	Q81 Reducing the number of employees in turnover
H T SA	Tivoli	2	2	3	4	4	4	3	5	4	4	4	5	4	4
Sotal, S.A.	Tivoli	2	2	2	2	2	4	3	4	4	4	4	4	4	2
HT Lisboa	Tivoli	2	2	2	2	2	3	2	1	1	2	2	4	3	2
HT M Vilamoura	Tivoli	5	5	5	4	3	4	3	4	4	4	5	4	4	3
HT M Portimão	Tivoli	4	4	4	4	4	4	3	3	4	4	4	4	4	3
HT Coimbra	Tivoli	5	5	5	5	4	5	5	5	5	5	5	5	5	3
HT Jardim	Tivoli	4	3	3	4	3	4	3	1	1	2	2	4	4	4
Tivoli Lagos	Tivoli	3	2	3	3	3	3	3	3	4	5	5	4	4	3
Turifonte	Tivoli	4	3	3	4	3	4	4	3	4	3	3	4	4	3
	Average	**3,4**	**3,1**	**3,3**	**3,6**	**3,1**	**3,9**	**3,2**	**3,2**	**3,4**	**3,7**	**3,8**	**4,2**	**4,0**	**3,0**
	St Deviation	**1,2**	**1,3**	**1,1**	**1,0**	**0,8**	**0,6**	**0,8**	**1,5**	**1,4**	**1,1**	**1,2**	**0,4**	**0,5**	**0,7**
Vila Galé, SA	Vila Galé	4	2	3	4	1	5	5	4	2	5	2	5	4	4
Vila Galé, SET	Vila Galé	4	4	4	3	4	5	3	4	3	5	3	5	5	4
Vila Galé Marina	Vila Galé	5	5	5	5	5	5	4	4	4	5	5	5	4	3
Vila Gale Ericeira	Vila Galé	3	3	4	4	3	5	3	3	3	3	3	5	4	2
Vila Galé Tavira	Vila Galé	2	3	3	2	3	2	2	2	3	2	1	2	2	4
Vila Galé Porto	Vila Galé	4	3	3	4	4	4	3	3	4	5	5	4	3	3
Vila Galé Albacora	Vila Galé	2	3	3	2	3	2	2	2	3	2	1	2	2	4
Vila Galé Náutico	Vila Galé	3	3	3	4	4	4	5	4	3	4	5	4	4	5
Vila Galé Atlântico	Vila Galé	3	2	3	3	3	4	3	4	3	2	2	4	4	2
	Average	**3,3**	**3,1**	**3,4**	**3,4**	**3,3**	**4,0**	**3,3**	**3,3**	**3,1**	**3,7**	**3,0**	**4,0**	**3,6**	**3,4**
	St Deviation	**1,0**	**0,9**	**0,7**	**1,0**	**1,1**	**1,2**	**1,1**	**0,9**	**0,6**	**1,4**	**1,7**	**1,2**	**1,0**	**1,0**
Alvor Park Hotel	Grupo Pestana	3	3	3	4	3	4	4	3	3	4	4	4	3	4
Delfim Hotel	Grupo Pestana	3	3	3	4	3	4	4	3	3	4	4	4	3	4
Alvor Praia Hotel	Grupo Pestana	3	3	3	4	3	4	4	3	3	4	4	4	3	4
Dom João II	Grupo Pestana	4	4	4	4	4	4	4	3	3	4	3	5	4	4
Alvor Atlântico	Grupo Pestana	4	4	4	4	4	4	4	3	3	4	3	5	4	4
	Average	**3,4**	**3,4**	**3,4**	**4,0**	**3,4**	**4,0**	**4,0**	**3,0**	**3,0**	**4,0**	**3,6**	**4,4**	**3,4**	**4,0**
	St Deviation	**0,5**	**0,5**	**0,5**	**0,0**	**0,5**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,5**	**0,5**	**0,5**	**0,0**

4.3. DISCUSSION

Analysis of the empirical results allows the hypotheses to be tested. Table 7 presents a summary of the number of hypotheses accepted or rejected.

Analysis of sustainable practices evaluation shows that all the hospitality groups give high importance to the adoption of different dimensions of sustainable practices, confirming *H₁: Major Portuguese hotel groups develop several dimensions of sustainable practices.*

All the groups deem it of high level of importance (above 3.5) to adopt several practices of environmental dimension such as: the use of halogen lamps; use of a separate electrical circuit on each floor; monitoring of light and water consumption; maintenance of air conditioning filters; watering outside areas at night; use of non-toxic paint in interior decoration; separation and recycling of waste; respect for biodiversity.

All three groups also believe the following implemented sustainable practices of social dimension to be important (with an above 3.5 score): respect for cultural heritage and local traditions; buying from local/national suppliers; programmes to support healthcare for employees; training of employees encouraged and supported; management system for suggestions and complaints.

The literature review also confirms the importance of sustainability in tourism. The Tourism Sustainability Group (COM, 2007a) and European Commission (COM, 2007b) both recognize the importance of sustainability in tourism and promote the development of sustainable practices (in their

environmental, social and economic dimensions) by encouraging stakeholders to integrate sustainability with their strategies in order to achieve competitiveness. Several authors who were mentioned in the literature review refer to sustainability as a very important trend for tourism firms (Archer and Cooper, 1994; Murphy, 1997; Middleton and Clarke, 2001; Poon, 1989).

Sustainable practices that are less frequently adopted and considered less important are those that require a higher level of investment, such as "use of renewable energy", "use of solar energy for hot water consumption" and "collection and reuse of rainwater". All these sustainable practices need investment in equipment and some of them also involve maintenance costs. This corroborates H_2: *Major Portuguese hotel groups give less importance to sustainable practices that require higher investment costs*.

These findings could be explained as resulting from the international economic crises and the World Tourism Organization (UNWTO) view that reduced tourism revenues means that large investments are less available. Moreover, Weiermair (2006) said that tourism sector competitiveness depends largely on costs reduction, which may also explain why tourism firms lack the motivation to make large investments.

Although all three groups viewed as positive the gains made from reducing costs as a result of sustainable practices ("reduction of production costs", "reduction of energy consumption", "reduced employee turnover"), they did not see them as the most significant effects. It was subsequently not possible to validate H_3: *Major Portuguese hotel groups give more importance to easy to implement sustainable practices that enable cost reduction*.

All the groups considered several gains from sustainable practices adoption, which confirms H_4: *Major Portuguese hotel groups recognize important gains from the implementation of sustainable practices*.

However, the main gains recognized with higher level of importance are more related with the improvement in service delivery and in the quality of products/services.

This confirms other studies that have been developed by several authors (Hall and Williams, 2008; Weiermair, 2006) that characterized tourism sector with high levels of competitiveness that impels firms to increase productivity (through costs reduction) and enlarge quality (adding value to service).

Table 6- Summary of hypotheses testing

	Hypotheses	Decision (accept/reject)
H1	Major Portuguese hotel groups develop several dimensions of sustainable practices	Yes
H2	Major Portuguese hotel groups consider sustainable practices that require higher investment costs to be less important	Yes
H3	Major Portuguese hotel groups give more importance to easy to implement sustainable practices that enable cost reduction	No
H4	Major Portuguese hotel groups recognize important gains from the implementation of sustainable practices	Yes

5. CONCLUSIONS

The review of literature highlights the importance of the study and demonstrates the importance of moving from policy guidance to action, where the involvement of various stakeholders of tourism is crucial to the success of the sustainability of the sector.

Sustainable tourism requires careful analysis and deliberation of resources – whether natural, social and economic. This is the major challenge that tourism sector businesses have to face, regardless of whatever market segment they address or types of supply. This challenge involves various stakeholders related with the tourism sector. A medium and long-term vision calls for the adoption of sustainable practices and can contribute to tourism competitiveness in Europe.

Analysis of documents about the characteristics of the hotel groups that were studied provides important information concerning the strategy followed by each of them and future challenges related to sustainability. This analysis confirms the progress of developing strategies that aim at sustainable value based on segmentation, diversification and quality.

Analysis of the empirical results and the hypotheses discussion corroborate the following s: a) major Portuguese hotel groups develop several dimensions of sustainable practices; b) major Portuguese hotel groups consider sustainable practices that require higher investment costs less important; c) major Portuguese hotel groups give more importance to easy to implement sustainable practices that enable cost reduction; d) major Portuguese hotel groups recognize important gains from the implementation of sustainable practices.

Discussion of the theoretical approach and empirical results also reveals positive aspects that reinforce the importance of sustainable practices employed by the three groups and confirms the existence of sustainable practices in all the hotels under study.

A balance of environmental and social aspects is present in the strategic choices made by these representatives of the Portuguese hotel industry, which demonstrates they understand the importance of adopting sustainable practices. These practices contribute to improving firms' performances though it reveals, however, a dependency on the implementation of low cost practices that achieve direct results without making large investments.

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ANNEX 1

QUESTIONNAIRE TO SUSTAINABILITY BEST PRACTICES

GENERAL INFORMATION

- **HOTEL IDENTIFICATION**
- **NAME OF THE GROUP**
- **REGION**

INOVATION AND SUSTAINABILITY

1) LEVEL OF IMPORTANCE TO THE FOLLOW SUSTAINABLE PRACTICES:
(5- VERY HIGH, 4- HIGH, 3-AVERAGE, 2-LOW E 1-VERY LOW):

	1	2	3	4	5
USE OF RENEWABLE ENERGY	○	○	○	○	○
USE OF HALOGEN LAMPS	○	○	○	○	○
NOT USE THE ELECTRICAL SYSTEM DURING THE NIGHT	○	○	○	○	○
USE A SEPARATE ELECTRICAL CIRCUIT ON EACH FLOOR	○	○	○	○	○
USE PREFERABLY WOOD MATERIAL IN THE FURNITURE	○	○	○	○	○
USE OF SOLAR ENERGY FOR HOT WATER CONSUMPTION	○	○	○	○	○
COLLECTION AND REUSIE OF RAINWATER	○	○	○	○	○
REGULAR MONITORING OF LIGHT AND WATER CONSUMPTION	○	○	○	○	○
MAINTENANCE AND REGULAR CLEANING OF AIR CONDITIONING FILTERS	○	○	○	○	○
WATERING OUTSIDE AREAS AT NIGHT	○	○	○	○	○
USE OF NON-TOXIC PAINT IN INTERIOR DECORATION	○	○	○	○	○
SEPARATION AND RECYCLING OF WASTE	○	○	○	○	○
RESPECT TO BIODIVERSITY	○	○	○	○	○
RESPECTS THE CULTURAL HERITAGE AND LOCAL TRADITION	○	○	○	○	○
BUYING FROM LOCAL SUPPLIERS / NATIONAL	○	○	○	○	○
DISSEMINATES INFORMATION TO CLIENTS ABOUT SUSTAINABLE PRACTICES (EG PROPER USE OF WATER / ENERGY)	○	○	○	○	○
IMPLEMENT PROGRAMS TO SUPPORT THE HEALTH OF EMPLOYEES (EG VACCINATION, AWARENESS ABOUT THE DANGERS OF SMOKING)	○	○	○	○	○
ENCOURAGES AND SUPPORTS THE TRAINING OF EMPLOYEES	○	○	○	○	○
EXISTENCE OF MANAGEMENT SYSTEM FOR SUGGESTIONS AND COMPLAINTS	○	○	○	○	○

2) GAINS FROM INNOVATION (5- VERY HIGH, 4- HIGH, 3-AVERAGE, 2-LOW E 1-VERY LOW):

	1	2	3	4	5
INCREASED RANGE OF PRODUCT / SERVICE	○	○	○	○	○
ENTERING NEW MARKETS	○	○	○	○	○
INCREASED MARKET SHARE	○	○	○	○	○
GREATER FLEXIBILITY OF PRODUCTION OR SERVICE DELIVERY	○	○	○	○	○
INCREASED PRODUCTION CAPACITY	○	○	○	○	○
IMPROVEMENT IN SERVICE DELIVERY	○	○	○	○	○
REDUCTION OF PRODUCTION COSTS	○	○	○	○	○
REDUCTION OF ENERGY CONSUMPTION	○	○	○	○	○
REDUCING THE ENVIRONMENTAL IMPACT	○	○	○	○	○
IMPROVEMENT IN HEALTH, HYGIENE AND SAFETY AT WORK	○	○	○	○	○
RESPONSE TO LEGAL REQUIREMENTS	○	○	○	○	○
IMPROVED QUALITY OF PRODUCTS / SERVICES	○	○	○	○	○
INCREASED EMPLOYEE SATISFACTION	○	○	○	○	○
REDUCING THE NUMBER OF EMPLOYEES IN TURNOVER	○	○	○	○	○

THANKS FOR YOU PARTICIPATION.