Green initiatives and their competitive advantage for the hotel industry in developing countries

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Abstract

The purpose of this study is to identify the organisational capabilities that complement the adoption of a proactive environmental strategy, and the specific benefits that can arise from such a strategy. The study focuses on developing countries that depend heavily on the tourism industry, but where environmental problems challenge the future of this industry. The study proposes that learning orientation, innovativeness, and quality management positively affect the adoption of proactive environmental strategies. Based on empirical data from hotels in Thailand, PLS-SEM was applied to explore these relationships. The results confirm the hypotheses but also show that the green strategy positively affects environmental performance and organisational competitive advantage. More specifically, green strategies lead directly to positive environmental performance in terms of the consumption of utilities, waste management, and environmental risk management, leading to cost competitiveness and competitive advantage through differentiation.

Keywords: Proactive environmental strategy; Learning orientation; Innovativeness; Quality management; Environmental performance; Competitive advantage.

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1. Introduction

Dealing with environmental problems is a substantial challenge for the business community, as unsustainable business activities contribute to the deterioration of natural resources (Hall, Daneke, & Lenox, 2010). Consequently, organisations are encouraged to apply a proactive approach in protecting the environment from the effects of their business activities on the biophysical environment through the over-consumption of natural resources and waste production (Fraj, Matute, & Melero, 2015; López-Gamero, Molina-Azorín, & Claver-Cortes, 2011). However, environmental aspects are often sacrificed in favour of profitability. While social pressures and environmental regulations can force organisations to become more active in environmental management (Barber, 2014), some organisations have little incentive to adopt environmental management practices which they either ignore or implement them only to meet regulation requirements. As a result, they may not be capable of taking advantage of the economic opportunities that are associated with environmental management due to a strong focus on short-term profit, or pure ignorance of environmental protection measures (Schaltegger & Synnestvedt, 2002). In contrast, other organisations go beyond what is required by regulation to implement proactive environmental strategies (PES) in order to gain a competitive advantage and to improve long-term financial performance (Aragón-Correa & Sharma, 2003).

This study builds upon the natural-resource-based view of the firm to explore how environmental and internal resources in relation to the PES can be utilised as organisational capabilities in order to gain a competitive advantage (Hart, 1995). The theory distinguishes between resources and the capabilities required to utilise these resources and has already been used to examine the relationships between organisational capabilities and competitive advantage in the manufacturing context – supporting PES as a driver of performance (Clarkson, Li, Richardson, & Vasvari, 2011; Menguc, Auh, & Ozanne, 2010; Menguc & Ozanne, 2005; Molina-Azorín, Claver-Cortés, López-Gamero, & Tarí, 2009).

Moreover, previous studies have found that the capability of learning orientation (Aguilera-Caracuel, Hurtado-Torres, & Aragón-Correa, 2012; Chan, Hon, Chan, & Okumus, 2014; Delmas, Hoffmann, & Kuss, 2011), innovativeness (Razumova, Ibáñez, & Palmer, 2015; Wagner, 2009), and quality-management (Molina-Azorín, Tarí, Pereira-Moliner, López-Gamero, & Pertusa-Ortega, 2015) independently complement the adoption of PES. In this context, learning orientation reflects the utilisation of resources in relation to employees' knowledge and skills as well as the organisational learning climate (Calantone, Cavusgil, & Zhao, 2002). Innovativeness is the ability of an organisation to continuously innovate, driven by the organisational innovative climate (Calantone et al., 2002); while the capability of quality management represents the ability to utilise employees' skills and knowledge gained through organisational quality-management initiatives (Molina-Azorín et al., 2015).

Previous research in the hotel and tourism industry focussed mainly on developed countries (Fraj et al., 2015; Leonidou, Leonidou, Fotiadis, & Aykol, 2015; Leonidou, Leonidou, Fotiadis, & Zeriti, 2013; Molina-Azorín et al., 2015). However, Myung, McClaren, and Li (2012) identified in a literature review that research in relation to developing countries is still in its infancy. Although strategies that are implemented successfully in one country may be transferable to another country, the implementation of PES is likely to be affected by local factors such as local government regulations, the local environmental infrastructure, and the resources available (González-Benito & González-Benito, 2006). Moreover, the environmental challenges and policy choices in developing countries differ substantially from those in developed countries because of the large informal economy, high levels of poverty and inequality, weak capacity and resources for innovation and investment, as well as limited mechanisms for implementing environment-related incentives (OECD, 2013). Therefore, further research is required as environmental strategies implemented in developing countries might differ from those in developed countries.

The objective of this study is twofold: Firstly, a natural-resource-based view of the firm is utilised to merge previous findings in relation to PES in the hotel industry. This particularly applies to the integration of quality management in established models. The study proposes a comprehensive

framework that combines firm-specific capabilities, which have been studied independently, into a single model in order to provide a holistic picture. As a result, the findings provide a better understanding of the interactions between organisational capabilities and the adoption of PES, and of the specific benefits that can arise from such a strategy. Secondly, this study follows Hart and Dowell's (2011) call to explore the natural-resource-based view in relation to organisational activities and their effect in developing countries with low levels of environmental activities. The success of PES in these countries can have substantial implications for the local community as negative environmental effects may endanger the national competitive advantage in the global competitive market and destroy the livelihood of local residents that require natural resources for their primary food source.

This study addresses the research gap by using the lens of the natural-resource-based view in order to examine the following research question: What are the necessary capabilities to obtain a competitive advantage through proactive environmental strategies in developing countries? In order to answer this research question, a set of hypotheses was developed and a survey was used to collect data from 97 hotels in Thailand. Structural equation modelling (SEM) was used to test the model and supported the importance of the capabilities learning orientation, innovativeness, and quality management on PES, which in turn drives environmental performance and competitive advantage.

The remainder of this study is organised as follows: Section 2 describes the theoretical framework and research hypotheses. Section 3 describes the research methodology, the data collection process, and the measurement of variables. The analysis of the results is presented in section 4, while section 5 presents the main findings, the limitations, and directions for future research.

2. Literature review and hypotheses development

2.1 Proactive environmental strategies and the natural-resource-based view

All businesses have to develop and maintain their own resources and capabilities in order to survive and sustain their operations. A firm's unique resources and capabilities are the key sources of a sustainable competitive advantage (Hart, 1995; Wernerfelt, 1984). Resources include tangible and intangible assets that are tied semi-permanently to the firm, such as in-house technological expertise,

trademarks, brand names, trade contacts, and highly skilled employees (Wernerfelt, 1984). Capabilities, in contrast, refer to the capacity to accomplish specific value-added tasks using supporting resources (Clarkson et al., 2011). In a very competitive global market, these resources and capabilities are important to enable businesses to obtain or sustain their competitive advantage (Hart, 1995; Hart & Dowell, 2011).

Management approaches to environmental problems may vary for several reasons, including managerial values, organisational resources and capabilities, and industry and market conditions (Aragón-Correa & Sharma, 2003). Approaches to environmental challenges can be categorised into reactive or proactive environmental strategies (Fraj et al., 2015), the former of which are short-term-focused solutions adopted only in response to regulations, and the latter of which include voluntary actions to prevent environmental pollution, minimise energy and water consumption, and/or reduce waste (Fraj et al., 2015). Sharma (2000, p. 683) defines PES as “a consistent pattern of company actions taken to reduce the environmental impact of operations, [rather than] to fulfil environmental regulations or to conform to standard practices”. In summary, a firm that is committed to solving its environmental challenges by developing innovative practices is considered as a proactive, environmentally friendly business (Buysse & Verbeke, 2003; Fraj et al., 2015). This definition is followed in this study.

According to the natural-resource-based view (Hart, 1995), strategy and competitive advantage are likely to be rooted in capabilities that facilitate environmentally sustainable economic activity. Firms can gain a competitive advantage by adopting environmental strategies that improve operational efficiency, enhance their reputation, and raise their rivals’ costs as a result of influencing future industry standards related to the environment (Clarkson et al., 2011). To minimise the environmental burden that is associated with a firm’s growth, a company must develop a sustainable strategy that implements a long-term vision using the development of clean technologies (Buysse & Verbeke, 2003). This paper builds on the natural-resource-based view, being the implementation of sustainable strategies requiring unique organisational resources and capabilities that can contribute to sustaining the firm’s competitive advantage.

Hart's (1995) natural-resource-based view contains three interconnected strategies: (a) product stewardship; (b) sustainable development; and (c) pollution prevention. The product stewardship strategy focuses on product design and development processes in order to exit environmentally hazardous businesses, redesign existing product systems to reduce liability, and develop new products with lower life-cycle costs. The sustainable development strategy relates to substantial investment and a long-term commitment to market development that require a long-term vision of management to minimise environmental impacts and to maximise long-term organisational performance. In order to implement product stewardship strategy, a firm must be able to coordinate functional groups within the firm and to integrate the perspectives of key external stakeholders into decisions on product design and development (Hart & Dowell, 2011). These capabilities are summarised in the socially complex skill of cross-functional management, which can be achieved through a learning and innovative climate in an organisation. In addition, the development of the sustainable-development strategy requires a firm to establish a shared vision, which refers to the common commitment to the firm's long-term future by encouraging members at all levels to work in the same direction and towards the same goal (Hart, 1995). It is argued that this is a rare skill as an organisation-wide dedication to the shared vision is key to generate the pressure and enthusiasm required for innovation and change (Hart, 1995). A shared vision such as this can be found in learning orientated organisations (Calantone et al., 2002). Based on this argument, capabilities related to learning and innovation are required and Fraj et al. (2015) included these capabilities in their model to investigate the effects of organisational capabilities on the adoption of PES and organisational competitive advantage.

For Hart's (1995) third strategy – pollution prevention – firms aim to reduce emissions by applying continuous-improvement methods. Continuous improvement can be achieved through quality management. Quality management is an integrated approach that aims to continuously improve the products and processes of an organisation in order to exceed customer expectations through the voluntary involvement of all levels of employees in a continuous-improvement effort (Molina-Azorín et al., 2015). Apart from the goal to exceed customer expectations, quality management also provides a firm with integrated knowledge and skills, which can be considered as a tacit skill (Barney, 1991).

In addition, from a quality management perspective, pollution is another form of waste, which is to be eliminated in the pursuit of quality (Hart, 1995). Hart (1995) argues that firms that do not have well-developed quality-management processes may not be able to implement pollution-prevention strategies as they require the voluntary involvement of employees at all levels in a continuous-improvement effort, as well as the tacit skills gained from quality management. Therefore, firms with capability in quality management will be better able to accumulate the resources necessary for pollution prevention than firms without such a capability.

Based on Hart's (1995) proposition, quality-management capability is another factor that is crucial for the adoption of PES. Molina-Azorín et al. (2015) studied the relationship between quality management and environmental management and confirmed the relationship, indicating that knowledge and skills gained from quality management facilitate the development of environmental-management practices as the related information creates a basis for environmental management. This study, therefore, includes quality-management capability in the Fraj et al. (2015) model in order to provide a holistic picture of the interactions of organisational capabilities, PES, and organisational performance. From this perspective, the combination of learning orientation, innovativeness, and quality-management capabilities will altogether complement the adoption of PES.

2.2 Critical capabilities for the implementation of PES

2.2.1 Learning orientation

Learning is as important for organisations as it is for individuals. Learning in an organisation starts with individuals. Individual learning, however, may not lead to organisational learning as it depends on the ability of the learning organisation to integrate individual learning into organisational learning (Wang & Ahmed, 2003). Generating higher-order learning is likely to require an organisational culture of learning (Fraj et al., 2015); therefore, a learning orientation is one of most valuable assets an organisation can have (Baker & Sinkula, 1999; Fraj et al., 2015). Learning orientation reflects how well an organisation can utilise its resources related to knowledge and skills of employees as well as organisational learning climate (Calantone et al., 2002). The people who are

in an organisation with a strong learning orientation are encouraged to challenge the organisational norms and to seek new knowledge.

Baker and Sinkula (1999) argue that a learning orientation has three dimensions: commitment to learning; open-mindedness; and shared vision. A commitment to learning refers to valuing learning, and detecting and correcting errors. Open-mindedness relates to the willingness to question its long-held routines and knowledge and to accept the need to change out-of-date mental models; while shared vision refers to the common commitment to an organisation's future, pushing organisational members at all levels to work in the same direction. However, Calantone et al. (2002) argue that these three dimensions are not sufficient for an organisation to become a learning-oriented organisation, as intra-organisational knowledge-sharing, which refers to the collective behaviours and beliefs that relate to the spread of learning among various units within an organisation, is also important. This study followed this argument.

An organization that has both a learning orientation and PES can address environmental changes more successfully (Martínez-Martínez, Cegarra-Navarro, & García-Pérez, 2015), as organisations with sound learning competencies have the tools to develop PES (Aguilera-Caracuel et al., 2012). Because the adoption of PES requires multiple fields of expertise (e.g., environmental engineering, eco-designing, and marketing), firms with higher levels of learning capabilities are more likely to integrate and utilise their knowledge related to the environment than firms with lower levels of learning skills (Delmas et al., 2011). However, individuals' learning style moderates managerial approaches to environmental issues (Joy & Kolb, 2009; Park, Kim, & McCleary, 2014). Therefore, people from different backgrounds and countries have their own preferences regarding learning and sharing their knowledge. These differences may affect the learning climate in an organisation and the relationship between learning orientation and the implementation of PES. Therefore, organisations in different countries may implement their PES in different ways and at different levels.

Several studies have found a positive impact of learning orientation on PES. For example, Pinkse, Kuss, and Hoffmann (2010) find that a firm's absorptive capacity stimulates PES by encouraging employees to update knowledge through education and a common ability to source the knowledge

that is necessary for environmental decision-making. Aragón-Correa, Hurtado-Torres, Sharma, and García-Morales (2008) find that learning capability, as represented in a shared vision, is associated with the adoption of PES. Roy and Thérin (2008) conclude that knowledge management plays a key role in supporting firms' efforts to increase their environmental commitment and that firms need an internal learning climate. It was found that lack of knowledge and skills is one of the important barriers that could impede the adoption of a formal environmental system in the hotel industry (Chan, 2008). Fraj et al. (2015) find that learning capability has a positive effect on PES implementation in the hospitality industry in a country with a high level of environmental sustainability. As developing countries usually do not have a high level of environmental sustainability (Crotti & Misrahi, 2017), the question arises whether these findings are transferable. Even though the formulation of environmental policies might differ in different countries, and individuals' learning styles may affect the level of PES implementation, learning orientation is likely to be important to an organisation's ability to implement PES successfully. To determine whether the organisational learning climate in emerging countries has a positive effect on PES implementation in their hotel industries, it is proposed that:

H1: Learning orientation positively influences PES.

2.2.2 Innovativeness

Innovativeness is important for organisational sustainability, as firms need to be innovative in order to survive in highly competitive environments (Calantone et al., 2002). Innovativeness reflects the organisation's ability to continuously innovate through the organisational innovative climate (Calantone et al., 2002). A new product or service, a new production process, a new organisational structure, and a new administrative system can each be considered an innovation resulted from the organisational innovative climate.

Innovation, in general, is crucial to a firm's long-term success as it provides opportunities for a firm to penetrate markets faster and have a better connection with emerging markets (Crossan & Apaydin, 2010). However, innovation that favours environmental sustainability through the implementation of

green strategies can greatly assist a firm to obtain a sustained competitive advantage (Hart, 1995; Hart & Dowell, 2011).

The development of PES requires organisations to search for solutions to environmental problems by being innovative with new products and processes (Menguc & Ozanne, 2005). Hart (1995) affirms that the success of the implementation of PES depends on the willingness of the firm to continuously evolve and innovate. Leonidou et al. (2013) study resources and capabilities as drivers of hotels' environmental marketing strategies in Greece and confirm that the firms' technology response (its ability to sense and respond quickly to new technologies) is positively related to the development of an environmental marketing strategy. Christmann (2000) examines the relationship between a firm's capability to process innovation and an ability to benefit from the implementation of green strategies, and finds that a firm's capability in product and process leads to cost competitive advantage through PES. Moreover, she concludes that the capability in product and process innovation is a valuable, rare, and imperfectly imitable asset that explain why not all firms are able to obtain a competitive advantage at the same level from green strategies. Fraj et al. (2015) finds that, in developed countries with advanced environmental regulations such as Spain, innovative hotels tend to be proactive in their environmental strategies. In developing countries, those advanced environmental regulations may not exist; therefore, hotels require a high willingness to continuously innovate in order to compete in the market. Therefore, it is proposed that innovativeness has a positive effect on PES implementation in emerging economies.

H2: Innovativeness positively influences PES.

2.2.3 Quality-management capability

Quality management is “an integrated approach to achieving and sustaining high-quality output, focusing on the maintenance and continuous improvement of processes and defect prevention at all levels and in all functions of the organisation, in order to meet or exceed customer expectations” (Flynn, Schroeder, & Sakakibara, 1994, p. 342). It is generally accepted that the adoption of quality-management practices reduces costs and increases productivity and helps firms to improve their competitive advantage (Evans & Lindsay, 2011). The quality-management capability refers to the

ability to utilise employees' skills and knowledge gained from quality-management initiatives (Molina-Azorín et al., 2015).

According to a natural-resource-based view, firms that implement PES will achieve sustained competitive advantage only when they develop complex capabilities including the tacit capabilities of quality management, the socially complex capabilities of cross-functional and cross-stakeholder management, and the firm-specific capabilities of shared vision (Aragón-Correa & Sharma, 2003; Hart, 1995). The involvement of employees at all levels to pursue continuous improvement of operations generates integrated knowledge and skills, which can be considered as a tacit skill. Hart (1995) argues that firms without well-developed quality-management processes cannot implement pollution-prevention strategies because these strategies require the voluntary involvement of employees at all levels in a continuous-improvement effort and also tacit skills gained through quality management. In other words, firms that pay attention to product and process quality and customer expectations through quality management are more likely to use the knowledge gained from quality management to address environmental problems and implement environmentally friendly strategies.

Regarding the relationship between quality management and environmental management, Darnall and Edwards (2006) find that firms with quality-management experience are more likely to adopt an environmental management system because the adoption cost of an environmental management system is lower compared to firms without this experience. Furthermore, firms with more complementary capabilities, such as quality management, adopt more comprehensive environmental-management systems resulting in a competitive advantage (Darnall, Henriques, and Sadorsky (2008). A possible explanation is that these capabilities help firms to develop extensive knowledge-integration and interaction of knowledge within the organisation that complement their strategic actions to improve the environment. Molina-Azorín et al. (2015) reveal that hotels that implement quality management prior of the adoption of PES are less likely to see obstacles to their attempts to implement environmental programs. The authors argue that the quality management capability provides fundamental information that facilitates the adoption of the environmental protection programs. Employees who are familiar with quality-management practices will find it easier to

understand what PES is about, as they are aware of, and committed to, quality (Molina-Azorín et al., 2015). In terms of the information system and document preparation, firms possessing a quality system can incorporate their existing systems with other documents required for environmental management. Hence, quality management capability can help firms to implement PES and environmental-management programs. This applies also to firms in the hotel industry of developing countries. Therefore, it is proposed that:

H3: Quality-management capability positively influences PES.

2.3 Environmental performance and competitive advantage

Implementing PES can result in an improved environmental performance. In line with previous studies, environmental performance in this study is defined as the degree to which a firm improves its performance in respect of its environmental responsibilities (Wagner, 2009; Yang, Hong, & Modi, 2011). Environmental management practices help firms modify processes and procedures to consider environmental matters across all functions of their operations (Sroufe, 2003). Therefore, environmental management activities enhance environmental performance in terms of the reduction of the environmental impacts, such as the reduction of utility consumption and waste (Wagner, 2009). In the manufacturing context, the implementation of environment management practices helps firms to clarify specific environmental related goals and objectives (Yang et al., 2011). Furthermore, it enhances environmental performance, such as the reduction of pollutant materials, and increases the usage and cost effectiveness of eco-friendly component parts (Yang et al., 2011). As for the hotel industry, because of the high volume of water and energy consumption and the use of chemicals, paper, and plastics in providing services, green strategies provide an opportunity for hotels to identify environmental related inefficiencies (e.g., the over-consumption of water and energy), and to initiate activities to reduce such inefficiencies. It was found that PES helps hotels to reduce water and energy consumption through several practices, including green technologies, training managers and employees, as well as utilising indicators and data analysis (Molina-Azorín et al., 2015). Consequently, also in developing countries an environmentally friendly strategy will improve an organisation's environmental performance. Therefore, it is proposed that:

H4: PES positively influences environmental performance.

The adoption of PES enhances organisational competitive advantage. In this study, a competitive advantage is defined as a benefit that a firm has over its main competitors, which is measured in both cost (such as minimising operation costs and regulation compliance costs) and differentiation (such as gaining brand image, attracting new customers, superior service quality) competitiveness (Porter, 2004). Firms that implement PES are likely to be more innovative, technologically sophisticated, entrepreneurially oriented, and socially conscious than those that do not, which will impress their customers (Menguc et al., 2010; Porter & van der Linde, 1995). Green marketing strategies can help firms to reduce costs in the long run and to differentiate their offerings from those of their competition (Leonidou et al., 2013). Menguc et al. (2010) argue that these firms will go a step beyond their competitors and enjoy first-mover competitive status because they can present their customers with a strong signal of their commitment to the natural environment. Leonidou et al. (2013) point out that customers are likely to pay higher prices for environmentally friendly products and services and will perceive firms that pursue PES as different from those that do not (Menguc et al., 2010). Consequently, these firms will gain a competitive advantage and grow more than they would have otherwise. In addition, by implementing a pollution-prevention strategy as part of PES, firms will improve their cost-efficiency by using continuous, total quality environmental management to minimise the need to invest in expensive end-of-pipeline technologies (Hart, 1995). Although some studies find that environmental initiatives have no effect, or even a negative effect, on performance (Gilley, Worrell, Davidson, & El-Jelly, 2000; Wagner, Van Phu, Azomahou, & Wehrmeyer, 2002), more recent studies show competitive advantage resulting from the implementation of PES in both developed and developing countries (Chiou, Chan, Lettice, & Chung, 2011; Delmas et al., 2011; Fraj et al., 2015; Leonidou et al., 2013; Menguc et al., 2010; Rodríguez & del Mar Armas Cruz, 2007; Tarí, Claver-Cortés, Pereira-Moliner, & Molina-Azorín, 2010). In line with these studies, it is proposed that:

H5: PES positively influences organisational competitive advantage.

Regarding the link between environmental performance and competitive advantage, increased environmental efficiency could reduce costs and improve the corporate image. Using data from hotels in Greece, Leonidou et al. (2013) also find that the adoption of PES leads to superior market penetration, competitive advantage, and financial performance. Based on empirical survey data from Taiwanese companies in various industries, Chiou et al. (2011) confirm a link between environmental performance and competitive advantage. However, Rao (2002) does not find a correlation between environmental performance and competitive advantage in Southeast Asian firms (Indonesia, Malaysia, Philippines, Thailand and Singapore). Implementing PES may require a significant amount of investment, and the return from such investment may be long-term. Developing countries have been encouraged to promote green growth strategies, and several environmental initiatives have been introduced by the governments of these countries (OECD, 2013), but businesses in these countries may not see immediate positive effects which could discourage them. This study extends these previous studies with its focus on the hotel industry in a developing country in order to determine whether there is a relationship between environmental performance and competitive advantage in this industry. Therefore, it is proposed that:

H6: Environmental performance positively influences competitive advantage.

Figure 1 summarises the conceptual model of the study.

Figure 1: Conceptual model

3. Methodology

3.1 Data collection

Thailand was selected for this study, as Thailand is one of many developing countries that relies heavily on revenue from tourism. The total contribution of travel and tourism activities to Thailand's GDP was USD82.5 billion, which was 20.6 percent of GDP in 2016 (World Travel and Tourism Council, 2017). However, tourism, and the hotel industry in particular, has a negative impact on the natural environment. According to Crotti and Misrahi (2017), Thailand performs poorly in environmental sustainability, which could affect the nation's competitive advantage in the tourism industry. Although organisations such as the Green Leaf Foundation have been established to promote PES to help Thailand's hotels strengthen their competitive advantage, only 219 hotels (The Green Leaf Foundation, 2017), representing only 3 percent of hotels around the country (National Statistical Office of Thailand, 2014), have participated in this initiative, suggesting that PES are still relatively uncommon. To that end, Thailand is appropriate for a study to extend the natural-resource-based view to the context of a developing country in which the hotel and tourism industry plays a major role in its economy.

This empirical study focuses on hotels that implement a green strategy. In order to answer the proposed research question, samples selected for this study must represent the hotels that have been active in environmental protection in Thailand. As discussed above, the Green Leaf Foundation has been a dominant organisation that promotes green practices in the hotel industry in Thailand. Accordingly, these hotels are considered the most appropriate representatives of green hotels in Thailand that can provide appropriate answers to the research question. The target group includes the hotel environmental manager, director or owner in charge of management of one of the 219 hotels with a rating of mostly four and five stars.

The questionnaire was first written in English, translated into Thai, and then translated back into English. The two versions of the questionnaire were compared to make sure that the Thai and English questions conveyed the same meaning, and both were made available to participants.

A mixed-mode collection approach using paper and online collection instruments was used to ensure that everyone in the target population could participate (Dillman, 2007). The first mode of data collection commenced with the paper-based survey. With the assistance of the Green Leaf Foundation, the paper-based questionnaires were distributed at the Third Green Hotel Supplier and Consumer Conference 2016 organised by the Green Leaf Foundation and partners. The conference was open to all interested hotels. However, more than 75 percent were members of the foundation. Overall, more than 200 participants attended the conference.

The online questionnaire procedure began a few weeks after the conference, when an invitation letter with a web survey link and the information sheet were emailed to all Green Leaf Foundation members. To avoid repetition, the invitation letter asked recipients to ignore the questionnaire if they had completed it during the conference. Reminder emails were sent out three times to encourage participation.

Of the 108 responses received (78 paper-based and 30 online), 11 were excluded (7 paper-based and 4 online) because of a substantial amount of missing data. Missing data for the remaining 97 usable questionnaires were treated in SmartPLS 3.0 with the mean value replacement method based on Hair Jr, Hult, Ringle, and Sarstedt (2017). To address the issue of non-response bias, the first 26 responses from paper questionnaires and the last 26 responses from online questionnaires were compared using the independent-samples t-test (Armstrong & Overton, 1977; Wang, So, & Sparks, 2017). The t-tests showed no significant difference in the results for the study's PES variable. Table 1 presents information about the characteristics of the participants in the study.

To determine whether the sample was of sufficient size for the data analysis, a power analysis using G*Power 3.1 software was conducted (Faul, Erdfelder, Lang, & Buchner, 2007). With type-1 error probabilities set to 0.05, a sample size of 92 was required to reach sufficient statistical power of 80 percent for a moderate effect size of 0.15. Therefore, the sample size of this study is sufficient to ensure that the results of the statistical method are robust (Hair Jr et al., 2017).

Table 1: Respondents' characteristics

Number of hotel employees		Number of hotel rooms	
Fewer than 75	11%	Fewer than 60	9%
75 – 149	17%	60 – 149	23%
150 – 249	27%	150 – 299	27%
250 – 349	11%	300 – 449	15%
350 or more	34%	450 or more	26%
Hotel rating		Type of hotel chain	
3 stars or less	11%	International chain	16%
4 stars	44%	Domestic chain	42%
5 stars	45%	Stand-alone	42%
Gender of respondent		Position of respondent	
Male	43%	Director/General Manager	36%
Female	41%	Environmental Manager	24%
Unspecified	16%	Departmental Manager	31%
		Others	9%

3.2 Measurement of variables

Questionnaire items for all variables were obtained and adopted from existing literature. All variables were measured with a 7-point Likert scale. Table 2 summarises the questions and items that measure each construct. The control variables for this study are hotel size (measured by number of rooms), and hotel rating (measured by the star rating). Large, superior hotels are likely to use their resources to facilitate the deployment of their organisational capabilities and to implement formal approaches to managing environmental issues (Fraj et al., 2015; Park et al., 2014; Tarí et al., 2010). The control variables are included as moderators of the relationships between PES and environmental performance and between PES and competitive advantage.

3.3 Data Analysis and common method bias

Structural equation modelling (SEM) was employed using partial least squares (PLS) with SmartPLS 3.0 to test the proposed model. PLS is suitable and convenient when the main objective of the research is to predict one or more dependent variables, not to confirm a previously theoretically accepted model (Hair Jr et al., 2017). This study explores how the capabilities that previous research studied separately are interconnected and how they affect the deployment of PES and organisations' competitive advantage. Because the study of PES is relatively new and the theoretical model has yet

to be explored, PLS is a suitable method for this study. PLS is also the method of choice when the number of observations is lower than 250 (Reinartz, Haenlein, & Henseler, 2009). Finally, PLS allows for joint use of formative and reflective constructs in the same model (Hair Jr et al., 2017).

Table 2: Measurement of variables

Construct	Question	Questionnaire item
Learning orientation (LO)	To what extent do the participants agree on the organisation's learning climate?	13 items (Calantone et al., 2002; Fraj et al., 2015)
Innovativeness (IN)	To what extent do the participants agree on the organisation's openness to new ideas and willingness to change?	4 items (Calantone et al., 2002; Fraj et al., 2015)
Quality management (QM)	To what extent have the hotels adopted quality practices?	19 items (Molina-Azorín et al., 2015)
Proactive environmental strategy (PES)	To what extent do the participants agree that there is a wide range of environmental activities in various areas in their hotels?	15 items (Fraj et al., 2015; Sharma, 2009)
Environmental performance (EP)	To what extent do the hotels reduce the indicated environmental impact through the improvement of environmental management?	10 items (Molina-Azorín et al., 2015)
Competitive advantage (CA)	To what extent do the participants agree that their organisations are competitive because of strategies and activities relative to those of other firms in the sector?	8 items (López-Gamero et al., 2011; Molina-Azorín et al., 2015; Wagner, 2009)

Common method bias may cause problems for survey research that relies on self-reported data, especially when one respondent reports on both dependent and independent variables. This potential problem is controlled through procedural and statistical methods (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). The procedural method includes separating the measurement of the predictor and criterion variables, and ensuring confidentiality and anonymity. The extent of common method bias was assessed with three tests. First, Harman's single-factor test, performed by including all items in a principle components analysis (Podsakoff et al., 2003), showed that one factor explains 39 percent of variance. While 39 percent is a significant amount of variance to be explained by a single factor, it is not a majority. Second, the Lindell and Whitney (2001) test was employed using a theoretical unrelated construct, a decision-making-purposes construct, to adjust the correlations among the principle constructs. Since the correlation values among the decision-making-purposes construct and the principle constructs were lower than the correlation values among the principle constructs, there was minimal evidence of common method bias. Third, the correlation matrix indicated no highly

correlated factors ($r > 0.90$; Pavlou, Liang, & Xue, 2007). These procedural methods and statistical tests suggest that the effect of common method bias on the results is negligible.

4. Results analysis

Analysis of the data's factor structure for the PES, environmental performance, and organisational competitive advantage constructs was performed using principal component analysis and varimax rotation prior to implementing the PLS technique. The Kaiser-Meyer-Olkin (KMO) measure showed the sample's adequacy for the analysis (0.907 for PES, 0.811 for CA), and all KMO values for individual items were greater than 0.75, which is well above the 0.5 threshold (Field, 2013). Each of the two constructs had two factors that had eigenvalues above Kaiser's criterion, explaining 63.46 percent (PES) and 76.61 percent (CA) of the variance. The PES and organisational competitive advantage constructs were transformed to be reflective second-order constructs.

4.1 Analysis of the measurement models

Because the research model includes higher-order constructs, a combination of the repeated-indicators approach and the use of latent variable scores in a two-stage hierarchical component model analysis was applied (Hair Jr et al., 2017). The repeated indicator approach was used to obtain the latent variable scores for the lower-order constructs. In this step, all of the items' loadings were above the critical value of 0.7 except item 6 under the QM construct and items 4 and 15 under the PES construct, whose loadings were lower than the critical value. Therefore, these items were removed from the analysis. In the second stage, the lower-order construct scores were used in the higher-order construct measurement model.

After the higher-order model was constructed, the measurement model was assessed, with the reflective and formative elements of the model analysed independently. Reliability (including construct reliability), convergent validity, and discriminant validity were examined as the reflective constructs. The *reliability* of the indicators' out loadings was examined to determine whether the indicator loadings are higher than 0.70. As Table 3 shows, the loadings of all items except two—one item under the learning orientation variable and one under the innovativeness variable, whose loadings were slightly lower than the threshold—were higher than 0.7. However, it has been argued

that the 0.7 threshold should not be so rigid in second-order variables (Fraj et al., 2015), so these items were retained in the model.

Table 3: Measurement model: Reflective constructs

Factor and Indicator	Loading	Alpha	Composite Reliability	AVE
Competitive Advantage (CA)		0.722	0.878	0.782
Differentiation	0.882			
Cost	0.887			
Environmental Performance (EP)		0.951	0.958	0.695
Water	0.726			
Energy	0.780			
Non-renewable resources	0.872			
Chemical	0.851			
Solid waste	0.828			
Discharges	0.863			
Emission	0.862			
Noise	0.843			
Landscape	0.873			
Risk of Accident	0.829			
Innovativeness (IN)		0.819	0.882	0.654
New offering	0.829			
New changes	0.831			
New operation	0.912			
First mover	0.638			
Learning Orientation (LO)		0.855	0.902	0.7
Commitment to learning	0.685			
Intra-organisation knowledge-sharing	0.861			
Shared vision	0.885			
Open-mindedness	0.898			
Proactive Environmental Strategy (PES)		0.867	0.937	0.882
Environmental management practices	0.948			
Interactions and communication with stakeholders	0.930			

The *construct reliability* of the construct measures was evaluated through an internal consistency measure. The composite reliability should be higher than 0.70 and, in this case, five reflective constructs had high levels of internal reliability. *Convergent validity* was assessed based on the average variance extracted (AVE). The results showed that the AVE values were well above the 0.5 threshold, so the measures of the reflective constructs had high levels of convergent validity. *Discriminant validity* was assessed to determine whether the construct measures discriminate well

empirically. According to the Fornell-Larcker criterion (Hair Jr et al., 2017), the square root of the AVE values of each construct should be higher than the correlation coefficients between the constructs. Overall, the results showed that all reflective constructs are valid measures of unique concepts (Table 4).

Table 4: Discriminant validity

Construct	CA	EP	IN	LO	PES
CA	0.884				
EP	0.756	0.834			
IN	0.551	0.415	0.809		
LO	0.540	0.359	0.656	0.837	
PES	0.735	0.714	0.652	0.644	0.939

For the formative construct, two techniques for the measurement model are required. First, *collinearity of indicators* were examined to determine whether each indicator's variance inflation factor (VIF) value is lower than the threshold value of 5 (Hair Jr et al., 2017). The results showed that no VIF values were greater than 5. (The highest value was 2.639). Thus, the formative construct did not present multicollinearity issues. Second, the significance of each indicator's *outer weight* and *outer loading* were examined using bootstrapping of 5,000 subsamples. Although two indicators' weights were not significant, the corresponding item loadings were relatively high and significant (Table 5). Therefore, the items were retained (Hair Jr et al., 2017).

Table 5: Measurement model: Formative construct

	Outer Weight			Out Loading		
	Weight	T Statistics	P Values	Loading	T Statistics	P Values
QM1: Operational systems	0.347	2.272	0.023	0.883	15.881	0.000
QM2: Information systems	0.077	0.451	0.652	0.838	12.895	0.000
QM3: Strategic systems	0.452	2.350	0.019	0.930	21.980	0.000
QM4: Technical systems	0.252	1.524	0.128	0.830	13.020	0.000

4.2 Analysis of the structural model

Once the construct measures were confirmed to be reliable and valid, the next step was to assess the structural model results. Collinearity issues for the structural model were checked. The results showed that all VIF values of predictor constructs were above 0.20 and below the threshold of 5. Therefore, collinearity among the predictor constructs is not a critical issue in the structural model. Next, the structural model was examined through the significance of the path coefficients, and the R^2

values of the dependent values were observed. The results showed that all of the path coefficients were significant at the 1 percent level except the coefficient of LO to PES, which was significant at the 10 percent level. Moreover, the R^2 values showed that the model explains 64.90 percent of the variance of the competitive advantage, 56.50 percent of the variance of PES, and 50.90 percent of the variance of environmental performance. The influence of the independent construct on the dependent construct was also assessed through the effect size f^2 values. For the interpretation of the effect size in PLS-SEM, it is recommended that f^2 values of 0.02, 0.15, and 0.35, respectively, indicate small, medium, and large effects of an exogenous construct (Hair Jr et al., 2017). The results showed that, learning orientation (0.039), innovativeness (0.096) and quality management (0.138) have a small effect on PES, while environmental performance (0.316) and PES (0.220) have a medium effect on competitive advantage. In addition to an evaluation of predictive accuracy using the R^2 values, Stone-Geisser's Q^2 values were examined using the blindfolding procedure. A Q^2 value larger than zero indicates the predictive relevance of the model (Hair Jr et al., 2017). The results showed that the Q^2 values of all three dependant variables were above zero (Q^2 -CA = 0.471; Q^2 -EP = 0.316; Q^2 -PES = 0.457). Thus, these results provided clear support for the model's predictive relevance. Table 6 provides the results for the structural model.

Table 6: Results of the structural model

Hypotheses	β	T Statistics	P Values
H1: LO -> PES	0.173	1.872	0.061
H2: IN -> PES	0.276	3.030	0.002
H3: QM -> PES	0.388	3.558	0.000
H4: PES -> EP	0.714	13.282	0.000
H5: PES -> CA	0.399	4.265	0.000
H6: EP -> CA	0.471	5.488	0.000

The structural path coefficients were used to confirm the proposed hypotheses. Learning orientation significantly influence PES at the 10 percent level of significance ($\beta = 0.173$; $t = 1.872$; $p = 0.061$). Although some factors may be involved in PES implementation, learning orientation is also important if organisations are to develop environmentally friendly strategies. Regarding hypothesis 2, PES is positively influenced by innovativeness ($\beta = 0.276$; $t = 3.030$; $p = 0.002$), so organisations that pursue

new ideas and new ways to do things are more likely to implement PES than are organizations that are not so innovative. For the relationship between quality-management practices and PES, Table 6 shows that quality management favours PES. Therefore, hypothesis 3 is supported ($\beta = 0.388$; $t = 3.558$; $p = 0.000$).

As a consequence of implementing PES, organisations are helped towards positive environmental outcomes, therefore hypothesis 4 is supported ($\beta = 0.714$; $t = 13.282$; $p = 0.000$). Moreover, PES positively influences competitive advantage, lending support to hypothesis 5 ($\beta = 0.399$; $t = 4.265$; $p = 0.000$). Hypothesis 6, which proposes that environmental performance directly affects competitive advantage, is also supported ($\beta = 0.471$; $t = 5.488$; $p = 0.000$). These findings indicate that competitive advantage can be obtained from PES and from having positive environmental outcomes. Figure 2 presents the path coefficients of the structural model.

Figure 2: Results of the structural model

4.3 Analysis of mediating effects

This study employed the procedures suggested by Hair Jr et al. (2017) for the mediation analysis. To begin, the significance of the indirect effect between PES and competitive advantage was tested through the bootstrapping procedure with 5,000 subsamples. Since the confidence interval does not include zero (0.206, 0.486), the indirect effect is significant ($t = 4.657$, $p = 0.00$). A test for the significance of the direct effect showed that the direct effect from PES to competitive advantage is

also significant since zero is not included in the confidence interval $[0.203, 0.566]$, $t = 4.265$, $p = 0.00$). Since the product of the direct effect and indirect effect is positive, environmental performance mediates the relationship between PES and competitive advantage.

4.4 Analysis of moderating effect

A two-stage approach was used to examine the moderating effect of the hotel size and the hotel rating on the relationship between PES and environmental performance, and on that between PES and competitive advantage. Under the two-stage approach, the scores of the exogenous variables and moderator are obtained from the estimation of the main effects model in stage one, and these scores are then multiplied to create a single-item measure used to measure the interaction terms in stage two (Hair Jr et al., 2017). A 5,000-subsamples bootstrapping procedure with SmartPLS 3 showed that hotel size significantly moderates only the relationship between PES and competitive advantage (p -value = 0.048), while hotel rating did not have a significant effect on either relationship. The moderating effect of hotel size is positive on the relationship between PES and competitive advantage, with a coefficient of 0.129. As the hotel size increases, the relationship between PES and competitive advantage also increases ($0.399 + 0.129 = 0.528$). According to Hair Jr et al. (2017), the moderator's f^2 effect size value of 0.047 indicates a small effect. These results suggest that, with good resources and capabilities, larger environmentally friendly hotels can gain cost and differentiation advantages from the implementation of PES.

5. Discussion and conclusions

The purpose of this study is to extend the natural-resource-based theory to businesses in developing countries by identifying the organisational capabilities that complement the adoption of a PES which, in turn, lead to a competitive advantage. This study examines the relationships among the organisational capabilities (learning orientation, innovativeness, and quality-management), PES, environmental performance, and competitive advantage by combining variables from two research models (Fraj et al., 2015; Molina-Azorín et al., 2015). While several studies on PES have been conducted in developed countries, the present study is the first to shed light on the effect of such strategies in a developing country, Thailand, where the hotel and tourism industry plays a key role in

the national economy. As this applies to many developing countries, it is assumed that Thailand is a suitable representative for these countries. Several implications can be drawn from the findings for both scholars and practitioners who are involved in the development of operations and management in the hospitality industry.

5.1 Contributions to theory

This study provides the following two theoretical contributions. First, the study follows the call from Hart and Dowell (2011) to explore the natural-resource-based view of the firm in relation to organisational activities and their effect on the poor. A number of research studies in the hospitality context have been conducted in developed countries (Fraj et al., 2015; Martínez-Martínez et al., 2015; Molina-Azorín et al., 2015). However, this study is the first that focusses exclusively on developing countries. This extends previous studies by adding to the literature that PES is also highly relevant for the hotel industry in developing countries.

Second, the findings of this study reveal how businesses can obtain a sustained competitive advantage from the adoption of PES in developing countries. In order to achieve this, companies can utilise three complementary capabilities (innovativeness, learning orientation, and quality management). The study supports Hart's (1995) natural-resource-based view, as it combines his originally suggested quality management capabilities with recent findings regarding the capabilities of learning orientation and innovativeness (Fraj et al., 2015). Consequently, the study is the first that confirms the relevance of these three capabilities in a holistic model. The specific implications of these findings are discussed below.

5.2 Practical implications

Regarding the relationships between capabilities that complement the adoption of PES, the findings show that organisational capabilities related to learning orientation, innovativeness and quality management complement the development of PES. Although a learning orientation supports the adoption of PES significantly (at the $p < 0.1$ level), the relationship appears weaker in the hotel industry in Thailand than in the hotel industries of other countries, such as Spain (Fraj et al., 2015; Rodríguez & del Mar Armas Cruz, 2007). Commitment to learning is the weakest of the components

of the learning capability as the loadings are the lowest (Appendix A). A learning culture could be a key moderator of the relationship between learning orientation and PES in Thailand. In addition, seniority is important in the Thai culture (McC Campbell, Jongpipitporn, Umar, & Ungaree, 1999; Swierczek & Onishi, 2003), so Thai people are unlikely to question or challenge norms and beliefs delivered from people at upper hierarchical levels. This cultural trait could be reflected in these employees' learning style, which differs from that in western countries (Joy & Kolb, 2009), and could affect the relationship between learning orientation and the implementation of PES. Therefore, hotels in developing countries should consider their learning culture before adopting PES. If Thailand's hotel industry wants to compete in the global business arena, the relationship between a learning orientation and PES must be strengthened by changing seniority-based business practices (McC Campbell et al., 1999) and how the organisational culture affects learning. Managers must view employee learning as an investment, not an expense, and employees at all levels should be encouraged to challenge norms and beliefs. An improvement in environmental knowledge, environmental awareness and an environmental concern by employees will influence employees' ecological behaviour, and the implementation of green practices in hotels (Chan et al., 2014). Specifically, employees should be encouraged to question organisational practices as they relate to environmental problems and should be rewarded for communicating their ideas and programs (McC Campbell et al., 1999). Also, the hotels must provide sufficient training programs, facilities, and support for this change, as the results of this study suggest that changes in the organisational learning can strengthen the relationship between learning orientation and the adoption of PES.

As expected, innovativeness positively influences the adoption of PES. Therefore, the results suggest that hotels with higher levels of an innovative climate are more likely to implement PES than non-innovative hotels. Hotels with high innovative competency search for new ways to do things, assess the possible risks of doing them without being overly risk-averse, and provide new products and services to customers. Implementing environmental management practices to minimise environmental inefficiencies requires hotels to initiate new ideas and new approaches; therefore, innovative hotels may be more likely to pursue new technologies and new operations that complement the adoption of

PES. For example, hotels may change their chemical-based cleaning products to more eco-friendly alternatives in order to minimise environmental impacts and the impact on their staffs' health. A new wastewater treatment system may enable hotels to reuse their water and improve quality of water returned to the freshwater supply in the environment. In line with studies in various business sectors in other countries (Clarkson et al., 2011; Fraj et al., 2015; Leonidou et al., 2013), environmental success is explained by an ability to pursue advanced innovation continuously.

The results confirm that quality-management practices positively influence the adoption of PES. Service quality and operational quality are among hotels' main concerns (Harrington & Kendall, 2006), and in highly competitive markets, the use of green strategies tend to impress their customers. As quality-management practices are commonly used in hotel operations, hotels could use their infrastructure and knowledge of quality management to complement the adoption of PES. For example, collaboration with suppliers could go beyond supplying quality products to providing eco-friendly quality products. In addition, hotel staff, who are familiar with quality-management reporting might not require additional skills to report environmental performance improvements that result from PES. It can be argued that the positive relationship between quality-management practices and the adoption of PES found in the manufacturing sector (Curkovic, Melnyk, Handfield, & Calantone, 2000) and in the hospitality industry in western countries (Molina-Azorín et al., 2015) is also found in the hotel industry of developing countries. The results also show that the information dimension is the weakest of the dimensions of quality management (Table 5). While strategic systems and operational systems are the most important dimensions of quality management, the information systems and technical system do not appear to have a significant effect on quality management.

For the consequences of the adoption of PES, the results show that PES positively affects both environmental performance and organisational competitive advantage. The adoption of PES does not result in overnight success and the investment of resources and capabilities are required. Moreover, the returns from such investment may not appear in the short-term. However, the investment in resources and capabilities that support the adoption of PES will improve the long-term organisational performance; and sustained competitive advantage can be obtained from PES. The results show both a

direct and indirect relationship between PES and organisational competitiveness through environmental performance. Logically, green strategies will directly lead to positive environmental performance in terms of utility consumption, waste management, and environmental risk management because proactive environmental hotels will be able to identify and eliminate environmental inefficiencies. Reducing consumption of utilities and waste allows hotels to reduce their operational costs and waste-management costs, leading to cost advantages. Apart from short-term cost reduction from utility costs and waste management, using eco-friendly products can extend the useful life of equipment and lower maintenance costs, which reduces operational costs in the long run. In addition, pro-environmental strategies allow hotels to assess their environmental risks and to communicate these risks and their strategies for addressing them to the public, enhancing their reputation for environmental responsibility. Therefore, a differentiation advantage can also be obtained applying environmentally friendly strategies.

The results of this study suggest that the adoption of environmentally friendly strategies depends on the support from several stakeholders, including government, management, and employees. In addition, in order to encourage more hotels to implement PES, public's awareness and support should not be overlooked as it plays a significant role to shape corporate environmental management practices (Buysse & Verbeke, 2003). Thai's public and their increasing willingness to supporting environmentally friendly organisations for the past few years have paved the way for successful PES (OECD, 2015). As a result, it is highly relevant to increase the public awareness of environmental protection and environmental sustainability. With the support from all parties, businesses are most likely to successfully implement PES and gain competitive advantages.

5.3 Limitations and future studies

The results of this study are subject to the following limitations. First, the analysis is based on the participants' perceptions, which are subjective and may differ from objective facts. Second, this study was not longitudinal, so it does not investigate the effects of organisational capabilities on organisational performance through PES over time. Future research could determine how cultural variables moderate and/or mediate the relationship between organisational capabilities and PES and

over time. As the results of this study confirm and extend previous studies in relation to PES implementations by focussing on developing countries, cross-national studies would help to determine whether the findings hold in countries other than Thailand in order to separate out the influence of national culture on the identified relationships. Such studies will help to make tourism more sustainable in other developing countries that depend on this industry. With regard to the substantial challenges that many developing countries face in relation to climate change and pollution, the success of green initiatives is essential for tourism to develop in these countries.

Appendix A: Questionnaire items

	Loadings	Weights	Composite reliability	AVE	Alpha
LO: Learning Orientation (Reflective-Reflective Second-order)			0.902	0.700	0.855
<i><u>LO1: Commitment of learning</u></i>	0.685		0.934	0.528	0.923
1 Managers basically agree that our organisation's ability to learn is the key to our competitive advantage	0.757				
2 The sense around here is that employee learning is an investment, not an expense	0.866				
3 Learning in my organisation is seen as a key asset necessary to guarantee organisational survival	0.911				
<i><u>LO2: Intra-organisational knowledge sharing</u></i>	0.847		0.883	0.716	0.802
4 The hotel emphasises the importance of knowledge sharing	0.836				
5 The hotel has specific mechanisms for sharing relevant information with the employees	0.836				
6 Employees and departments share their knowledge in order to keep learning alive and to achieve the hotel's goals	0.866				
<i><u>LO3: Shared vision</u></i>	0.905		0.932	0.774	0.902
7 All employees are committed to the goals of this hotel	0.827				
8 Employees view themselves as partners in charting the direction of this organisation	0.891				
9 There is total agreement on the organisational vision that guides our strategy across all levels and departments	0.901				
10 There is a commonality of purpose in this hotel	0.898				
<i><u>LO4: Open-mindedness</u></i>	0.897		0.903	0.756	0.839
11 Personnel in this hotel realise that what they know about the marketplace must be continually questioned	0.844				
12 We continually judge if our decisions and activities taken over time are the best for the hotel	0.860				
13 We are not afraid to reflect critically on the shared assumptions we have made about our clients	0.864				
IN: Innovativeness (Reflective First-order)			0.882	0.654	0.819
1 Our hotel offers innovative services and products to our customers	0.829				
2 In recent years, we have developed changes and improvements in the products and services we offer to our clients	0.831				
3 Our hotel seeks out new ways to do things	0.912				
4 Our hotel is often the first to market with new products and services	0.638				
QM: Quality Management (Reflective-Formative Second-order)					
<i><u>QM1: Operational system</u></i> (VIF = 2.911)		0.337	0.913	0.638	0.885
1 Quality training courses are offered for all hotel managers and area managers	0.866				
2 Quality training is offered to all employees	0.883				
3 Employee motivation is encouraged	0.852				
4 Quality issues are considered when the services are offered	0.783				

5	Our hotel collaborates with intermediaries in order to improve the product offered in the establishment	0.709				
6	Our hotel collaborates with suppliers in order to improve the product offered in the establishment	removed				
<i>QM2: Information system (VIF = 3.309)</i>			0.251	0.918	0.738	0.880
7	Quality information/data is used in day-to-day activities in different areas	0.825				
8	Quality information/data is available for all employees	0.909				
9	Quality information/data is used to improve the quality of the service	0.903				
10	Financial and operational indicators are used to measure quality effects	0.793				
<i>QM3: Strategic systems (VIF = 2.937)</i>			0.297	0.911	0.674	0.878
11	Quality policy is formally communicated to all employees	0.790				
12	Quality is highlighted by a well-defined set of policies and procedures	0.892				
13	Required resources are provided to improve quality service	0.806				
14	The needs of customers are used to improve the quality	0.816				
15	Complaints and suggestions from customers are evaluated to improve the service quality	0.796				
<i>QM4: Technical systems (VIF = 2.080)</i>			0.251	0.937	0.789	0.910
16	Internal audits are performed	0.816				
17	Satisfaction surveys are conducted	0.894				
18	A complaints and suggestions system is employed	0.935				
19	A system of quality indicators is used for continuous improvement	0.905				
PES: Proactive Environmental Strategies (Reflective-Reflective Second-order)				0.937	0.882	0.867
<i>PES1: Environmental management practices</i>		0.948		0.938	0.683	0.922
1	Our hotel has a clear environmental policy	0.887				
2	We continuously update our knowledge about the environmental impacts of our industry	0.888				
3	Managers in our hotel are interested in the best environmental practices in our sector	0.807				
5	Our hotel gives priority to purchasing ecological and environmentally respectful products (biodegradable, reusable, recyclable, etc.) above other environmentally harmful alternatives	0.830				
6	We have reduced purchases of products that can be harmful to the environment (materials that cannot be recycled/biodegraded, toxic products, polluting materials, etc.)	0.796				
7	Our hotel applies energy and water saving practices	0.743				
8	Our hotel makes a selective collection of paper, oil, glass, etc.	0.825				
<i>PES2: Interactions and communication with stakeholders</i>		0.931		0.923	0.603	0.904
4	We publish regular external reports about our environmental impacts or provide information on a website	removed				
9	Managers have discretion (time and funds) to undertake initiatives for environmental improvements	0.706				

10	In our hotel, managers and employees are committed to improving the environmental performance of the organisation	0.874			
11	Our hotel gives the employees training on environmental issues	0.844			
12	Our hotel recognises and rewards the environmental initiatives of its employees	0.815			
13	We educate guests about responsible environmental practices	0.808			
14	We try to facilitate customer collaboration in achieving a more sustainable hotel (reusing towels, lighting and climate control, responsible use of facilities, recycling)	0.818			
15	Our hotel organises activities related to nature and the environment for its clients (excursions, activities, lectures, conferences, etc.)	removed			
EP: Environmental Performance (Reflective First-order)			0.958	0.695	0.951
1	Lower water consumption	0.727			
2	Lower energy consumption	0.780			
3	Lower use of non-renewable resources	0.872			
4	Lower use of toxic materials	0.851			
5	Less solid waste	0.828			
6	Fewer discharges	0.863			
7	Fewer emissions	0.862			
8	Noise abatement	0.843			
9	Less damage to landscape	0.873			
10	Lower risk of serious accidents	0.829			
CA: Competitive Advantage (Reflective-Reflective Second-order)			0.878	0.782	0.722
<u>CA1: Differentiation</u>		0.882	0.919	0.588	0.899
1	Gaining brand image	0.799			
2	The quality of the service offered is better than that offered by competitors	0.920			
3	Maintaining your current customers and attracting other new customers	0.910			
4	Achieving greater credibility before the society	0.930			
<u>CA2: Cost</u>		0.887	0.908	0.713	0.866
5	General costs are minimised because of the unification of some administrative and/or technical processes	0.845			
6	Reduction in regulation compliance costs (the firm avoids fines for polluting and compensation for damages caused)	0.843			
7	Reduction in insurance premium costs	0.872			
8	Better access to bank loans and lower financial costs	0.817			

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