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Resources and capabilities as drivers of hotel environmental marketing strategy: Implications for competitive advantage and performance

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Abstract

Building on the resource-based view, we develop a model of drivers and outcomes of environmentally friendly marketing strategies in the Greek hotel sector. Data collected from 152 hotels reveal that possessing sufficient physical and financial resources is instrumental in achieving effective green marketing strategies. In addition, shared vision and technology sensing/response capabilities help develop a sound environmentally friendly marketing strategy. In turn, the adoption of such a strategy is conducive to obtaining competitive advantage, which subsequently increases the potential to achieve superior market and financial performance. Furthermore, the study finds that the effect of environmental marketing strategy on competitive advantage is stronger in the case of intense competitive situations, while market dynamism has no moderating effect on this association. Several implications can be drawn from the study findings for both corporate and public policy makers and interesting directions for future research are provided.

Keywords: Environmental marketing; Business performance; Resource-based view; Hotel industry; Greece

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Highlights

- We examine the drivers and outcomes of environmental marketing strategies.
- We build on the resource-based view of the firm and focus on hotels in Greece.
- We use a survey to collect data and structural equation modelling for analysis.
- Certain resources and capabilities are instrumental for green marketing strategies.
- In turn, such strategies lead to competitive advantages and superior performance.

Resources and capabilities as drivers of hotel environmental marketing strategy: Implications for competitive advantage and performance

1. Introduction

Attention to ecological issues has been gaining increasing momentum within both the business and academic communities since the early 1970s, when the first worrying signs about the environment began to appear. With the intensification of ecological problems on the planet, various stakeholder groups (e.g., customers, regulators, general public) have increasingly put pressure on firms to take drastic measures to protect and sustain the natural environment (Chan & Wong, 2006; Klassen & Whybark, 1999; Rueda-Manzanares, Aragón-Correa, & Sharma, 2008). This pressure has inevitably given rise to a new body of research focusing on the interface between business organizations and the biophysical environment, in turn producing dozens of articles covering a wide variety of topics (for a recent review, see Leonidou & Leonidou, 2011).

Although valuable work has accumulated in this relatively new field of marketing and management, more research is necessary to effectively address critical issues relevant to the topic (Baker & Sinkula, 2005; Cronin, Smith, Gleim, Ramirez, & Martinez, 2011). One issue that warrants particular attention is the distinctive role of organizational resources and capabilities in developing a sound environmental marketing strategy, as well as the impact of this strategy on competitive advantage and business performance (Aragón-Correa & Rubio-Lopez, 2007; Chan, 2005; Menon, Menon, Chowdhury, & Jankovich, 1999). While prior research (e.g., Hart, 1995) has considered firms' environmental practices as a resource and/or capability that enforces competitive advantage, little attention has been specifically paid to the role of the resources and capabilities responsible for shaping an eco-friendly marketing strategy and its performance outcomes.[1]

Because studies on environmental marketing/management have mainly focused on manufacturing firms, due to their greater exposure to ecological issues in the form of inputs and outputs, investigation needs to extend to green issues in the services sector, which has often been

described as destroying the environment 'silently' (Álvarez-Gil, Burgos-Jiménez, & Céspedes-Lorente, 2001; Carmona-Moreno, Céspedes-Lorente, & De Burgos-Jiménez, 2004; Foster, Sampson, & Dunn, 2000). A driving force in this sector is tourism, which, with its unprecedented growth in recent decades, has been responsible for making excessive use of natural resources, consuming a great amount of energy, and damaging the biophysical environment (Rodriguez & Cruz, 2007). Reflecting this, the scope of the tourism–environment interface has experienced a serious shift, from emphasizing more traditional concerns about natural resource management and recreational opportunities to introducing more unorthodox forms of tourism, such as ecotourism and sustainable tourism (Knowles, Macmillan, Palmer, Grabowski, & Hashimoto, 1999).

Inextricably linked to tourism is the hotel industry, in which environmental issues play a unique role for four major reasons.[2] First, hotel operations usually comprise a set of smaller activities, each using limited resources and having only a minimal damaging effect on the environment; second, in most countries, environmental legislation regulating hotels is relatively rare because of their less visible impact on the environment, thus offering fertile ground for voluntary environmental management actions; third, customers are directly influenced by the services provided by hotels and therefore are actively exposed to their environmentally friendly practices; fourth, the natural environment forms part of the tourist product itself, determining in many ways the quality and satisfaction offered to tourists (Álvarez-Gil et al., 2001; Carmona-Moreno et al., 2004; Deng & Burnett, 2002; Font, 2002; González & León, 2001; Knowles et al., 1999).

Although the uniqueness characterizing the relationship between hotels and the natural environment has received increasing attention in the field (Kasim, 2006), environmental marketing issues within the hotel industry have only been tangentially tackled (Hudson & Miller, 2005). However, the investigation of these issues is critical because (1) in recent years, tourist buying behavior has changed dramatically, as demonstrated by the growing involvement in environmental-caring activities, reliance on decisions regarding sustainable issues, and a willingness to pay higher prices for eco-friendly goods (Han, Hsu, Lee, & Sheu, 2011; Lee, Hsu, Han, & Kim, 2010); (2) the

marketing function is at the forefront of the hotel's environmentally friendly activity, since it is the one that first identifies and subsequently satisfies the needs and wants of customers with regard to green issues (Kotler & Lee, 2008); and (3) the hotel's eco-marketing activities (e.g., products/services, prices, distribution, communications) are greatly responsible for enhancing business performance, as a result of their direct impact on end users (Leonidou & Leonidou, 2011).

Our study aims to fill this void in the green hotel literature by proposing and testing an integrated model of the drivers and outcomes of environmental marketing strategies pursued by hotels. Specifically, we focus on (1) the effect of both organizational resources and capabilities on formulating an eco-friendly marketing strategy, (2) the link between this strategy and the achievement of competitive advantage, (3) the impact of an environmentally driven competitive advantage on both market performance and financial performance, (4) the effect of the firm's market performance on its financial performance, and (5) the moderating role of both competitive intensity and market dynamism on the link between environmentally friendly marketing strategy and competitive advantage.

The remainder of this article proceeds as follows: in section 2, we review the pertinent literature on the environmentally responsible behavior of hotels. In section 3, we present the conceptual model of the study and provide its theoretical justification. In section 4, we formulate several research hypotheses among the key constructs of the study. The specific methodology adopted for carrying out our research is subsequently explained, followed by an analysis of the data and presentation of the findings with regard to each of the hypotheses tested. The final three sections derive the study's conclusions, offer managerial and public policy implications, and suggest future research directions.

2. Literature review

Although initial research on environmental and societal issues came from marketing scholars (e.g., Kotler & Levy, 1969), researchers from the management discipline have since taken the lead. The

intensification of government, public, and company concerns with protecting the environment in the 1990s was responsible for the exponential growth of the discipline, which continues relentlessly to the present day (Banerjee, 2002; Menon & Menon, 1997). This has resulted in a voluminous and widely diverse line of research, which has been described as too fragmented, heterogeneous, and non-programmatic (Leonidou & Leonidou, 2011). Part of this research has focused on environmental issues within the context of the tourism industry in general and the hotel sector in particular (Kasim, 2006). Furthermore, the literature on green dimensions of hotels has taken various directions, which we elaborate in the following paragraphs.

The first stream focuses on the *knowledge*, *attitudes*, and *behavior* of hotel organizations with regard to sustainability and environmental issues. Some of these studies (e.g., Horobin & Long, 1996; Kasim, 2009; Leslie, 2007; Vernon, Essex, Pinder, & Curry, 2003) stress that though most hoteliers perceive the adoption of environmental practices favorably, they have limited awareness and an unclear understanding of the specific dimensions involved in these green practices. Even in the cases in which positive attitudes toward protecting the environment were adopted, these were usually guided by the generation of lower costs and/or higher revenues (Penny, 2007; Stabler & Goodal, 1997). Some scholars highlight the situation-specific role of both country (e.g., geo-political, socio-cultural, economic) and personal (e.g., educational background, environmental expertise, nationality) factors in shaping green attitudes in the hotel sector (Bohdanowicz, 2005, 2006; Leslie, 2007; Rivera & De Leon, 2005; Tzshentke, Kirk, & Lynch, 2008). Dewhurst and Thomas (2003) classify hotels according to their environmental attitudes and behavior into unconvinced minor participants, anti-green pragmatists, or committed actors, with each denoting an increasing level of commitment to green practices.

The second group of studies centers mainly on the factors *driving and/or obstructing* the adoption of eco-friendly behavior among hotels, especially that of a proactive nature. Drivers of green behavior relate either to macro forces, such as stakeholder pressures, regulatory measures, and green requests by customers, or to micro factors, such as managerial traits and values,

ownership status, and organizational culture (Kasim, 2007a; López-Gamero, Claver-Cortés, & Molina-Azorín, 2011; López-Gamero, Molina-Azorín, & Claver-Cortés, 2011; Rivera, 2004; Shah, 2011). The underlying motives for the adoption of a green approach by hotels were basically grouped into financial (e.g., more sales/profits), altruistic (e.g., ethical), or both (Bohdanowicz, Zientara, & Novotna, 2011; Garay & Font, 2012; Tzchnetke, Kirk, & Lynch, 2004a, 2004b). Bonilla Priego, Najera, and Font (2011) find that most hotels are internally driven in their purpose and ad hoc in their decision making, with a limited understanding of externally driven benefits and motivation for most systematic management systems, and Sampaio et al. (2012a, 2012b) stress the role of worldviews, self-efficacy beliefs, context beliefs, and goal orientation as potential motivations explaining environmental engagement among small firms. Several studies (e.g., Chan, 2008, 2011; Forsyth, 1995; Kasim, 2007a, 2007b; Tzchentke, Kirk, & Lynch, 2008) have also focused on the factors preventing the adoption of eco-friendly behavior, which may be of an institutional (e.g., lack of infrastructural support by local authorities), operational (e.g., reduction in the quality of eco-friendly products/services), or financial (e.g., extra costs involved in taking ecological actions) nature.

The third research stream deals with issues pertaining to the *environmental management practices* of hotels, which can be broadly divided into planning/organization (e.g., appointment of environmental specialists) and operational (e.g., water conservation, energy reduction) (Bohdanowicz, Zientara, & Novotna, 2011; Carlsen, Getz, & Ali-Knight, 2001; Mensah, 2006). Environmental management practices can be guided either by genuine concerns about preserving the environment (explicit) or by factors unrelated to green thinking (tacit) (Céspedes-Lorente, Burgos-Jiménez, & Alvarez-Gil, 2003; Erdogan & Baris, 2007). Such practices mainly refer to (1) water conservation, such as savings in the water used in laundry machines (Chan & Lam, 2001; Deng & Burnett, 2002); (2) energy savings, such as the reduction of electricity used for lighting (Chan & Lam, 2003; Shiming & Burnett, 2002); (3) solid waste treatment, such as the recycling of glass, paper, and metal (Ball & Taleb, 2011; Chan & Lam, 2001a; 2003; Shanklin, Petrillose, &

Pettay, 1991); and (4) air pollution control, such as minimizing carbon dioxide emissions (Shanklin, 1993). Céspedes-Lorente et al. (2003) argue that the degree of adopting environmental management practices largely depends on the power of stakeholders regarding green issues, the ways this power is used to protect the environment, and the perceived financial benefits accruing from such practices.

The fourth group of studies addresses *environmental marketing* issues in hotel organizations. For example, El Dief and Font (2010) find that various organizational contextual factors (i.e., targeting Western tourists and being affiliated with an international hotel chain) and marketers' demographic characteristics (i.e., gender, age, and educational background) were the best predictors of more proactive green marketing behavior in the Egyptian hotel sector. In addition, Hudson and Miller (2005) propose a responsible marketing model for tourism, which identifies four possible strategic situations toward environmental marketing: (1) inactive, that is, finding no benefit in allocating resources to eco-friendly activities or having no interest in communicating them; (2) reactive, that is, finding engagement in environmental issues beneficial but failing to communicate this effort; (3) exploitative, that is, exploiting consumer interest in eco-friendly products without considering resource characteristics, environmental ethics, or long-term perspectives; and (4) proactive, that is, adopting a strong commitment toward protecting the environment and actively communicating eco-friendly behavior.

The fifth stream of research focuses on how hoteliers' environmentally responsible actions *influence their performance*, but it has produced mixed findings. For example, while several studies (e.g., Álvarez-Gil et al., 2001; Garay & Font, 2012; Rodríguez & Cruz, 2007; Tarí, Claver-Cortés, Pereira-Moliner, & Molina-Azorín, 2010) reveal a positive relationship between environmental management practices and the hotel's financial performance, Claver-Cortés, Molina-Azorín, Pereira-Moliner, and Lopez-Gamero's (2007) study indicates that the degree of environmental strategy (whether proactive, intermediate, or reactive) does not strongly affect organizational performance. Moreover, Carmona-Moreno et al.'s (2004) study of Spanish firms indicates that the

more developed the green strategy of the hotel, the higher is its environmental performance, though positive effects on financial performance did not always occur. Furthermore, Kirk's (1995) study demonstrates the favorable effects of environmental policies and activities on both market performance (e.g., customer satisfaction) and financial performance (e.g., sales).

The sixth stream of research tackles *miscellaneous green issues* related to the hotel industry. These issues include evaluating the potential of information and communication technologies to reduce the environmental impact of hospitality activities (Ruiz-Molina, Gil-Saura, & Moliner-Velánquez, 2010); developing environmental standards for hotels and methods for measuring them (Font, 2002); identifying and assessing the actual environmental measures implemented in ISO 14001 certified hotels (Chan, 2009); adopting voluntary environmental tools in hotels (Ayuso, 2006; Chan & Wong, 2006); analyzing the environmental statements made by hotel units that were awarded the Eco-management and Audit Scheme (Bonilla Priego & Avilés-Palacios, 2008); content-analyzing the environmental responsibility patterns of hotels on their websites (Holcomb, Upchurch, & Okumus, 2007; Hsieh, 2012); examining the role of various stakeholders in influencing hotels to adopt environmental business practices (Shaalan, 2005); and determining the impact of environmental management systems on hotel employees' working attitudes (Chan & Hawkins, 2010).

3. Conceptual model and theoretical foundation

To capture the effect of drivers and outcomes of environmental marketing strategies, we develop a conceptual framework consisting of three sets of constructs (see Fig. 1). The first set focuses on the firm's resources (i.e., physical, financial, and experiential) and capabilities (i.e., shared vision, relationship building, and technology sensing/response) that act as drivers of an environmental marketing strategy. The second set centers on the impact of a green marketing strategy (comprising product/service, price, distribution, promotion, people, atmosphere, and processes) on the creation of a competitive advantage. The relationship between these two constructs is assumed to be

moderated by both competitive intensity and market dynamism. The third set shows that an environmentally based competitive advantage leads to heightened market performance and financial performance, while market performance also has a positive effect on financial performance.

… insert Figure 1 about here…

Our model is anchored on the resource-based view (RBV), which emphasizes the firm's resources as key drivers of competitive advantage and business performance (Amit & Shoemaker, 1993; Peteraf, 1993). According to this theory, the firm's control of valuable, rare, imperfectly imitable, and non-substitutable resources helps it design and implement strategies that will eventually create sustainable competitive advantages and achieve superior performance (Barney, 1991; Bharadwaj, Varadarajan, & Fahy, 1993). The firm gains a competitive advantage by building strategies that exploit its own strengths and avoid its internal weaknesses, while responding to environmental opportunities and neutralizing external threats.

Resources can be divided into tangible (e.g., financial reserves, buildings, equipment) and intangible (e.g., technology, human resources, reputation) (Grant, 1991). Regardless of their nature, resources are not productive on their own, but rather must be assembled, integrated, and managed so as to form organizational capabilities (e.g., new product development, market sensing, relationship building) to address external environments and meet changing market demands (Eisenhardt & Martin, 2000). In other words, capabilities serve to bind different resources, so that they can be identified and organized effectively and efficiently (Day, 1994). For an activity to be a capability, it must reach some threshold level of routine or practice and work in a reliable manner (Helfat & Peteraf, 2003). Firms can achieve a competitive advantage by constantly reconfiguring or recombining different types of resources that can alter existing capabilities or generate new ones (Eisenhardt & Martin, 2000).

According to the RBV, not all resources and capabilities are sources of competitive advantage, and depending on their nature, the firm can be confronted with three situations: (1) *competitive parity*, which results from the exploitation of valuable but common resources and

capabilities; (2) *temporary competitive advantage*, which is based on the use of valuable and rare resources; and (3) *sustainable competitive advantage*, which relies on the deployment of valuable, rare, and costly-to-imitate resources (Ray, Barney, & Muhanna, 2004). However, a sustainable competitive advantage may not last forever, since unanticipated changes in the economic structure of the industry (e.g., entrance of new competitors) may reduce the value of a certain resource and/or capability and thus minimize its contribution as a source of competitive advantage (Barney, 1991). To reach the full competitive potential of its resources and capabilities, the firm must be able to manage its business processes effectively and efficiently (Barney & Wright, 1998).

Under the RBV, a competitive advantage is conceptualized as the implementation of a strategy that is currently not used by competing firms, which helps reduce costs, exploit market opportunities, and neutralize competitive threats (Barney, 1991). In contrast, business performance is conceived as the rents accrued from the exploitation of the firm's competitive advantages (Hult, Ketchen, & Slater, 2005). A firm that attains a competitive advantage, whether based on offering the same benefits at a lower cost or providing greater benefits at the same cost, will be able to improve its performance in a way that competitors cannot match (Newbert, 2008). In other words, while competitive advantage reflects the economic value created from exploiting the firm's resources and capabilities, performance refers to the economic value gained from commercializing these resources/capabilities (Newbert, 2008).

Within the context of the hotel industry, Garay and Font (2012) employ the RBV to explain the positive impact of environmentally responsible behavior on financial performance. According to them, the hotel's unique resources and capabilities related to environmental protection can provide the basis for a new strategy that improves its competitiveness, usually leading to favorable financial results. However, these scholars acknowledge that to achieve a sustainable environmentally based advantage, the hotel must also improve various other critical business areas, such as product quality, employee satisfaction, and good relationships with the wider community. López-Gamero, Molina-Azorín, & Claver-Cortés (2011) also confirm the importance of complementary resources and

capabilities in developing proactive green management schemes among Spanish hotels.

4. Development of research hypotheses

The conceptual model comprises nine main hypothesized associations between key constructs, as well as two hypotheses that moderate the link between green marketing strategy and competitive advantage. We elaborate on each of these hypotheses in the following sub-sections.

4.1. Organizational resources and strategy

Organizational resources are vital inputs in designing and implementing sound environmental marketing strategies because they help firms (1) bear the costs of implementing environmental initiatives, (2) actively seek new areas of success through experience, (3) take advantage of scale economies in sharing environmental costs, and (4) have the technological basis for building on sustainability (Garay & Font, 2012). We identified three types of resources in the pertinent literature that play a crucial role in formulating eco-friendly marketing strategies. The first is *physical resources*, which refers to the possession of modern technology equipment and the availability of operating capacity or other infrastructure required to facilitate product/service efficiency and effectiveness (Hall, 1993). If properly deployed, these resources can help the firm capitalize on and make better use of its internal methods related to environmental issues, such as waste reduction, energy conservation, and pollution prevention (Russo & Fouts, 1997). Physical resources are also essential to support and sustain an eco-friendly marketing strategy because they help in building the right green products/services, processes, and infrastructure in the organization (Russo & Fouts, 1997). They are particularly crucial in the hotel sector, which is characterized by excessive consumption of energy, water, and solid waste (Chan & Lam, 2001a, 2001b, 2003) and a wide range of non-durable products and services (Carmona-Moreno et al., 2004). This is more likely to be achieved in the case of firms stressing prevention of, rather than compliance with, environmental issues (Reed & DeFilippi, 1990). Thus:

> *H1. The greater the firm's physical resource, the greater is the possibility of developing an environmental marketing strategy.*

The second type of resources is *financial* dimensions, such as the firm's financial liquidity, working capital, and borrowing power, which are critical in achieving stability and success in eco-friendly marketing strategies (Bohdanowicz, 2005; Zadek, Pruzan, & Evans, 1997). Investing in clean technologies and green practice involves (1) substantial amounts of expenditure (especially at the introductory stage of a new technology) that require considerable time before a satisfactory rate of return is achieved; (2) high risks associated with designing and supporting green strategies, especially in high-growth industries such as the hotel sector; and (3) excessive running costs resulting from subsidizing prices for certain green products/services, setting up a reverse logistics mechanism, designing special green advertising campaigns, and so on (Russo & Fouts, 1997). Indeed, limitations in financial resources constitute one of the major barriers faced by hotels, especially smaller ones, to taking ecological actions (Forsyth, 1995; Tzchentke, Kirk, & Lynch, 2008). Recent evidence also shows that hotels with a healthy financial position are more likely to be environmentally responsible than those that are financially unhealthy (Shah, 2011). Therefore, the availability of adequate financial resources is vital, not only in adopting the necessary green infrastructure in the hotel organization but also in supporting a sustainable green marketing strategy. Thus:

> *H2. The greater the firm's financial resource, the greater is the possibility of developing an environmental marketing strategy.*

The third resource is of an *experiential* nature, that is, knowledge gained from the firm's operational experience, which helps identify and match customer needs and anticipate new market trends (Daily, Certo, & Dalton, 2000). As opposed to physical and financial resources, experiential knowledge is an intangible resource that takes time to develop and is accumulated through exposure to environmental practices of other organizations, internal environmental audits, information provided by industry advisory boards, and other sources (Darnall & Edwards, 2006; Zollo & Winter, 2002). With the adoption of internal routines and accumulation of know-how related to environmental issues, the firm widens and deepens its experiential knowledge, which acts as a

facilitator toward building eco-friendly marketing strategies (Russo & Fouts, 1997). The width and depth of this experience will depend, *inter alia*, on the amount of time the hotel has been engaged in environmental activities, the exposure/involvement of managers in eco-friendly practices in their previous employment, and the participation of the firm in a wider chain of hotels (especially of international coverage) (El Dief & Font, 2010). Thus:

> *H3. The greater the firm's experiential resource, the greater is the possibility of developing an environmental marketing strategy.*

4.2. Organizational capabilities and strategy

The environmental marketing/management literature highlights several capabilities that accompany an environmentally based marketing strategy. Firms developing such capabilities will be able, *inter alia*, to adopt sustainable business practices, set up an ecologically sensitive culture, better understand the requirements of the different stakeholders, and design sound marketing strategies and processes around them (Hart, 1995; Shrivastava, 1995).

We traced three types of capabilities that influence an eco-friendly marketing strategy. The first capability is *shared vision*, which is the existence of common ideas, commitment, and dedication among the firm's employees toward the achievement of green organizational objectives (Aragón-Correa, Hurtado-Torres, Sharma, & García-Morales, 2008). Firms with a shared vision are able to gather and organize the resources necessary to develop sustainable business practices, in comparison with firms that lack that capability (Hart, 1995). Thus, a shared vision means that members of the organization hold a collective belief in the strategic role of environmental issues in developing a sustainable business model (Ramus & Steger, 2000). The design of an eco-friendly marketing strategy requires major changes in the thinking of organizations, which can only be effectively implemented if there is adequate employee support and participation (Russo & Fouts, 1997; Wehrmeyer & Parker, 1996). A case in point is Hilton's 'We care!' program (involving 16,000 employees), in which the creation of hotel-specific action teams linking all employee levels in the organization was responsible for significant reductions in energy, water, and carbon dioxide

emissions (Bohdanowicz et al., 2011). Thus:

> *H4. The greater the firm's shared vision capability, the greater is the possibility of developing an environmental marketing strategy.*

Relationship building—that is, firms' ability to form close relationships with their customers, suppliers, or other stakeholders—constitutes the second capability (Morgan, Kaleka, & Katsikeas, 2004; Rodriguez-Diaz & Espino-Rodriguez, 2006). With relationship building, firms gain a better understanding of and thus can respond better to their needs and wants and spot potentially profitable market trends and opportunities. Sensitivity to company stakeholders regarding environmental issues is growing stronger and represents a critical force influencing firms to become environmentally friendly (Banerjee, Iyer, & Kashyap, 2003). As a result, firms that have strong relationship-building capabilities are better able to acknowledge the attractiveness of environmentally friendly segments and to understand the environmental requirements of the different stakeholders in particular markets well in advance of the competition. Cultivating links with various stakeholder groups (e.g., tour operators) and responding to their ecological requests are particularly crucial in the hotel business because they directly affect the level and nature of demand (Shaalan, 2005). Thus:

> *H5. The greater the firm's relationship-building capability, the greater is the possibility of developing an environmental marketing strategy.*

The third capability is *technology sensing/response,* which refers to the firm's ability to sense and quickly respond to new technologies (Aragón-Correa, 1998; Aragón-Correa and Sharma, 2003; Rodriguez-Diaz & Espino-Rodriguez, 2006; Sharma, Aragón-Correa, & Rueda-Manzanares, 2007). Technology has the power to influence and transform business processes, products, and services, as well as accommodate environmental attitudes and shape environmental marketing strategies (Srinivasan, Lilien, & Rangaswamy, 2002). In the case of green technologies, there are two major issues of concern: (1) their viability may be largely unknown, as well as the economic consequences of their use, and (2) they may cost a lot and suffer from low quality, especially when

they are at the cutting-edge stage (Russo & Fouts, 1997). However, firms that can sense and respond to technological advancements are more likely to be among the first to acknowledge the benefits of adopting green technologies, identify the clean technologies that are the most suitable and the least risky to adopt, and build their strategies and processes around technologies that will accrue better economic results (Russo & Fouts, 1997). Within the hotel domain, such technologies particularly refer to solid waste management (Shanklin et al., 1991), energy savings (Chan & Lam, 2003), water conservation (Chan & Lam, 2001), and air pollution control (Shanklin, 1993), as well as to more specific green activities, such as product recycling and reuse (El Dief & Font, 2010). Thus:

> *H6. The greater the firm's technology sensing/response capability, the greater is the possibility of developing an environmental marketing strategy.*

4.3. Strategy and competitive advantage

Environmental marketing strategy comprises policies, practices, and procedures in the context of marketing that incorporate an ecologically friendly focus, with the aim to create revenue and profit while achieving organizational and individual objectives (Menon et al., 1999). Adopting an environmentally friendly strategic stance in hotels can lead to the creation of competitive advantage (Forsyth, 1995; Stabler & Goodal, 1997). Such green marketing strategies significantly lower costs in the long run and/or help differentiate offerings from the competition, resulting from the use of cheaper recyclable supplies/materials, energy-saving processes, waste-minimization solutions, and operating process improvements (Porter & Van der Linde, 1995). A case in point is the Hyatt Regency Chicago Hotel, which, through its distinct recycling program, recovered approximately 70% of its products used (e.g., towels, dishes, linen) and saved a large amount of money by reusing them (Enz & Siguaw, 1999). The ability to target the environmentally friendly customer segment also promotes competitive advantage (Banerjee et al., 2003; Manaktola & Jauhari, 2007). Several studies (e.g., Han et al., 2011; Mostafa, 2007) have noted the increasing size of this segment, while other studies (e.g., Laroche, Bergeron, & Barbaro-Forleo, 2001; Royne, Levy, & Martinez, 2011)

have reported consumers' willingness to pay higher prices for environmentally friendly products/services. In addition, firms can significantly improve their current processes and product/service quality by making them greener. All these advantages offer a more attractive, likable, favorable, and acceptable company offering to customers than that of the competition (Garay & Font, 2012; Menguc & Ozanne, 2005; Menon & Menon, 1997; Porter & Van der Linde, 1995). Thus:

> *H7. The adoption of an environmental marketing strategy is positively related to the achievement of a competitive advantage.*

4.4. Competitive advantage and performance outcomes

The firm's superiority over its competitors regarding environmental offerings enables it to benefit from increased customer satisfaction, creation, and retention. This is achieved by communicating the environmental benefits and possible savings to customers, by ensuring the environmentally conscious segment of the market is satisfied with their initiatives, and by promoting their corporate's or products' environmental friendliness as a criterion of superior product quality (Dechant & Altman, 1994). Consumers will also show a preference to purchase from an eco-friendly firm, resulting in greater financial gains (Banerjee et al., 2003). This superiority enables hotels to charge higher prices, generate more cash, target potentially lucrative consumer segments, increase sales from existing segments, and so on (Claver-Cortés et al., 2007). In one of the few studies to examine the relationship between competitive advantage and performance in an environmental context, Carmona-Moreno et al. (2004) find that firms with a relatively low competitive advantage have significantly weaker business performance than others. In addition, López-Gamero, Molina-Azorín, and Claver-Cortés's (2011) recent study of Spanish hotels reveals a positive relationship between the development of an eco-friendly-based competitive advantage and financial performance. Thus:

> *H8a. Having an environmentally based competitive advantage leads to higher market performance.*
>
> *H8b. Having an environmentally based competitive advantage leads to higher financial*

performance.

Market performance refers to the company's ability to satisfy, develop, and retain customers by offering products, services, and other elements that suit their needs (Moorman & Rust, 1999). All these will lead to superior financial performance because (1) satisfying customers increases repeat purchases, reduces complaints, encourages them to buy other company products, and generates positive word-of-mouth recommendations (Szymanski & Henard, 2001); (2) achieving customer loyalty enables the firm to maintain a steady customer base, as well as command a premium price for or sell more of its products at a given price (Day & Wensley, 1988); and (3) developing customers helps the firm more deeply penetrate and/or expand its market (Homburg, Grozdanovic, & Klarmann, 2007). In the hotel sector, business success depends on the interactions between company employees and customers, thus making the link between market and financial performance even more critical (Matzler & Renzl, 2007; Zhou, Brown, & Dev, 2009). This positive link between market and financial performance is well documented in the broader marketing/management literature (e.g., Homburg et al., 2007; Ramaswami, Srivastava, & Bhargava, 2009; Zhou et al., 2009). Moreover, there are hints that hotel adoption of environmental programs helps increase customer satisfaction, which in turn enhances company profitability (Kirk, 1995). Thus:

> *H9. The higher the firm's market performance, the greater is the possibility of achieving superior financial performance.*

4.5. Moderating hypotheses

Competitive intensity, defined as the degree to which a firm faces competition in a specific product market (Jaworski & Kohli, 1993), may have a moderating effect on the strategy–competitive advantage link. Specifically, in the hotel industry, which is characterized by intense competition, customers have many alternative options to satisfy their needs and wants and can easily switch suppliers (Tsai, Chou, & Kuo, 2008). In this situation, firms are forced to develop strategies, such as those protecting the environment, in a way that satisfies their customers better than the

competition (Arora & Cason, 1995). Therefore, in highly competitive environments, adopting environmental marketing strategies helps firms gain a strong advantage over key competitors, which is difficult to negate (Langerak, Peelen, & Van der Veen, 1998). Thus:

> *H10. The intensity of competition has a positive moderating effect on the relationship between environmental marketing strategy and competitive advantage.*

Market dynamism (or instability), defined as the perceived frequency of change in marketing forces in the firm's operating market (Achrol & Stern, 1988), can also moderate the influence of environmental marketing strategy on competitive advantage. Dynamic environments are endemic in the tourism business, which is characterized by uncertain demand, changing products/services, and shifting consumer preferences (Sharpley, 2000). Under such dynamic conditions, firms are forced to better understand their consumers' needs, quickly absorb information from the market, and constantly revise the way their strategy is organized and implemented (Cui, Griffith, & Cavusgil, 2005). Thus, the ability to develop and sustain a competitive advantage in highly dynamic environments can be facilitated by creating first-mover advantages and resource position barriers that affect the competitors' ability to develop substitute resources and capabilities (Baker & Sinkula, 2005; Jennings & Zandbergen, 1995). Thus:

> *H11. The dynamism of the market has a positive moderating effect on the relationship between environmental marketing strategy and competitive advantage.*

5. Research methodology

The study took place in Greece, which is a member of the European Union and a major tourism destination. Specifically, Greece is globally classified as the 22nd country in terms of the total contribution of tourism to the national economy, accounting for 43.9% of its gross national product in 2009 (World Travel & Tourism Council, 2011). Notably, the number of tourists visiting Greece in 2009 was approximately 15 million, which is significantly greater than the country's population (World Bank, 2011). The Greek tourism product has traditionally emphasized the country's unique landscape, excellent climatic conditions, high-quality tourism infrastructure, and rich history and

culture (Dritsakis, 2004). However, Greece's heavy dependence on tourism has inevitably led to negative repercussions on the natural environment, resulting in a polluted atmosphere, sea contamination, and uncontrollable disorganization of ecosystems (Kousis, 2000).[3]

We identified the population of firms for this study using the online directory of the Hellenic Chamber of Hotels, which comprises 9342 hotel entries. These were cross-checked with input provided by the Greek Tourism Organization. Because our exploratory interviews with hotel managers revealed that eco-friendly marketing practices are rarely adopted by either lower-rating or smaller hotels, we confined our sampling frame to hotels with a four- or five-star rating and a minimum capacity of 50 beds. With a few exceptions, these hotels operated all-year round, rather than during high season periods only. Altogether, 529 firms fulfilled these criteria and were contacted by telephone to assess their eligibility for inclusion in the study, identify appropriate key informants, and ensure participation in the full-scale study. Of these, 410 reported that they were willing to take part in the study.

We identified appropriate scales of the constructs after a careful review of the pertinent management/marketing literature (see Appendix). We used the Morgan et al. (2004) scales for physical, financial, and experiential resources, while the scales for shared vision, relationship building, and technology sensing/response were extracted from the studies of Aragón-Correa et al. (2008), Morgan et al. (2004), and Srinivasan et al. (2002), respectively. Environmental marketing strategy comprised seven sub-constructs, whose scales we derived from Menon et al. (1999), Middleton and Clarke (2001), and Carmona-Moreno et al. (2004). The competitive advantage scale came from Banerjee et al.'s (2003) study. We constructed the scales for market performance and financial performance based on input from Moorman and Rust (1999), Vorhies and Morgan (2005), and Zhou et al. (2009). Finally, we took the competitive intensity scale from Jaworski and Kohli (1993) and adopted the scale of market dynamism from Sarin and Mahajan (2001). Two academic experts with extensive experience in the field helped verify the face validity of all scales. Finally, we further refined the scales on the basis of input received from informal discussions with a group

of five hotel marketing managers.

The questionnaire comprised six parts: the first part asked questions about the hotel's organization resources (i.e., physical, financial, and scale), the second centered on organizational capabilities (i.e., shared vision, relationship building, and technology sharing/response), the third focused on elements of the green marketing strategy (i.e., product/services, price, distribution, promotion, atmosphere, people, and processes), the fourth tackled issues related to the firm's competitive advantage, the fifth referred to the firm's market and financial performance, and the sixth included the two moderating variables (i.e., competitive intensity and market dynamism). An additional set of questions measured the degree to which the respondent was (1) responsible for the hotel's marketing operations, (2) directly involved in the hotel's environmental marketing activities, (3) knowledgeable about dealing with the hotel's environmental marketing actions, and (4) confident about answering the questions contained in the questionnaire. The questionnaire was initially developed in English and then translated into Greek. To achieve linguistic equivalence, the instrument was back-translated into English, and all necessary adjustments were made. Subsequently, we pre-tested it with five Greek hotel marketing managers and made some minor changes to improve flow, clarity, and functionality.

We collected the data using a mail survey; each of the questionnaires was dispatched to the marketing managers of the targeted hotels, accompanied by a self-addressed stamped envelope. We identified the names of these managers during the exploration phase of selecting hotels to participate in the study. In addition to returning the questionnaire by post, respondents could send their questionnaires by e-mail or facsimile. Data collection took place during the summer of 2009 and lasted approximately three months. The process resulted in completed questionnaires from 158 hotels (i.e., 38.5% response rate). Of these, we dropped six questionnaires because of excessive missing data and removed another four because of failure to meet the key informant requirements (Cannon & Perreault, 1999). Sample hotels had an average operational experience of close to 25 years, and their origin was mainly domestic. More than half were four-star hotels (59.9%), while the

rest belonged in the five-star category. Respondents had an average total capacity of 390 beds, the majority of which were independent units, rather than part of a wider hotel chain.

To reduce the possibility of self-selection bias, we undertook the following actions: (1) all hotels contacted were encouraged to participate in the study, regardless of whether they were involved in eco-friendly marketing practices or not; (2) the demographic characteristics of participants and non-participants in the survey were compared and contrasted, revealing non-significant statistical differences; and (3) the reasons for not participating in the study were investigated and found to be unrelated to ecological issues (e.g., company policy not to take part in surveys, lack of available time to answer the questionnaire, company ceasing or suspending operations). Moreover, to control for the existence of non-response bias, we compared the answers of early and late respondents but found no significant statistical differences (Armstrong & Overton, 1977).

6. Research findings

We employed structural equation modeling, using EQS 6.1 (Bentler, 2006), to analyze the data and test the research hypotheses.[4] We first assessed the validity and reliability of the study's constructs using confirmatory factor analysis. This involved restricting each item to load on its *a priori* specified factor, while allowing the underlying factors to correlate (Anderson & Gerbing, 1988). To estimate the models, we used the elliptical-reweighted least squares estimation procedure, which is superior to other estimation techniques (Stump & Heide, 1996). Because of sample size constraints, we estimated two measurement models (Hair at al., 2006). The first model included the first-order organizational resources, organizational capabilities, and two moderating constructs. The second model included environmental marketing strategy as a higher-order factor construct, along with the first-order factors measuring competitive advantage, market performance, and financial performance. The outputs of both models indicated a good fit to the data, while the factors loaded highly on their assigned constructs (see Table 1). Specifically, the goodness-of-fit estimates for the

first model were $\chi^2_{(296)} = 409.18$, $p < .001$; $\chi^2/df = 1.38$; normed fit index (NFI) = 0.94; non-normed fit index (NNFI) = 0.98; comparative fit index (CFI) = 0.98; goodness-of-fit index (GFI) = 0.93; adjusted goodness-of-fit index (AGFI) = 0.91; standardized root mean square residual (SRMR) = 0.04; and root mean square error of approximation (RMSEA) = 0.05. For the second model, they were $\chi^2_{(976)} = 1619.17$, $p < .001$; $\chi^2/df = 1.66$; NFI = 0.93; NNFI = 0.97; CFI = 0.97; GFI = 0.92; AGFI = 0.89; SRMR = 0.05; and RMSEA = 0.06.

…insert Table 1 about here…

Convergent validity was met because the *t*-value for each item was always significant, with the lowest value being 5.53; all standard errors of the estimated coefficients were low, and the average variance extracted for each construct was greater than or equal to the threshold of 0.50 (Hair et al., 2006). *Discriminant validity* was also evident; that is, the confidence interval around the correlation estimate for each pair of constructs examined never included 1.00 (Anderson & Gerbing, 1988), and the squared correlation for each pair of constructs never exceeded their average variance extracted (Fornell & Larcker, 1981). All factors had *composite reliability* values greater than or equal to 0.75, implying a reliable measurement of the theoretical construct as an element of the structural model (Bagozzi & Yi, 1988). Table 2 presents the correlations between all the study's constructs.

…insert Table 2 about here…

To control for the possibility of *common method bias*, we employed two post-hoc statistical tests.[5] First, we used the Harman's single-factor test, in which all study indicators were inserted in a principal component analysis with varimax rotation (Podsakoff & Organ, 1986). The results of the unrotated factor solution revealed 18 factors with eigenvalues greater than 1.0, which accounted for 70% of the variance, while the first factor accounted for only 23% of the variance. Second, we repeated the same procedure in structural equation modeling and constructed a confirmatory factor analysis model in which all indicators included in our measurement validation were restricted to load on a single-factor model. The resulting fit indices of that model indicated a poor fit (i.e., $\chi^2_{(1484)}$

= 8388.67, $p < .001$; $\chi^2/df = 5.65$; NFI = 0.71; NNFI = 0.75; CFI = 0.76; GFI = 0.54; AGFI = 0.50; SRMR = 0.13; RMSEA = 0.15) (Podsakoff, MacKenzie, Jeong-Yeon, & Podsakoff, 2003). Collectively, the results of the two tests suggested that common method bias was unlikely to be a problem in this study.

Using elliptical-reweighted least squares as the estimation method, we specified the structural model to test the hypothesized links. The chi-square ($\chi^2 = 1610.43$) for this model was statistically significant ($p < .001$) with 923 degrees of freedom; we expected this finding because of the test statistic's sensitivity to sample size and model complexity (Kline, 2004). All other fit indices, however, suggested a good overall model fit. Specifically, the results indicated a favorable normed chi-square ($\chi^2/df = 1.75$) and satisfactory values for the alternative fit indices (NFI = 0.93; NNFI = 0.96; CFI = 0.97; GFI = 0.91; AGFI = 0.88; SRMR = 0.06; RMSEA = 0.07). Table 3 presents all the standardized path coefficients, together with the corresponding *t*-values for each hypothesis. Notably, with the exception of H3 and H5, all other hypotheses were accepted.

…insert Table 3 about here…

Our findings confirm H1, which links physical resources with environmental strategy ($\beta = 0.15$, $t = 2.12$, $p = .04$), and H2, which associates financial resources with environmental strategy ($\beta = 0.30$, $t = 4.08$, $p = .00$). This is in line with the RBV, which stresses the instrumental role of resources in forming environmentally friendly strategies (Aragón-Correa & Sharma, 2003). Indeed, in harmony with the findings of prior research (e.g., Russo & Fouts, 1997), the availability and use of these resources provides the means for developing a company offering to customers that takes environmental concerns into account. Surprisingly, H3, which refers to the link between experiential resources and eco-friendly marketing strategy, was not confirmed ($\beta = –0.02$, $t = –0.37$, $p = .71$), perhaps because Greek hotels have only recently been confronted with environmental dilemmas and thus have limited experience of green marketing practices.

H4, which links shared vision with environmental marketing strategy, and H6, which links technology sensing/response with environmental marketing strategy, were also confirmed ($\beta = 0.45$,

t = 4.62, p = .00 and β = 0.19, t = 2.17, p = .02, respectively). This supports prevailing views that shared vision helps firms identify and organize the resources that are vital for adopting sustainable business practices (Bohdanowicz et al., 2011; Ramus & Steger, 2000), while technology/sensing is instrumental in making an eco-friendly transformation of business processes, products, and services (Russo & Fouts, 1997). H5, which refers to the effect of relationship-building capability on environmental marketing strategy, was not verified (β = 0.04, t = 0.52, p = .00); this is somewhat surprising, because previous research has stressed its importance in properly handling various pressure groups interested in protecting the environment (e.g., Banerjee et al., 2003).

In line with prior research (e.g., Carmona-Moreno et al., 2004; Menon & Menon, 1997; Porter & Van der Linde, 1995), our study confirms that adopting an environmentally friendly stance in marketing strategy formulation and implementation can enhance the firm's competitive advantage (β = 0.65, t = 6.11, p = .00), in support of H7. This highlights the significant cost savings, product/service differentiation, and other advantages (e.g., high reputation) that environmental marketing strategies can provide through ecological products/services, collaboration with environmentally friendly partners, and communication of environmental initiatives (Christmann, 2000; Klassen & Whybark, 1999).

The study findings also provide support for H8a and H8b—that environmentally driven competitive advantage enhances both the firm's market performance (β = 0.35, t = 3.38, p = .00) and financial performance (β = 0.21, t = 2.55, p = .00). This finding reaffirms the prevailing notion that the commercialization of the firm's resources/capabilities through the achievement of a competitive advantage can yield important non-economic and economic gains for the firm (Banerjee et al., 2003; López-Gamero, Molina-Azorín, & Claver-Cortés, 2011; Menon et al., 1999; Miles & Covin, 2000). The study also confirmed H9 by finding a positive effect of market performance on financial performance (β = 0.54, t = 4.95, p = .00), which is in harmony with prior studies (e.g., Homburg et al., 2007) in the broader marketing/management field.

We employed multi-group analysis to test the moderating effects of H10 and H11. Using a

median split, we divided the data into two groups for each moderating construct (i.e., low *versus* high competitive intensity and low *versus* high market dynamism). We then ran two separate models: (1) a free model, in which we allowed all parameter estimates to vary between the two groups, and (2) a restricted model, in which we imposed an equality constraint on the hypothesized moderated link between the two groups (see Table 4). A moderation effect is evident if a significant chi-square difference ($\Delta\chi^2_{(1)} > 3.84$; $p < .05$) emerges.

For competitive intensity, the findings suggest that there is a moderating effect on the environmental marketing strategy–competitive advantage link ($\Delta\chi^2_{(1)} = 4.75$; $p < .05$), in support of H10. Specifically, the results suggest that though under low competitive intensity settings environmental marketing strategy positively influences competitive advantage ($\beta = 0.47$, $t = 3.18$, $p = .00$), the link is significantly stronger under high competitive intensity conditions ($\beta = 0.76$, $t = 5.84$, $p = .00$). This is because when competition is strong, the firm can better capitalize on an eco-friendly-related advantage to differentiate from its competitors (Langerak et al., 1998).

In the case of H11, the results provide no significant support ($\Delta\chi^2_{(1)} = 3.26$; $p > .05$) for the moderating effect of market dynamism on the relationship between environmental marketing strategy and competitive advantage. This surprising finding can be partially explained by the relative stability of the Greek hotel market during the period preceding our investigation, despite recent politico-economic upheavals in Greece.

7. Summary and conclusions

Our analysis shows that the RBV can provide a sound theoretical platform for explaining the antecedents and outcomes of the adoption of an eco-friendly marketing strategy in the hotel sector. Our study amply demonstrates that certain organizational resources and capabilities can lead to the formulation of an environmental marketing strategy. When this strategy is formed and implemented, a unique competitive advantage will follow. Furthermore, such an advantage is likely to be even stronger for hotels operating in highly competitive environments because it helps differentiate them from other competitors. In turn, an environmentally based competitive advantage

should enable firms to achieve superior market and financial performance, and market performance is expected to affect financial performance favorably.

Possessing adequate resources (particularly physical and financial) is conducive to building a sound environmental marketing strategy, which stresses the importance of acquiring and maintaining appropriate tangible and intangible assets that can both differentiate the firm from its competitors and help it sustain eco-friendly marketing programs. However, for an effective impact on eco-friendly marketing strategy, these resources should not be easily copied by competitors and/or substituted by other resources (Barney, 1991).

Cultivating a shared environmental vision and harnessing a capability of responding quickly to new environmental technologies are important prerequisites for hotels wanting to promote their environmental credentials. Such capabilities are essential in coordinating internal mechanisms that enable the most effective and efficient competitive use of the firm's resources. Without these mechanisms, organizational resources cannot be assembled, integrated, or managed to effectively accommodate the needs of an eco-friendly marketing strategy (Eisenhardt & Martin, 2000).

The favorable effect of an eco-friendly marketing strategy on gaining a competitive advantage indicates that the adoption of an environmentalism approach can seriously reduce the firm's costs (e.g., energy savings, process efficiency, recyclable material) and/or differentiate its products/services (e.g., refillable packages, eco-friendly image, unique features). Taking advantage of the positive effect of green marketing strategy on achieving a competitive advantage is even more imperative in the case of hotels facing acute competition.

The finding that an eco-friendly marketing strategy has a positive effect on both market and financial performance reflects the growing trend in the tourism market of environmentally conscious consumers, who appreciate firms that care about the environment (Han, Hsu, & Sheu, 2010; Rodriguez & Cruz, 2007). Our findings seem to imply that recent equivocal results in the literature (e.g., Carmona-Moreno et al., 2004; Claver-Cortés et al., 2007) on the impact of environmental strategies on performance may be attributed to the non-exploration of the intervening

role of competitive advantage between strategy and performance. Finally, the positive effect of market performance on financial performance indicates that using ecological practices to satisfy, retain, or develop customers is important for achieving financial success.

8. Study implications

Several implications can be drawn from the study findings for both corporate and public policy makers. *Corporate policy makers* must realize that though environmental marketing strategies require the deployment of significant resources and the use of specific capabilities, their proper handling will pay off in the end, while enabling them to operate in an environmentally friendly manner and fulfill their societal responsibilities. Toward this end, it is important to cultivate an organizational culture centered on principles such as developing eco-friendly products/services, training employees on environmental issues, facilitating customer collaboration on ecological issues, and so on. In light of today's realities, characterized by cut-throat competition, growing public concern, and strong regulatory systems, the astute manager should adopt a more proactive stance toward environmental issues and implement environmentally friendly marketing strategies. In this respect, demonstrating a long-term environmental commitment through, for example, the allocation of necessary resources/capabilities, the execution of regular environmental audits, and the preparation of environmental marketing plans is of paramount importance. Participating in environmental initiatives, such as those adopted by the Green Hotels Association, which focuses on programs aimed to save water, conserve energy, and reduce waste, would also help boost the firm's reputation among guests and attract ecologically sensitive consumers. It is also important to adopt schemes that will reward employees who take eco-friendly initiatives. Hotels should also team up with other members of the supply chain, such as suppliers, to enhance environmental protection arrangements, as well as embark on promotional and communication efforts that will highlight their firm's green marketing efforts.

Public policy makers should adhere to the principle that the tourist industry should strike a

balance among social, economic, and ecological interests, rather than purely considering tourism a source of revenue. In this context, they should help hotels (through the provision of financial assistance, technical expertise, and consultative advice) acquire the necessary resources and capabilities to develop sound environmental marketing strategies, as well as illustrate the non-financial and financial gains regarding environmental sustainability on strategic, rather than regulatory, grounds. Successful cases of hotels adopting environmental marketing strategies should be widely publicized, while the organization of conferences/seminars targeting hotels should explain the benefits derived from the adoption of eco-friendly marketing strategies. More important, governments should cultivate a spirit of respect, caring, and concern for the environment not only among people employed in the hotel sector but also among individuals in the wider tourist industry. This can be achieved through special educational programs provided to schools/colleges, promotional campaigns targeted at the wider public, and the provision of incentives (e.g., awards, recognition, and certifications).

9. Future research directions

Directions for further research could include examining the effect of additional resources (e.g., scale/scope resources, human resources, top management qualities) and capabilities (e.g., cross-functional coordination, organizational learning, new product/service development) on the formation and implementation of an eco-friendly marketing strategy. Research should also investigate the role of temporal effects on the associations between the constructs of the model through the execution of longitudinal studies. This is because some time needs to elapse before resources/capabilities lead to an eco-friendly strategy, before strategy yields competitive advantage, and before competitive advantage results in positive market/financial performance. Another important issue to examine is whether the hotel's eco-friendly marketing strategy is genuinely set or is influenced by 'greenwashing' practices (Bonilla-Priego et al., 2011). It would also be worthwhile to explore whether this strategy is guided by either altruistic or cost-related factors.

The moderating role of additional external (e.g., public sensitivity, regulatory forces, environmental complexity) and internal (e.g., managerial characteristics, organizational culture, strategic pro-activity) factors on the relationship between environmental marketing strategy and competitive advantage should also be examined. In addition, the roles of worldviews, self-efficacy beliefs, and context beliefs as potential moderators of the link between resources/capabilities and eco-friendly marketing strategy could be investigated (Sampaio et al., 2012a, 2012b). It would also be worthwhile to discriminate between hotels that operate on an ad-hoc basis and those with a systematic approach to pursuing a green marketing strategy (Bonilla-Priego et al., 2012). Further research could also explore how firms implement an eco-friendly marketing strategy by paying particular attention to how they manage the human factor to show sensitivity to ecological issues (Bohdanowicz et al., 2011).

Research should also try to complement the analysis among hoteliers with input from their customers, especially regarding the impact of the implementation of an eco-friendly strategy on customer decision making. It would be equally important to shed light on the trade-off many firms encounter in the service sector regarding the danger of customers seeking other service providers, should they believe that environmental adjustments reduce the service they receive (Grove, Fisk, Pickett, & Kangun, 1996). To obtain external validity, the conceptual model proposed in this study should be tested among hotels in other developed (e.g., the United States) and developing (e.g., Pakistan) countries, to draw comparisons between their environmental practices. It would also be useful to test the model in other tourist sectors, such as catering and transportation. In addition, because this study was conducted among more high-rated and larger hotel units, further research could concentrate on low-rated and smaller firms, which are usually more flexible and less formalized in their green marketing practices (Lefebvre, Lefebvre, & Talbot, 2003).

In light of growing globalization trends, it would be useful to examine the proposed model in an international setting and take into consideration the role of parameters such as standardization/adaptation of green marketing strategies, cultural factors influencing strategic

success, and country differences in environmental legislative intensity. Finally, it would be illuminating to examine hotel environmental marketing practices from the perspective of other theoretical paradigms, such as political economy, contingency, and industrial organization theories. Such paradigmatic pluralism would help inject new ideas, concepts, and approaches with a better understanding of the antecedents, outcomes, and moderators of strategic aspects of green marketing.

Notes

1. Hart (1995) proposes the natural RBV, according to which the firm has at its disposal three interconnected strategic capabilities (i.e., pollution capability, product stewardship, and sustainable development), which are driven by three key resources (i.e., continuous improvement, stakeholder integration, and shared vision), respectively. Each set of resources/capabilities is responsible for creating a competitive advantage related to incurring lower costs, pre-empting competitors, and enhancing future position.

2. Although the tourism industry consists of a wide array of businesses that are both complex and highly connected, these can be broadly classified into those related to accommodation and those related to transportation (Carmona-Moreno et al., 2004). Our focus in this study is on the accommodation area, namely hotels, mainly because (1) they play a significant role in the product/service offering provided to tourists; (2) they are highly connected with territorial, ecological, and other issues related to the environment; and (3) they are heavy users of water, electricity/energy, and other resources with a potential harmful effect on the environment.

3. In particular, hotel activities in Greece have been criticized as (1) consuming excessive amounts of water and electricity; (2) generating large quantities of solid waste, often dumped irresponsibly; and (3) constantly producing liquid discharges that aggravate pollution and degrade coastal waters (Karatzoglou & Spilanis, 2010; Organisation for Economic Co-operation and Development, 2000).

4. According to Hair et al. (2006), to apply structural equation modeling analysis, the sample size should be large enough compared with the number of estimated parameters. Although some scholars (e.g., Bagozzi & Yi, 1988; Iacobucci, 2010) recommend an absolute minimum of 50 respondents and a 5:1 observations per parameter estimates ratio, others (e.g., Anderson & Gerbing, 1984) emphasize that the minimum level should range between 100 and 150 and that the ratio should be 3:1. Although these various rules of thumb are frequently mentioned in the literature, their appropriateness and relevance have been questioned by some scholars (e.g., Westland, 2010). Using Westland's (2010) software, the minimum sample size for indicator/latent ratio for our model is 88, and with the procedure proposed by MacCallum, Browne, and Sugawara (1996), the analysis of our model with 923 degrees of freedom and 158 observations indicated a high statistical power ($\pi > 0.99$). This is much higher than the recommended cut off point of .80, indicating that sufficient power was present to detect close model fit and avoid any model misspecification (Lawson, Tyler, & Cousins, 2008).

5. As Podsakoff et al. (2003) suggest, we also followed several procedural remedies (e.g., ensuring careful construction and clarity of the scale items, guaranteeing response anonymity, assuring respondents that there are no right or wrong answers, and counterbalancing question order) at the initial design phase of the study to minimize this phenomenon.

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Figure 1: The conceptual model

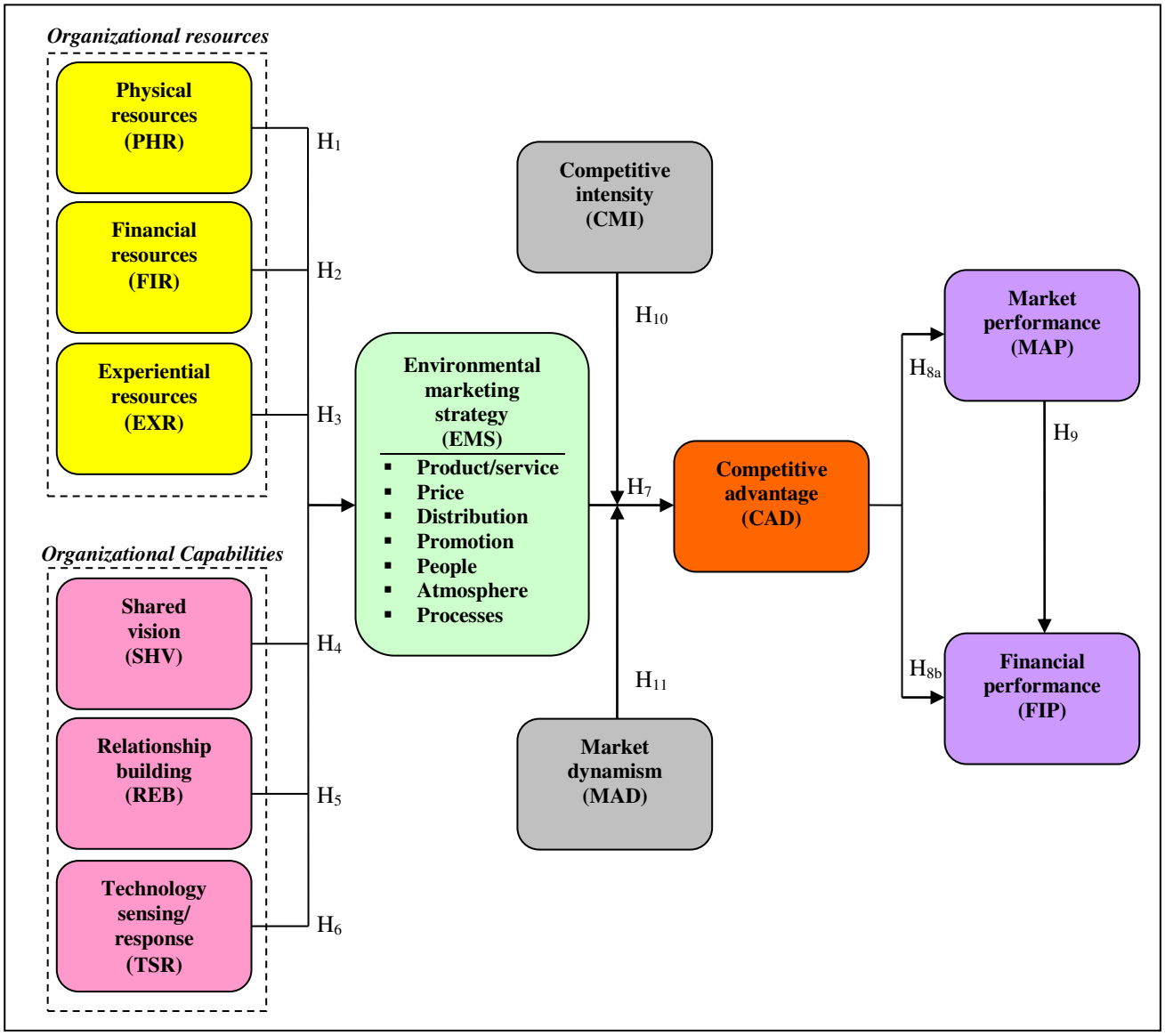

Table 1: Results of the measurement models

Model A		Model B			
Factor	Stand. Loadings [a]	Factor	Stand. Loadings [a]	Factor	Stand. Loadings [a]
First-order		First-order		First-order	
Physical resources (PHR)		*Product/service* (PRS)		*Competitive advantage* (CAD)	
PHR1	0.81 [b]	PRS1	0.77 [b]	CAD2	0.67 [b]
PHR2	0.86 (10.53)	PRS2	0.90 (11.71)	CAD3	0.87 (8.93)
PHR3	0.74 (8.75)	PRS3	0.91 (11.78)	CAD4	0.92 (9.33)
Financial resources (FIR)		PRS4	0.86 (11.03)	CAD5	0.86 (8.89)
FIR1	0.92 [b]	*Price* (PRI)		CAD6	0.80 (8.33)
FIR2	0.96 (15.55)	PRI1	0.75 [b]	*Market performance* (MAP)	
Experiential resources (EXR)		PRI2	0.88 (10.60)	MAP1	0.60 [b]
EXR1	0.82 [b]	PRI3	0.91 (10.94)	MAP2	0.76 (7.01)
EXR2	0.87 (10.93)	PRI4	0.74 (8.79)	MAP3	0.68 (6.52)
EXR3	0.86 (10.82)	*Distribution* (DIS)		MAP4	0.80 (7.24)
Shared vision (SHV)		DIS1	0.88 [b]	MAP5	0.85 (7.56)
SHV1	0.89 [b]	DIS2	0.90 (14.73)	MAP6	0.86 (7.59)
SHV2	0.92 (15.52)	DIS3	0.80 (12.02)	MAP7	0.73 (6.89)
SHV3	0.77 (10.89)	*Promotion* (PRM)		*Financial performance* (FIP)	
SHV4	0.84 (12.88)	PRM1	0.96 [b]	FIP1	0.76 [b]
Relationship building (REB)		PRM2	0.95 (25.60)	FIP2	0.81 (9.92)
REB1	0.91 [b]	PRM3	0.91 (21.04)	FIP3	0.77 (9.32)
REB2	0.86 (11.93)	PRM4	0.62 (8.78)	FIP4	0.81 (9.91)
REB3	0.67 (6.69)	*People* (PEO)		FIP5	0.68 (8.16)
Technology sensing/response (TSR)		PEO1	0.87 [b]	FIP6	0.82 (10.03)
TSR1	0.90 [b]	PEO2	0.90 (14.58)	FIP7	0.81 (9.88)
TSR2	0.80 (11.44)	PEO3	0.70 (9.42)	FIP8	0.85 (10.47)
TSR3	0.89 (13.92)	PEO4	0.84 (12.73)		
Competitive intensity (CMI)		*Atmosphere* (ATM)		Second-order	
CMI1	0.94 [b]	ATM1	0.80 [b]	*Environmental marketing strategy* (EMS)	
CMI2	0.83 (9.30)	ATM2	0.73 (7.29)	PRS	0.88 [b]
CMI4	0.64 (6.53)	ATM3	0.66 (6.12)	PRI	0.72 (6.69)
Market dynamism (MAD)		*Process* (PRO)		DIS	0.90 (8.98)
MAD1	0.72 [b]	PRO1	0.64 [b]	PRM	0.82 (8.94)
MAD2	0.79 (8.56)	PRO2	0.80 (7.71)	PEO	0.91 (8.92)
MAD3	0.90 (9.69)	PRO3	0.76 (7.49)	ATM	0.75 (5.53)
MAD4	0.83 (8.93)	PRO4	0.90 (8.50)	PRO	0.91 (6.80)
MAD5	0.66 (7.16)				
MAD7	0.70 (7.52)				
Goodness-of-Fit Statistics: $\chi^2_{(296)} = 409.18$, $p < .001$; $\chi^2/df = 1.38$; NFI = 0.94; NNFI = 0.98; CFI = 0.98; GFI = 0.93; NGFI = 0.91; SRMR = 0.04; RMSEA = 0.05.		*Goodness-of-Fit Statistics*: $\chi^2_{(976)} = 1619.17$, $p < .001$; $\chi^2/df = 1.66$; NFI = 0.93; NNFI = 0.97; CFI = 0.97; GFI = 0.92; NGFI = 0.89; SRMR = 0.05; RMSEA = 0.06.			

[a] t-values from the unstandardized solution are in parentheses.

[b] Item fixed to set the scale.

Table 2: Correlation matrix

Variable	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
1. Physical resources	-											
2. Financial resources	0.49	-										
3. Experiential resources	0.63	0.36	-									
4. Shared vision	0.59	0.59	0.46	-								
5. Relationship building	0.52	0.51	0.47	0.69	-							
6. Technology sensing/response	0.53	0.62	0.38	0.67	0.61	-						
7. Environmental marketing strategy	0.60	0.69	0.43	0.72	0.63	0.71	-					
8. Competitive advantage	0.34	0.47	0.30	0.56	0.47	0.53	0.65	-				
9. Market performance	0.43	0.31	0.49	0.39	0.48	0.29	0.40	0.35	-			
10. Financial performance	0.25	0.33	0.26	0.28	0.32	0.20	0.29	0.40	0.62	-		
11. Competitive intensity	0.39	0.09	0.27	0.23	0.24	0.23	0.21	0.12	0.19	0.07	-	
12. Market dynamism	0.30	0.25	0.24	0.34	0.29	0.26	0.44	0.33	0.28	0.11	0.29	-

Notes: n = 152; Correlations greater than | ± 0.16 | are significant at the $p < .05$ level.

Table 3: Results of the structural model

H	Hypothesized association	Expected Sign	Standard. estimate	*t*-value	*p*-value
H1	Physical resources→ Environmental marketing strategy	+	0.15	2.12	**.04**
H2	Financial resources→ Environmental marketing strategy	+	0.30	4.08	**.00**
H3	Experiential resources → Environmental marketing strategy	+	–0.02	–0.37	.71
H4	Shared vision → Environmental marketing strategy	+	0.45	4.62	**.00**
H5	Relationship building → Environmental marketing strategy	+	0.04	0.52	.61
H6	Technology sensing/response → Environmental marketing strategy	+	0.19	2.17	**.02**
H7	Environmental marketing strategy → Competitive advantage	+	0.65	6.11	**.00**
H8a	Competitive advantage → Market performance	+	0.35	3.38	**.00**
H8b	Competitive advantage → Financial performance	+	0.21	2.55	**.01**
H9	Market performance → Financial performance	+	0.54	4.95	**.00**

Goodness-of-Fit Statistics:
Chi-squared (χ^2) = 1610.43, $p < .001$; $df = 923$;
Normed chi-square (χ^2/df) = 1.75; Normed Fit Index (NFI) = 0.93;
Non-Normed Fit Index (NNFI) = 0.96; Comparative Fit Index (CFI) = 0.97;
Goodness-of-fit Index (GFI) = 0.91; Adjusted of Goodness-of Fit Index (AGFI) = 0.88;
Standardized Root Mean Square Residual (SRMR) = 0.06;
Root Mean Squared Error of Approximation (RMSEA) = 0.07.

Table 4: Results of moderation analysis

Competitive intensity as a moderator				
Main effect	Hypothesized moderating effect	Low competitive intensity group (n_1=70)	High competitive intensity group (n_2=82)	$\Delta\chi^2$ (Δd.f. =1)
EMS → CAD	H_{10}: Effect is stronger among high competitive intensity than the low competitive intensity group	β = 0.47 *t* = 3.18**	β = 0.76 *t* = 5.84**	4.75*

Market dynamism as a moderator				
Main effect	Hypothesized moderating effect	Low market dynamism group (n_1=76)	High market dynamism group (n_2=76)	$\Delta\chi^2$ (Δd.f. =1)
EMS → CAD	H_{11}: Effect is stronger among high market dynamism rather than the low market dynamism group	β = 0.62 *t* = 4.39**	β = 0.67 *t* = 4.71**	3.26

* $p < .05$; ** $p < .01$

Appendix: Scales of constructs and descriptive statistics

Constructs and scale items	Item mean* (s.d.)	Construct mean* (s.d.)
Organizational resources		
***Physical resources* (PHR) -** (α = 0.84; ρ = 0.77; AVE = 0.65)		5.79 (1.06)
(Seven-point scale, adapted from Morgan et al., 2004)		
PHR1 - In our hotel, we use modern technology and equipment	5.68 (1.25)	
PHR2 - We have preferential access to valuable and environmentally friendly sources of supply	5.71 (1.28)	
PHR3 - We have adequate service capacity availability	5.96 (1.09)	
***Financial resources* (FIR) -** (α = 0.94; ρ = 0.84; AVE = 0.89)		3.80 (1.79)
(Seven-point scale, adapted from Morgan et al., 2004)		
FIR1 -We have adequate financial resources available to devote to environmental marketing activities	3.78 (1.87)	
FIR2 - We have adequate capital resources to devote to this hotel's environmental marketing activities	3.83 (1.81)	
FIR3 - The speed of acquiring and deploying financial resources for environmental marketing is satisfactory (D)	4.01 (1.92)	
FIR4 - We have adequate ability to find additional financial resources for environmental initiatives when needed (D)	3.53 (1.76)	
***Experiential resources* (EXR) -** (α = 0.88; ρ = 0.80; AVE = 0.72)		5.94 (1.02)
(Seven-point scale, adapted from Morgan et al., 2004)		
EXR1 - We have adequate knowledge of the characteristics and trends in our market	5.72 (1.24)	
EXR2 - We have extensive operational expertise in the hotel industry	6.13 (1.10)	
EXR3 - Overall, our past business performance has been satisfactory	5.97 (1.06)	
Organizational capabilities		
***Shared vision* (SHV) -** (α = 0.91; ρ = 0.85; AVE = 0.74)		
(Seven-point scale, adapted from Aragón-Correa et al., 2008)		4.68 (1.40)
SHV1 - All our employees have a very clear idea about the firm's environmental objectives	4.55 (1.61)	
SHV2 - All our employees make significant efforts to reach the firm's environmental objectives	4.62 (1.54)	
SHV3 - Managers and employees always agree on the right environmental procedures for the firm	5.14 (1.53)	
SHV4 - Employees often offer valuable ideas for improving the firm's abilities to achieve its environmental objectives	4.41 (1.62)	
***Relationship building capability* (REB) -** (α = 0.80; ρ = 0.76; AVE = 0.63)		5.74 (1.01)
(Seven-point scale, adapted from Morgan et al., 2004)		
REB1 - We fully understand customer requirements regarding environmental issues	5.84 (1.15)	
REB2 - We fully understand requirements of other stakeholders regarding environmental issues	5.78 (1.16)	
REB3 - We fully establish and maintain close relationships with suppliers regarding environmental issues	5.61 (1.26)	
REB4 - We establish and maintain close collaborations with internal/external strategic partners regarding environmental issues (D)	5.10 (1.45)	
***Technology sensing/ response* (TSR) -** (α = 0.90; ρ = 0.82; AVE = 0.75)	5.24 (1.39)	4.92 (1.39)
(Seven-point scale, adapted from Srinivasan et al., 2002)		
TSR1 - We are often one of the first in our industry to detect technological developments that may potentially affect our eco efforts	4.82 (1.59)	
TSR2 - We actively seek intelligence on technological changes in the environment that are likely to affect our environmental efforts	5.16 (1.46)	
TSR3 - We generally respond very quickly to technological changes in the environment that have to do with environmental issues	4.77 (1.52)	
TSR4 - This organization lags behind the industry in responding to new technologies that have to do with environmental issues (R) (D)	4.59 (1.93)	
Environmental marketing strategy - (α = 0.92; ρ = 0.90; AVE = 0.71)		4.89 (1.18)
(Seven-point scale, adapted from Menon et al., 1999, Middleton & Clarke, 2001, and Carmona-Moreno et al., 2004)		
***Product-service* (PRS) -** (α = 0.92)		5.25 (1.22)
PRS1 - Our hotel uses environmentally friendly supplies and consumable products for our products/services	5.45 (1.24)	
PRS2 - Our hotel gives priority to offering ecological products and services	5.10 (1.44)	
PRS3 - Our hotel is geared to design, develop and offer its product/services in an environmentally friendly way	5.13 (1.41)	
PRS4 - Our hotel provides its product/services in a way that minimizes its impact on the natural environment	5.35 (1.36)	
***Price* (PRI) -** (α = 0.89)		4.30 (1.48)
PRI1 - Our hotel tends to build environmental compliance costs into the service price	4.20 (1.72)	
PRI2 - Out hotel takes advantage of any cost savings derived from using environmentally friendly practices, to offer better prices	4.68 (1.65)	
PRI3 - Our hotel takes advantage of the financial success of several environmentally friendly products/services, to reduce its prices	4.50 (1.65)	
PRI4 - Our hotel offers competitive prices to our customers as a result of the environmentally friendly practices implemented	3.81 (1.79)	
***Distribution* (DIS) -** (α = 0.89)		5.15 (1.45)
DIS1 - Our hotel encourages suppliers/vendors and agents/representatives to embrace and reflect environmental responsibility	4.79 (1.79)	
DIS2 - Our hotel shows preference to suppliers and strategic partners that embrace environmental responsibility	5.14 (1.65)	
DIS3 - Our hotel is careful when choosing supplies and consumable products so that these are environmentally friendly	5.52 (1.34)	
DIS4 - Our hotel buys supplies in bulk to reduce packaging where possible (D)	5.49 (1.47)	
***Promotion* (PRO) -** (α = 0.92)		4.40 (1.62)
PRO1 - We highlight our commitment to environmental preservation in our advertisements, sponsorships and/or campaigns	4.28 (1.84)	
PRO2 - Our promotional and communicational efforts highlight and inform our customers about the our environmental efforts	4.39 (1.85)	
PRO3 - Our hotel uses ecological arguments in our advertisements, promotional material and/or marketing campaigns	4.19 (1.82)	
PRO4 - Our hotel communicates its environmental initiatives to all employees	4.76 (1.75)	
***People* (PEO) -** (α = 0.89)		4.35 (1.62)
PEO1 - Our hotel provides to employees training on environmental issues	4.18 (1.84)	
PEO2 - Our hotel rewards employees with the best environmental initiatives	3.95 (1.88)	
PEO3 - Our hotel staff "educates" consumers about the harmful environmental impact of human actions through verbal or written means	4.72 (1.84)	
PEO4 - Our hotel encourages employees to actively participate in environmental awareness programs and activities organized for the community	4.53 (1.88)	
***Atmosphere* (ATM) -** (α = 0.71)		5.82 (1.13)
ATM1 - Our hotel applies energy saving practices in guestrooms and common areas	6.22 (1.22)	
ATM2 - Our hotel applies water saving practices in guestrooms and common areas	5.88 (1.40)	
ATM3 - Our hotel applies waste management practices in guestrooms and common areas	5.36 (1.81)	
ARM4 - Our hotel uses renewable sources of energy (D)	4.01 (2.32)	4.97 (1.47)

***Process* (PRO) -** (α = 0.85)		
PRO1 - Our hotel facilitates customer collaboration (e.g., voluntary changing of towels) in environmental protection	5.10 (2.01)	
PRO2 - Our hotel tries to mix environmental-friendliness with other philosophies (e.g., quality, low-cost) across the service process	5.02 (1.65)	
PRO3 - Our hotel encourages collaboration with local communities, governmental agencies, and other hotels in improving environmental standards and practices	4.73 (1.75)	
PRO4 - Our hotel tries to offer a fully sustainable and ecologically-friendly experience to our customers	5.04 (1.61)	
Competitive advantage		
***Competitive advantage* (CAD) -** (α = 0.91; ρ = 0.86; AVE = 0.67)		4.81 (1.39)
(Seven-point scale, adapted from Banerjee et al., 2003)		
CAD1 - Being environmentally conscious can lead to substantial cost advantages for our hotel (D)	4.89 (1.74)	
CAD2 - Our hotel has realized significant cost savings by improving the environmental quality of our products/services	4.14 (1.76)	
CAD3 - By regularly investing in new eco-friendly technologies, processes and strategies, our hotel can be a leader in the market	4.66 (1.76)	
CAD4 - Our hotel can enter lucrative new markets by adopting environmental strategies	4.80 (1.62)	
CAD5 - Our hotel can increase service quality by making its current processes more environmentally friendly	5.20 (1.41)	
CAD6 - Reducing the negative environmental impact of our hotel's activities will lead to a quality improvement in its products/services	5.23 (1.51)	
Performance		
***Market performance* (MAP) -** (α = 0.90; ρ = 0.86; AVE = 0.58)		5.76 (0.76)
(Seven-point scale, adapted from Moorman & Rust, 1999, Vorhies & Morgan, 2005, and Zhou et al., 2009)		
MAP1 - Rate of acquiring new customers	5.46 (0.98)	
MAP2 - Rate of retaining existing customers	5.69 (1.04)	
MAP3 - Rate of increasing sales from existing customers	5.30 (1.04)	
MAP4 - Customer satisfaction	5.95 (0.87)	
MAP5 - Customer loyalty	5.95 (0.88)	
MAP6 - Reputation among customers	6.05 (0.92)	
MAP7 - Service quality offered to customers	5.91 (1.02)	
MAP8 - Occupancy rate (D)	5.63 (1.17)	
***Financial performance* (FIP) -** (α = 0.93; ρ = 0.89; AVE = 0.62)		5.04 (1.02)
(Seven-point scale, adapted from Moorman & Rust, 1999, Vorhies & Morgan, 2005, and Zhou et al., 2009)		
FIP1 - Operating profits	5.22 (1.15)	
FIP2 - Profit to sales ratio	5.10 (1.18)	
FIP3 - Profit return on investment	4.84 (1.36)	
FIP4 - Return on assets	4.79 (1.30)	
FIP5 - Market share	5.12 (1.16)	
FIP6 - Sales volume	5.26 (1.15)	
FIP7 - Sales return on investment	4.99 (1.31)	
FIP8 - Cash-flow	5.00 (1.37)	
Moderators		
***Competitive intensity* (CMI) -** (α = 0.78; ρ = 0.75; AVE = 0.62)		5.26 (0.98)
(Seven-point scale, adapted from Jaworski & Kohli, 1993)		
CMI1 - Competition in our industry is cut-throat	5.41 (0.82)	
CMI2 - There are many "wars" (e.g., focusing on price, promotion, etc.) among firms in our industry	5.31 (0.97)	
CMI3 - In our industry, anything that one competitor can offer, another can match readily (D)	5.47 (1.29)	
CMI4 - Competition is a major hallmark of our industry	5.05 (1.15)	
CMI5 - One hears of a new competitive move almost every day (D)	4.90 (1.64)	
CMI6 - Our competitors are relatively weak (R) (D)	4.57 (1.51)	
***Market dynamism* (MAD) -** (α = 0.89; ρ = 0.85; AVE = 0.60)		4.79 (1.14)
(Seven-point Likert scale, adapted from Sarin & Mahajan, 2001)		
MAD1 - In our kind of business, the mix of product/services available changes very frequently	4.72 (1.42)	
MAD2 - In our kind of business, marketing strategies change very frequently	4.60 (1.40)	
MAD3 - In our kind of business, product/service standards change very frequently	4.61 (1.37)	
MAD4 - In our kind of business, customer preferences in product/service features change very frequently	4.78 (1.43)	
MAD5 - In our kind of business, the technology employed changes very frequently	4.91 (1.30)	
MAD6 - In our kind of business, the frequency of major competitors entering/leaving the industry is very high (D)	4.70 (1.56)	
MAD7 - In our kind of business, customer preferences in the price of the service offered change very frequently	5.11 (1.51)	

*Based on a seven-point scale ranging from strongly disagree (1) to strongly agree (7)

Notes: The sign (R) denotes a reverse scale; The sign (D) denotes that the item was excluded as a result of scale purification procedures.