Greening competitiveness for hotels and restaurants

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Abstract
Purpose – The purpose of this paper is to present the results of a survey-based study performed on Italian SMEs in the “hotel, restaurant, café” (HORECA) sector, aimed at investigating the relationship between pro-environmental strategies and competitiveness and how such strategies can be exploited to outperform competitors.

Design/methodology/approach – The survey involved 317 Italian SMEs. Regression models have been developed to analyze the causal relationship between three dimensions of competitiveness (competitive advantage over competitors, customer satisfaction and employees’ motivation), and environmental practices that can be adopted by HORECA SMEs.

Findings – Top management commitment emerges as a key driver of competitiveness, confirming the strategic relevance of a sound approach to sustainability also in SMEs operating in the tourism sector. Moreover, actions aimed at investing in green food products (e.g. organic food) and awareness campaigns emerge as strong predictors of good business performance. Finally, at managerial level, entrepreneurs and owners evaluate the implementation of internal sustainability monitoring systems as a relevant support to increase their competitive performance.

Research limitations/implications – Since the results are limited to Italian HORECA businesses, a cross-country comparison could represent a potential improvement of the research. Moreover, since the sector is characterized by the predominance of small and micro firms, specific attention should be devoted to the role played by entrepreneurs’ personal values in shaping business strategies.

Originality/value – The paper contributes to the ongoing debate on the relationship between SMEs in the tourism sector and the environmental dimension analyzing the link between the adoption of “green” practices and the competitive performance. The results suggest that customer involvement represents an essential pre-requisite to turn sustainability into an opportunity of market distinctiveness and stress the strategic role of the implementation of performance monitoring systems.

Keywords Italy, Competitiveness, Hospitality, HORECA, Green practices, Tourism SMEs

1. Introduction
The field of research on business and the natural environment (BNE) grew steadily since the 1990s, with contributions from all business disciplines (Bansal and Hoffman, 2012; Testa et al., 2017; Wright and Nyberg, 2016) and emerging as a response to growing calls for companies to reduce the detrimental impacts of their activities on the environment. Theoretical contributions and empirical investigations on BNE represent a heterogeneous body addressing the topic from different perspectives; for instance, many scholars focused on the relationship between corporate environmental practices (or corporate social responsibility (CSR)) and financial performance (Aragon-Correa et al., 2015; Lioui and Sharma, 2012; Miroshnychenko et al., 2017; Singal, 2014; Wang et al., 2016) or competitiveness at large (Battaglia et al., 2015; Marin et al., 2012; Ortiz-de-Mandojana and Bansal, 2016; Schaltegger et al., 2012).
The tourism sector made no exception, being involved in the debate on sustainability since 1995, with the first World Conference on Sustainable Tourism (Hall et al., 2015) and the issue of the consistency between anthropogenic burdens generated by tourism and environmental consequences becoming mainstream at both institutional and academic level (Aragon-Correa et al., 2015; Buckley, 2012; Hall et al., 2015). Indeed, sustainability represents an important topic in relation to tourism planning and development (Budeanu et al., 2016; Cucculelli and Goffi 2016; Southgate and Sharpley, 2002; Yuksel et al., 1999) because of its effects (both positive and negative) on community and society, economy and the natural environment. Improper tourism planning and management can destroy resources, which are the foundations of tourism itself within a community. To be successful, tourism development must be planned and managed according to sustainable principles, with a constant focus on protecting the local natural heritage and on limiting pollution (Choi and Sirakaya, 2006; Jenkins and Schröder, 2013; Jovicic, 2014); this requires the direct and active involvement of all subjects that are interested in initiatives related to tourism, and affected by its flows (Pulido-Fernandez et al., 2015; Waligo et al., 2013).

Businesses are to play a key role, given the strong correlation between their profitability and the preservation of natural heritage and landscape (Byrd, 2007; Gómez-Haro et al., 2015); indeed, unspoiled environment can represent the attractive element qualifying a specific destination where activities take place (Huybers and Bennet, 2002; Mihalič, 2013). The regenerative capacity of resources is essential to ensure the attractiveness of a territory, to guarantee high levels of tourism demand and to support the survival and profitability of companies therein located (Battaglia et al., 2012). The sustainability challenge hence becomes strategic for tourism companies, representing a qualifying asset of their business. Nevertheless, the debate on the business case for sustainability in the tourism sector is far from over, as there is no general agreement in literature and amongst practitioners on whether companies implementing sound green strategies achieve a competitive edge over gray companies. On the one hand, increased sustainability bears the potential to attract those customers that are interested in ethical and environmental aspects and that can be directly involved in a sustainable management of tourism businesses (Chen et al., 2016; Dolnicar, 2015; Moeller et al., 2011); moreover, sound strategies might entail cost reductions in terms, for instance, of energy/water savings, energy efficiency or waste reduction (Chan, 2005; Font et al., 2016). On the other hand, however, there are also costs (both technical and organizational) that need to be born in order for a successful green strategy to be implemented (Chan et al., 2015; Revell and Blackburn, 2007), and that assume a particular relevance if we consider that most companies in this sector are SMEs (Thomas et al., 2011).

The paper contributes to the ongoing debate analyzing the relationship between the adoption of “green” practices by businesses in the tourism industry and competitive performances of the latter. In particular, it explores “green” practices adopted by SMEs operating in the “hotel, restaurant, café” (HORECA) sector, based on data collected with a survey on a large sample of Italian companies. Regression models are developed to analyze the causal relationship between three dimensions of competitiveness (competitive advantage over competitors, customer satisfaction and employees’ motivation) and environmental practices that can be adopted by firms. Emerging evidence has relevant implications both for practitioners and for scholars. Top management commitment emerges as a key driver of competitiveness, confirming the strategic relevance of a sound approach to sustainability also in SMEs operating in the tourism sector (Battaglia and Frey, 2014; Murillo and Lozano, 2009). Moreover, investments on green food products (e.g. organic food) and awareness campaigns emerge as two strong predictors of good business performance. These results are relevant for the current debate, highlighting customer involvement as an essential pre-requisite to exploit sustainability as an opportunity for market distinctiveness. Indeed, growing research on consumer behavior suggests that in many sectors the role
played by customers is crucial, as regards not only purchasing but also consumption and curtailment behaviors (Testa et al., 2016). Furthermore, at managerial level, entrepreneurs and owners consider the implementation of internal sustainability monitoring systems as a relevant support to increase their competitive performance.

The paper is organized as follows: Section 2 analyzes literature on relevant theoretical frameworks and defines the research questions of the study. Section 3 describes the research methods illustrating variable measurement and estimation methodology. Section 4 is devoted to the presentation and discussion of results, while concluding remarks in section 5 outline the limitations of the study as well as possible avenues for future research.

2. Literature review and research questions

2.1 The relationship between business and natural environment
Businesses operating in the tourism sector are mainly SMEs (Garay and Font, 2012; Thomas et al., 2011). Such organizations somehow typify the sector, and they can be vital to job creation (Wanhill, 1999), to destination competitiveness and development (Andriotis, 2002; Cvelbar et al., 2016), and to sustainable tourism (Batta, 2016; Fuller et al., 2005; Horobin and Long, 1996). As far as the latter point is concerned, a vast literature (Chou et al., 2012; Coles et al., 2016; Michailidou and Vlachokostas, 2016; Wang et al., 2013) demonstrated that tourism businesses, because of growth rates and geographical dissemination, might be considered extremely pollutant. The impacts of tourist flows (albeit negligible at individual level) are significant if considered as an aggregate, because of the cumulative effects produced by tourism businesses in a specific territory. Surprisingly, however, practitioners in the industry only recently became aware of (and interested in) the implications of pro-environmental practices for their businesses (Hang et al., 2010). A possible explanation is represented by the fact that most SMEs seem to downsize the real environmental impacts of their activities, which are considered as negligible and not deserving specific environment-oriented strategies (Gössling, 2002; Holden, 2008; Rutherford et al., 2000). This lack of awareness also influenced the perception of opportunities related to a correct and proactive management of environmental issues, as many business owners are yet reluctant to undertake sustainable strategies and practices exceeding legal compliance.

First, businesses tend to lack perception of the strategic link existing between their activities and local natural environment, and the need to balance environmental protection as source of tourist attractiveness with the accessibility of natural beauties for the enjoyment of tourists. This relationship represents the crucial strategic variable connecting demand and supply of the services being provided (Ayuso, 2006). However, the aim of tourism businesses should not be limited to equilibrium between “protection” and “accessibility” to local natural resources, as it is worth considering the need to balance complex sustainability-related issues with criteria and standards of comfort and hospitality. The identification of a correct balance between these forces requires the definition of specific strategies that exceed mere legal compliance as well as an active involvement of employees, guests and tourists (Battaglia et al., 2012; Dos Santos et al., 2016; Font et al., 2008; Sinding, 2000).

Second, companies failing to see the business case for sustainability fear that costs associated with green strategies might outweigh perspective benefits (Dodds and Holmes, 2011; Revell and Blackburn, 2007). There is, however, evidence in literature supporting a positive correlation between environmental and competitive performance in the hospitality sector. Singal (2014), for instance, carried out an empirical analysis on a data set of tourism companies, showing that better environmental performances lead to improved financial performances. Hotels implementing sustainable practices attract more customers via word-of-mouth, increasing their willingness to pay and return intention (Kang et al., 2012), similar results, moreover, can be found in the restaurant sector, as well (Schubert et al., 2010).
Albeit the increasing share of customers actually interested in the sustainability of the offer so that a customer-driven pressure actually exists (Dolnicar, 2015; Foster et al., 2000; Kirk, 1995), most owners still believe that clients can be won on dimensions other than environmental ones: prices, traditional qualities of the offer, etc. (Kasim and Ismail, 2012). Moreover, some businesses fear that sustainability might be interpreted as trading-off with luxury and comfort of the hospitality experience (Barber and Deale, 2014).

The debate on the sustainability-competitiveness relationship is still open; for instance, tourism literature addressing the topic from the perspective of the CSR-CFP (corporate financial performance) link often reaches insufficient or even inconclusive results (Garay and Font, 2012; Inoue and Lee, 2011; Kang et al., 2010).

Furthermore, even in business owners holding positive attitudes toward green strategies, there is often an attitude-behavior gap (which might be driven by resource constraints), so that many managers fail to walk their talk (McKercher and Robbins, 1998; Sampaio et al., 2012). Indeed, although market-related concerns influence the adoption of sound pro-environmental strategies, there is evidence that internal factors play a relevant role (Chan, 2008). The main barriers highlighted are implementation/maintenance costs, lack of professional advice, lack of internal knowledge/skills and lack of resources. These burdens might overrun the willingness to adopt tools to manage environmental issues (such as environmental management systems (EMSs)) and to improve relations with stakeholders and the pressure they exert (Carlsen et al., 2001; Garay and Font, 2012; Vernoon et al., 2003). Moreover, it has been investigated how, when economic conditions are unfavorable, investments in sustainability-related initiatives are often subject to a thorough revision, especially as regards non-operational initiatives such as environmental and community programs (Lee, 2013).

### 2.2 Adoption of environmental practices in the HORECA sector

Efforts related to the implementation of sustainable practices in SMEs belonging to the HORECA sector can either refer to specific activities or involve the whole organization. On the one hand, they can be angled toward single aspects of activities with environmental impacts, such as selling organic food or other eco-labeled products, or implementing water-saving strategies. On the other hand, companies could adopt a holistic approach, pervading the company in all its organizational as well as operational activities and aimed at managing synergically all sustainability-related aspects. Without presumption of exhaustiveness, an overview of evidence in literature regarding the areas of pro-environmental activities is provided, differentiating between hotel/accommodation firms on the one side, and restaurant and bar/cafés on the other.

Waste management represents a relevant issue for hotels (Pirani and Arafat, 2014), given both the associated costs and the environmental consequences (International Hotel Environmental Initiative, 2002). There is mounting awareness in business owners of the need to shift toward green strategies for the management of both solid waste and wastewaters; however, many are still reluctant to make sound investments due to high costs and uncertainties of returns (Kumar, 2005). Radwan et al. (2012) stress how a crucial aspect for hotels is represented also by food waste, for which composting could be a cost-effective alternative. Consistently, Todd and Hawkins (2002) suggest that sound waste management could reduce costs for hotels up to 60 percent, and Parfitt et al. (2013) state that 75 percent of food wasted in the UK hospitality sector could be avoided. Pirani and Arafat (2016) analyze the factors affecting food waste in the hospitality sector the most (e.g. type of food, prediction of number of guests, serving style), suggesting simple but effective strategies for waste minimization, which involve the cooperation of managers, staff and customers.

Another practice with positive competitive effects refers to natural resource management, in particular energy and freshwater, whose efficient allocation supports
costs savings (Pereira-Moliner et al., 2012). The evidence in literature corroborating such assumption is robust, with many studies focusing on the relevant role of internal drivers connected to water and energy savings and on resource-use optimization in spurring firm competitiveness (Chan, 2008; Coles et al., 2016; Enz and Siguaw, 1999; Gössling, 2015; Pace, 2016).

Other than managerial initiatives, some hotels developed specific communicational strategies addressing two key stakeholders: guests and employees. Businesses have to communicate effectively to actual and prospective customers their efforts to implement green strategies. Most travelers seem indeed unable to indicate whether they stayed at an eco-friendly hotel or not (Hang et al., 2010), signaling the need for business owners to improve the communication of their sustainability-related efforts and policies.

Moreover, there is the need to gain better understanding of the real motives underpinning customer behaviors in the hospitality sector: awareness of drivers behind individual choices would provide businesses with a crucial informational background on which to build sound strategies (Baker et al., 2014; Han and Yoon, 2015). Improved communication would also prevent companies from sending the wrong message to actual and prospective clients. For instance, there is evidence (Kang et al., 2012; Robinot and Giannelloni, 2010) that many customers might misinterpret the motives underpinning green strategies, considering initiatives such as towel reuse or recycled paper adoption as cost-cutting measures or a drop in standards. Indeed, albeit environmental awareness is a factor driving consumer choice (Han et al., 2011), most customers are still unwilling to give up on traditional variables such as comfort and luxury (Baker et al., 2014). To overcome this hindrance, customers should be empowered, as to perceive that with their activities (which might entail a bit of effort or discomfort) they are actually playing a relevant role in supporting the environmental cause. In other words, customers need to know that they can actually make a difference, and companies should devote great attention to adequately inform guests on how to participate and contribute (Baker et al., 2014). This is what some authors call perceived effectiveness, or the belief about the effect of individual eco-friendly behaviors in lessening ecological problems (Straughan and Roberts, 1999); it has been found to be particularly important for businesses in the accommodation sector, where an active involvement of customers is crucial (Han and Yoon, 2015). Research indeed shows that, although sustainability does not represent yet a crucial driver in the choice of tourism services, clients express their appreciation for green commitment if they can perceive their own contribution to sustainable practices (Dolnicar, 2015; Tzschentke et al., 2004); sustainability is perceived as a part of the overall “quality” of the service provided, and being involved in these practices represents a benefit for tourists.

Employees represent another key stakeholder, though from this standpoint research has provided heterogeneous indications. According to a US-based survey (Withiam, 1997), an overwhelming majority of the workforce calls for own hotels to increase business sustainability (92 percent), pledging to eventually change work routines in order to support such process (93 percent). On the other hand, Green Hotelier (2002) highlighted that an active involvement of employees might require extra workloads (such as room attendants having to sort rubbish to retrieve plastic bottles and other recyclable items, laundry staff having to cut condemned linen into pieces to be used for cleaning purposes, and so on). Some employees might be then reluctant to accept the introduction of environmental policies not only because this might imply the change of long-established routines, but also because they might be doubtful about the real motives behind green initiatives (Chan et al., 2014). Chan et al. (2014) conducted an empirical investigation on hotel employees, focusing on environmental awareness, knowledge and concern as behavioral triggers. They concluded that managers might even include ecological predisposition as a criterion to select employees. Indeed, job seekers prefer employer’s values to reflect their own (Renwick et al., 2013); this will
increase their satisfaction, will not collide with behavioral patterns and will result in motivation and, thus, better performance.

Finally, in a broad management perspective, some hotels adopt formal EMSs in accordance with the international standard ISO 14001 “to develop systematic approaches to improve environmental performance” (Chan, 2008, p. 187). Besides a genuine interest in the environment, the economic reasons to formalize environmental commitment and get a certification are manifold: ensuring legal compliance (Chan and Hawkins, 2010), optimizing energy and resource use (Best and Thapa, 2013; Font, 2002; Font et al., 2003), and improving brand image and customer satisfaction (Aragon-Correa et al., 2015; Bien, 2007). Moreover, the implementation of EMSs stimulates environmental communication with a wide range of players: customers (Clark, 1999), suppliers (Morrison et al., 2000) and even regulatory agencies, insurance companies and financial institutions (Donaldson, 1996). The uptake of such management tool in the sector is still slow and unevenly distributed on global scale (Chan, 2008), although recent years witnessed a change of pace (Segarra-Oña et al., 2012).

While most studies initially focused on hotels (Schubert et al., 2010), there is now growing interest in the food service sector as well: restaurants entail relevant impacts on waste, energy/water consumption and on the agro-alimentary supply chain (Butler, 2008; Carbonara, 2007; Kasim and Ismail, 2012). A study by Sims (2009) in the food service sector argues that food plays an important role in sustainable tourism because it can appeal visitors’ demand for “authenticity:” this is connected with localness of food, which has implications for economic, cultural and environmental sustainability.

Consistently with evidence on a growing interest of customers for healthier food (Kim et al., 2013), research focused on their willingness to pay for organic products. Albeit the anecdotal evidence suggests that many managers are not interested in offering organic food, a Malaysia-based study shows that one-third of business owners believe being a green restaurant might give competitive edge over competitors, and offering organic food could represent a way to increase competitiveness (Kasim and Ismail, 2012).

Schubert et al. (2010) found that almost all guests would be willing to pay a premium to eat in a green restaurant, with 20 percent of the sample declaring to be willing to pay up to 10 percent more. However, other studies reached different results. For instance, a research conducted by Dutta et al. (2008) in India and the USA showed that 34.1 and 23.7 percent of the respective samples declared not to be willing to pay any premium.

Not only the origin but also the disposal of food has relevant implications at managerial and operational level. Research focusing on waste disposal suggests that over 90 percent of restaurants’ waste could be composted or recycled, and that savings could amount to thousands of dollars even in medium-sized enterprises (Nielsen, 2004). Also upstream activities have a relevant impact on the sustainability and the cost-effectiveness of food-management: sound green supply chain management initiatives bear the potential to provide an important contribution to restaurants willing to decrease their footprint on the environment, achieving at once cost savings (Wang et al., 2013).

2.3 Implication of existing literature and research questions

There is hence evidence on the positive effects of green strategies’ adoption on the competitiveness of businesses belonging to the tourism sector (Kassinis and Soteriou, 2003; Leonidou et al., 2013; Menguc et al., 2010; Molina-Azorin et al., 2015), with relevant managerial implications (Hathroubi et al., 2014). Nevertheless, other works highlight contradictory evidence, stressing the level of costs associated with the implementation of green initiatives (Revell and Blackburn, 2007; Sampaio et al., 2012), or the long-term perspective that is necessary to break even and eventually benefit from such investments (Park and Lee, 2009), especially in the case of SMEs (Morrison and Teixeira, 2004). On these premises, this research focuses on HORECA companies to contribute to the debate on the
relationship between environmental practices and competitiveness, by addressing the following research questions:

**RQ1.** Does a prominent role of environmental issues in SMEs’ strategies affect their competitive performance?

**RQ2.** Does the adoption of operational environmental practices affect the competitive performance of SMEs in the HORECA sector?

**RQ3.** Do sustainability-related managerial and communicational initiatives influence the competitive performance of SMEs in the HORECA sector?

### 3. Methods

#### 3.1 Sample

The study was designed and performed within the scope of a cooperative project between a leading wholesaling company and an Italian University, to investigate how HORECA SMEs approach environment-related topics. In order to answer the research questions, a questionnaire-based survey was performed to collect data from the registered clients of the partner organization operating in the sector.

The Italian HORECA sector is composed of approximately 405,000 companies, employing over 1.2 million workers for a turnover that exceeds €70 billion. Most organizations (81.5 percent) are micro firms with less than six employees.

The questionnaire was designed taking into account the potential problems of common method variance that might affect behavioral research (King and Bruner, 2000; Tourangeau and Yan, 2007). Several procedural remedies were adopted to reduce biases: the questions were simple, specific and concise, while vague concepts, complicated syntax and unfamiliar terms were avoided and the respondents’ anonymity was guaranteed. The questionnaire was designed in close cooperation with the staff of the leading wholesaling company and was pre-tested with four managers of HORECA organizations. Their feedback was considered to frame the final version of the questionnaire, which consisted of 16 questions distributed over four sections. The first section collected general information on the organization; the second section focused on managers’ personal beliefs on sustainability issues; the third section investigated the level of adoption of environmental practices; and the last section explored environmental and competitive performance.

The questionnaire, promoted on a newsletter sent to all the registered clients of the partner organization, was distributed on-line to approximately 3,000 companies. Over the two-month period of the survey (September 2014-October 2014), 315 questionnaires were returned (response rate of approximately 10.5 percent), 44 percent of which representing restaurants, 18 percent hotels and 38 percent catering companies or bars.

After data collection, the presence of selection bias was investigated by applying the method proposed by Armstrong and Overton (1977). Accordingly, we assumed that late respondents were more similar to non-respondents and we divided respondents into early respondents ($n = 183$) and late respondents ($n = 132$): differences in answers to questions related to respondents’ interest in the environment were checked. Since all comparisons revealed that ratings on selected measures were similar, we could reasonably affirm that data are not biased.

The representativeness of the sample was checked against the general characteristics of the population, such as organization size and geographical distribution. In line with the features of the sector, respondents are mainly micro firms employing less than six people (77 percent); 15 percent of responding organizations have six to ten employees whereas only 8 percent of them employ more than ten people. Regarding the geographical distribution, most of responding companies are located in Northern Italy, consistently with the territorial distribution of the wholesaling company’s stores at national level.
3.2 Measures

Since green initiatives could increase the attractiveness of an organization in the job market (Del Brio et al., 2007), to answer our research questions we focused on three different dimensions of competitiveness (Chi and Gursoy, 2009): competitive advantage over direct competitors (Leonidou et al., 2013), customer satisfaction (Berezan et al., 2013) and employee motivation (Renwick et al., 2013). In detail, we measured such three variables with questions on the benefits deriving from the adoption of environmental practices: respondents were asked to rate the level of perceived benefits on a five-point Likert scale ranging from “very low” to “very high.”

To measure the different types of environmental initiatives, we started from literature on environmental practices adopted in the tourism sector, as to identify the relevant categories (Levy and Park, 2011). Based on such research, we asked respondents to state (on a five-point scale ranging from “none” to “effectively implemented”) the stage of adoption and/or implementation of environmental initiatives in the fields of: resources savings (four items), waste reduction and chemicals (three items), reduction of the environmental footprint of food (two items) and non-food (two items) products, customer information practices, environmental performance monitoring, ISO 14001 and Ecolabel certifications; finally, a variable regarding the environmental commitment has been taken into consideration.

In the case of practices measured by multiple questions, answers were combined with a factor analysis to produce a single factor (i.e. resource saving practices; waste reduction practices; use of green food products and use of green non-food products). For all constructs, the Cronbach’s $\alpha$ reliability coefficient was above the recommended value of 0.7 (Nunnally, 1978) (see Table I).

Moreover, we measured the achievement of external recognition of the environmental quality of services being provided (EU-Ecolabel), the adoption of an EMS according to the ISO 14001 standard and the level of management commitment on environmental issues, in order to check its relevance. Finally, we controlled for firm size and sector. Table I provides details on the items used to construct each variable as well as the descriptive statistics.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Number of cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competitive advantage over direct competitors</td>
<td>2.564</td>
<td>1.347</td>
<td>1</td>
<td>5</td>
<td>317</td>
</tr>
<tr>
<td>Increase of market opportunities</td>
<td>2.810</td>
<td>1.322</td>
<td>1</td>
<td>5</td>
<td>317</td>
</tr>
<tr>
<td>Employee motivation</td>
<td>2.403</td>
<td>1.302</td>
<td>1</td>
<td>5</td>
<td>317</td>
</tr>
<tr>
<td>Resource saving practices (4 items: equipment with low-flow toilets; low-flow shower heads; towel and sheet reuse program; and equipment for recovering rainwater; Cronbach’s $\alpha = 0.78$)</td>
<td>0.001</td>
<td>1</td>
<td>-1.272</td>
<td>2.162</td>
<td>317</td>
</tr>
<tr>
<td>Waste reduction practices (3 items: differentiated waste collection; use of dispenser for food or soaps; and adoption of waste prevention practices; Cronbach’s $\alpha = 0.72$)</td>
<td>0.001</td>
<td>1</td>
<td>-2.175</td>
<td>1.076</td>
<td>317</td>
</tr>
<tr>
<td>Chemical reduction practices</td>
<td>2.902</td>
<td>1.608</td>
<td>1</td>
<td>5</td>
<td>317</td>
</tr>
<tr>
<td>Use of green food products (2 items: local food and organic food; Cronbach’s $\alpha = 0.83$)</td>
<td>0.001</td>
<td>1</td>
<td>-1.392</td>
<td>1.373</td>
<td>317</td>
</tr>
<tr>
<td>Use of green no-food products (2 items: use of recycled bottle and recycled paper; Cronbach’s $\alpha = 0.71$)</td>
<td>0.001</td>
<td>1</td>
<td>-1.112</td>
<td>1.447</td>
<td>317</td>
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<tr>
<td>Customers’ information practices</td>
<td>2.356</td>
<td>1.520</td>
<td>1</td>
<td>5</td>
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<td>Environmental performance monitoring</td>
<td>1.911</td>
<td>1.333</td>
<td>1</td>
<td>5</td>
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<tr>
<td>ISO 14001 adoption</td>
<td>0.164</td>
<td>0.370</td>
<td>0</td>
<td>1</td>
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<tr>
<td>Ecolabel certification</td>
<td>0.066</td>
<td>0.249</td>
<td>0</td>
<td>1</td>
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<tr>
<td>Environmental commitment</td>
<td>3.965</td>
<td>0.894</td>
<td>1</td>
<td>5</td>
<td>317</td>
</tr>
</tbody>
</table>

Table I. Descriptive statistics
3.3 Empirical model and results

To answer our research questions, we developed four models. In Model 1, the dependent variable is represented by the comprehensive measure of competitiveness obtained by a combination of its three constructs (Cronbach’s α = 0.83). Models 2-4 analyze the effect of explanatory variables on such constructs, individually. Given the nature of the dependent variables, we performed an ordinary least square (OLS) in Model 1 and an ordered logistic regression in Models 2-4.

The assumptions underlying the OLS regression and logistic regression were verified to check the robustness of the statistical techniques adopted. We checked the normality of residuals by plotting the non-parametric Kernel density estimator, which revealed the symmetry of residuals distribution. Then, the Breusch-Pagan test was performed to investigate the homogeneity of variance of the residuals, revealing that heteroskedasticity did not affect the equations (the null hypothesis that the variance of the residuals is homogenous was not significant). We performed a regression specification error test for omitted variables, which confirmed the absence of model specification errors.

Moreover, we investigated the presence of collinearity by calculating the tolerance and variance inflation factor (VIF) for all variables. The results showed a VIF < 5 and low variance inflation factors (<2.0), suggesting that multicollinearity is not present in the empirical model (O’Brien, 2007). Finally, the presence of the common method variance was checked by Harman’s one-factor test: a single factor or a factor accounting for the majority of covariance among the variables did not emerge (Table II).

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
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<td></td>
<td>Overall</td>
<td>Competitive</td>
<td>Increase</td>
<td>Employees’</td>
</tr>
<tr>
<td></td>
<td>competitive</td>
<td>advantage</td>
<td>of market</td>
<td>motivation</td>
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<td></td>
<td>performance</td>
<td>respect to</td>
<td>opportunities</td>
<td>Coefficient</td>
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<td>Coefficient</td>
<td>direct</td>
<td>Coefficient</td>
<td>Coefficient</td>
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<td></td>
<td>SE</td>
<td>competitors</td>
<td>SE</td>
<td>SE</td>
</tr>
<tr>
<td>Environmental commitment</td>
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<td>0.054</td>
<td>0.328**</td>
<td>0.131</td>
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<td>0.064</td>
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<td>0.141</td>
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<td>Waste reduction practices</td>
<td>-0.100</td>
<td>0.063</td>
<td>-0.201</td>
<td>0.145</td>
</tr>
<tr>
<td>Chemical reduction practices</td>
<td>0.029</td>
<td>0.036</td>
<td>0.109</td>
<td>0.081</td>
</tr>
<tr>
<td>Use of green food products</td>
<td>0.183***</td>
<td>0.061</td>
<td>0.317**</td>
<td>0.141</td>
</tr>
<tr>
<td>Use of green no-food products</td>
<td>0.026</td>
<td>0.065</td>
<td>0.051</td>
<td>0.149</td>
</tr>
<tr>
<td>Customers’ information practices</td>
<td>0.121***</td>
<td>0.040</td>
<td>0.172*</td>
<td>0.091</td>
</tr>
<tr>
<td>Environmental performance monitoring</td>
<td>0.112**</td>
<td>0.048</td>
<td>0.279**</td>
<td>0.110</td>
</tr>
<tr>
<td>ISO 14001 adoption</td>
<td>0.252**</td>
<td>0.128</td>
<td>0.421</td>
<td>0.287</td>
</tr>
<tr>
<td>Ecolabel certification</td>
<td>0.315</td>
<td>0.196</td>
<td>0.340</td>
<td>0.446</td>
</tr>
<tr>
<td>Employees</td>
<td>0.075</td>
<td>0.073</td>
<td>0.101</td>
<td>0.159</td>
</tr>
<tr>
<td>Sector restaurant (compared to hotel)</td>
<td>0.074</td>
<td>0.138</td>
<td>0.238</td>
<td>0.131</td>
</tr>
<tr>
<td>Sector Catering (compared to Hotel)</td>
<td>0.316**</td>
<td>0.149</td>
<td>0.573**</td>
<td>0.342</td>
</tr>
<tr>
<td>Constant</td>
<td>-1.897****</td>
<td>0.295</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>F-test</td>
<td>****</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>$\chi^2$</td>
<td>0.360</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.104</td>
<td>0.131</td>
<td>0.090</td>
<td></td>
</tr>
<tr>
<td>Pseudo $R^2$</td>
<td>0.104</td>
<td>0.131</td>
<td>0.090</td>
<td></td>
</tr>
</tbody>
</table>

Notes: *p < 0.1; **p < 0.05; ***p < 0.01; ****p < 0.001

Table II. Estimation results of competitive performance equations
4. Discussion
First and foremost, our study shows that the priority given to pro-environmental practices within the strategies of HORECA companies is a relevant determinant of their competitive success. This is confirmed by the strong influence that the strategic role of environmental issues can exert on competitiveness, as measured by all the different dependent variables included in the models.

This can be explained by many factors. First of all, the choice of prioritizing the environment can pervasively inspire the decision-making process: such a deep impact on the business model makes it easier for the company to pursue the competitive goal of getting an edge from being green. If the entrepreneur shows (and puts into practice) a strong commitment for environmental issues, the key message that the hotel or the restaurant is actually green is more credible both for the employees and customers. This enables an active involvement of the personnel who, in the face-to-face interaction with the customer (i.e. the moment of truth), plays a pivotal role in making the latter perceive the (environmental) quality and the superior performance. Moreover, when the strategic input from the management is intense and passionate, engaging customers becomes easier and more effective: green initiatives within the hotel/restaurant stimulate them, with messages on different environmental aspects being consistent and mutually reinforcing (Molina-Azorín et al., 2015).

The strategic input of a sustainability-oriented management is significant also for the three models focusing on the specific areas of competitiveness (better positioning with respect to competitors, advantages on the market measured by means of customer satisfaction and benefits in terms of personnel motivation). This reveals the importance of green strategies and their ability to positively influence competitiveness in all its facets, both internally (with potential growth of labor productivity as a consequence of increased employee motivation) and externally (with respect to the advantage over competitors and in the perspective of gaining market shares and new customers) (Testa, Gusmerotti, Corsini, Passetti and Iraldo, 2015; Testa, Boiral and Iraldo, 2015).

The results are hence in line with the literature review. From this point of view, important elements refer to the size of firms belonging to the tourism industry and to the type of activities that characterize it. On the one hand, company size implies a close relationship between owner/manager and employees. Managerial philosophy and commitment are directly transferred from top management to staff, setting rules that cover daily operational activities mirroring the entrepreneurial system of values and principles (Murillo and Lozano, 2009). On the other hand, the second distinctive element is the type of activity: providing services that are not mediated, with a direct and close relationship with guests in order to influence their behavior. Such influence can limit their direct environmental impacts, within the hotel/restaurant/bar but also outside, when tourists visit local areas (stimulating and educating them on sound behaviors). It is only through the active involvement of guests and tourists that tourism business can really contribute to a holistic approach to environmental protection. Information and dialogue can raise the awareness of tourists, and thus lead to a reduction in their footprint. Business hence plays a social role, contributing to local sustainable development and supporting a balance between service quality, protection of local environment and accessibility to local natural heritage.

In addition to the strategic endorsement of top management/entrepreneur, other variables produce effects on the overall ability of hotels and restaurants to compete. If we look at the other determinants of competitiveness arising from Model 1, the key actions are those that are closer to the customer, where her/his interest and involvement get heightened. Some actions are perceived as more in line with the idea of sustainability in the HORECA sector and, as such, they are crucial in judging whether a hotel/restaurant is environment friendly or not. Most customers, for instance, focus on the environmental impact of food, including the supply chain. This represents a core element of the service, and is hence
privileged by customers over other aspects such as those related to logistics and the transport modes to reach the accommodation. Customers indeed tend to interpret sustainability in terms of dimensions that are very close to their personal sphere: green customers mostly focus on health-related dimensions such as organic food, seasonal food and local food coming from small producers adopting traditional cultivation methods (so-called proximity effect of green consumerism, Edwards-Jones et al., 2008). Our study clearly shows that HORECA SMEs focusing on the sustainability of foods and beverages, with a purchasing policy based on domestic, organic and traditional food products, can better respond to customer expectations exploiting the potential of the proximity effect. This result is consistent with evidence outlined in the literature review (e.g. Sims, 2009), confirming the relevance of green strategies from a marketing perspective.

Another strong determinant of competitiveness is represented by actions aimed at sensitizing and involving customers in the environmental management of HORECA services. When hotels/restaurants implement information and awareness-raising initiatives toward customers (especially in-field), they are more likely to achieve better competitive performances. Model 1 demonstrates that entrepreneurs recognizing the importance of active customer involvement can achieve higher competitive benefits and advantages from being green. Indeed, tourists tend to change their everyday behaviors when on holiday (Dolnicar and Grun, 2009; McKerner, 1993): they want to break free from their everyday life, reducing their engagement in environment friendly actions (for instance, they are less willing to differentiate waste, they do not pay attention to curtailment behaviors on energy and water consumptions, etc.). On this premise, the environmental commitment of entrepreneurs can be attended by actions of involvement, aimed at accompanying the “traditional” variables (price, comfort, location, etc.) with actions increasing the awareness of guests about their own contribution to “sustainability.” Such initiatives might entail an active involvement of guests in environmental improvement activities performed “on the spot,” through information and guidelines on how to behave as to curtail the environmental footprint of the accommodation, when visiting specific sensitive natural destinations, and so on. This result is consistent with evidence in literature on the sustainability of service providers: only if customers are involved such companies are able to exploit the potential benefits of environmental management (Gil et al., 2001).

Other actions captured by different independent variables of Model 1 (e.g. waste management, energy savings, etc.) do not lead to similar competitive advantages, even if linked to very practical and operational dimensions. Actions on energy savings and/or on waste reduction, for instance, do not emerge as significant predictors of good competitive performances. This result highlights a scant ability of managers to assess benefits associated to “green” commitment, with particular reference to operational activities. This is only partially consistent with evidence in existing literature: although a general awareness on the benefits of “green commitment” exists, the perception of its ability to provide in the short-term economic-financial benefits is weak, especially if initiatives are considered individually and not integrated in a broad framework of green investments.

This is confirmed by the fact that the only operational activity that has an influence on competitiveness is monitoring, which represents the effort of the entrepreneur to keep management levers under control and to collect relevant data and indicators as to support an efficient and effective environmental management. Indeed, by monitoring green management actions and data, the entrepreneur is able to make timely decisions on how to adapt and improve the management approach and the environmental performance of the accommodation, identifying potential margins for progress. Successful monitoring requires setting up a set of procedures and a system for the implementation of performance reporting, data collection and feedback creation. Its level of sophistication depends on the size of the organization, and data collected can help managers/entrepreneurs to assess

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the environmental performance of a particular facility or a selected group of properties, to provide back-up information for legislative compliance and for sustainability reporting (Hawkins and Bohdanowicz, 2011). Key performance indicators refer, for instance, to utility use and related unitary energy and water consumption, carbon footprint and waste generation per customer and/or occupied room, and so on. This information can be monitored over time, allowing managers to identify needed improvements and to measure performance evolution alongside that of regulation and with respect to performances of competitors (as confirmed also in Model 2). Setting up the monitoring system can be part of the implementation of a wider EMS, aimed at organizing all environment-sensible activities according to a model such as that promoted by ISO 14001.

ISO 14001 certification seems to have an influence on competitiveness, although the significance of the statistical correlation is rather low. ISO 14001 is not a trademark (such as the EU-Ecolabel); it is a process-based system certifying that managerial practices adopted within a specific company are oriented to improve its environmental performance (Font et al., 2003). Monitoring actions are essential in the implementation of an EMS compliant with ISO 14001, and the positive relationship with competitiveness resulting from the survey seems to be coherent with the results emerged for monitoring systems. Consistently with the literature review, the adoption of certified EMSs can provide both tangible benefits (such as resource saving, legal compliance) and intangible ones (reputation and imagine), fostering at once communication and relationships with different stakeholders (e.g. guests and employees). Indeed, certifications and labels increase the knowledge of consumers and guests with respect to business commitment, supporting the adoption of responsible practices and increasing the ability to distinguish between real sustainable practices and greenwashing (Testa, Boiral and Iraldo, 2015). They thus increase the credibility of certified organizations and, consequently, improve their image and reputation (Bien, 2007). Regarding ISO 14001 certification, the results of the regression model highlight a low significance (95 percent); this is consistent with literature stressing the difficulties of SMEs in implementing such type of instruments (Battaglia et al., 2010; Hillary, 2004; Rutherfoord et al., 2000; Testa et al., 2012), which explains the low diffusion of certifications amongst SMEs belonging to the tourism sector.

To gain further insights on how different independent variables of Model 1 can affect competitiveness, we analyzed the results emerging from three additional models, referring to dependent variables linked to specific components, or building blocks, of competitiveness.

In Model 2, the focus is on the concept of differentiation with respect to competitors. In addition to the strategic lever of management commitment (which is a strong predictor for all the different facets of competitiveness), two other variables seem to play a major role: actions concerning served food and beverages, and monitoring activities.

Food and beverages-oriented actions represent a crucial differentiation dimension for companies operating in the sector. Indeed, all touristic accommodations approaching a green strategy face the choice between the structure and the service: opting for a housekeeping-oriented strategy (i.e. focusing on waste management, water-saving policies, energy savings, etc.), or differentiating the service they offer focusing on the sustainability of food and beverages. The latter option is more demanding, as it requires a thorough reconsideration of both the menu and the supply chain management; for instance, it implies higher costs of raw materials and the need to set up a system for identifying, selecting and controlling suppliers. However, according to the results of our study, this effort seems to pay back.

The practice of monitoring relevant environmental impacts, which implies a considerable effort yet represents a clear sign of maturity of the environmental management approach, is not widely diffused in the sample. Setting up a monitoring system to fuel corrective actions and improvement plans is something that very few front-runners do, although they recognize (as highlighted in Model 1) its relevance in terms of competitive advantage over
competitors. These pioneers are, for instance, adopting a dashboard of indicators to drive their management strategies, demonstrating the strong influence this variable is able to exert on the competitive performance in terms of differentiation.

In Model 3, we test the same independent variables over the ability to predict marketing-related competitiveness in terms of customer satisfaction. Two different variables (in addition to strategic approach, which again is very significant) emerge as good predictors of high competitive performance: the choice to rely on the sustainability of food and beverages, and the choice to perform information and communication campaigns to involve customers in the greening of the accommodation structure. Both variables need a proactive behavior toward customers, based on expression of preferences, communication and, finally, engagement.

As regards the first variable, the strategy of prioritizing the food supply chain to serve food and beverages based on green procurement criteria (organic food, local production, etc.) perfectly fits with customer expectations. Indeed, as highlighted in the literature review, citizens are particularly eager to choose green products based on the proximity of the impacts to their personal sphere (health for organic food, for instance). As our survey demonstrates, most of the respondents are interpreting food sustainability as organic food purchasing, zero km products, and so on. This has a positive influence on competitiveness as it represents a value added for customers, who seemingly express their preferences for these restaurants or hotels.

The second variable refers to actions that can be developed to stimulate and attract the interest of customers while receiving the service: distributing information on the environmental footprint of products alongside the menu or empowering customers to express their opinion by means of a suggestion box are recent initiatives adopted by hotels and restaurants to take the customers on-board. This is done for a twofold objective. First, customers are involved, making a difference improving or worsening the environmental performance of an accommodation structure. Second, through this direct channel customers can be sensitized on what the business has done to guarantee a high environmental performance and, therefore, their satisfaction and loyalty to the company.

Finally, in Model 4 we test the relevance of the independent variables with reference to employee satisfaction and loyalty, the consequent engagement in corporate strategies and motivation/productivity benefits that follow. Once again, the strategic approach proves to be a very important predictor of this declination of competitiveness. Two additional variables are crucial: the efforts to inform customers on-site and the ISO 14001 certification.

Information provided to customers also reaches employees who are often responsible of conveying the message to clients. This multiplies the rebound effect of information campaigns on people operating within the company, representing the first and most important mediator of green messages for clients and the public at large.

The variable relating to the ISO 14001 certification has a significant influence on the dependent variable of the last model: adopting an EMS produces effects especially within the organization itself and, particularly, in terms of employee participation and commitment. Changing working routines to take into account environmental priorities, as required by ISO 14001, increases employee awareness and competence, motivating the workforce to support the company in achieving both environmental and competitive goals. Going through a certification process seems to be formative for employees, increasing their involvement and motivation and aligning their behaviors with the commitment of top management by means of training and awareness initiatives.

5. Conclusions
The study has been conceived to investigate the relationship between green strategies and competitiveness in the HORECA sector.
First of all, top management strategic commitment emerges as a key driver of better competitive performance: a strong input toward a thorough and pervasive environment-oriented strategy represents a necessary condition for competitive success. Not only our models show that, by prompting a green approach, the apical functions can guarantee the credibility of actions and initiatives that follow; they also assert that managers can strategically rely on this approach to pursue an effective improvement of the competitive position. Our research demonstrates that even in the tourism industry (because of the size of companies and the close connection between managers and strategic stakeholders), the managerial model established by the entrepreneur emerges as essential to make “green” strategies functional to competitive advantage. The credibility of instruments being implemented is essential in improving relations and in creating an informational background on which to base strategic decisions.

A second layer of implications refers to the levers that managers can activate to trigger green competitiveness: actions on food products/food-chains and information to customers emerge as the two strongest predictors of good business performance. By investing in such levers, managers can be confident that the greening of the business will pay back.

Several implications also refer to the benefits of local food. Choosing local food is likely to result in stronger local multiplier effects, reducing the environmental footprint of consumption and increasing opportunities for local farm producers. Furthermore, the coincidence between a territory and local food increases the competitive advantage of a specific destination, making gastronomy an appealing driver of local competitiveness. Third, food from local farmers is perceived as “authentic” and healthier than food from large industrial companies. This result builds on the evidence that customers hold a concept of sustainability strongly connected to that of personal care: working on such dimensions (especially with reference to food and beverages), managers are likely to obtain a positive outcome. These implications seem to provide a social value to the green strategy of tourism managers, moving beyond mere “environmental protection” and focusing on the quality of life of both guests and local communities (i.e. local producers). Of course, this perspective stems from the assumption that there is a direct connection between the “authentic,” “local,” “healthy” and “sustainable” concepts, an assumption that should be demonstrated by business managers and for which, again, a system of information, communication and dialogue with guests would be essential.

As far as customer behaviors are concerned, our results show that guests are willing to be actively involved in the environmental initiatives carried out in-field, to adopt proactive green behaviors and to express their opinion and suggestions on how to improve the environmental performance of businesses. Managers indeed need to stimulate customer participation and feedback, as this will turn into higher involvement, loyalty and appreciation, thus increasing company competitiveness.

Evidence from the survey suggests that managerial initiatives play a bigger role in shaping competitiveness, compared to operational ones (related to waste management, to an ineffective management of natural resources, etc.). The competitive advantage appears to be connected to sustainability policies promoted by top management (or business owners), and to the implementation of initiatives for environmental performance monitoring. Also customer awareness and involvement initiatives emerge as strategic elements in pursuing envisaged goals and targets.

Interestingly, the survey shows that single actions that could have a positive direct impact on the cost structure (such as initiatives on energy savings, freshwater or improved waste management) are not perceived *per se* beneficial in terms of competitiveness. Such initiatives are perceived more as a consequence of a managerial green strategy (based on an overarching environmental policy), rather than as factors worth being pursued to improve competitiveness. Certification systems can play a relevant role in such process. Obtaining a certification in accordance with the ISO 14001 standard goes in parallel with the definition of
an environmental policy to be implemented based on procedures aimed at staff involvement, continuous communication and interaction with clients, and internal monitoring systems. Certification can hence assume a strategic relevance; nevertheless, its level of diffusion and knowledge amongst HORECA SMEs is still quite scarce. A policy recommendation for trade associations and Chambers of Commerce could be that of investing in training and information initiatives to increase awareness on the topic.

Further implications concern the urge to focus on different levers according to the business area and the specific aim of the company in terms of competitive edge. For instance, monitoring actions and tools should be preferably used to support differentiation-oriented strategies. A manager should prioritize on-site information campaigns to engage customers and promote the environmental quality of the offer (e.g. by proposing greener dishes in the menu on the basis of their environmental footprint), if she wants to get a positive and lasting response from the market. By involving the personnel in the communication with customers and by implementing an EMS, the manager would be able to enhance employee motivation, participation and productivity.

The academic and managerial contribution of our research refers to the importance of a managerial vision and a holistic approach to sustainable management of tourism businesses, instead of specific, stand-alone “green” initiatives developed by SMEs. Such vision should involve two dimensions: the relational dimension with staff and guests, and the internal dimension, stimulating the measurement of benefits associated to specific “green” strategies. Specific initiatives in the domain of resource savings and selection of suppliers are perceived as beneficial as long as they are integrated within an overarching strategy promoted by the owner/manager. This element can foster the credibility of the tourism business and improve the “sustainability culture” amongst prospective customers (enlarging demand), contributing at once to local development with the support of other local businesses, as well.

In this perspective, our research contributes to the debate on the business case for sustainability suggesting to move beyond the mere identification of “which” green initiatives should be promoted by SMEs (e.g. energy savings, waste reduction, etc.). In order to increase the competitive performance and make “green” strategies beneficial, tourism SMEs should expand the relationships with their stakeholders, and implement effective internal monitoring systems of environmental performances (also by means of implementation of certified EMSs).

As a concluding remark, some limitations of the study can be highlighted as a stimulus for future research. First of all, the sample is composed of Italian enterprises only, representing a hindering factor for the generalizability of the findings. Studies should be replicated in different national and cultural contexts, in order to identify both common trends and features characterizing all businesses in the HORECA sector and those that, on the other hand, are country specific. Moreover, specific attention should be devoted to the role played by entrepreneurs’ personal values in shaping business strategies. Since the sector is characterized by the predominance of small and micro firms, the relationship between the individual sphere of the business owner and the company itself is arguably stronger than in the case of large corporations, so that the influence that can be exerted is likely to be more direct. Future research should investigate in detail the determinants of pro-environmental behaviors of entrepreneurs (e.g. attitudes, behavioral control, social pressure, resistance to change, environmental values, etc.), how these translate into managerial practices and how this link can be strengthened as to maximize the positive spillover between the two domains (Lanzini and Thøgersen, 2014; Mas-Machuca et al., 2016).

Note


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