

# Greening the hospitality industry: How do green human resource management practices influence organizational citizenship behavior in hotels? A mixed-methods study



Nhat Tan Pham<sup>a</sup>, Zuzana Tučková<sup>a</sup>, Charbel José Chiappetta Jabbour<sup>b,\*</sup>

<sup>a</sup> Tomas Bata University in Zlín, Zlín, Czech Republic

<sup>b</sup> Montpellier Business School, 2300 Avenue des Moulins, Montpellier, 34000, France

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## ABSTRACT

Despite the important contribution made by green human resource management (GHRM) towards organizational citizenship behavior for the environment (OCBE), few published studies have investigated this significant contemporary topic in the hospitality industry, which constitutes a major gap in the literature on the greening of the hospitality industry. Drawing on Ability-Motivation-Opportunity theory, this study develops and tests direct and interactive effects of GHRM practices on OCBE. A mixed methodology is applied, with a survey of 203 employees working in 4–5 star hotels being conducted first to test six hypotheses, followed by qualitative research into two specific cases. The results indicate a mixture of expected and unexpected findings, including: (i) the direct effects of GHRM practices on OCBE; (ii) the interaction of three GHRM practices (training, performance management and employee involvement), which can enhance employees' voluntary green behavior, dependent on the level of green performance management and green employee involvement; and (iii) that green training is seen as a key mechanism to boost employees' voluntary green behavior. The originality of this manuscript is based on its status as one of the first mixed-methodology works on GHRM in the hospitality industry in an emerging economy.

## 1. Introduction

Anchored in Ability-Motivation-Opportunity theory (Appelbaum, Bailey, Berg, & Kalleberg, 2000), this study aims to explain the relationships between GHRM practices and OCBE. Additionally, the interactive effects of the GHRM practices of green training, green performance management, and green employee involvement on OCBE are investigated through a mixed-methodology approach applied to hotels located in an emerging, yet so far under-studied context: Vietnam. Therefore, this work creates a bridge between two important topics in tourism management: environmental management (Martinez-Martinez, Cegarra-Navarro, Garcia-Perez, & Wensley, 2019) and human resource management (Baum, 2015), applied to the hospitality industry.

Environmental impact has come to be seen as a significant concern by both organizations and governments over the last few decades (Rhead, Elliot, & Upham, 2015; Robertson & Barling, 2017). Increased environmental pressures from the market and consumers in recent times, as well as modern regulations and laws, have enhanced

organizations' awareness and experience of handling environmental issues, including hotels and the wider hospitality sector (Chan & Hawkins, 2012; Chan & Hsu, 2016). Therefore, environmental concern has recently become an emerging topic in management scholarship (Masri & Jaaron, 2017; Renwick, Redman, & Maguire, 2013), with an emphasis on integrating environmental management strategies with human resource management, a synthesis termed “green human resource management” (GHRM) (Renwick, Redman, & Maguire, 2008). In addition, in order to enhance environmental performance, employees' involvement in green behavior is necessary, especially organizational citizenship behavior toward the environment (Robertson & Barling, 2017), because such behavior contributes to tackling environmental problems and enhancing organizations' sustainable development (De Groot & Steg, 2010). In the hotel industry, management strategies for environmental sustainability have become important to improving environmental performance and maintaining competitive advantage (Chan & Hsu, 2016; Molina-Azorín, Tari, Pereira-Moliner, López-Gamero, & Pertusa-Ortega, 2015). Further, the adoption of

\* Corresponding author.

E-mail addresses: [nhatpham1729@gmail.com](mailto:nhatpham1729@gmail.com), [pham@utb.cz](mailto:pham@utb.cz) (N.T. Pham), [tuckova@utb.cz](mailto:tuckova@utb.cz) (Z. Tučková), [c.chiappetta-jabbour@montpellier-bs.com](mailto:c.chiappetta-jabbour@montpellier-bs.com) (C.J. Chiappetta Jabbour).

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environmental practices benefits human resources in hotels – for instance, employees' environmental knowledge and awareness (Alonso-Almeida, Fernández Robin, Celemin Pedroche, & Astorga, 2017) – which in turn motivates their green behavior and their willingness to implement environmental activities in their organizations (Chan, Hon, Chan, & Okumus, 2014).

So far, scholars have published papers on several different aspects of GHRM and OCBE. There are theoretical studies which aim to better understand the existing GHRM literature (Ren, Tang, & Jackson, 2017; Renwick, Jabbour, Muller-Camen, Redman, & Wilkinson, 2016) as well as empirical studies to investigate the contributions of GHRM to environmental performance (Guerci, Longoni, & Luzzini, 2016; Masri & Jaaron, 2017), financial performance (Longoni, Luzzini, & Guerci, 2018), and green supply chain management (Nejati, Rabiei, & Jabbour, 2017; Zaid, Jaaron, & Talib Bon, 2018). There are also OCBE-related studies, which have primarily concentrated on the relationships between OCBE and organizations' support for the environment (Paillé & Raineri, 2015; Wesselink, Blok, & Ringersma, 2017), employees' job satisfaction and commitment to the organization (Paillé, Amara, & Halilem, 2018; Paillé & Mejía-Morelos, 2014), organizational identification (Afsar, Cheema, & Javed, 2018) and multi-level factors such as individual differences, leadership behavior, and coworker advocacy (Kim, Kim, Han, Jackson, & Ployhart, 2017).

However, the papers published to date in this area have left the following research gaps. First, following social exchange theory (Emerson, 1976), if employees perceive support for and benefits of green practices they are likely to participate voluntarily in green activities (Alt & Spitzbeck, 2016; Paillé & Mejía-Morelos, 2014). Also, although Ren et al. (2017) argue that green human resource management strategies may motivate employees' discretionary behavior toward the environment, very few scholars have so far considered this angle. For instance, Pinzone, Guerci, Lettieri, and Redman (2016) investigate the effects of GHRM practices on OCBE, in the context of the healthcare system in England. Second, based on Ability-Motivation-Opportunity theory, Kim, Pathak, and Werner (2015) discuss the application of a multiplicative model (three-way interactive effect) which significantly clarifies the contributions of human resource management practices to organizational performance benefits.

Moreover, Bos-Nehles, Van Riemsdijk, and Kees Looise (2013) point out the moderating effects which arise through the combination of ability and motivation, as well as of ability and opportunity, and which contribute to higher explained variance of performance. In the green context, however, no scholar has yet demonstrated the interactive effects (moderating effects and three-way interactive effects) of GHRM practices on performance in general or on OCBE in particular. Third, in the hotel industry, although there are some prior studies concerning the importance of environmental management in relation to the existence of benefits such as hotel performance, competitive advantage and customer satisfaction (Alonso-Almeida et al., 2017; Chan & Hsu, 2016), very few researchers have thoroughly investigated the application of GHRM practices in this industry. In fact, we found very little GHRM-related research; one example is Luu (2018), but this article only clarifies the relationships between the green practices of training, empowerment and reward and employees' green recovery performance in tourist organizations, rather than examining the role of OCBE. Finally, the application of GHRM practices in hotels is still a new area, although it has recently become a relevant topic. A mixed-methods approach is appropriate in this case because this method may help us to investigate the complexity of the research problem (Creswell, 2003), providing better findings (Tashakkori & Creswell, 2007). Meanwhile, previous empirical studies lack the application of mixed methods to explain the relationships between GHRM practices and OCBE.

This study answers following research questions:

- Do GHRM practices have direct effects on OCBE?
- Do GHRM practices have interactive effects on OCBE?

This paper makes a number of original contributions both to the literature and to practice:

- First, our study makes a theoretical contribution through applying Ability-Motivation-Opportunity theory to the examination of the effects of three GHRM practices on OCBE.
- Second, the paper also contributes to the extant literature by analyzing the interactive effects of these practices on OCBE, which have not been investigated by previous studies.
- Third, regarding empirical contributions, this paper is one of very few studies which explore these relationships in the context of the hotel industry.
- Fourth, the mixed methodology selected contributes to the methodological perspective that helps us better understand the role of GHRM practices in employees' eco-behavior.
- Furthermore, this study applies conditional process analysis according to the PROCESS model (Hayes, 2013) in order to better clarify these interactive effects under different moderating conditions.
- Finally, this study offers new insights into the practice of greening the hospitality industry in emerging economies, such as Vietnam.

## 2. Theoretical background

### 2.1. Organizational citizenship behavior towards the environment and green human resource management

The concept of organizational citizenship behavior towards the environment (OCBE) developed from the definition of organizational citizenship behavior (Raineri & Paillé, 2016). Therefore, OCBE can be understood as *'individual and discretionary social behaviors that are not explicitly recognized by the formal reward system and that contribute to a more effective environmental management by organizations'* (Boiral, 2009, p. 223). Similarly, OCBE is also highlighted as encompassing an individual's discretionary behaviors which are directed toward environmental improvement but are not required by the organization (Daily, Bishop, & Govindarajulu, 2009). Discretionary behaviors are not specified in job descriptions and help to make organizations and society more sustainable through the combined efforts of individual employees (Lamm, Tosti-Kharas, & Williams, 2013).

The term 'green human resource management' (GHRM) was coined by Renwick et al. (2008), and is generally defined as covering the human resource management-related aspects of environmental management (Renwick et al., 2013). At the same time, scholars have viewed GHRM as a new line of research with the aim of studying organizational environmental management through the deployment of human resource management practices (Jabbour, Jugend, De Sousa Jabbour, Gunasekaran, & Latan, 2015; Jackson & Seo, 2010). Renwick et al. (2008, 2013) introduce Ability-Motivation-Opportunity theory as an underlying theory used to clarify GHRM practices and their role. Currently, the application of three core components of GHRM has increasingly been studied by researchers: (1) the development of green abilities such as green training; (2) the motivation of employees for green activities such as green performance management; and (3) the creation of green opportunities such as green employee involvement (Guerci et al., 2016; Masri & Jaaron, 2017; Pinzone et al., 2016). In this study, we use these three components – green training, green performance management and green employee involvement – to gauge GHRM practices.

### 2.2. Enhancing organizational citizenship behavior toward the environment through green human resource management practices

#### 2.2.1. Related organizational theories

According to Ability-Motivation-Opportunity theory, human resource management practices influence performance in relation to

ability, motivation, and opportunity (Appelbaum et al., 2000). Here, performance is conceptualized as multidimensional (Cochran & Wood, 1984; Jiang, Lepak, Hu, & Baer, 2012) with, for example, organizational citizenship behavior forming a part of human resources outcomes and performance (Dyer & Reeves, 1995; Jiang et al., 2012). This is entirely appropriate because Siemsen, Roth, and Balasubramanian (2008) indicate that behavior or motivation is operationalized as performance. Following the framework of Ability-Motivation-Opportunity, human resource management practices may influence individuals' discretionary efforts or organizational citizenship behavior. In the green context, therefore, we can view as appropriate the application of Ability-Motivation-Opportunity theory to the investigation of the relationships between GHRM practices and “green” organizational citizenship behavior (OCBE). In fact, Pinzone et al. (2016) apply this same framework to evaluate the effects of GHRM practices on OCBE and collective commitment. Moreover, we will also apply social exchange theory (Emerson, 1976) in order to more deeply explain these relationships. This theory indicates that when an employee perceives benefits from their organization's actions, they feel obligated to reciprocate (Jiang et al., 2012). Normally, social exchange theory is utilized to clarify the application of human resource management policies to employees' reciprocal behavior (Snape & Redman, 2010). From the environmental perspective, OCBE – representing one of these reciprocal behaviors – has become an interesting research area in management studies (e.g. Raineri & Paillé, 2016; Robertson & Barling, 2017). Thus, the two above theories are appropriate to exploring the effects of GHRM practices on OCBE.

### 2.2.2. The additive model

According to Ability-Motivation-Opportunity theory, the additive function of combining ability, motivation and opportunity best describes OCBE. Ability-Motivation-Opportunity theory is seen as the heart of strategic human resource management (Katou & Budhwar, 2010) and, therefore, human resource management practices designed to enhance these variables (ability, motivation, and opportunity) can shape and improve individuals' discretionary behavior (Boxall & Purcell, 2003; Katou & Budhwar, 2010). In the green context, accordingly, Paillé, Chen, Boiral, and Jin (2014) argue that devoting attention to developing internal environment-oriented strategic human resource management may positively enhance OCBE, even though few previous studies have concentrated on direct effects of GHRM practices on OCBE (e.g. Pinzone et al., 2016).

To be more specific about these GHRM practices, green training is considered to comprise those environmental policies which provide employees with the required knowledge, skills and attitudes (Jabbour, Santos, & Nagano, 2010) to achieve the organization's environmental goals (Daily & Huang, 2001). Training for environmental activities promotes the spread of environmental values to encourage employees' voluntary behaviors (Boiral, 2009). In particular, this strategy helps to communicate green knowledge and skills to employees, thus enhancing the ability to recognize environmental issues (Govindarajulu & Daily, 2004) and to understand and minimize negative environmental impacts (Vidal-Salazar, Cordón-Pozo, & Ferrón-Vilchez, 2012), as well as encouraging employees to participate in environmental activities (Pless, Maak, & Stahl, 2012). Further, employees may become more aware of environmental standards and adopt proactive attitudes and behaviors in the workplace (Daily & Huang, 2001). Empirically, Pinzone et al. (2016) highlight that applying practices to build green competences leads to employees 'going the extra mile' with environmental activities and engaging in OCBE.

Green performance management denotes a system for guiding employees in aligning their behaviors with the organization's environmental objectives (Govindarajulu & Daily, 2004; Harvey, Williams, & Probert, 2013). Green performance management practices aim to appraise employees' environmental performance, which motivates them to engage in and contribute to firms' environmental activities (Renwick

et al., 2013). In fact, environment-based feedback from supervisors/managers helps to increase employees' knowledge, skills, and abilities (Masri & Jaaron, 2017), which in turn can boost their motivation to engage in environmental responsibilities (Govindarajulu & Daily, 2004). Thus, monitoring and appraising employees' environmental performance and activities can be expected to help employees obtain clear information on the environment, adopt green voluntary behaviors (Guerci et al., 2016; Pinzone et al., 2016), and ensure their environmental responsibilities are met (Chinander, 2009). Pinzone et al. (2016) emphasize the importance of evaluating environmental activities and appraising skills and competencies in improving employees' voluntary eco-behaviors.

Another important green practice is green employee involvement. Providing green opportunities through employee involvement encourages employees to participate in and initiate new ideas for ecological practices (Daily, Bishop, & Massoud, 2012; Masri & Jaaron, 2017), supports them to implement the organization's environmental goals and develops successful environmental management systems (Boiral & Paillé, 2012). This practice can be seen as an individual factor which may enhance employees' environmental behavior in the workplace (Ramus, 2001; Starik & Rands, 1995). For instance, creating green teams inspires employees to actively contribute to proactive pollution prevention efforts (Govindarajulu & Daily, 2004). Moreover, if employees are allowed to make decisions and suggestions concerning environmental problems, they are more willing to become voluntarily involved in environmental activities (Pinzone et al., 2016). Accordingly, it is necessary to develop employee involvement in order to promote OCBE (Alt & Spitzeck, 2016).

From the above arguments, the authors anticipate effects of all three of these green practices (training, performance management and employee involvement) on OCBE. Thus, we hypothesize that:

- H1. Green training is positively associated with OCBE
- H2. Green performance management is positively associated with OCBE
- H3. Green employee involvement is positively associated with OCBE

### 2.2.3. The combination model

Bos-Nehles et al. (2013) indicate that the relationships between the three components (ability, motivation, and opportunity) and performance can be described as follows: performance represents a two-way interactive function involving both the combination of ability and motivation and the combination of ability and opportunity. Following this reasoning, we argue for the interactive influences of human resource management practices on organizational citizenship behavior through combining ability and motivation as well as ability and opportunity. Although practices to motivate and create opportunities for employees are important, developing their ability is a key element in influencing organizational citizenship behavior, and this influence can be moderated when ability interacts with motivation or opportunity. In the green context, we therefore expect to discover the interactive influences of green training and green performance management (ability and motivation) and of green training and green employee involvement (ability and opportunity) on OCBE improvement, the formula being illustrated as follows: OCBE represents a two-way interactive function involving both the combination of ability and motivation and the combination of ability and opportunity.

Specifically, according to the motivational perspective (Vroom, 1964), performance is seen as a function of the interaction between ability and motivation. Van Iddekinge, Aguinis, Mackey, and DeOrtentiis (2018) support this through their finding that 9% of explained performance variance can be accounted for by the ability-motivation interaction. Following Siemsen et al. (2008), this motivational perspective is appropriate to clarifying the interactive effects which influence individuals' behavior. Developing this argument based on the

works of [Wabba and House \(1974\)](#) and [Blumberg and Pringle \(1982\)](#), we hold that if organizations develop policies to strongly motivate their employees, the enhancement of ability will result in a stronger increase in employees' environmental behavior than policies which only weakly motivate employees. Similarly, [Macduffie \(1995\)](#) also argues that an organization which stimulates its skilled and knowledgeable employees will better strengthen and encourage these employees to contribute voluntary efforts than one which provides little interest or encouragement to employees with the same related skills and knowledge. This can be explained by the essential role of extrinsic factors in human resource management, the lack of which could influence individuals' intrinsic motivation to implement human resource management practices ([Bos-Nehles et al., 2013](#)). In the green context, therefore, environmental training helps employees to obtain environmental knowledge and skills ([Govindarajulu & Daily, 2004](#); [Jabbour et al., 2010](#)). At the same time, employees are more willing to voluntarily apply their knowledge and skills to green activities when their organization has policies (e.g. an environmental appraisal system) which stimulate them. GHRM practices generally aim to motivate employees through developing motivation and trust to encourage them to apply the knowledge arising from their abilities ([Kim et al., 2015](#)). Accordingly, we extend this reasoning to suggest that organizations which pay more attention to green performance management will positively influence the effect of green ability on OCBE – and that those which neglect green performance management will negatively influence it. We therefore hypothesize that:

**H4.** Green performance management moderates the effect of green training on OCBE

Similarly, from the arguments of [Blumberg and Pringle \(1982\)](#) and [Bos-Nehles et al. \(2013\)](#), we suggest that there are interactive influences on organizational citizenship behavior arising from practices which develop both ability and opportunity. [Lepak, Liao, Chung, and Harden \(2006\)](#) also emphasize the addition of opportunity to this model to enhance individuals' effectiveness in performing their tasks. This is consistent with [Blumberg and Pringle \(1982\)](#), who imply that the benefits attained from employees' abilities can depend more or less on the organization's strategies, such as the creation of opportunities for employees. In fact, although employees may have sufficient skills and knowledge to do what their company requires of them, a lack of opportunities to satisfactorily fulfill these requirements (e.g. empowerment, employee involvement, top management support, resources, technology) puts a limit on their potential, negatively impacts their performance and decreases their motivation and discretionary efforts ([Lepak et al., 2006](#)).

We extend these arguments into the environmental perspective, i.e. creating green opportunities for employees. In this way, green employee involvement becomes an important factor in human resource management and environmental management. Green involvement encourages employees to participate in and initiate new ideas for ecological practices ([Daily et al., 2012](#); [Masri & Jaaron, 2017](#)) and to obtain green knowledge, skills, abilities and behavior ([Paillé, Boiral, & Chen, 2013](#)). This may in turn moderate the relationship between green training (or other GHRM practices) and OCBE ([Ren et al., 2017](#)). Individuals' participation in environmental projects can contribute to tacit environmental knowledge, which enhances better understanding of identifying hazardous waste and pollution and of managing energy consumption ([Boiral & Paillé, 2012](#)), which in turn encourages employees to participate in better voluntary ecological behavior ([Chan et al., 2014](#)). Organizations which concentrate on creating a green climate generate more opportunities for employees to be involved and trained in environmental skills and activities. This encourages individuals who have higher personal environmental standards to enact discretionary green behaviors ([Chou, 2014](#)). Similarly, [Dumont, Shen, and Deng \(2017\)](#) suggest that GHRM practices (including green training) have a stronger effect on employees' voluntary green behavior

when companies pay more attention to developing a green climate in the workplace. Thus, we expect that hotels which concentrate on improving green employee involvement will see a positive influence on the effect of green training on OCBE, while those which neglect the development of green employee involvement will see a negative effect. We therefore hypothesize that:

**H5.** Green employee involvement moderates the effect of green training on OCBE.

#### 2.2.4. The multiplicative model

[Siemsen et al. \(2008\)](#) point out that the interactions of all three dimensions (ability, motivation, and opportunity) should be theoretically supported by Ability-Motivation-Opportunity theory. More specifically, if one of these dimensions is absent or has a lower value, overall performance may be decreased ([Blumberg & Pringle, 1982](#)). For instance, although employees' ability is important, organizations also require policies to motivate them (e.g. performance management) and to create opportunities for them to be positively involved in their job to significantly enhance organizational performance. Using this multiplicative interactive model explains more performance variance than the linear terms alone ([Siemsen et al., 2008](#); [Van Iddekinge et al., 2018](#)). This can be explained through the reciprocal roles of the three components instead of the independent role alone, as in the additive model, because the individual (or organization), the environment and behavior are interlocking determinants with reciprocal relationships and influences on each other ([Blumberg & Pringle, 1982](#)). Returning to the GHRM context, we therefore expect to see three-way interactive effects on OCBE from green practices (training, performance management and employee involvement); the model is specified as follows: OCBE represents a three-way interactive function of ability, motivation, and opportunity.

More specifically, environmental performance management helps to motivate employees, developing their trust and willingness to share knowledge and apply the knowledge and skills gained from training to green activities, so that employees' green abilities will increase. Furthermore, employees motivated by these practices feel it is necessary to become involved in actively providing suggestions and solutions to solve environmental problems, as well as participating in "green" community activities. In terms of creating green opportunities, when employees have chances to become positively involved in green activities, this creates a positive environment for them to apply their green knowledge and skills and to learn more about environment-related requirements, thus enhancing their green ability. At the same time, creating green opportunities encourages employees to undertake green activities which are likely to motivate them to work on environmental issues within the organization. Similarly, green training equips employees with knowledge and skills which, in turn, helps them to confidently pursue environmental initiatives and activities, leading to a boost in their motivation. Moreover, thanks to their environmental knowledge and skills, employees can understand how to better participate in green opportunities in their group or organization. For instance, environmental training communicates knowledge and skills ([Govindarajulu & Daily, 2004](#)) which, in turn, may promote the spread of environmental values to encourage employees' voluntary behaviors ([Boiral, 2009](#); [Pinzone et al., 2016](#)). The level of environmentally-conscious behavior is enhanced if employees perceive a positive and simultaneous high level of the other two green practices (performance management and employee involvement). From these arguments, we hypothesize that:

**H6.** There is a three-way interaction effect on OCBE arising from green training, green performance management, and green employee involvement.

In sum, a review of the literature reveals a need to investigate the links between GHRM practices and OCBE, and to test the above six



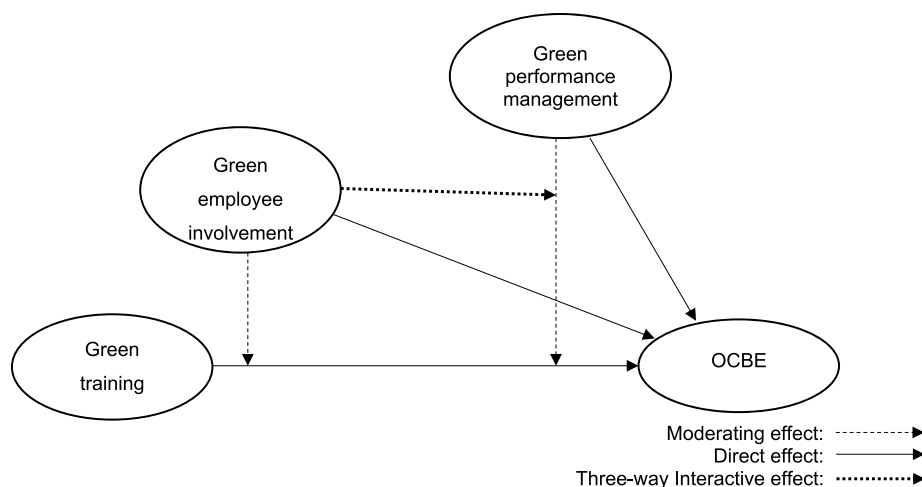


Fig. 1. Research framework.

hypotheses. Arguments to propose these hypotheses are primarily based on the Ability-Motivation-Opportunity framework. Though the direct effects of GHRM practices on OCBE have been suggested by a few studies (e.g. Pinzone et al., 2016), examining these influences in a new research area – the hotel industry – delivers insights into the application of GHRM and its roles in relation to OCBE. In terms of the interaction model (combination and multiplicative), there is also a necessity to understand the interactive influences of GHRM practices on OCBE to fill existing research gaps, since the interactive effects among GHRM practices remain absent from published studies, even though GHRM has attracted increasing attention from scholars recently. Thus, testing the above hypotheses not only clarifies the extension of the interaction model and Ability-Motivation-Opportunity theory through the argument of Blumberg and Pringle (1982) in the environmental context, but also establishes convergence between GHRM practices and green behavior, as well as further stressing the important roles played by these concepts and their relationships with tourism management (Fig. 1).

### 3. Methodology

#### 3.1. Research design

Although some scholars have conducted empirical studies related to GHRM (e.g. Masri & Jaaron, 2017) and hotels have acknowledged the importance of proactive green behavior, firm performance and competitive advantage in dealing with environmental management (Alonso-Almeida et al., 2017; Bagur-Femenias, Llach, & Alonso-Almeida, 2013; Chan & Hsu, 2016), the literature still contains several research gaps. For example, published studies so far have not extensively focused on the interactive effects of GHRM practices (training, performance management, and employee involvement) on OCBE. Also, the complexity of GHRM practices is differentiated in different cultures, since people living in countries with varying cultures may have different attitudes and responses to situations (Adler, Doktor, & Redding, 1986). Accordingly, a mixed methodology is preferable to clarify our understanding of the complexity of this research problem (Creswell, 2003). The mixed-methods approach combines qualitative and quantitative data collection and analysis procedures, which can be employed either simultaneously or sequentially within a single study (Creswell, 2003). Moreover, we expect that this method will help us to corroborate the findings of qualitative and quantitative analyses (Saunders, Lewis, & Thornhill, 2009). For this reason, mixed-methods provides better findings (Tashakkori & Creswell, 2007; Tashakkori & Teddlie, 2003), and improves validity and reliability (Bryman & Bell, 2011). Thus, a mixed-methods approach is applied, with quantitative research being

performed initially to test our six hypotheses, which are then confirmed through the qualitative research. We use a cross-sectional design which is appropriate for studies focusing on a particular phenomenon at a particular time (Anderson, Sweeney, & Williams, 2011) and for studies which apply mixed-methods (Saunders et al., 2009).

#### 3.2. Quantitative study

This study uses a quantitative research approach to infer the characteristics, attitude, or behavior of the sample (Creswell, 2003) and, more specifically, to measure the effects of GHRM practices on OCBE in the hotel industry. The research strategy used is a survey, which is appropriate to quantitative data collection and to measuring relationships between variables (Saunders et al., 2009). To conduct this survey, we chose participants working in 4–5 star hotels in Vietnam and who are frequently involved in environmental activities, based on the following reasoning. First, since Doi Moi (renovation) in 1986, Vietnam has been transformed into a market-oriented economy (Nguyen, Özçaglar-Toulouse, & Kjeldgaard, 2018) which presented a perfect opportunity for the development of the tourism industry in Vietnam (Jansen-Verbeke & Go, 1995). Additionally, the tourism industry was expected to balance economic development and environmental protection (Le, Hollenhorst, Harris, McLaughlin, & Shook, 2006). In 2011, the Prime Minister of Vietnam also approved the “Strategy on green growth in the period of 2011–2020 and vision to 2050”, aiming for sustainable economic development (Doan & Kim, 2014). Accordingly, organizations operating in tourism have begun following environmental regulations and laws, and are currently strictly supervised by local authorities.

Second, environmental commitments have been highlighted in luxury hotels, particularly in 4–5 star hotels which are engaged in Corporate Social Responsibility policies with an emphasis on environmental protection (Le & Ferguson, 2016). Previous environment-related studies conducted in the area of hospitality have also collected data from 4 to 5 star hotels (e.g. Zientara & Zamojska, 2016). Furthermore, Trung and Kumar (2005) argue that practices which emphasize environmental issues and standards for the efficient use of environmental resources are highlighted in Vietnamese hotels, especially in luxury hotels. Therefore, the top managerial levels in 4–5 star Vietnamese hotels are always concerned with environmental commitment. For instance, environmental training for both employees and managers (e.g. how to reduce, recycle, and replace waste, and to effectively use energy and water) is an essential green practice in these hotels. In fact, almost all 4–5 star hotels operating in Vietnam follow TCVN: 4391–2015 (the Vietnamese hotel classification standard) and apply ISO:14001, which indicates an emphasis on environmental criteria with the aim of

developing a sustainable tourism industry. Thus, employees/managers working in 4–5 star hotels are appropriate for involvement in this study. The questionnaire technique was used to collect data, which is consistent with other studies applying a mixed-methods research design and descriptive and explanatory research (Saunders et al., 2009). The structured questionnaire with closed questions was distributed to employees in both hard copy and email. After carefully checking the returned questionnaires, we were left with 203 valid questionnaires to be used for the quantitative analysis. Regarding the sample size, for studies employing factor analysis, the sample size should be more than 200 (Comrey & Lee, 1992). Halinski and Feldt (1970) emphasize that the sample size for regression analysis should be 10 individuals or more for each independent variable. Consequently, since the number of independent variables in this case is 3, the sample size of 203 is appropriate for this study.

Concerning data analysis, we first assessed the reliability and validity of the measurement instrument. Next, regression was utilized to investigate the effect of GHRM on OCBE, with the PROCESS model specifically applied to clarify the interactive influences. The PROCESS model has been developed and added for SPSS and SAS software by Hayes (2013). This process makes it easier to estimate regression equations because of its convenience and ease of use (Hayes & Rockwood, 2017). This study uses the regression-based approach which can be easily implemented using PROCESS (Hayes, 2018). Another important reason for choosing this method is that our research focuses on interactive effects, especially the multiplicative model. This requires us to apply conditional process analysis with a model which combines many equations to test our hypotheses (Hayes, 2018). Thus, the PROCESS model is appropriate for application in this study. We conducted three separate stages of analysis for the additive model, the combination model (Model 2 in PROCESS), and the multiplicative model (Model 3 in PROCESS) to test our hypotheses, evaluate the changes in the R<sup>2</sup> value, and compare models.

3.2.1. Statistical analysis

The questionnaire was originally developed in English. This initial questionnaire was then worked on in Vietnamese by the first author and another bilingual academic, before being retranslated back into English. In order to ensure the validity and reliability of the questionnaire, a number of items were reworded through the case study and the pilot testing of the Vietnamese version of the survey. This study used Disagree-Agree scales with five answer points (ranging from 1 – totally disagree to 5 – totally agree) in accordance with Revilla, Saris, and Krosnick's (2014) suggestion that the quality of measurement decreases as scholars increase the number of categories. Based on scales used in published studies in the Scopus and Web of Science databases, we proposed constructs to measure GHRM and OCBE.

3.2.1.1. Green human resource management. Although we reviewed some GHRM-related published studies, there is a general lack of studies covering environmental issues in the hotel industry, as well as of studies focusing entirely on GHRM practices. Thus, we based our research on the definitions used by Renwick et al. (2013) and various constructs and items published by different authors to develop the following measures.

*Green training (TRA):* We utilized six items adopted by Daily et al. (2012) and Jabbour (2015) (e.g. “An adequate amount of training in environmental issues is provided for employees” and “Employees have the chance to be trained on environmental issues”).

*Green performance management (PEM):* Five items from Jabbour et al. (2010) and Masri and Jaaron (2017) were employed to measure green performance management (e.g. “Employees understand the specific environmental targets, goals, and responsibilities” and “providing regular feedback to employees or teams to achieve environmental goals or improve hotel's environmental performance”).

*Green employee involvement (EIN):* Based on items published by Masri and Jaaron (2017) and Pinzone et al. (2016), we proposed five items to measure green employee involvement (e.g. “Employees are allowed to make decisions concerning environmental problems”; “Employees are involved in problem-solving groups related to environmental matters”).

3.2.1.2. Organizational citizenship behavior towards the environment. We used items developed by Boiral and Paillé (2012) to measure OCBE. These items were selected because their scope is not restricted to a specific context, and is hence appropriate for application in different circumstances (Raineri & Paillé, 2016). For instance, Zientara and Zamojska (2016) have previously utilized it in the tourism industry. Some sample items include “I encourage my colleagues to adopt more environmentally conscious behaviors” and “I volunteer for projects or activities that address the hotel's environmental issues”.

According to Hair, Black, Babin, Anderson, and Tatham (2006), Cronbach's Alpha should be 0.7 or higher for such measurements, with a loading of 0.5 or higher being acceptable. In addition, the percentage of variance explained must be greater than 50%. From Table 1 and Table 2 we conclude that this result meets the requirements for reliability and validity of measurement.

3.3. Qualitative study

We also adopted a qualitative research approach in order to clarify the nature of the effects of GHRM practices (Saunders et al., 2009). The research strategy selected is a case study approach, used to enrich and deepen understanding of this complex topical phenomenon (Yin, 2014), and in turn to reveal why organizations apply GHRM practices. Specifically, with this aspect of the research we seek to answer the “why” question related to the effects of GHRM practices on OCBE, which may help us to more deeply understand the findings from the quantitative stage of our research. To conduct this survey, we chose respondents who are employed in 4–5 star hotels and who meet the requirements mentioned in the quantitative study.

Concerning the participants, all respondents are full-time staff, are at least 18 years of age and have at least one year of working experience in their hotel. This aims to ensure that participants understand the hotel's environmental policies and concerns, which in turn guarantees the reliability of our data. These requirements are entirely consistent with the studies of Chan and Hawkins (2012) and Luu (2017). Participants include both managers and employees. We have purposefully selected managers who have adequate knowledge and understanding of environmental management practices and environmental issues

**Table 1**  
Descriptive statistics, criteria for assessing measurements and correlation.

Construct	Mean (SD)	CrA	Loadings	Variance explained	VIF	Correlation				
						1	2	3	4	
1	TRA	3.524(0.802)	0.903	0.701–0.790	64.733%	1.718	–			
2	PEM	3.705(0.684)	0.863	0.684–0.797		1.513	0.553**	–		
3	EIN	3.653(0.697)	0.874	0.718–0.770		1.503	0.549**	0.455**	–	
4	OCBE	3.664(0.588)	0.875	0.630–0.810		–	0.603**	0.527**	0.546**	–

Note: N = 203; SD: Standard Deviation; CrA: Cronbach's Alpha; VIF: Variance Inflation Factor; \*\*p < 0.01.

**Table 2**  
Characteristics of participants.

No.	Participant (Code)	Case	Age (years)	Position	Experience at this hotel (years)
1	MK1	K	47	Manager of administration department	5
2	MK2	K	40	Manager of front office department	5
3	EK1	K	26	Employee of maintenance department	3
4	EK2	K	26	Employee of housekeeping department	3
5	MG1	G	49	Manager of HR & training department	7
6	MG2	G	41	Manager of maintenance department	6
7	EG1	G	29	Senior employee of kitchen room	4
8	EG2	G	28	Senior employee of maintenance department	4

(Molina-Azorín et al., 2015). Additionally, we chose employees who are primarily involved in environmental practices. Non-standardized interviews (semi-structured and in-depth) were employed to gather better responses to “why” questions in the case study portion of the research (Saunders et al., 2009). Choosing the appropriate number of cases is important when conducting case studies, and scholars should choose no more than four cases (Creswell, 2007); in this instance, 2 cases are utilized. Specifically, case K (Hotel K) is a 5-star international hotel which is entirely managed by a multinational corporation from a Western country in the hotel industry. Case G (Hotel G) is a 4-star private hotel owned and managed by a Vietnamese corporation operating in tourism, real estate and construction.

Indeed, in the first stage, a list of possible hotels was created to ensure the application of green practices. We then established potential participants and contacted them to schedule the interviews. At the second stage, the semi-structured interviews were conducted in Vietnamese. The schedule for such interviews should have three main steps: warm-up, development, and closing (Chan & Hawkins, 2012). Information on the interviewers and the purpose of study was given to participants, emphasizing interviewees' anonymity in order to create a reliable and comfortable ambiance. The interviewees' personal information was also checked again before entering the main content of the interviews. At the next step, interviewees were asked a diverse set of questions to clarify why hotels should apply GHRM practices, in order to examine the GHRM-OCBE relationship. The closing step focused on questions to confirm and add more related information. After completing the interviews, the authors summarized and analyzed the data of each case carefully. To reduce bias and improve the credibility and quality of the research, we applied a member checking process (Baxter & Jack, 2008) by contacting interviewees to confirm the information collected. Finally, the final report was translated from Vietnamese into English in a way that preserved the original meaning through the back-translation method.

**4. Results**

**4.1. Quantitative results**

Table 1 illustrates the correlations between GHRM practices and OCBE. The results show the significant relationships among the independent variables and a dependent variable (all p-values < 0.01). For assessment of multicollinearity, this study uses variance inflation factor indicators. The variance inflation factor value should be less than 5 (Hair et al., 2006). The variance inflation factor values in our results range from 1.503 to 1.718, showing that there is no indication of multicollinearity problems in this study. In Table 3, we test our six hypotheses by analyzing the effects of GHRM practices on OCBE based on the additive, combination, and multiplicative models detailed above. To clarify the interactive effects, Table 4 shows the conditional effects of green training on OCBE at different values of moderating variables. Furthermore, the descriptive visualizations in Fig. 2 (a, b and c) help us to better understand these interactive effects.

**Table 3**  
Results of regression analysis for the three models.

Predictors	OCBE		
	Additive model b (s.e)	Combination model b (s.e)	Multiplicative model b (s.e)
Intercept	1.279(0.194)**	3.647(0.036)**	3.643(0.036)**
TRA	0.248(0.050)**	0.251(0.053)**	0.251(0.051)**
PEM	0.192(0.055)**	0.199(0.058)**	0.153(0.061)*
EIN	0.219(0.054)**	0.215(0.057)**	0.146(0.066)*
TRA x PEM	–	–0.001(0.060)	–0.053(0.066)
TRA x EIN	–	0.055(0.050)	0.054(0.075)
TRA x PEM x EIN	–	–	0.163(0.079)*
F value	57.133**	44.560**	41.741**
R <sup>2</sup> (%)	46.300**	46.600**	48.160**
ΔR <sup>2</sup> (%) – TRA	–	0.000	–
x PEM	–	–	–
ΔR <sup>2</sup> (%) – TRA	–	0.300	–
x EIN	–	–	–
ΔR <sup>2</sup> (%) – TRA	–	–	1.030*
x PEM x EIN	–	–	–

Note: \*\*p < 0.01; \*p < 0.05.

**Table 4**  
Conditional effects on the value of moderators.

Moderators		The focal predictors	
PEM	EIN	Effects (b)	Conclusion
Low	Low	0.327**	TRA predicts OCBE
Low	Average	0.287**	TRA predicts OCBE
Low	High	0.247**	TRA predicts OCBE
Average	Low	0.214**	TRA predicts OCBE
Average	Average	0.251**	TRA predicts OCBE
Average	High	0.288**	TRA predicts OCBE
High	Low	0.100	TRA does not predict OCBE
High	Average	0.215**	TRA predicts OCBE
High	High	0.330**	TRA predicts OCBE

Note: \*\*p < 0.01.

**4.1.1. Testing of hypotheses**

**4.1.1.1. The additive model.** The results presented in Table 3 demonstrate the significant and positive effects of three GHRM practices on OCBE: green training (b = 0.248, p < 0.05), green performance management (b = 0.192, p < 0.05), and green employee involvement (b = 0.219, p < 0.05). Also, these independent variables significantly explain 46.3% of OCBE's variance (F = 57.133, p < 0.05). Thus, our first three hypotheses – H1, H2, and H3 – are supported.

**4.1.1.2. The combination model.** We analyzed the two-way interactive effects of GHRM practices on OCBE. In Table 3, R<sup>2</sup> = 46.6% is significant (F = 44.56, p < 0.05), but the increase in ΔR<sup>2</sup> of 0.3% (p > 0.05) implies that the combination model is not better than the

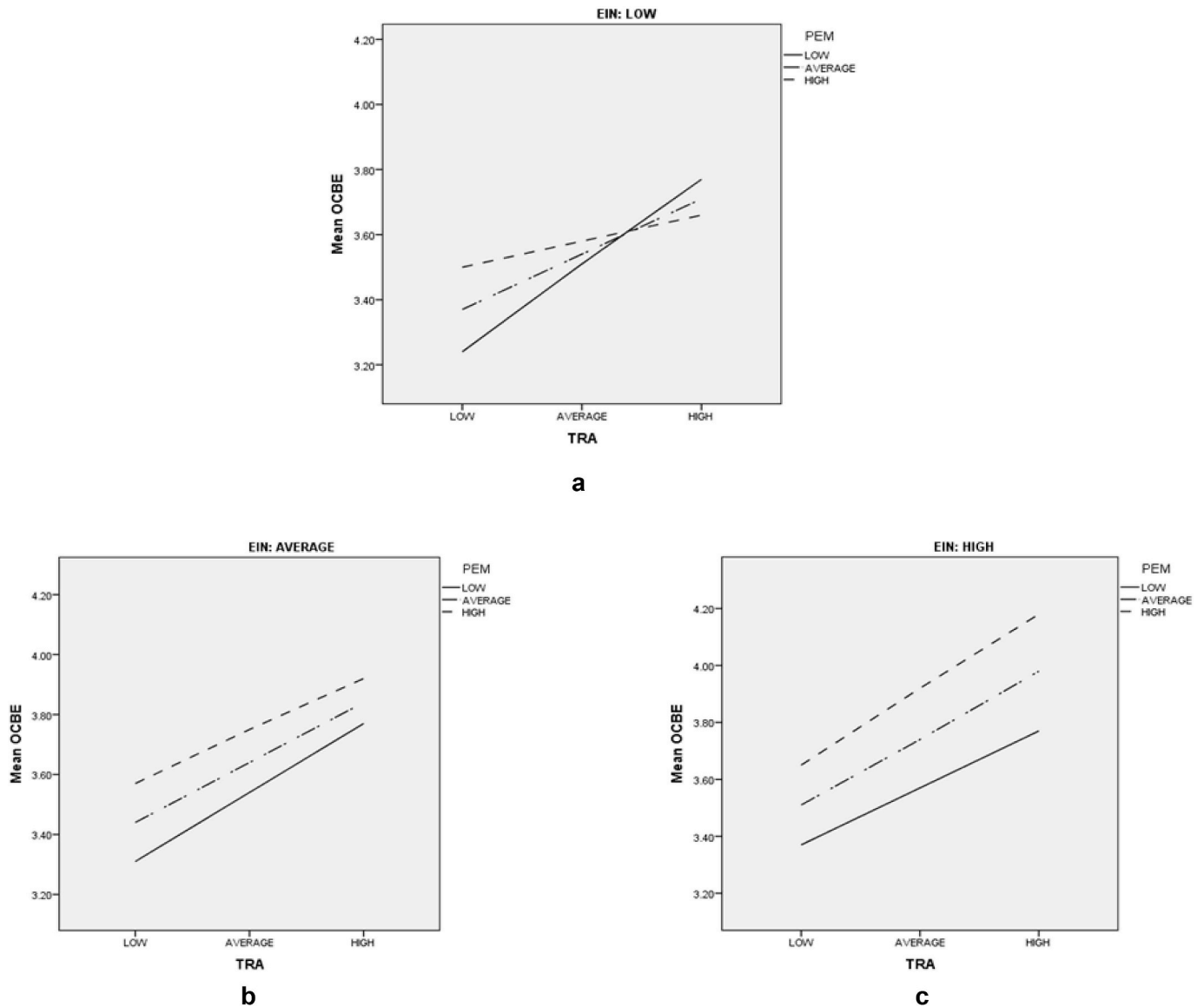


Fig. 2. a. The conditional effect in the Low-EIN. b. The conditional effect at the Average -EIN. c. The conditional effect at the High -EIN.

additive model. Specifically, there are no interactive effects on OCBE emerging from the interaction of green training with green performance management ( $b = -0.001, p > 0.05$ ) and green employee involvement ( $b = 0.055, p > 0.05$ ). Thus H4 and H5 are rejected, indicating that neither green performance management nor green employee involvement moderate the effect of green training on OCBE.

4.1.1.3. *The multiplicative model.* The three-way interactive effect was used to clarify the relationship between three GHRM practices and OCBE in the multiplicative model. With  $R^2 = 48.16\%$  ( $F = 41.741, p < 0.05$ ) and  $\Delta R^2$  of 1.03% ( $p < 0.05$ ), the multiplicative model fits significantly better than either the combination or additive models. Further, this result recognizes the positive and significant interaction among three GHRM practices ( $b = 0.163, p < 0.05$ ) in influencing OCBE. Thus, H6 is accepted.

4.1.2. *The conditional effect at the value of the moderators and visualization*

As illustrated above, the interaction of three green practices mentioned influences OCBE. However, different conditions lead to different effects. In Table 4, the effect of green training on OCBE ( $b = 0.1, p > 0.05$ ) is rejected at high values of green performance management

and there is a low value of green employee involvement, which has the lowest slope (Fig. 2a). Meanwhile, the positive effects are supported under other conditions (b-values range from 0.214 to 0.330, all p-values  $< 0.05$ ).

Specifically, under two conditions, including high levels of green performance management and green employee involvement ( $b = 0.33, p < 0.05$ ) and low levels of both ( $b = 0.327, p < 0.05$ ), green training has the strongest positive influence on OCBE. This is visualized in Fig. 2a and c, where the slopes are highest. By contrast, green training has the two weakest positive effects on OCBE under the conditions of average green performance management and low green employee involvement ( $b = 0.214, p < 0.05$ ) and high green performance management and average green employee involvement ( $b = 0.215, p < 0.05$ ), where its slopes are rather low (Fig. 2a and b). With the remaining conditions, such as average green performance management and high green employee involvement ( $b = 0.288, p < 0.05$ ), low green performance management and average green employee involvement ( $b = 0.287, p < 0.05$ ), average values of both ( $b = 0.251, p < 0.05$ ), and low green performance management and high green employee involvement ( $b = 0.247, p < 0.05$ ), where its slopes are neither high nor low, green training positively influences OCBE.



## 4.2. Qualitative results

As mentioned in sections 3.1 and 3.3, a mixed-methods approach provides better findings. Thus, following the quantitative study with a qualitative study helps in better understanding the findings from the quantitative stage of the research, specifically with regard to the effects of GHRM practices on OCBE. These qualitative results help us better understand the effects of GHRM on OCBE because of the fact that different cases (hotels) point to different influences of GHRM practices on OCBE. Qualitative results and their value are discussed through comparison with quantitative findings in the discussion (section 5). These results contribute to a stronger conclusion when addressing the hypotheses.

### 4.2.1. Case K (hotel K)

Hotel K consistently highlighted employees' role in developing the hotel's green strategy. Policies and practices to boost employees' green behavior, particularly discretionary green behavior, are a significant concern for top management:

- “Members must understand their environmental role and responsibility to the community and hotel.” (MK1)
- “We will fail (in this strategy) if missing employees' enthusiasm and commitment.” (MK2)

The role of employees is denoted through employees' involvement and training programs related to the environment. Respondents emphasized the necessity for these green practices to be based not only in environmental knowledge, awareness and skills, but also in individuals' voluntary green behaviors:

- “Involvement in environmental activities encourages me to share my environmental suggestions or initiatives because that helps me feel more confident and enthusiastic in performing these activities.” (EK1)
- “I feel that employees voluntarily and actively perform environmental activities after training.” (MK1)

Also, we identified a stronger improvement in employees' voluntary green behavior when hotels pay more attention to green employee involvement through enacting policies to encourage them to participate in environmental activities:

- “Green training is important to enhance employees' discretionary efforts, but it is better if opportunities are created for them to participate in environmental protection.” (MK1)
- “I was equipped with knowledge and skills on how to classify and identify waste [...] to save water and energy, etc. Also, I will be more willing to help new colleagues [...] if encouraged by my boss to participate actively in a group to share environmental initiatives.” (EK2)

One manager explained a situation in which:

- “Employees are trained fully [...] Moreover, the hotel encourages them to get involved in these environmental activities [e.g. consulting on suggestions for saving energy and water, suggestion box], which is seen as showing respect from managerial levels toward employees, which in turn makes a comfortable working environment for them to utilize their training, knowledge and skills. Accordingly, they will be willing to strongly support the hotel's green goals.” (MK2)

However, we also perceived that monitoring employees' environmental activities (green performance management) does not moderate the effects of green training on employees' voluntary green behavior in this hotel:

- “I was trained in and gained environmental knowledge and skills, and my willingness to use it [knowledge and skill] is not influenced by my boss' supervision [...] but the managerial level's positive recognition of my green performance is better.” (EK2)

This opposition can be explained through employees' feelings about supervision and recognition:

- “Monitoring can cause wariness for employees, especially lazy people. With hard-working employees, they are not much concerned about this supervision.” (MK2)
- “... but if supervisors and managers recognize employees' efforts in environmental tasks, employees are more willing to use trained green knowledge and skills at work, as green recognition is seen as demonstrating the managerial level's respect toward them.” (MK2)

Regarding the three-way interactive effect, although we did not recognize an interactive effect of the above green practices toward the enhancement of employees' voluntary green behavior, we did note an interaction among green practices including training, reward, and employee involvement having an influence on employees' willingness towards environmental activities:

- “Employees' involvement in green solutions and activities or groups helps them learn new knowledge and share skills with others. Of course, it is better if they receive positive recognition from managerial levels that enhances motivation and confidence to actively and voluntarily use their training for environmental protection activities.” (MK1)

### 4.2.2. Case G (hotel G)

Hotel G is a private hotel owned and managed by a Vietnamese family corporation. Hence, the hotel's management style at least partially follows from this parent corporation. In terms of environmental strategy, we recognize that this hotel meets environmental standards such as ISO 14001. Yet the hotel's sense of social responsibility related to the conservation of Vietnamese culture is emphasized strongly, above any environmental strategy:

- “Our main sustainable development is to conserve Vietnamese culture. The environmental issues are important but it is not a strategic priority.” (MG1)

But this does not mean that the hotel lacks concern for the environment, especially in employees' role in environmental protection:

- “Employees have links with many environmental activities and costs [...] They need to be trained and motivated frequently in these activities.” (MG2)

Participants emphasized the necessity of the role of employees and environmental training. They agree that green training and environmental performance management are important factors in enhancing employees' voluntary green behavior:

- “Employees are more [...] willing towards environmental tasks after adequate training in the environment.” (MG1)
- “It is difficult to encourage employees to participate actively in environmental activities without supervisors' and managers' appraisals, and embedded environmental targets.” (MG2)
- “I'll be more aware of and participate more actively in environmental tasks if I am monitored by supervisors. This motivates me to learn skills and work harder to fulfill these tasks.” (EG1)

Also, OCBE is stronger when supported simultaneously by both training and performance management policies:

- “When an individual is monitored or given regular feedback from managers on environmental activities, she/he may be more active in volunteering activities than others, even though they participate in the same environmental training.” (MG2)

Regarding green employee involvement, however, respondents pointed out a weaker moderating role for this practice on the relationship between green training and employees' voluntary green behavior:

- “Training is important to encourage willingness to participate in eco-activities. To boost this better, I need more rewards [e.g. bonuses and recognition] than participation in consulting and suggesting solutions for environmental issues.” (EG1)
- “Participating in green team or suggestion schemes partially encourages me to utilize my trained environmental knowledge and skills to discretionally enhance environmental activities.” (EG2)

In order to clarify this difference, one manager explained it based on employees' benefits:

- “In fact, employees are passive and quite lazy in these activities, and they are only concerned with what is related directly to their benefits. Hence, rewards [e.g. bonus and recognition] and appraisals [e.g. feedback and reports from managers] are more interesting because these may significantly influence managers' evaluation of them.” (MG1)

This explanation also illustrates why there is a weak three-way interactive effect of the three practices on OCBE.

- “In addition to training which gives me skills and knowledge, I also need supervision from managers, or bonuses and recommendation to enhance my morale and enthusiasm in these activities. But I do not think that this will be changed significantly if I am encouraged to participate in environmental issues.” (EG1)

#### 4.2.3. Similarities and differences

From our interviews, it emerges that environmental training is highlighted strongly in both cases as contributing to enhancing employees' voluntary green behavior in hotels. Green employee involvement moderates the relationship between green training and OCBE. In particular, where hotels pay less attention to green employee involvement this leads to a decrease in the influence of green ability on OCBE, whereas focusing on it more amplifies this influence. Another important similarity is that green reward (e.g., bonuses and recognition from managers for green performance) is shown to moderate the effect of green training on OCBE in both cases.

However, there are differences between cases in terms of the effects of the three GHRM practices. First, green employee involvement strongly enhances voluntary green behavior in Case K, but green performance management contributes more significantly to this behavior in Case G. Second, the moderating role of employee involvement in environmental issues toward the effect of green training on OCBE is much stronger in Case K than in Case G; meanwhile, green performance management is seen as a moderating variable on this effect only in Case G. Similarly, a weak interactive effect of all three practices on OCBE is recognized in Case G. Finally, Case K recognizes green reward as one of three GHRM practices (training, reward, and employee involvement) having a three-way interactive effect on OCBE.

## 5. Discussion and conclusion

This study analyzes the direct effects of three GHRM practices (training-Ability, performance management-Motivation, and employee involvement-Opportunity) on OCBE, the moderating roles of green

performance management and employee involvement on the effects of green training on OCBE, and the interactive effect of these three GHRM practices on OCBE in the hotel industry, based on Ability-Motivation-Opportunity theory. This topic has so far been covered by very few scholars in the hotel industry in particular, as well as in management in general. The paper applies a mixed methodology to answer the research questions. The quantitative part of the study was conducted first to test our six hypotheses, before a qualitative approach with case studies was used to confirm and compare the quantitative results. The results will now be discussed and analyzed to answer our two research questions.

### 5.1. The additive model

The findings show that all three GHRM practices have positive linear effects on OCBE. More specifically, green training has the strongest influence on improving the voluntary green behavior of employees, as highlighted in both Case K and Case G in the qualitative study. Hence, green training emerges as a core practice. In fact, we recognize the important role of environmental training programs, which have been strongly adopted by many 4–5 star hotels in Vietnam. Therefore, the more advanced the degree of implementation of environmental training/education (e.g. implementing an adequate training program, giving opportunities for employees to be trained and to use their knowledge and skills), the greater the potential to enhance employees' discretionary efforts and active and voluntary participation in hotels' environmental activities. This result supports the consensus in the literature about the role of environmental training in promoting employees' voluntary behaviors toward the environment (Boiral, 2009; Pinzone et al., 2016).

As to green performance management, this practice also contributes significantly to OCBE. As was the case with green training, hotels need to pay more attention to assessing employees' green performance, providing environmental feedback, or embedding environmental goals and responsibilities to encourage employees to be more willing to participate in environmental initiatives in hotels. In the qualitative results, this finding is also emphasized in Case G, where the environmental appraisal policy is strictly implemented. In fact, appraising employees' environmental activities helps to partially increase their green ability, knowledge and skills (Masri & Jaaron, 2017), which in turn helps them to be more actively involved in the hotel's environmental projects. This result is supported by the literature, which mentions the positive effect of green performance management on OCBE (Pinzone et al., 2016). Similarly, Pinzone et al.'s (2016) conclusion is also consistent with our quantitative findings in investigating the relationship between green employee involvement and OCBE, as also recognized qualitatively in Case K, where green opportunities are fully provided to all employees. Green practices, such as creating workshops and opportunities for employees to be involved in environmental activities and allowing them to make and participate in decisions concerning environmental problem-solving, helps to develop individuals' discretionary eco-behavior in organizations, as is echoed in Alt and Spitzack's (2016) findings. In the hotel industry, although there are no previous studies which separately test the effect of different GHRM practices on OCBE, the above findings are supported by Kim, Kim, Choi, and Phetvaroon's (2019) study. Here, Kim and colleagues measure GHRM as a general variable comprising six items, and their results indicate the positive and direct contribution of GHRM to employees' eco-friendly behavior in hotels in Phuket, Thailand.

### 5.2. The combination model

Conversely, the quantitative results do not support our hypotheses on the moderating roles of green performance management and employee involvement in the effects of green training on OCBE. Hotels' policies to motivate employees through appraising the green performance of their employees or to create opportunities for them to be

involved in green projects do not significantly encourage employees to be willing to apply trained knowledge and skills to environmental issues in hotels, which results in no greater change in the green training-OCBE relationship. By contrast, the qualitative results do recognize the moderating effects of green performance management in Case G and of green employee involvement in Case K. In fact, in addition to green training, Hotel G highlights the practice of motivating employees by setting environmental goals and responsibilities for them, and monitoring and appraising their environmental performance and activities. Thus, when such a training program is applied well and appraisal of environmental issues is performed effectively, this will enhance employees' eco-behavior in hotels. Meanwhile, Hotel K has paid attention to creating green opportunities for employees (e.g., consulting on suggestions for saving energy and water, suggestion boxes and green groups), which helps them to actively and discretionarily utilize the green knowledge and skills gained through training and, in turn, improves their green willingness in the hotel. This result accords with [Bos-Nehles et al.'s \(2013\)](#) conclusion. Based on Ability-Motivation-Opportunity theory, they argue that creating opportunities for employees improves the effect of ability on the effectiveness of human resource management implementation. Consequently, the differences between the qualitative and quantitative results may suggest that the moderating roles of the two above practices on the effect of green training on OCBE are not recognized in the quantitative stage because this study lacks an investigation of these effects in different types of hotels (detailed explanation provided in section 5.4).

### 5.3. The multiplicative model

The results show that the three-way interaction of the three GHRM practices studied here has a positive effect on OCBE. But the level of this influence depends on different conditions. At conditions with high levels of both green performance management and employee involvement, but also when there are low levels of these two practices, green training has the strongest influence on OCBE. Therefore, when employees are given opportunities for involvement in environmental issues and are motivated by green performance management policies, this significantly encourages them to acquire and utilize training in green knowledge and skills to contribute to hotels' environmental protection activities. In turn, they are more willing to participate voluntarily in environmental projects. This result is demonstrated partially by Case G. Further, the results for the multiplicative model also yield a higher contribution to OCBE's explained variance than the additive model based on Ability-Motivation-Opportunity theory. Thus, our findings also support the arguments of [Kim et al. \(2015\)](#) and [Siemsen et al. \(2008\)](#), which indicate that the interaction of these three practices (ability, motivation, and opportunity) is necessary to enhance organizations' performance.

### 5.4. Further unexpected findings

In addition to the above quantitative results, which help us test our hypotheses, we also acknowledge new findings in the qualitative results, which are related to differences between Case K and Case G in the effects of GHRM practices on OCBE. These differences can be explained by conflicting guidance from top management in developing green culture in their organizations. Hotel K has been concerned with developing a clear green strategy, communicated at both employee and managerial levels, but this is not the case in Hotel G. In reality, employees working at Hotel K are always aware of the important role of green activities in the hotel's development. Hotel K has regularly provided green training and opportunities for employees to participate in green projects, not only for the hotel but also for the local community. Thus, employees are also active in and confident with environmental tasks. By contrast, it seems that though Hotel G's employees are well trained and supervised, they are not proactive in terms of these

environmental tasks. These differences can be explained through institutional theory ([Meyer & Rowan, 1977](#)). The culture and values of companies based in Vietnam may be affected by their headquarters ([Hoang, Rao Hill, Lu, & Freeman, 2018](#)), because the culture and values of the parent company can influence subsidiaries' operations, practices, and outcomes ([Lau & Ngo, 2001](#)). Following institutional theory, managerial culture influences organizational decisions in hotels' green strategizing. Consequently, different managerial cultures (e.g. Foreign-Western and Local) or different green organizational cultures can be used to explain the above differences.

Furthermore, the qualitative results point to green rewards (e.g. bonuses or managerial recognition) as a GHRM practice which can moderate the effect of green training on OCBE with both two-way and three-way interactive effects. This is consistent with Ability-Motivation-Opportunity framework-related arguments from previously published studies ([Kim et al., 2015](#); [Van Iddekinge et al., 2018](#)). For instance, [Macduffie \(1995\)](#) also suggests the interaction of practices to motivate employees (e.g. reward systems) and practices to provide the relevant skills and knowledge (e.g. training and education) to improve employees' discretionary efforts at work. Thus, in the green context, we argue that a good environmental reward system is necessary to enhance the relationship between green training and OCBE.

### 5.5. Implications

In tourism management, human resources and environmental management have generally developed separately along two divergent pathways. However, the integration of human resources and environmental management issues has been considered a key element of the greening of organizations. Consequently, the hospitality industry would benefit from better understanding this topic, which constitutes a major gap in the literature. Additionally, evidence on green human resource management in hotels has been even less understood from the perspective of emerging economies. Thus, understanding the context of Vietnam can add original evidence to the multidisciplinary field of green human resources in the hospitality industry.

These results provide some implications for practice. Responsible corporate action has long been considered a vital step toward sustainability ([Lin, Yu, & Chang, 2018](#)) that may lead to changes in employee behavior ([Wells, Manika, Gregory-Smith, Taheri, & McCowen, 2015](#); [Wells, Taheri, Gregory-Smith, & Manika, 2016](#); [Youn, Lee, & Lee, 2018](#)). Therefore, hotels' managerial levels should carefully consider the benefits received from investing in GHRM practices (e.g. training, performance management, and employee involvement), since such investments would be likely to boost pro-environmental behavior in their organizations. This can provide further benefits not only for environmental performance but also for reputation and financial performance. The GHRM practices studied here allow hotel managers to improve employees' eco-behavior through regular training and education on environmental activities in hotels. For instance, employees should be trained in the knowledge and skills necessary to classify and identify waste, cut emissions and save water, energy and other resources. Moreover, hotel managers, especially in hotels which are managed by Vietnamese companies, need to focus more on appraising and monitoring employees' environmental performance and activities (e.g. establishing an independent board to monitor employees' daily work and environmental activities, or providing environmental feedback from customers, managers and supervisors to employees). Hotels which have a Western management culture should focus on creating opportunities for employees to become involved in their hotel's green activities (e.g. suggestion boxes, green groups and encouragement to offer suggestions for saving energy and water). From the interactive effects analyzed, the recommendation is that managers should invest in all three GHRM practices together, because applying all of them simultaneously will more strongly enhance individuals' voluntary green behavior in hotels.

5.6. Limitations and suggestions for further research

There are several limitations to our study which warrant consideration. First, although the quantitative results do not demonstrate moderating roles for green performance management and employee involvement in the effects of green training on OCBE, the qualitative study does recognize these moderating roles, depending on the type of hotel. In addition, the application of GHRM practices is not similar between the two hotels studied. Thus, based on institutional theory (Meyer & Rowan, 1977) and Lau and Ngo's (2001) arguments, future studies should compare the influence of these three GHRM practices on OCBE between hotels with top management from Foreign-Western and Local cultures, or from other green organizational cultures. This is in accordance with Ryan's (2018) emphasis on important cultural differences which continue to exist as a topic for future tourism studies, as well as Pham, Paillé and Halilem's (2019) suggestion of the critical role of green organizational culture in OCBE. Second, following Ability-Motivation-Opportunity theory, further research could look more deeply into the three components of ability, motivation and opportunity, which may influence firms' performance (e.g. environmental and financial performance) through organizational citizenship behavior. Concerning the green context, we argue that OCBE can mediate the effects of GHRM practices on environmental and financial performance. Thus, based on our study, future studies should examine the moderated mediation model to clarify these effects. Third, Renwick et al. (2013) propose GHRM practices including not only the three studied here, but also other green practices (e.g. green reward, green organizational culture). Luu (2018) also mentions green reward in a GHRM-related study in the tourism industry. Additionally, the qualitative results highlight green reward, which may enhance OCBE in hotels. However,

our study ignores this factpr. Future studies may consider green reward as a GHRM practice to investigate the effects of GHRM practices on OCBE in particular, and firms' performance in general. Fourth, this study was conducted in 4–5 star hotels in Vietnam, and hence may not be generalizable to other regions. Consequently, in order to achieve better generalization, future studies should apply this model in other countries. Finally, it is necessary to highlight social desirability bias in sustainability-related studies as an issue which might have influenced the data collected (Roxas & Lindsay, 2012).

Authors' declaration

**Nhat Tan Pham:** idea development, research framework conceptualization, literature review, survey development, data collection, data analysis, writing on the original draft, review and editing. Contributed during all rounds of revision.

**Zuzana Tučková:** idea development, research framework conceptualization, survey development, data collection supervision, writing, review and editing. Contributed during all rounds of revision.

**Charbel Jose Chiappetta Jabbour:** idea development, research framework conceptualization, writing on the original draft, review and editing. Contributed during all rounds of revision.

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Appendix I. Measurement scales and descriptive statistics.

Constructs and items	References	Mean	SD	Loadings
<b>Green training</b>				
An adequate amount of training in environmental issues is provided for employees (TRA1)	Daily et al. (2012)	3.542	0.934	0.790
Employees can have the chance to be trained on environmental issues (TRA2)	Jabbour (2015)	3.522	0.992	0.701
Employees receive environmental training frequently (TRA3)		3.389	0.981	0.707
Employees use environmental training effectively (TRA4)		3.552	0.970	0.737
Employees have many opportunities to use environmental training (TRA5)		3.517	0.997	0.750
There is adequate evaluation of employees' performance after environmental training (TRA6)		3.621	0.985	0.750
<b>Green performance management</b>				
Employees understand the specific environmental targets, goals and responsibilities that each employee must accomplish (PEM1)	Jabbour et al. (2010)	3.591	0.799	0.797
Employees' environmental behavior and contributions to the hotel's environmental performance are assessed (PEM2)	Masri and Jaaron (2017)	3.626	0.837	0.719
Regular feedback is provided to employees or teams to achieve environmental goals and improve the hotel's environmental performance (PEM3)		3.749	0.857	0.684
Achievement of environmental goal is seen as one of the criteria in system of employee performance appraisal (PEM4)		3.818	0.891	0.734
Roles of managers in achieving environmental outcomes included in appraisals (PEM5)		3.744	0.852	0.763
<b>Green employee involvement</b>				
Opportunities are provided to employees to participate in green suggestion schemes and joint consultations for environmental problem solving (EIN1)	Masri and Jaaron (2017)	3.759	0.854	0.780
The organization offers workshops or forums for employees to improve environmental behavior and exchange their tacit knowledge (EIN2)	Pinzone et al. (2016)	3.557	0.845	0.774
Managers maintain open communications with employees on environmental issues (EIN3)		3.532	0.858	0.746
Employees are allowed to make decisions concerning environmental problems (EIN4)		3.645	0.935	0.764
Employees are involved in problem-solving groups related to environmental matters (EIN5)		3.773	0.776	0.780
<b>Organizational citizenship behavior towards the environment</b>				
I suggest new practices that could improve the hotel's environmental performance (OCBE1)	Boiral and Paillé (2012)	3.655	0.783	0.661
I encourage my colleagues to adopt more environmentally conscious behaviors (OCBE2)		3.700	0.817	0.640
I stay informed of the hotel's environmental efforts (OCBE3)		3.704	0.759	0.630
I make suggestions about ways to protect the environment more effectively (OCBE4)		3.724	0.804	0.664
I volunteer for projects or activities that address the hotel's environmental issues (OCBE5)		3.611	0.797	0.660
I spontaneously give my time to help my colleagues take the environment into account (OCBE6)		3.631	0.736	0.680
I undertake environmental actions that contribute positively to the hotel's image (OCBE7)		3.621	0.751	0.810

Note: N = 203; SD: Standard Deviation.



## References

- Adler, N. J., Doktor, R., & Redding, S. G. (1986). From the atlantic to the pacific century: Cross-cultural management reviewed. *Journal of Management*, 12(2), 295–318.
- Afsar, B., Cheema, S., & Javed, F. (2018). Activating employee's pro-environmental behaviors: The role of CSR, organizational identification, and environmentally specific servant leadership. *Corporate Social Responsibility and Environmental Management*, 1–8. (January) <https://doi.org/10.1002/csr.1506>.
- Alonso-Almeida, M. del M., Fernández Robin, C., Celemín Pedroche, M. S., & Astorga, P. S. (2017). Revisiting green practices in the hotel industry: A comparison between mature and emerging destinations. *Journal of Cleaner Production*, 140, 1415–1428.
- Alt, E., & Spitzack, H. (2016). Improving environmental performance through unit-level organizational citizenship behaviors for the environment: A capability perspective. *Journal of Environmental Management*, 182, 48–58.
- Anderson, D., Sweeney, D., & Williams, T. (2011). *Fundamentals of business statistics* (6th ed.). Mason, Ohio: Cengage Learning.
- Appelbaum, E., Bailey, T., Berg, P., & Kalleberg, A. L. (2000). *Manufacturing Advantage: Why high-performance work systems pay off*. New York: Cornell University Press.
- Bagur-Femenias, L., Llach, J., Alonso-Almeida, M., & del, M. (2013). Is the adoption of environmental practices a strategic decision for small service companies?: An empirical approach. *Management Decision*, 51(1), 41–62.
- Baum, T. (2015). Human resources in tourism: Still waiting for change?—A 2015 reprise. *Tourism Management*, 50, 204–212.
- Baxter, P., & Jack, S. (2008). Qualitative case study methodology: Study design and implementation for novice researchers. *Qualitative Report*, 13(4), 544–559.
- Blumberg, M., & Pringle, C. D. (1982). The missing opportunity in organizational research: Some implications for a theory of work performance. *Academy of Management Review*, 7(4), 560–569.
- Boiral, O. (2009). Greening the corporation through organizational citizenship behaviors. *Journal of Business Ethics*, 87(2), 221–236.
- Boiral, O., & Paillé, P. (2012). Organizational citizenship behaviour for the environment: Measurement and validation. *Journal of Business Ethics*, 109(4), 431–445.
- Bos-Nehles, A. C., Van Riemsdijk, M. J., & Kees Looise, J. (2013). Employee perceptions of line management performance: Applying the AMO theory to explain the effectiveness of line managers' HRM implementation. *Human Resource Management*, 52(6), 861–877.
- Boxall, P., & Purcell, J. (2003). *Strategy and human resource management*. London: Palgrave Macmillan.
- Bryman, A., & Bell, E. (2011). *Business research methods* (3rd ed.). Oxford: Oxford University Press.
- Chan, E. S. W., & Hawkins, R. (2012). Application of EMSs in a hotel context: A case study. *International Journal of Hospitality Management*, 31(2), 405–418.
- Chan, E. S. W., Hon, A. H. Y., Chan, W., & Okumus, F. (2014). What drives employees' intentions to implement green practices in hotels? The role of knowledge, awareness, concern and ecological behaviour. *International Journal of Hospitality Management*, 40, 20–28.
- Chan, E. S. W., & Hsu, C. H. C. (2016). Environmental management research in hospitality. *International Journal of Contemporary Hospitality Management*, 28(5), 886–923.
- Chinander, K. R. (2009). Aligning accountability and awareness for environmental performance in operations. *Production and Operations Management*, 10(3), 276–291.
- Chou, C. J. (2014). Hotels' environmental policies and employee personal environmental beliefs: Interactions and outcomes. *Tourism Management*, 40, 436–446.
- Cochran, P. L., & Wood, R. A. (1984). Corporate social responsibility and financial performance. *Academy of Management Journal*, 27(1), 42–56.
- Comrey, A. L., & Lee, H. B. (1992). *A first course in factor analysis* (2nd ed.). New Jersey: Lawrence Erlbaum Associates.
- Creswell, J. W. (2003). *Research design: Qualitative, quantitative, and mixed methods approaches*. Thousand Oaks: Sage Publications.
- Creswell, J. W. (2007). *Qualitative inquiry and research design: Choosing among five approaches*. Thousand Oaks: Sage Publications.
- Daily, B. F., Bishop, J. W., & Govindarajulu, N. (2009). A conceptual model for organizational citizenship behavior directed toward the environment. *Business & Society*, 48(2), 243–256.
- Daily, B. F., Bishop, J. W., & Massoud, J. A. (2012). The role of training and empowerment in environmental performance: A study of the Mexican maquiladora industry. *International Journal of Operations & Production Management*, 32(5), 631–647.
- Daily, B. F., & Huang, S. C. (2001). Achieving sustainability through attention to human resource factors in environmental management. *International Journal of Operations & Production Management*, 21(12), 1539–1552.
- De Groot, J. I. M., & Steg, L. (2010). Relationships between value orientations, self-determined motivational types and pro-environmental behavioural intentions. *Journal of Environmental Psychology*, 30(4), 368–378.
- Doan, V. H., & Kim, T. (2014). Vietnam implements green growth: An appropriate approach in international integration. *The Communication Review*, 8(2), 67–70.
- Dumont, J., Shen, J., & Deng, X. (2017). Effects of green HRM practices on employee workplace green behavior: The role of psychological green climate and employee green values. *Human Resource Management*, 56(4), 613–627.
- Dyer, L., & Reeves, T. (1995). Human resource strategies and firm performance: What do we know and where do we need to go? *International Journal of Human Resource Management*, 6(3), 656–670.
- Emerson, R. M. (1976). Social exchange theory. *Annual Review of Sociology*, 2(1976), 335–362.
- Govindarajulu, N., & Daily, B. F. (2004). Motivating employees for environmental improvement. *Industrial Management and Data Systems*, 104(3), 364–372.
- Guerci, M., Longoni, A., & Luzzini, D. (2016). Translating stakeholder pressures into environmental performance – the mediating role of green HRM practices. *International Journal of Human Resource Management*, 27(2), 262–289.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate data analysis* (6th ed.). New Jersey: Pearson Education, Inc.
- Halinski, R. S., & Feldt, L. S. (1970). The selection of variables in multiple regression analysis. *Journal of Educational Measurement*, 7(3), 151–157.
- Harvey, G., Williams, K., & Probert, J. (2013). Greening the airline pilot: HRM and the green performance of airlines in the UK. *International Journal of Human Resource Management*, 24(1), 152–166.
- Hayes, A. (2013). *Introduction to mediation, moderation, and conditional process analysis*. New York: The Guilford Press.
- Hayes, A. F. (2018). Partial, conditional, and moderated moderated mediation: Quantification, inference, and interpretation. *Communication Monographs*, 85(1), 4–40.
- Hayes, A. F., & Rockwood, N. J. (2017). Regression-based statistical mediation and moderation analysis in clinical research: Observations, recommendations, and implementation. *Behaviour Research and Therapy*, 98, 39–57.
- Hoang, H. T., Rao Hill, S., Lu, V. N., & Freeman, S. (2018). Drivers of service climate: An emerging market perspective. *Journal of Services Marketing*, 32(4), 476–492.
- Jabbour, C. J. C. (2015). Environmental training and environmental management maturity of Brazilian companies with ISO14001: Empirical evidence. *Journal of Cleaner Production*, 96, 331–338.
- Jabbour, C. J. C., Jugend, D., De Sousa Jabbour, A. B. L., Gunasekaran, A., & Latan, H. (2015). Green product development and performance of Brazilian firms: Measuring the role of human and technical aspects. *Journal of Cleaner Production*, 87(1), 442–451.
- Jabbour, C. J. C., Santos, F. C. A., & Nagano, M. S. (2010). Contributions of HRM throughout the stages of environmental management: Methodological triangulation applied to companies in Brazil. *International Journal of Human Resource Management*, 21(7), 1049–1089.
- Jackson, S. E., & Seo, J. (2010). The greening of strategic HRM scholarship. *Organization Management Journal*, 7(4), 278–290.
- Jansen-Verbeke, M., & Go, F. (1995). Tourism development in Vietnam. *Tourism Management*, 16(4), 315–321.
- Jiang, K., Lepak, D. P., Hu, J., & Baer, J. C. (2012). How does human resource management influence organizational outcomes? A meta-analytic investigation of mediating mechanisms. *Academy of Management Journal*, 55(6), 1264–1294.
- Katou, A. A., & Budhwar, P. S. (2010). Causal relationship between HRM policies and organisational performance: Evidence from the Greek manufacturing sector. *European Management Journal*, 28(1), 25–39.
- Kim, Y. J., Kim, W. G., Choi, H. M., & Phetvaroon, K. (2019). The effect of green human resource management on hotel employees' eco-friendly behavior and environmental performance. *International Journal of Hospitality Management*, 76, 83–93.
- Kim, A., Kim, Y., Han, K., Jackson, S. E., & Ployhart, R. E. (2017). Multilevel influences on voluntary workplace green behavior: Individual differences, leader behavior, and coworker advocacy. *Journal of Management*, 43(5), 1335–1358.
- Kim, K. Y., Pathak, S., & Werner, S. (2015). When do international human capital enhancing practices benefit the bottom line? an ability, motivation, and opportunity perspective. *Journal of International Business Studies*, 46(7), 784–805.
- Lamm, E., Tosti-Kharas, J., & Williams, E. G. (2013). Read this article, but don't print it: Organizational citizenship behavior toward the environment. *Group & Organization Management*, 38(2), 163–197.
- Lau, C. M., & Ngo, H. Y. (2001). Organization development and firm performance: A comparison of multinational and local firms. *Journal of International Business Studies*, 32(1), 95–114.
- Le, H. D., & Ferguson, D. L. (2016). Customer relationship enhancements from corporate social responsibility activities within the hospitality sector: Empirical research from Vietnam. *Corporate Reputation Review*, 19(3), 244–262.
- Le, Y., Hollenhorst, S., Harris, C., McLaughlin, W., & Shook, S. (2006). Environmental management: A study of Vietnamese hotels. *Annals of Tourism Research*, 33(2), 545–567.
- Lepak, D. P., Liao, H., Chung, Y., & Harden, E. E. (2006). A conceptual review of human resource management systems in strategic human resource management research. *Research in Personnel and Human Resources Management*, 25, 217–271. [https://doi.org/10.1016/S0742-7301\(06\)25006-0](https://doi.org/10.1016/S0742-7301(06)25006-0).
- Lin, L. P. L., Yu, C. Y., & Chang, F. C. (2018). Determinants of CSER practices for reducing greenhouse gas emissions: From the perspectives of administrative managers in tour operators. *Tourism Management*, 64, 1–12.
- Longoni, A., Luzzini, D., & Guerci, M. (2018). Deploying environmental management across functions: The relationship between green human resource management and green supply chain management. *Journal of Business Ethics*, 151(4), 1081–1095.
- Luu, T. T. (2017). CSR and organizational citizenship behavior for the environment in hotel industry: The moderating roles of corporate entrepreneurship and employee attachment style. *International Journal of Contemporary Hospitality Management*, 29(11), 2867–2900.
- Luu, T. T. (2018). Employees' green recovery performance: The roles of green HR practices and serving culture. *Journal of Sustainable Tourism*, 1–17. <https://doi.org/10.1080/09669582.2018.1443113>.
- Macduffie, J. P. (1995). Human resource bundles and manufacturing performance: Organizational logic and flexible production systems in the world auto industry. *Industrial and Labor Relations Review*, 48(2), 197–221.
- Martinez-Martinez, A., Cegarra-Navarro, J. G., Garcia-Perez, A., & Wensley, A. (2019). Knowledge agents as drivers of environmental sustainability and business performance in the hospitality sector. *Tourism Management*, 70, 381–389.
- Masri, H. A., & Jaaron, A. A. M. (2017). Assessing green human resources management practices in Palestinian manufacturing context: An empirical study. *Journal of Cleaner*

- Production*, 143, 474–489.
- Meyer, J. W., & Rowan, B. (1977). Institutionalized organizations: Formal structure as myth and ceremony. *American Journal of Sociology*, 83(2), 340–363.
- Molina-Azorín, J. F., Tari, J. J., Pereira-Moliner, J., López-Gamero, M. D., & Pertusa-Ortega, E. M. (2015). The effects of quality and environmental management on competitive advantage: A mixed methods study in the hotel industry. *Tourism Management*, 50, 41–54.
- Nejati, M., Rabiei, S., & Chiappetta Jabbour, C. J. (2017). Envisioning the invisible: Understanding the synergy between green human resource management and green supply chain management in manufacturing firms in Iran in light of the moderating effect of employees' resistance to change. *Journal of Cleaner Production*, 168, 163–172.
- Nguyen, N. N., Özçaglar-Toulouse, N., & Kjeldgaard, D. (2018). Toward an understanding of young consumers' daily consumption practices in post-Doi Moi Vietnam. *Journal of Business Research*, 86, 490–500.
- Paillé, P., Amara, N., & Halilem, N. (2018). Greening the workplace through social sustainability among co-workers. *Journal of Business Research*, 89, 305–312.
- Paillé, P., Boiral, O., & Chen, Y. (2013). Linking environmental management practices and organizational citizenship behaviour for the environment: A social exchange perspective. *International Journal of Human Resource Management*, 24(18), 3552–3575.
- Paillé, P., Chen, Y., Boiral, O., & Jin, J. (2014). The impact of human resource management on environmental performance: An employee-level study. *Journal of Business Ethics*, 121(3), 451–466.
- Paillé, P., & Mejía-Morelos, J. H. (2014). Antecedents of pro-environmental behaviours at work: The moderating influence of psychological contract breach. *Journal of Environmental Psychology*, 38, 124–131.
- Paillé, P., & Raineri, N. (2015). Linking perceived corporate environmental policies and employees eco-initiatives: The influence of perceived organizational support and psychological contract breach. *Journal of Business Research*, 68(11), 2404–2411.
- Pham, D. D. T., Paillé, P., & Halilem, N. (2019). Systematic review on environmental innovativeness: A knowledge-based resource view. *Journal of Cleaner Production*, 211, 1088–1099.
- Pinzone, M., Guerci, M., Lettieri, E., & Redman, T. (2016). Progressing in the change journey towards sustainability in healthcare: The role of "Green" HRM. *Journal of Cleaner Production*, 122, 201–211.
- Pless, N. M., Maak, T., & Stahl, G. K. (2012). Promoting corporate social responsibility and sustainable development through management development: What can be learned from international service learning programs? *Human Resource Management*, 51(6), 873–903.
- Raineri, N., & Paillé, P. (2016). Linking corporate policy and supervisory support with environmental citizenship behaviors: The role of employee environmental beliefs and commitment. *Journal of Business Ethics*, 137(1), 129–148.
- Ramus, C. A. (2001). Organizational support for employees: Encouraging creative ideas for environmental sustainability. *California Management Review*, 43(3), 85–105.
- Ren, S., Tang, G., & Jackson, S. E. (2017). Green human resource management research in emergence: A review and future directions. *Asia Pacific Journal of Management*, 1–35. <https://doi.org/10.1007/s10490-017-9532-1>.
- Renwick, D. W. S., Jabbour, C. J. C., Muller-Camen, M., Redman, T., & Wilkinson, A. (2016). Contemporary developments in Green (environmental) HRM scholarship. *International Journal of Human Resource Management*, 27(2), 114–128.
- Renwick, D. W. S., Redman, T., & Maguire, S. (2008). *Green HRM: A review, process model, and research agenda*. Vol. 44, Discussion Paper The University of Sheffield Management School—46 0.
- Renwick, D. W. S., Redman, T., & Maguire, S. (2013). Green human resource management: A review and research agenda\*. *International Journal of Management Reviews*, 15(1), 1–14.
- Revilla, M. A., Saris, W. E., & Krosnick, J. A. (2014). Choosing the number of categories in agree-disagree scales. *Sociological Methods & Research*, 43(1), 73–97.
- Rhead, R., Elliot, M., & Upham, P. (2015). Assessing the structure of UK environmental concern and its association with pro-environmental behaviour. *Journal of Environmental Psychology*, 43, 175–183.
- Robertson, J. L., & Barling, J. (2017). Toward a new measure of organizational environmental citizenship behavior. *Journal of Business Research*, 75, 57–66.
- Roxas, B., & Lindsay, V. (2012). Social desirability bias in survey research on sustainable development in small firms: An exploratory analysis of survey mode effect. *Business Strategy and the Environment*, 21(4), 223–235.
- Ryan, C. (2018). Future trends in tourism research – looking back to look forward: The future of 'Tourism Management Perspectives'. *Tourism Management Perspectives*, 25, 196–199.
- Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research methods for business students* (5th ed.). Harlow: Pearson Education Limited.
- Siemens, E., Roth, A. V., & Balasubramanian, S. (2008). How motivation, opportunity, and ability drive knowledge sharing: The constraining-factor model. *Journal of Operations Management*, 26(3), 426–445.
- Snape, E., & Redman, T. (2010). HRM practices, organizational citizenship behaviour, and performance: A multi-level analysis. *Journal of Management Studies*, 47(7), 1219–1247.
- Starik, M., & Rands, G. P. (1995). Weaving an integrated Web: Multilevel and multisystem perspectives of ecologically sustainable organizations. *Academy of Management Review*, 20(4), 908–935.
- Tashakkori, A., & Creswell, J. W. (2007). Editorial: The new era of mixed methods. *Journal of Mixed Methods Research*, 1(1), 3–7.
- Tashakkori, A., & Teddlie, C. (2003). *Handbook of mixed methods in social & behavioral research*. Thousand Oaks: Sage Publications.
- Trung, D. N., & Kumar, S. (2005). Resource use and waste management in Vietnam hotel industry. *Journal of Cleaner Production*, 13(2), 109–116.
- Van Iddekinge, C. H., Aguinis, H., Mackey, J. D., & DeOrtentiis, P. S. (2018). A meta-analysis of the interactive, additive, and relative effects of cognitive ability and motivation on performance. *Journal of Management*, 44(1), 249–279.
- Vidal-Salazar, M. D., Cordon-Pozo, E., & Ferrón-Vilchez, V. (2012). Human resource management and developing proactive environmental strategies: The influence of environmental training and organizational learning. *Human Resource Management*, 51(6), 905–934.
- Vroom, V. H. (1964). *Work and motivation*. New York: Wiley.
- Wabba, M., & House, R. (1974). Expectancy theory in work and motivation: Some logical and methodological issues. *Human Relations*, 27(2), 121–147.
- Wells, V. K., Manika, D., Gregory-Smith, D., Taheri, B., & McCowlen, C. (2015). Heritage tourism, CSR and the role of employee environmental behaviour. *Tourism Management*, 48, 399–413.
- Wells, V. K., Taheri, B., Gregory-Smith, D., & Manika, D. (2016). The role of generativity and attitudes on employees home and workplace water and energy saving behaviours. *Tourism Management*, 56, 63–74.
- Wesselink, R., Blok, V., & Ringersma, J. (2017). Pro-environmental behaviour in the workplace and the role of managers and organisation. *Journal of Cleaner Production*, 168, 1679–1687.
- Yin, R. (2014). *Case study research: Design and methods (applied social research methods)* (5th ed.). Thousand Oaks: Sage Publications.
- Youn, H., Lee, K., & Lee, S. (2018). Effects of corporate social responsibility on employees in the casino industry. *Tourism Management*, 68, 328–335.
- Zaid, A. A., Jaaron, A. A. M., & Talib Bon, A. (2018). The impact of green human resource management and green supply chain management practices on sustainable performance: An empirical study. *Journal of Cleaner Production*, 204, 965–979.
- Zientara, P., & Zamojska, A. (2016). Green organizational climates and employee pro-environmental behaviour in the hotel industry. *Journal of Sustainable Tourism*, 1–18. <https://doi.org/10.1080/09669582.2016.1206554>.



**Nhat Tan Pham:** A researcher at Tomas Bata University in Zlín, Zlín, Czech Republic. His research interests are sustainable tourism, green HRM, the greening of the hotel industry and sustainable consumption. His contributions to this study include idea development, research framework conceptualization, literature review, survey development, data collection, data analysis, writing on the original draft, review and editing; he contributed during all rounds of revision.



**Zuzana Tučková:** An Associate Professor and Dean of Faculty of Logistics and Crisis Management at Tomas Bata University in Zlín, Zlín, Czech Republic. Her research interests are sustainable tourism, socially-responsible tourism and BPM in tourism. Her contributions to this study include idea development, research framework conceptualization, survey development, data collection supervision, writing, review and editing; she contributed during all rounds of revision.



**Charbel Jose Chiappetta Jabbour:** An Associate Editor of the Journal of Cleaner Production (Elsevier), he has been working for Montpellier Business School, France. He has experience in working in Brazil and the UK. His contributions to this study include idea development, research framework conceptualization, writing the original draft, review and editing; he contributed during all rounds of revision.