Enhancing the organizational citizenship behavior for the environment: the roles of green training and organizational culture

Nhat Tan PHAM
Tomas Bata University in Zlín, Zlín, Czech Republic
University of Labour and Social Affairs, Ho Chi Minh City, Vietnam
nhatpham1729@gmail.com

Quyen Phu Thi PHAN
Tomas Bata University in Zlín, Zlín, Czech Republic
University of Economics, The University of Danang, Vietnam
phuquyen.due@gmail.com

Zuzana TUČKOVÁ
Tomas Bata University in Zlín, Zlín, Czech Republic
tuckova@utb.cz

Nga VO
Tomas Bata University in Zlín, Zlín, Czech Republic
vo@utb.cz

Lien H.L. NGUYEN
Tomas Bata University in Zlín, Zlín, Czech Republic
lnguyen@utb.cz

Abstract. *The environmental concern has become an emerging topic in organization's human resource management strategy, especially in improving employee's environmental behavior at work. Thus, the organizational citizenship behavior toward the environment (OCBE) has been currently attracting scholars in management. However, published studies contain research gaps in investigation of the relationships between both green training and organizational culture and OCBE, especially in the hotel industry. Following the social exchange and Ability-Motivation-Opportunity theories, this study aims to examine the effects of two green practices on OCBE and the moderating role of green organizational culture to the effect of green training on OCBE. A quantitative approach with survey strategy is employed and conducted in 4-5 star hotels to test these relationships. The PLS-SEM and K-means Cluster Analysis techniques are applied to analyze data. The findings reveal that green training and organizational culture positively influence OCBE. Also, the effect of green training on OCBE is moderated by green organizational culture. Finally, our study provides limitations of research and further studies, and the implications for management practices concerned with improving employee's voluntary eco-behavior in the hotel industry.*

Keywords: green organizational culture, green training, organizational citizenship behavior for the environment (OCBE), Social exchange theory, AMO theory.

Introduction

Currently, the social responsibility, especially the environmental responsibility has been of concern to scholars, organizations or governments (Rajnoha and Lesníková, 2016), such as development of green purchasing behavior (Liobikienė et al., 2016; Esmaeilpour and Bahmiary, 2017) and green supply chain (Teixeira et al., 2016; Islam and Soliman, 2017). As society is more aware of the negative relationship between economic development and the environment, stronger pressures are put on organizations towards the environmental improvement (Ramanathan, 2018). Also, these pressures encourage company's top management to increasingly apply the environmental management strategy (Jabbour et al., 2015). Since then, an effective application of environmental management may help a company gain the competitive advantage (Porter and Van der Linde, 1995) through social, economic, and environmental benefits (Prajogo et al., 2012).

In the hotel industry, the increasing concern of the environmental issues has been paid attention since the 1990s (Chan and Hsu, 2016). Currently, organizations in this industry have increased their adoption of environmental management practices (Yoon et al., 2016). There are several reasons for this and firstly, the competitive advantage can be a motive for adopting the environmental management in tourism companies (Blanco et al., 2009). Furthermore, the environmental practices will allow hotels to manage and develop employee's environmental awareness as well as green culture, which increase customer satisfaction, environmental performance, and economic performance through saving water, energy consumption, and reducing waste, emissions and pollution, and so on. (Molina-Azorín et al., 2015)

However, to ensure the success of an environmental management strategy, the role of human resource management is necessary. Thus, since the definition of "environmental" or "green" human resource management (GHRM) was proposed by Renwick et al. (2008) and Jabbour and Santos (2008), it has been of concern to many scholars (e.g., Ren et al., 2018; Nejati et al., 2017; Tang et al., 2018; Pham and Tuckova, 2018). Following Renwick et al. (2013), training for the environment (green training) and developing green culture are important green practices in making the green development strategy. Reviewing the literature, green organizational culture has not paid attention to previous studies. Meanwhile, green training has become a hot topic for the recent studies to investigate the relationship between training for the environment and the environmental management maturity (Jabbour, 2015), green supply chain management (Teixeira et al., 2016), and environmental performance (Masri and Jaaron, 2017).

The papers yet published also contain research gaps. Firstly, following the social exchange theory (Emerson, 1976), organizations concentrate on providing the training program for employees and creating opportunities through the organizational culture development that may enhance reciprocate employee behaviors (e.g, organizational citizenship behavior-OCB). Therefore, scholars in the environmental management have implied that the organizational citizenship behavior for the environment (OCBE) can be engaged by employees, thanks to two of these green practices. However, very few prior studies have paid attention to clarifying the effects of both green practices on OCBE. We only found a study of Pinzone et al. (2016), which indicates that the practices to build the green competence affect OCBE positively and significantly.

Secondly, based on the AMO framework (Blumberg and Pringle, 1982), interaction of practices to create opportunity for employees (e.g., culture of organization) and to develop employee's ability (e.g., training program) may be expected

to enhance the organizational performance as well as human resource management outcome (e.g, OCB). Bos-Nehles et al. (2013) state that organizations emphasize creating opportunities (e.g., developing organizational culture) for individuals, which is important to enhance the effect of ability (e.g., training) on the effectiveness of human resource management implementation. Thus, in the green context, the effect of green training on OCBE may be moderated by the green organizational culture. Even though this is recognized, published studies have a notable lack of research to explore this limitation.

Finally, although Alonso-Almeida et al. (2017) point out the necessities (e.g., cost and efficiency, cultural motivations, hotel's image, etc.) for applying the environmental management strategy in the hotel industry, the number of GHRM-OCBE studies in the hotel industry is limited. Currently, Kim et al. (2019) examine the effect of GHRM on hotel employees' eco-friendly behavior in Thailand. Nevertheless, its results do not clarify the contribution of green training and green organizational culture to OCBE.
Thus this study aims to explore the effects of both green practices on OCBE and to answer two research questions to fill the three research gaps above:

RQ1: Are there any effects of green training and green organizational culture on OCBE in hotels?

RQ2: Does green organizational culture moderate the effect of green training on OCBE in hotels?

Our findings give the following contributions. First, the study gives the theoretical insights linked with social exchange theory the role of two green practices on OCBE. Also, based on AMO framework, the finding clarifies an important contribution about the moderating role of green organizational culture towards the effect of green training on OCBE. Second, the finding provides an empirical study that gives a better understanding about the necessity of these green practices applications to boost employee's voluntary eco-behavior in the hotel industry.

Literature review
Definitions of green training, green organizational culture, and the organizational citizenship behavior for the environment
Green training
Training is an important human resource management practice to positively enhance organization's performance. Garavan et al. (1995) state that training is seen as "*a planned and systematic effort to modify or develop knowledge, skills, and attitudes through learning experiences, to achieve effective performance in an activity or a range of activities*". Thus, in the green context, Jabbour et al. (2010) define training in the environment (green training) viewed as the environmental policies to provide the related knowledge, its practices, and necessary attitudes to individuals. Also, green training is considered as a necessary human or organizational element (Jackson and Seo, 2010) and widely seen as a key green human resource management (GHRM) practice (Renwick et al., 2013).

Green organizational culture
Organizational culture is an important intangible asset and plays a key role in building the organization's strength. According to Hatch (1993), organizational culture is widely understood to be made up of a collection of fundamental values and beliefs system. Based on that, green organizational culture, which is dealing with the environmental issues as culture value of organization (Jabbour et al., 2010), is also understood as

assumptions, values, symbols, and artifacts which reflect the environmentally sustainable development in organizations (Harris and Crane, 2002).

The organizational citizenship behavior for the environment
The organizational citizenship behavior (OCB) is a discretionary behavior which is not part of employee's job requirements (Robbins et al., 2010) or individual voluntary initiatives which are not rewarded by their companies (Boiral and Paillé, 2012). The definition of the organizational citizenship behavior for the environment (OCBE) is based on OCB, therefore OCBE can be viewed as individual discretionary behavior that is not clearly required in the reward system and contributes effectively to organizations' environmental improvement (Boiral, 2009).

Effects of green training and green organizational culture on the organizational citizenship behavior for the environment
In order to explain the effects of the two green practices, we apply the social exchange theory (Emerson, 1976). This theory emphasizes the effects of reciprocity on long-term relationships among stakeholders in the organization (e.g., employees, managers) (Paillé and Mejia-Morelos, 2014). It occurs when employees perceive benefits from what their organization provides and they feel obligated to reciprocate (Jiang et al., 2012). In the environmental context, when a company provides training programs and creates green opportunities for employees, they will have reciprocate behavior towards their company. Also, OCBE is seen as one of reciprocal behaviors in the environmental management-related studies (e.g. Raineri and Paillé, 2016; Robertson and Barling, 2017).

More specifically, green training role is mentioned in ISO 14001, that "*this ensures that employees at all levels of the organization understand the goals of the environmental management system (EMS) and the ways their job activities impact the environment and the achievement of EMS goals*" (Roig, 1998), which in turn enhances employees' green abilities to recognize environmental issues (Govindarajulu and Daily, 2004), understand and solve organization's environmental problems (Vidal-Salazar et al., 2012; Jabbour, 2015). In addition, Daily and Huang (2001) address the training's necessity in the environment that helps employees become more aware of environmental standards and change to a proactive behavior. Empirically, Pinzone et al. (2016) indicate that the training and educating practices build green competence, which boosts employees to 'go the extra mile' in eco-activities and to engage in the voluntary green behavior at the workplace. Consequently, the green training program is expected to play an important role in positively improving OCBE. We hypothesize that

H1: *Green training has a positive effect on OCBE*

Similarly, although there are very few published papers investigating the effect of green organizational culture on OCBE, Paillé et al. (2013) state that when an employee perceives organization's supports in engaging in pro-environmental behavior by providing necessary resources, she/he will be more likely to make extra eco-efforts. In human resource management, companies have the environmental-oriented management strategy and the supportive policies in the environment, employees are more willing to behave eco-actively in the workplace (Paillé et al., 2014). Since the green policies communicated to all employees, and the organizational support for a good environment performance boost an individual's organizational commitment, which in turn enhances their eco-behavior in the company (Temminck et al., 2015). Also, Chan et al. (2017) suggest top management's green message translated to the employee that helps improve their awareness and makes them focus on the environmental protection.

Therefore, employees are likely to pay more attention and concern for green activities, which in turn involve more active eco-behavior. This argument is supported by Zientara and Zamojska's (2016) findings in a hotel study. They conclude that hotels have policies to make green organizational climate at the workplace that positively influence OCBE. Thus, green organizational culture is necessary to enhance OCBE. We hypothesize that,

H2: *Green organizational culture has a positive effect on OCBE.*

The moderating role of green organizational culture
Based on the AMO framework, Blumberg and Pringle (1982) suggest that there is an interaction of practices to enhance employee's ability and practices to create opportunities for employees. This means enhancing benefits through employee's ability (e.g. training) that depends more or less on the work perspective in organizations such as supporting organization or a friendly working climate (or the organizational culture). Lepak et al. (2006) also support this argument, employees are equipped with enough skills and knowledge to do what company requires, but the company has a lack of organizational support or opportunities for employees to involve the tasks that will put a limit on their potential and decrease their willingness and discretionary effort in the workplace. Extending this into the green context, if employees are trained and given the environmental knowledge and skills, this will enhance their willingness in eco-tasks. This enhancement will be stronger once the organization creates green opportunities for them to involve the environmental activities at work through the green organizational culture. Empirically, Dumont et al. (2017) state that GHRM practices (including green training) are necessary to increase effect toward employee's pro-environmental behavior, when their company pays more attention to creating a green climate at the workplace. In fact, organizations have green culture, employees usually have opportunities to be trained the needed knowledge and skills and to involve the green activities. This motivates employees to participate voluntarily in green tasks, especially individuals have higher personal environmental norm (Chou, 2014). Thus we argue that organizations concentrate more on developing green organizational culture, this enhances a stronger effect of green training on OCBE than the low green culture. We hypothesize that,

H3: *Green organizational culture moderates the effect of green training on OCBE, such that the effect is stronger when green organizational culture is high rather than low.*
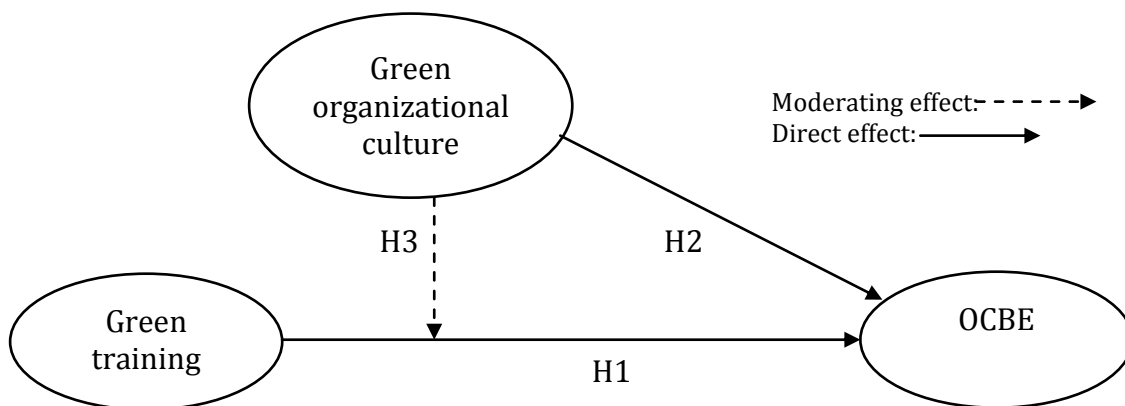

Figure 1. **The conceptual model**

Source: Authors' own contribution.

Methodology

Research design

A quantitative approach should be applied if the study's purpose is to infer the population's characteristic, attitude, or behavior from a sample (Creswell, 2003). Thus, as our study aims to measure the effects of green training and green organizational culture on OCBE in the hotel industry, this approach is appropriate to utilize. Along with the research strategy, a survey strategy was chosen for applying the quantitative data collection and evaluating the relationships between variables (Saunders et al., 2009). As for the respondents, we chose participants working in 4-5 star hotels in Vietnam and frequently involving environmental activities. As the environmental concerns are highlighted in luxury hotels, particularly in 4-5 star hotels in Vietnam where they have engagements in CSR policies with the emphasis on environmental protection (Le and Ferguson, 2016). Respondents must have at least one year-working-experience in their hotels. The reason is that they need to understand the environmental requirements and grasp used green practices in the workplace. Thus, employees working at departments such as Housekeeping, Food & Beverage, Maintenance, and Administration (or HR) were chosen to collect data.

The questionnaire technique was used to collect data. At first, 379 hotels, from the available information on Vietnam National Administration of Tourism and author's relatives, were contected to obtain agreement. The structured questionnaire with closed questions was sent to respondents in paper and via google mail. In each hotel, four questionnaires were distributed to four informants working at four aforementioned departments from March to July 2018. In total, 65 hotels were contacted successfully, approximately 17.15% response rate. After considering 221 received questionnaires, 209 valid questionnaires were used for the quantitative analysis due to the missing data. As for the sample size, the factor analysis is employed, hence it should be more than 200 (Comrey and Lee, 1992). Everitt's (1975) recommendation is that scholars should use at least 10 observations per independent variable in factor analysis. Moreover, Halinski and Feldt (1970) state that the sample size for regression analysis should be 10 individuals or more for each independent variable. This study has two independent variables. Thus the sample size of 209 is appropriate for this study.

Data analysis

This study employed partial least squares structural equation model (PLS-SEM) through SMART 3.0 software for data analysis because of the exploratory and prediction-oriented nature of the study, model complexity, and ease of model specification and model interpretation (Hair et al., 2011). While traditional ordinary least squares (OLS) assumes that all variables are observable and are measured without any error (Haenlein and Kaplan, 2004), the PLS path analysis is appropriate when it can overcome the aforementioned restrictions and will predict the variables more precisely than theory testing (Hair et al., 2014). After conducting searches on scientific databases, it is possible to conclude that there is a lack of sufficient previous researches linking green training and green organizational culture to OCBE, and as such, PLS-SEM was the suitable data analysis technique for this study.

First of all, the assessment of measurement model was carried out. Upon the confirmation of the measurement theory and ensuring the validity and reliability of the measurement model, the structural model was assessed for hypothesis testing. Additionally, to evaluate the moderating effects of green organizational culture, this study will use K-means Cluster Analysis by dividing the respondents into 4 groups.

Analysis of variance was then conducted to verify whether the differences of the dependent variables are significant among these four groups of respondents.

Measure
Green practices
Following Renwick et al.'s (2013) definitions and constructs and items related to green training and green organizational culture published by different studies to develop measure. *Green training (GTR).* We utilized six items adapted by Daily et al. (2012) and Jabbour (2015) (Table 4, Appendix), such as "An adequate amount of training in environmental issues is provided for employees"; "Employees can get opportunities to be trained on environmental issues". *Green organizational culture (OGC).* Based on five published items of Jabbour et al. (2010) and Masri and Jaaron (2017), we proposed five items to measure green organizational culture (Table 4, Appendix). Some sample items are: "Organizational vision/mission statements include environmental improvement"; "Environmental dimension is considered as one of the organizational priorities".

The organizational citizenship behavior for the environment (OCBE)
OCBE is developed based on six items of Boiral and Paillé (2012) (Table 4, Appendix). This measure is not particular and specific and can be applied to different circumstances (Raineri and Paillé, 2016). Some sample items:"I voluntarily carry out environmental actions and initiatives in daily work activities"; "I actively participate in environmental events organized in our hotel".

Results
Measurement model evaluation
The analysis starts with the assessment of measurement model. To assess the validity and reliability of the measurement model, item loadings, average variance extracted (AVE), composite reliability (CR), and Cronbach's alpha of measurement constructs are examined (Table 1). For all of the research constructs, the factor loading is higher than the rule of thumb of 0.7. In addition, AVE values for all of the constructs surpass the threshold of 0.5 (Hair et al., 2011). The internal consistency for the reliability of the measurement models is demonstrated through Cronbach's alpha and CR values higher than 0.7 for all constructs.

Table 1. *Items loading, AVE, Composite reliability and Cronbach's alpha assessment*

Construct scale	Item	Loadings	AVE	Composite reliability	Cronbach's alpha
Green training	GTR1	0.855	0.678	0.926	0.904
	GTR2	0.775			
	GTR3	0.812			
	GTR4	0.832			
	GTR5	0.819			
	GTR6	0.841			
Green organizational culture	OGC1	0.879	0.67	0.91	0.877
	OGC2	0.748			
	OGC3	0.811			
	OGC4	0.795			
	OGC5	0.854			
Organizational citizenship behavior for the environment	OCBE1	0.765	0.588	0.909	0.883
	OCBE2	0.745			
	OCEB3	0.798			
	OCBE4	0.780			

OCBE5	0.732	
OCBE6	0.763	
OCBE7	0.781	

<div align="right">Source: Authors' own contribution.</div>

To ensure that the proposed constructs are sufficiently different from each other, the discriminant validity is established that the square root of average variance extracted (AVE) for each construct is greater than the correlations of all other constructs (Fornell and Larcker, 1981). These data confirm the discriminant validity of the measurement model since all of the on-diagonal values are greater than the off-diagonal values (correlations of all other constructs) (Table 2).

Table 2. *Correlations and Discriminant validity of constructs*

	Mean	SD	GTR	OGC	OCBE
GTR	3.520	0.802	**0.823**		
OGC	3.583	0.778	0.57	**0.819**	
OCBE	3.652	0.696	0.588	0.565	**0.767**

Note. *The inter-construct correlations are presented in the off-diagonals while the values for the square root of the AVE are placed in the main diagonal in the matrix in bold font.*

<div align="right">Source: Authors' own contribution.</div>

Overall, the measurement model demonstrates the adequate convergent validity and discriminant validity, hence the discriminant validity is confirmed and acceptable for hypothesis testing.

Structural model evaluation

The direct effects of green training and green organizational culture on OCBE

After confirming the measurement model, a nonparametric bootstrapping process is applied to evaluate the structural model and test the significance of path models. In this process, 5000 random samples are calculated, with replacement from the original sample, and the indirect effects of interest are gauged from each bootstrap sample. This result in a sampling distribution could be employed to build a confidence interval (Precher et al., 2007). The R-square value of OCBE is 0.4055, meaning that 40.55% of the variance can be explained by green training and green organizational culture.

For the purpose of hypothesis testing, the critical value for a two-tail t-test is applied. As such, green training has a significant positive effect on organizational citizenship behavior for the environment. In the analysis of obtained results, the value of the coefficient (β) to the relationship GTR $\rightarrow$ OBCE is 0.35 with a p-value <0.001. This means that the hypothesis 1 (H1) is supported.

Furthermore, it can be seen that the organizational green culture has a positive effect on organizational citizenship behavior for the environment with a value of path coefficients (β) = 0.364, and this relationship OGC $\rightarrow$ OCBE is significant at 0.000. This means that hypothesis 2 (H2) is supported.

Table 3. *Path coefficient and hypothesis testing*

Hypotheses	Path	Coefficient	t-value	Decision
H1	GTR $\rightarrow$OCBE	0.35	6.209***	Supported
H2	OGC $\rightarrow$ OCBE	0.364	4.805***	Supported

Note. ****p < 0.001*

<div align="right">Source: Authors' own contribution.</div>

The moderating role of green organizational culture

To test H3, we use a K-means cluster method that divides the participants into four groups using green training (GTR) and green organizational culture (OGC) as the grouping variables: high GTR/high OGC, high GTR/low OGC, low GTR/high OGC, and low GTR/low OGC. The results indicate that at the high GTR level, participants with high OGC tend to have a better organizational citizenship behavior for the environment (F=24.453, p=0.000) than those with low OGC. In addition, the high OGC is associated with the enhanced relationship between green training and organizational citizenship behavior for the environment. More specifically, applying green training is important to enhance OCBE, and this enhancement is higher when organizations pay more attention to developing the green organizational culture. Thus, H3 is supported that there is a moderation role of organizational green culture for the effect of green training on OCBE.
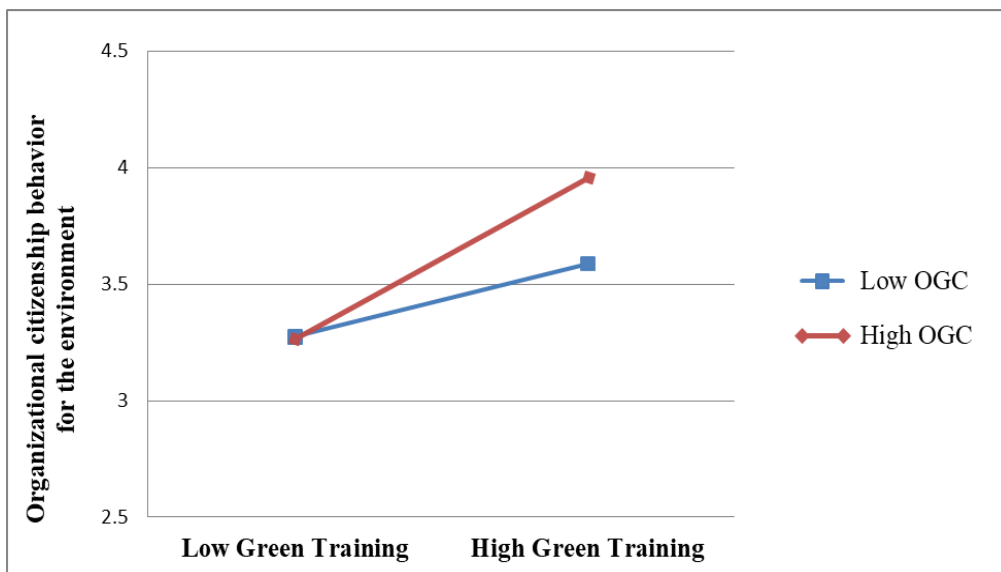

Figure 2. **Interaction effect of green training and green organizational culture**
Source: Authors' own contribution.

Discussion

This study explores the direct effects of green training and green organizational culture on OCBE in the hotel industry. Also, the moderating role of green organizational culture toward the effect of green training on OCBE is clarified. A quantitative approach with the PLS-SEM and K-means Cluster Analysis techniques were utilized to answer two research questions.

According to the results, firstly, green training is seen as an important green practice to significantly and positively enhance employees' voluntary green behavior in hotels. The result is consistent with the argument of Daily and Huang (2001) and findings of Pinzone et al. (2016). For instance, Pinzone et al. (2016) conclude that employees are more willing to participate in environmental activities at work when organizations effectively apply the practices to increase their green ability through building green competence (e.g., green training). With our study, we argue that hotels provide green training program for employees and opportunities for them to use the environmental training adequately, and have evaluation about employees' green performance after training that encourages them to voluntarily involve the environmental activities in the workplace. In fact, training the environment can increase employees' environmental knowledge and skills (Teixeira et al., 2012; Jabbour et al., 2010) which help them understand how to solve the environmental problems in

organization (Vidal-Salazar et al., 2012; Jabbour, 2015) as well as the goal of the environmental management (Roig, 1998). Thus they are more aware of pro-environmental attitudes and behavior.

Secondly, green organizational culture has a positive and significant effect on OCBE. The result is in line with arguments of previous studies (e.g, Zientara and Zamojska, 2016; Chan et al., 2017), which emphasize the necessities of making the green organizational climate and support of top management in the environmental policies that enhance employees' voluntary eco-behavior. Our results also suggest that hotels have the clear green strategy through their vision/mission and the managerial level's green support, and concentrate on the environment-oriented priorities that are important to help boost employees' willingness in the eco-activities at work. This is because in organizations focusing on developing the green strategy, employees feel encouraged and supported by managerial levels (e.g., top management or department managers). Thus they have more willingness to engage in pro-environmental behaviors to achieve the organization's environmental goal (e.g., Hanna et al., 2000; Paillé et al., 2014).

From two above findings, extending the social exchange theory investigating the effects of green training and green organizational culture on OCBE is appropriate and contributes to the existing literature. Also, confirmation of two first hypotheses helps us say "Yes" in answering the first research question.

Thirdly, the result points out a moderating effect of green organizational culture on the green training's influence on OCBE. This supports argument of Blumberg and Pringle (1982) followed to the AMO framework to explore the moderating role of green organizational culture aiming to answer the second research question. Our finding is consistent with Lepak et al. (2006), they state that training to enhance skills and knowledge is necessary, but if there is a lack of organization's supports or opportunities for employees, this restricts their willingness and discretionary effort at work. For green hotels, a suggestion is that providing the environmental training program to employees helps them obtain the green knowledge and skills, and when hotels have green supports from managerial levels and the environment-oriented priorities that will stimulate employees to apply the trained knowledge and skills in the environmental activities discretionarily and actively, it encourages them to be more concerned with pro-environmental behavior.

Implication, limitation and further studies
Practical implications for hotels
Going green in the workplace is becoming one of the important factors for the sustainable development strategy of hotels (Kim et al. 2019; Luu, 2017). To deal with this responsibility, hotels need to have concerns about the environmental practices, especially the necessary role of human resource management in developing a green hotel. According to results, this study suggests two managerial practices for organizations in the hotel industry.

Firstly, it is necessary for hotel managers to concentrate on developing green training program because this encourages employees not only to carry out environmental activities and initiatives voluntarily, but also to be more willing in helping their co-workers to involve the environmental issues in the workplace. From the above result, hotels need to give an adequate green training program to employees and to create chances for them to use the trained knowledge and skills. Also, the hotels should review employees' performance after training, to ensure this program has carried out effectively. In addition, hotels have to pay attention to developing the green

organizational culture. More specifically, making a clear green strategy through hotel's vision/mission is necessary and translated to both non-managerial and managerial staffs. The importance of hotel's top management should be highlighted through supports for environmental activities as punishment system and penalties for noncompliance in the environmental management.

Secondly, according to the results of moderating effect of green organizational culture, although green training is important, developing a green culture in the hotel leads to a stronger enhancement of employees' voluntary green behavior. Thus our finding suggests that a simultaneous application of both green training and green organizational culture is better than one of these alone. For example, in addition to the fact that hotels should regularly provide the training program for the environmental protection to employees, hotel's top management should have an environment-oriented management policy to support employee's green activities and projects not only in hotels, but also in the local community.

Limitations and further studies
Although our study fills the research gaps mentioned in the introduction, this study also contains two limitations which will be avenues for further researches.

First, following Renwick et al. (2013), based on the AMO theory (Appelbaum et al., 2000), green practices aiming to enhance green motivation for employees, such as green reward or green performance management, contribute to improvement of employees' discretionary effect for the environment (e.g, OCBE). This argument has not been investigated by previous studies in the hotel industry. Thus, a recommendation for next study is to explore the additional effects of these green practices on OCBE.

Second, Ren et al. (2018) propose an organizing framework for green human resource management research that highlights the green organizational culture as an independent variable influencing GHRM practices. This means that policies to develop hotels' green culture may play the roles of indirect and direct effects on OCBE; on this, there is a lack of published articles. Therefore, it is important to carry out a study that will explore the indirect influence of hotel's green culture on OCBE through the mediating roles of GHRM practices, such as training or reward.

Acknowledgment

Appendix

Table 4. *Constructs and items*

Constructs/Items	Reference
Green training (GTR)	
An adequate amount of training in environmental issues is provided for employees	
Employees can get opportunities to be trained on environmental issues	Daily et al. (2012) Jabbour (2015)
Employees receive environmental training frequently	
Employees use their environmental training effectively	
Employees have opportunities to use their environmental	

training
There is adequate evaluation of employee's performance after
environmental training

Green organizational culture (OGC)	
Environmental dimension is considered as one of organizational priorities Organizational vision/mission statements include environmental improvement Top management clarify information and values of environmental management throughout the organization Top management develop punishment system and penalties for noncompliance in the environmental management Top management actively support environmental practices	Jabbour et al. (2010) Masri and Jaaron (2017)
The organizational citizenship behavior for the environment (OCBE)	
I voluntarily carry out environmental actions and initiatives in daily work activities I make suggestions to colleagues about how to protect the environment more effectively, even when it is not my/their direct responsibility I actively participate in environmental events organized in our hotel I undertake environmental actions that contribute positively to the image of our hotel I volunteer for projects, endeavors or events that address environmental issues in our hotel I spontaneously give time to help my/their colleagues take the environment into account in everything they do at work I encourage my/their colleagues to adopt more environmentally conscious behavior	Boiral and Paillé (2012)

Source: Authors' own contribution.

References

Alonso-Almeida, M., Robin, C. F., Pedroche, M. S. C., & Astorga, P. S. (2017), "Revisiting green practices in the hotel industry: A comparison between mature and emerging destinations", Journal of Cleaner Production, Vol. 140, pp. 1415-1428.

Blanco, E., Rey-Maquieira, J., & Lozano, J. (2009), "Economic incentives for tourism firms to undertake voluntary environmental management", Tourism Management, Vol. 30, No. 1, pp. 112-122.

Blumberg, M., & Pringle, C. D. (1982), "The missing opportunity in organizational research: Some implications for a theory of work performance", Academy of management Review, Vol. 7, No. 4, pp. 560-569.

Boiral, O. (2002), "Tacit knowledge and environmental management", Long Range Planning, Vol. 35, No. 3, pp. 291-317.

Boiral, O. (2009), "Greening the corporation through organizational citizenship behaviors", Journal of Business Ethics, Vol. 87, No. 2, pp. 221-236.

Boiral, O., & Paillé, P. (2012), "Organizational citizenship behaviour for the environment: Measurement and validation", Journal of Business Ethics, Vol. 109, No. 4, pp. 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, Vol. 52, No. 6, pp. 861-877.

Chan, E. S., & Hsu, C. H. (2016), "Environmental management research in hospitality", International Journal of Contemporary Hospitality Management, Vol. 28, No. 5, pp. 886-923.

Chan, E. S., Hon, A. H., Okumus, F., & Chan, W. (2017), "An empirical study of environmental practices and employee ecological behavior in the hotel industry", Journal of Hospitality & Tourism Research, Vol. 41, No. 5, pp. 585-608.

Chou, C. J. (2014), "Hotels' environmental policies and employee personal environmental beliefs: Interactions and outcomes", Tourism Management, Vol. 40, pp. 436-446.

Comrey, A. L., & Lee, H.B. (1992), A First Course in Factor Analysis, Hillsdale, NJ: Erlbaum.

Creswell, J. W. (2003), Research design: Qualitative, quantitative and mixed methods approaches, Thousand Oaks: Sage Publications.

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, Vol. 32, No. 5, pp. 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, Vol. 21, No. 12, pp. 1539-1552.

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, Vol. 56, No. 4, pp. 613-627.

Emerson, R. M. (1976), "Social exchange theory", Annual review of sociology, Vol. 2, No. 1, pp. 335-362.

Esmaeilpour, M., & Bahmiary, E. (2017), "Investigating the impact of environmental attitude on the decision to purchase a green product with the mediating role of environmental concern and care for green products", Management & Marketing, Vol. 12, No. 2, pp. 297-315.

Everitt, B. S. (1975), "Multivariate analysis: The need for data, and other problems", The British Journal of Psychiatry, Vol. 126, No. 3, pp. 237-240.

Fornell, C., & Larcker, D. F. (1981), "Evaluating structural equation models with unobservable variables and measurement error", Journal of marketing research, Vol. 18, No.1, pp. 39-50.

Garavan, T. N., Costine, P., & Heraty, N. (1995), Training and development in Ireland: context, policy, and practice, Cengage Learning EMEA.

Govindarajulu, N., & Daily, B. F. (2004), "Motivating employees for environmental improvement", Industrial management & data systems, Vol. 104, No. 4, pp. 364-372.

Halinski, R. S., & Feldt, L. S. (1970), "The selection of variables in multiple regression analysis", Journal of Educational Measurement, Vol. 7, No. 3, pp. 151-157.

Haenlein, M., & Kaplan, A. M. (2004), "A beginner's guide to partial least squares analysis", Understanding statistics, Vol. 3, No. 4, pp. 283-297.

Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011), "PLS-SEM: Indeed a silver bullet", Journal of Marketing theory and Practice, Vol. 19, No. 2, pp. 139-152.

Hair, J. F., Sarstedt, M., Hopkins, L., & G. Kuppelwieser, V. (2014), "Partial least squares structural equation modeling (PLS-SEM) An emerging tool in business research", European Business Review, Vol. 26, No. 2, pp. 106-121.

Hanna, M. D., Rocky Newman, W., & Johnson, P. (2000), "Linking operational and environmental improvement through employee involvement", International journal of operations & production management, Vol. 20, No. 2, pp. 148-165.

Harris, L. C., & Crane, A. (2002), "The greening of organizational culture: Management views on the depth, degree and diffusion of change", Journal of organizational change management, Vol. 15, No. 3, pp. 214-234.

Hatch, M. J. (1993), "The dynamics of organizational culture", Academy of management review, Vol. 18, No. 4, pp. 657-693.

Islam, S., Karia, N., Fauzi, F. B. A., & Soliman, M. (2017), "A review on green supply chain aspects and practices", Management & Marketing, Vol. 12, No. 1, pp. 12-36.

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, Vol. 87, pp. 442-451.

Jabbour, C. J. C., & Santos, F. C. A. (2008), "Relationships between human resource dimensions and environmental management in companies: proposal of a model", Journal of Cleaner Production, Vol. 16, No. 1, pp. 51-58.

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, Vol. 21, No. 7, pp. 1049-1089.

Jackson, S. E., & Seo, J. (2010), "The greening of strategic HRM scholarship", Organization Management Journal, Vol. 7, No. 4, pp. 278-290.

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, Vol. 55, No. 6, pp. 1264-1294.

Le, H.D.M., & Ferguson, D. L. (2016), "Customer Relationship Enhancements from Corporate Social Responsibility Activities Within the Hospitality Sector: Empirical Research from Vietnam", Corporate Reputation Review, Vol. 19, No. 3, pp. 244-262.

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", Book series: Research in personnel and human resources management, Emerald Group Publishing Limited.

Liobikienė, G., Mandravickaitė, J., & Bernatonienė, J. (2016), "Theory of planned behavior approach to understand the green purchasing behavior in the EU: A cross-cultural study", Ecological Economics, Vol. 125, pp. 38-46.

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, Vol. 29, No. 11, pp. 2867-2900.

Masri, H. A., & Jaaron, A. A. (2017), "Assessing green human resources management practices in Palestinian manufacturing context: An empirical study", Journal of Cleaner Production, Vol. 143, pp. 474-489.

Molina-Azorín, J. F., Tarí, 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, Vol. 50, pp. 41-54.

Nejati, M., Rabiei, S., & Jabbour, C. J. C. (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, Vol. 168, pp. 163-172.

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, Vol. 24, No. 18, pp. 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, Vol. 121, No. 3, pp. 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, Vol. 38, pp. 124-131.

Pham, N. T., & Tuckova, Z. (2018), Green Human Resource Management in the Hospitality Sector (pp. 219-226), paper presented at 1th International Conference on Tourism Research (ICTR 2018), JAMK University of Applied Science Jyväskylä, Finland.

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, Vol. 122, pp. 201-211.

Porter, M. E., & Van der Linde, C. (1995), "Toward a new conception of the environment-competitiveness relationship", Journal of economic perspectives, Vol. 9, No. 4, pp. 97-118.

Prajogo, D., Tang, A. K., & Lai, K. H. (2012), "Do firms get what they want from ISO 14001 adoption?: an Australian perspective", Journal of Cleaner Production, Vol. 33, pp. 117-126.

Preacher, K. J., Rucker, D. D., & Hayes, A. F. (2007), "Addressing moderated mediation hypotheses: Theory, methods, and prescriptions", Multivariate behavioral research, Vol. 42, No. 1, pp. 185-227.

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, Vol. 137, No. 1, pp. 129-148.

Rajnoha, R., & Lesníková, P. (2016), "Strategic performance management system and corporate sustainability concept-specific parametres in Slovak Enterprises", Journal of Competitiveness, Vol. 8, No. 3, pp. 107-154.

Ramanathan, R. (2018), "Understanding complexity: The curvilinear relationship between environmental performance and firm performance", Journal of Business Ethics, Vol. 149, No. 2, pp. 383-393.

Ren, S., Tang, G., & Jackson, S. E. (2018), "Green human resource management research in emergence: A review and future directions", Asia Pacific Journal of Management, Vol. 35, No. 3, pp. 769-803.

Renwick, D. W., Redman, T., & Maguire, S. (2013), "Green human resource management: A review and research agenda", International Journal of Management Reviews, Vol. 15, No. 1, pp. 1-14.

Robbins, S. P., Judge, T., & Campbell, T. T. (2010), Organizational behaviour, Financial Times Prentice Hall.

Robertson, J. L., & Barling, J. (2017), "Toward a new measure of organizational environmental citizenship behavior", Journal of Business Research, Vol. 75, pp. 57-66.

Roig, R. A. (1998), ISO 14001 environmental management systems: a complete implementation guide, North Vancouver, BC: STP Speciality Technical Publishers.

Saunders, M., Lewis, P., & Thornhill, A. (2009), Research methods for business students, 5th edn, England: Pearson Education Limited.

Tang, G., Chen, Y., Jiang, Y., Paillé, P., & Jia, J. (2018), "Green human resource management practices: scale development and validity", Asia Pacific Journal of Human Resources, Vol. 56, No. 1, pp. 31-55.

Teixeira, A. A., Jabbour, C. J. C., & de Sousa Jabbour, A. B. L. (2012), "Relationship between green management and environmental training in companies located in Brazil: A theoretical framework and case studies", International Journal of Production Economics, Vol. 140, No. 1, pp. 318-329.

Teixeira, A. A., Jabbour, C. J. C., de Sousa Jabbour, A. B. L., Latan, H., & de Oliveira, J. H. C. (2016), "Green training and green supply chain management: evidence from Brazilian firms", Journal of Cleaner Production, Vol. 116, pp. 170-176.

Temminck, E., Mearns, K., & Fruhen, L. (2015), "Motivating employees towards sustainable behaviour", Business Strategy and the Environment, Vol. 24, No. 6, pp. 402-412.

Vidal-Salazar, M. D., Cordón-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, Vol. 51, No. 6, pp. 905-934.

Yoon, D., Jang, J., & Lee, J.H. (2016), "Environmental management strategy and organizational citizenship behaviors in the hotel industry: The mediating role of organizational trust and commitment", International Journal of Contemporary Hospitality Management, Vol. 28, No. 8, pp. 1577-1597.

Zientara, P., & Zamojska, A. (2016), "Green organizational climates and employee pro-environmental behaviour in the hotel industry", Journal of Sustainable Tourism, pp. 1-18. DOI: 10.1080/09669582.2016.1206554.