FORUM

FROM GREEN TRAINING AND INVOLVEMENT TO AN ORGANIZATIONAL RATIONALE FOR SUSTAINABILITY: DOES IT IMPROVE INDIVIDUAL GREEN PERFORMANCE?

Do treinamento e envolvimento verde à lógica organizacional para a sustentabilidade: Melhora-se o desempenho verde individual?

De la capacitación y el compromiso verdes a la lógica organizacional para la sustentabilidad: ¿Mejora el desempeño verde individual?

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ABSTRACT

Organizations are pressured by their stakeholders to promote sustainable actions, so they need to adopt strategies that encourage their employees to engage in green behaviors. Our aim was to analyze the effects of green training and involvement on individual green performance, with the intervention of the interactive and diagnostic use of Performance Measurement Systems (PMS), organizational rationale for sustainability, and organizational identification. A survey was conducted with employees of a private electric power generator operating in Brazil, and 101 valid responses were obtained. The analysis used mixed methods: partial least squares structural equation modeling and fuzzy-set qualitative comparative analysis. The findings suggest the influence of green training and involvement on the interactive and diagnostic use of PMS, and on the organizational rationale for sustainability, which influences individual green performance moderated by organizational identification. Furthermore, two (four) combinations of the conditions promote high (low) individual green performance.

Keywords: green training and involvement, performance measurement systems, organizational rationale for sustainability, organizational identification, individual green performance.

RESUMO

As organizações são pressionadas pelos stakeholders a promoverem ações sustentáveis, de modo que precisam adotar estratégias que incentivem seus funcionários a apresentarem comportamentos verdes. Assim, objetiva-se analisar os efeitos do treinamento e envolvimento verde no desempenho individual verde, com a interveniência do uso interativo e diagnóstico dos sistemas de mensuração de desempenho (PMS), lógica organizacional para a sustentabilidade e identificação organizacional. Uma survey foi realizada com funcionários de uma geradora privada de energia elétrica, atuante no Brasil, e se obtiveram 101 respostas válidas. Nas análises, utilizaram-se métodos mistos: modelagem de equações estruturais por mínimos quadrados parciais e análise qualitativa comparativa fuzzy-set. Os achados sugerem influência do treinamento e envolvimento verde no uso interativo e diagnóstico do PMS, e desses elementos na lógica organizacional para a sustentabilidade, a qual influencia o desempenho individual verde moderada pela identificação organizacional. Ademais, duas (quatro) combinações entre as condições promovem alto (baixo) desempenho verde individual.

Palavras-chave: *treinamento e envolvimento verde, sistemas de mensuração de desempenho, lógica organizacional para a sustentabilidade, identificação organizacional, desempenho verde individual.*

RESUMEN

Las organizaciones son presionadas por los stakeholders a promover acciones sostenibles, por lo que necesitan adoptar estrategias que alienten a sus empleados a exhibir un comportamiento ecológico. Así, el objetivo es analizar los efectos de la capacitación y el compromiso verdes en el desempeño verde individual, con la intervención del uso interactivo y diagnóstico de sistemas de medición de desempeño (PMS), lógica organizacional para la sustentabilidad e identificación organizacional. Se realizó una encuesta a empleados de una generadora privada de energía eléctrica, que opera en Brasil, y se obtuvieron 101 respuestas válidas. En los análisis se utilizaron métodos mixtos: modelado de ecuaciones estructurales por mínimos cuadrados parciales y análisis cualitativo comparativo fuzzy-set. Los hallazgos sugieren la influencia de la capacitación y el compromiso verdes en el uso interactivo y el diagnóstico de PMS, y de estos elementos en la lógica organizacional para la sostenibilidad, que influye en el desempeño individual verde moderado por la identificación organizacional. Además, dos (cuatro) combinaciones de condiciones promueven un alto (bajo) desempeño verde individual.

Palabras clave: *capacitación y compromiso verdes, sistemas de medición del desempeño, lógica organizacional para la sustentabilidad, identificación organizacional, desempeño verde individual.*

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INTRODUCTION

Organizations receive pressure from various stakeholders to promote sustainable strategies and behaviors (Guerci, Longoni, & Luzzini, 2016; Seroka-Stolka & Fijorek, 2020). Green Human Resource Management (HRM) practices are important for enabling organizations to foster more sustainable strategies via their employees (Renwick, Redman, & Maguire, 2013), one of the main practices of which is green training and involvement (Guerci et al., 2016). Green HRM practices have the potential to lead the organizational rationale for sustainability (Jerónimo, Henriques, Lacerda, Silva, & Vieira, 2020; Jerónimo, Lacerda, & Henriques, 2020), which involves the employees' perceptions of the organization's sustainable values (Tosti-Kharas, Lamm, & Thomas, 2017).

Possible intervening factors play a role in the relationship between green HRM practices and the organizational rationale for sustainability, an aspect that is still little explored in the literature. Performance Measurement Systems (PMS), which comprise the measures used to quantify certain actions in the organization (Neely, Gregory, & Platts, 1995), can drive green training and involvement. Managers interactively use PMS (encouraging dialogue and learning, and providing a common view of the organization) and in a diagnostic way (monitoring, correcting, and tracking goals) (Henri, 2006; Simons, 1995). The facilitatory role of the interactive and diagnostic use of the PMS, therefore, is considered in the dissemination of green training and involvement, thereby promotes an organizational rationale for sustainability.

When employees perceive the organizational rationale for sustainability, they begin to exhibit more sustainable behaviors and actions (Tosti-Kharas et al., 2017). Furthermore, employee organizational identification, which is the individual's perception of belonging to the organization of which he/she is a member (Mael & Ashforth, 1992), can amplify the contributions of the organizational rationale for sustainability in individual green performance. Despite the existing research on the topic, there are further opportunities for study. For example, Jerónimo, Henriques et al. (2020) and Jerónimo, Lacerda et al. (2020) suggest research that explores the impact of green HRM practices on employees by contrasting these points with other company strategies. Thus, comparing the interactive and diagnostic uses of PMS may offer insights into the literature.

This study aims to analyze the effects of green training and involvement on individual green performance with the intervention of the interactive and diagnostic use of PMS, the organizational rationale for sustainability, and organizational identification. A survey was conducted with employees of a large private power generator listed on the Brazilian Corporate Sustainability Index (ISE), Bolsa e Balcão (B3), and Clean200. We used mixed methods in our analyses: partial least squares structural equation modeling (PLS-SEM) and fuzzy-set qualitative comparative analysis (fsQCA).

The results suggest that green training and involvement are positively related to the interactive and diagnostic use of the PMS and the organizational rationale for sustainability. The interactive and diagnostic use of PMS is positively related to the organizational rationale for sustainability, which, in turn, has a positive effect on individual green performance. The diagnostic use of PMS assumes a mediating role between green training and involvement

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and the organizational rationale for sustainability. Furthermore, organizational identification moderates the relationship between organizational rationale for sustainability and individual green performance. Two (four) combinations of conditions lead individuals to high (low) individual green performance. The empirical results indicate that sustainable strategies must be disseminated and incorporated by employees for them to be able to exhibit green behaviors that are consistent with the organizational strategy (Chaudhary, 2020).

The findings make both theoretical and managerial contributions. The literature on green HRM practices receives new evidence, particularly for the practice of green training and involvement. The use of PMS is discussed, as is organizational identification as an important factor for individuals to behave sustainably. They contribute to managerial practice, since by knowing the pathways that lead to the green performance of individual employees, managers can direct their efforts to facilitate achieving them. The role of these leaders is critical to this perception by employees (Jeronimo, Henriques et al., 2020) so they understand that sustainable performance is a priority in the organization (Glavas & Godwin, 2013; Jerónimo, Henriques et al., 2020; Tosti-Kharas et al., 2017).

Following this Introduction, this paper is organized into a Literature review, with the Hypotheses section presenting the theoretical insights for developing the hypotheses. The Method section explains the methodological procedures. The Data Analysis section describes and discusses the data and the results, and the Conclusions section highlights the findings, theoretical and managerial implications, and the paper's limitations and recommendations.

LITERATURE REVIEW AND HYPOTHESES

Green training and involvement and the organizational rationale for sustainability

Among green HRM practices, one of those receiving a lot of emphasis is green training and involvement (Guerci et al., 2016). This assigns to the organization the role of sharing information about the organization's mission and vision (Mandip, 2012) to foster the development of the sustainable competencies that are expected of employees (Mousa & Othman, 2020). Green training and involvement programs provide links with managing external pressures and higher levels of environmental performance (Guerci et al., 2016), which are reflected in employee satisfaction and their engaging in sustainable behaviors (Amrutha & Geetha, 2021). Green training is essential for the successful sustainable management of organizations (Pinzone, Guerci, Lettieri, & Huisingh, 2019), thereby fostering the organizational rationale for sustainability (Jerónimo, Henriques et al., 2020).

The organizational rationale for sustainability considers the priority of maintaining environmentally sustainable operations, which implies employees having a perception of sustainable behaviors in the organization (Tosti-Kharas et al., 2017). This rationale is conveyed to employees by green training and involvement, or resulting actions, such as internal reporting,

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events, newsletters, and training in order to project a more positive and sustainable image of the organization (Glavas & Godwin, 2013). Evidence points to the fact that green HRM practices, such as green training, influence employees' perceptions of the organizational rationale for sustainability, and that green training is a necessary and sufficient condition for a large part of how employees perceive an organization's rationale for sustainability (Jeronimo, Henriques et al., 2020). Thus, it is assumed that:

> H1: Green training and involvement are positively related to an organizational rationale for sustainability.

The mediating role of PMS use

PMS are one of the Management Control Systems (MCS) that comprise the measures used by organizations to quantify certain actions (Neely et al., 1995). These measures may contain financial and/or non-financial, internal and/or external, short and/or long-term, and ex-post and/or ex-ante information (Henri, 2006). PMS are formalized information-based procedures and systems to ensure or modify patterns of behavior in organizational activities (Simons, 1987). MCS are generally used in a dynamic tension rationale: the diagnostic use of PMS performs the function of feedback, actions for monitoring, rewarding and ensuring goal achievement, while the interactive use of PMS encourages organizational dialogue and learning (Henri, 2006; Simons, 1995).

This study posits that the (interactive and diagnostic) use of the PMS ensures that green training and involvement result in an organizational rationale for sustainability that is perceived by the employees. First, green HRM practices have a positive influence on several forms of performance measurement (Acquah, Agyabeng-Mensah, & Afum, 2020). However, developing, quantifying, and particularly divulging HRM measures and goals to organizational stakeholders is an ongoing challenge (Herington, McPhail, & Guilding, 2013), which demands the use of PMS aimed at providing timely information of the organization's HRM goals and activities and their performance (Huselid, 1995). Consequently, green training and involvement may need the diagnostic and interactive use of PMS to be translated into the organizational rationale for sustainability. It is assumed that PMS feedback in it role of supporting strategy implementation (diagnostic use), dialogue, the signals emitted for focusing organizational attention, and the emergence of new strategies (interactive use) (Henri, 2006; Simons, 1995) can assist the organization in implementing, tracking, and realigning the development of environmental skills and competencies, while engaging employees in proactive green behaviors (green training and involvement) (Guerci et al., 2016; Jerónimo, Henriques et al., 2020).

PMS play an active role in the sustainable development of organizations by divulging their core values (Jollands, Akroyd, & Sawabe, 2015). Companies use MCS to pass on their beliefs and values, thereby directing and guiding individuals to the desired behavior (Simons, 1995)

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through the interactive and diagnostic use of PMS (Henri, 2006). PMS allow an organization to track and direct its goals for green behaviors in the organization (Lisi, 2015). MCS are used to track and control actions and results (diagnostic use), or to encourage learning, creativity, and discussion (interactive use) among employees (Henri, 2006; Simons, 1995). This reflects positively on sustainable outputs (Heggen & Sridharan, 2021), and helps employees achieve the organizational rationale for sustainability.

The perceived organizational rationale for sustainability aligns the interests of employees with regard to their green attitudes (Starik & Rands, 1995). Consequently, organizations need this idea to be widely accepted and disseminated by their employees (Jeronimo, Henriques et al., 2020; Jeronimo, Lacerda et al., 2020). Individuals' perceptions of organizational sustainability are developed through strategies (e.g., mission, standards, and practices) and/or are based on organizational culture (e.g., beliefs and values) (Glavas & Godwin, 2013; Jeronimo, Lacerda et al., 2020) They are usually proposed and developed through green training and involvement (Guerci *et al.*, 2016) and possibly disseminated by the interactive and diagnostic use of PMS (Henri, 2006; Lisi, 2015). Thus, it is assumed that:

> H2: The interactive use of PMS plays a mediating role in the relationship between green training and involvement and the organizational rationale for sustainability.

> H3: The diagnostic use of PMS plays a mediating role in the relationship between green training and involvement and the organizational rationale for sustainability.

The organizational rationale for sustainability and individual green performance

In addition to the vision and mission stating that sustainability as a strategic goal of the organization, energetic and discretionary actions may be required to achieve this purpose, such as creating a sustainability committee, developing recycling and loss management policies, or digitizing and automating processes (Boiral & Paillé, 2012). How employees perceive the organization's sustainable principles influences their behaviors (Schneider, Ehrhart, & Macey, 2012; Tuan, 2021). Therefore, the organizational rationale for sustainability needs to be seen to influence employees' sustainable actions (Tosti-Kharas et al., 2017). Employees who perceive organizational behavior for sustainability are more likely to adopt green behaviors in the workplace (Paillé & Raineri, 2015).

One of the effects of the organizational rationale for the employees' perception of sustainability is the organization's environmental citizenship behavior (Tosti-Kharas et al., 2017). Because of this, individual green performance is critical for effective sustainable behavior in the organization (Boiral & Pallé, 2012). Employees who engage in green behaviors generate knowledge about sustainability and multiply this knowledge within the organization (Tuan, 2021). As a

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consequence, there are three aspects of individual green performance: it is voluntary: the organization does not pay for it (eco-initiatives); it is collaborative, with support from colleagues or knowledge exchange actions, which is also considered to be voluntary (eco-help); and it is encouraged through loyalty and commitment to the organization (eco-civic) (Boiral & Pallé, 2012). Considering the benefits of the perceived organizational rationale for sustainability on employees' sustainable behaviors (Tosti-Kharas et al., 2017), it is assumed that:

> H4: The organizational rationale for sustainability is positively related to the individual's green performance.
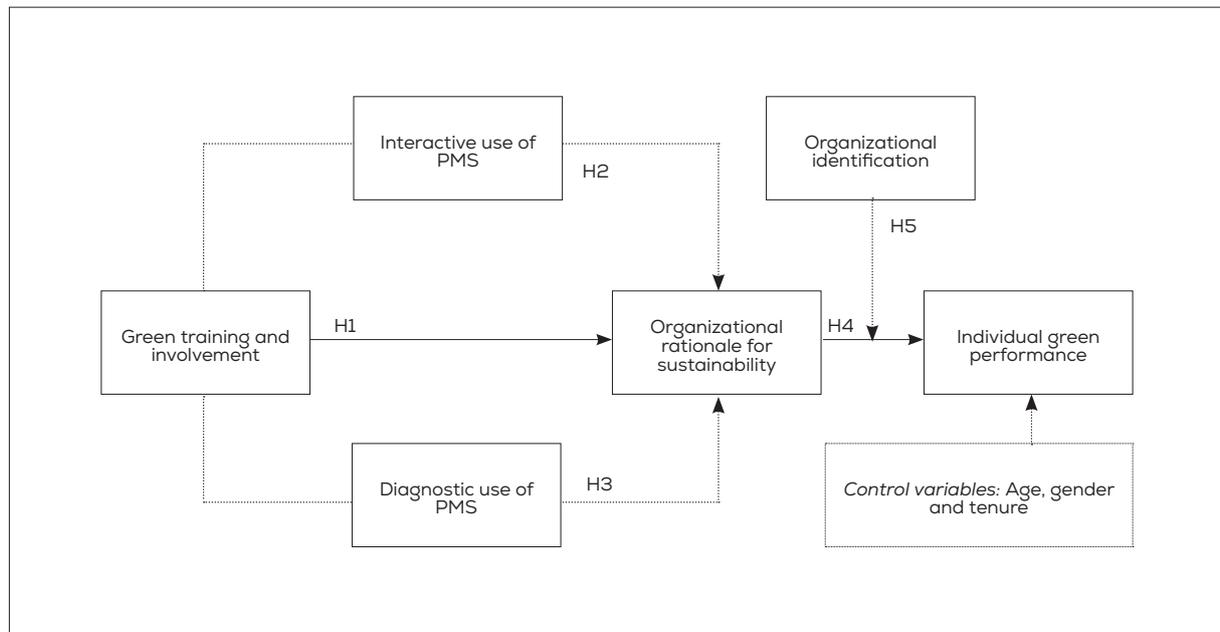
The moderating role of organizational identification

Organizational identification consists of the individual's perception of belonging in the organization in which he/she works (Mael & Ashforth, 1992). Greater feelings of identification result in employees having a greater propensity to share values, beliefs, organizational goals (Ashforth, Harrison, & Corley, 2008), and their interest in the success of the organization (Ashforth & Mael, 1989). Evidence indicates that a perceived organizational rationale for sustainability and identification with the organization result in employees engaging fully with their work, and reflecting positively on their individual performance (Jeronimo, Lacerda et al., 2020). Generally, employees who perceive this rationale also report higher levels of organizational identification (Lamm, Tosti-Kharas, & King, 2015), which may be beneficial to the green performance of individuals in the organization.

Although Tosti-Kharas et al. (2017) did not support the hypothesized moderating effect of organizational identification between the organizational rationale for sustainability and organizational citizenship behaviors toward the environment for a sample of employees from diverse organizations and occupations, the authors suggest that further research should consider the potential moderating effect of organizational identification between perceptions of the organizational rationale for sustainability and discretionary pro-environmental behaviors at work. It is presumed that when employees strongly identify with the organization, then they are more likely to grasp the organization's rationale and its strategies and act in alignment with them (Lamm et al., 2015). Therefore, when considering employees who work in an organization that, by its nature, should promote and enact green behaviors in the work environment (Süßbauer & Schäfer, 2018), it is proposed that:

> H5: Organizational identification positively moderates the relationship between the organizational rationale for sustainability and individual green performance.

Figure 1 presents the conceptual model of the research.

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Figure 1. Conceptual model

METHOD

Context and participants

The survey data come from employees of a private power generator operating in Brazil, which has 373 employees (analysts, coordinators, and managers) at its headquarters. This organization produces at least 86% of its energy from renewable sources and has been listed on the B3 ISE since its inception in 2005 and on Clean200, a global ranking of publicly-traded companies that lead in solutions for a clean energy future. The literature suggests that organizations should focus on ways of encouraging sustainable behaviors, especially green behaviors, in their employees in the work environment (Süßbauer & Schäfer, 2018); this is an integral part of this organization's internal policy.

After explaining the purposes of the research and formally consulting the organization's Human Resource and Culture Management area, authorization was given for the survey to be carried out. Using a list with the names and email addresses of the employees, the presentation letter and link to access the questionnaire were sent out. Data were collected between January and February 2021, resulting in 101 respondents (final sample). Exploratory analyses revealed there to be no outliers or missing data. The sample profile indicates that most employees are over 35 years old (56.44%), the average being 39, most are men (55.45%), and most have worked in the company for more than five years (59.41%), the average being 10 years. Most of them (71.29%) have a graduate degree, and 57.43% have a degree in Applied Social Sciences.

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Measures

The constructs and items were extracted/adapted from the literature. For all items, a 7-point scale was used, with different labels. Green training and involvement were measured by way of four items (Guerci et al., 2016). Respondents were asked to indicate their perceptions with regard to the extent of the organization's implementation of green training and involvement (1=not implemented to 7=fully implemented). Examples of items are "environmental training for employees" and "employee involvement in environmental issues". Since 2007, training in the organization has focused on social and environmental care and has been carried out in all company activities.

Items for the interactive (7) and diagnostic (4) use of PMS are based on Henri (2006), and respondents assessed the extent to which the company's management uses performance measures (1=not at all to 7=to a great extent). Items for interactive use are "enable discussion in meetings of superiors, sub-ordinates and peers" and "develop a common vocabulary in the organization." For diagnostic use, they are "track progress toward goals" and "compare outcomes with expectations". Since 2015, formalized PMS have been used by management in the organization, and are related, for example, to the digitization process and a continuous improvement in sustainability.

The organizational rationale for sustainability considers four items (Tosti-Kharas et al., 2017). Although the original formulation contains eco-centric (moral reasons) and organization-centric (business reason) rationale as in previous studies (Jerónimo, Henriques et al., 2020; Jerónimo, Lacerda et al., 2020), we only considered the latter. Respondents stated their degree of agreement with the perceived organizational rationale for sustainability on a Likert-type scale (1=strongly disagree to 7=strongly agree). Examples of items are "my organization believes that good environmental practices can save it money" and "my organization believes that a good reputation for responsible environmental practices helps attract and retain good employees".

Organizational identification comprises six items (Mael & Ashforth, 1992). The only adaptation was exchanging the term "school" for "organization". Respondents indicated the degree to which they agreed with how they felt about their company on a Likert-type scale (1=strongly disagree to 7=strongly agree). Examples of items are "I am very interested in what others think about my organization" and "when someone praises this organization, it feels like a personal compliment".

Individual green performance is a second-order construct (Boiral & Paillé, 2012), composed of three first-order constructs (eco-helping, eco-civic engagement, and eco-initiatives), with three, four, and three items, respectively. As in Tuan (2021), the construct is defined by individual green performance and is based on Boiral and Paillé's (2012) organizational citizenship behavior scale for the environment. Respondents marked their degree of agreement regarding individual green performance on a Likert-type scale (1=strongly disagree to 7=strongly agree). Examples of items are: (eco-helping) "I encourage my colleagues to adopt more environmentally conscious behavior," (eco-civic engagement) "I actively participate in environmental events organized in

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and/or by my organization," and (eco-initiatives) "In my work, I weigh the consequences of my actions before doing something that could affect the environment".

As in previous literature (Marescaux, Winne, & Forrier, 2019; Jeronimo, Henriques et al., 2020), three binary control variables were entered into the model: age (0=up to 35 years and 1=over 35 years), gender (0=male and 1=female), and tenure (0=up to 5 years and 1=more than 5 years).

Common method bias and non-response bias

The study applied measures to minimize common method bias. For example, a guarantee of anonymity, diversification in the scores (labels) of the multipoint scales, and, after data collection, the application of Harman's single factor test (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). A total of seven factors with an eigenvalue greater than 1 emerged in the exploratory factor analysis and correspond to 73.89% of the total variance. The first factor accounts for less than 50% (35.59%) of the total variance.

To access potential non-response bias, late respondents were considered analogous to non-participants in the survey (Armstrong & Overton, 1977). A mean comparison test of the item responses for the first 10 and last 10 respondents indicates no significant difference (lowest p-value=0.112). Based on the care and testing performed, these biases are not problems in this research.

Mixed-methods approach

The study employs mixed methods in the analyses, a quantitative and a qualitative technique. It applies PLS-SEM and fsQCA, given the complementarity power of the results (Frare & Beuren, 2020; Crespo, Curado, Oliveira, & Muñoz-Pascual, 2021), including in contexts of human resource management (Curado, 2018) and sustainability (Muñoz-Pascual, Curado, & Galende, 2019). In studies on sustainable perspectives, considering fsQCA as a complement to PLS-SEM seems appropriate (Muñoz-Pascual, Galende, & Curado, 2021), as it strengthens the complementary explanatory design and aids the holistic understanding of the phenomenon (Johnson & Onwuegbuzie, 2004).

The PLS-SEM technique (in SmartPLS 3.0 software) allows for quantitative and symmetric analysis, complex modeling, and robustness in the absence of data normality (Hair, Risher, Sarstedt, & Ringle, 2019). The fsQCA technique (in fsQCA 3.0 software) allows qualitative analysis to identify asymmetric relationships and necessary and/or sufficient conditions for a given outcome (Ragin, 2008). It also provides an analysis of configurations between conditions that lead to the success or failure of the outcome (Fiss, 2011).

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DATA ANALYSIS

PLS-SEM

Measurement model

Individual green performance (second-order) is composed of three first-order constructs. For this, a reflexive-reflexive (Type I) structure was employed, with a repeated indicators approach. The remaining constructs are single-order and follow a reflexive approach (Hair et al., 2019).

The loadings of the indicators were analyzed by confirmatory factor analysis, and, after excluding two items (one from the organizational rationale for sustainability and another from organizational identification) to adjust the model, values were shown to be adequate (≥0.708) (Hair et al., 2019). Internal consistency was attested by Cronbach's alpha, rho_A, and composite reliability (CR) with acceptable values (>0.70) (Hair et al., 2019). Convergent validity is shown to be adequate, as the average variance extracted (AVE) is higher than the threshold (0.50) (Hair et al., 2019). More information is provided in Table 1.

Table 1. Reliability and Convergent Validity

	Loadings	Cronbach's Alpha	rho_A	CR	AVE
1.GTI	[0.833; 0.875]	0.877	0.888	0.915	0.729
2.iPMS	[0.754; 0.895]	0.924	0.925	0.939	0.687
3.dPMS	[0.901; 0.963]	0.951	0.953	0.965	0.873
4.ORS	[0.830; 0.865]	0.805	0.805	0.885	0.720
5.OI	[0.715; 0.823]	0.828	0.845	0.876	0.587
6.IGP	[0.818; 0.947]	0.940	0.944	0.937	0.833

Discriminant validity (Table 2) is evidenced by two criteria. In the first (Fornell-Larcker), the square root of the AVE is higher than the correlations between the constructs (Hair, Hult, Ringle, & Sarstedt, 2017). The second, heterotrait-monotrait ratio of correlations (HTMT) has values less than 0.85 (Hair et al., 2019).

Table 2. Discriminant validity

	1	2	3	4	5	6	7	8	9
1.GTI	**0.854**	0.550	0.465	0.505	0.336	0.678	0.230	0.144	0.177
2.iPMS	0.503	**0.829**	0.646	0.558	0.444	0.405	0.061	0.076	0.173
3.dPMS	0.437	0.608	**0.934**	0.665	0.402	0.280	0.049	0.017	0.128
4.ORS	0.427	0.483	0.583	**0.848**	0.485	0.356	0.072	0.143	0.098
5.OI	0.301	0.396	0.353	0.379	**0.766**	0.345	0.085	0.097	0.073
6.IGP	0.618	0.388	0.269	0.309	0.330	**0.912**	0.215	0.095	0.201
7.Age	0.210	0.049	0.048	0.065	0.067	0.212	–	0.026	0.372
8.Gender	-0.136	0.035	0.002	0.028	0.069	0.084	-0.026	–	0.121
9.Tenure	0.159	0.166	0.124	-0.005	-0.057	0.194	0.372	-0.121	–

Note: Bold diagonal values indicate the square root of the AVE, the lower diagonal values indicate the correlations for accessing the Fornell–Larcker criterion, and the upper diagonal values indicate the HTMT.

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From analysis of the loadings, internal consistency, and convergent and discriminant validity, the measurement model is adequate (Hair et al., 2019).

Structural Model

The significance of the structural relationships was checked by bootstrapping, with 5,000 resamples (Table 3).

Table 3. Structural model

Type of relationship	H	Relationship	*Beta* (*β*)	Valor-*p*
Main effects	H1	GTI→ORS	0.172	0.055*
	-	GTI→iPMS	0.503	0.000***
	-	iPMS→ORS	0.139	0.097*
	H2	GTI→iPMS→ORS	0.070	0.122
	-	GTI→dPMS	0.437	0.000***
	-	dPMS→ORS	0.424	0.001***
	H3	GTI→dPMS→ORS	0.185	0.007***
	H4	ORS→IGP	0.279	0.008***
	-	OI→IGP	0.298	0.002***
	H5	ORS*OI→IGP	0.299	0.003***
Control variables	-	Age→IGP	0.142	0.109
	-	Gender→IGP	0.077	0.377
	-	Tenure→IGP	0.149	0.083*
Other specific indirect effects	-	GTI→ORS→IGP	0.048	0.141
	-	iPMS→ORS→IGP	0.039	0.141
	-	dPMS→ORS→IGP	0.118	0.014**
	-	GTI→iPMS→ORS→IGP	0.019	0.171
	-	GTI→dPMS→ORS→IGP	0.052	0.040**

Note: *p<0.10; **p<0.05; ***p<0.01, one-tailed test when the sign of the relationship is predicted, and two-tailed otherwise (control variables).

There is no evidence of multicollinearity, as the variance inflation factor between constructs is less than 3 (largest value=1.782) (Hair et al., 2019). The explained variance of the dependent variables is analyzed by the coefficient of determination (R^2) based on Cohen (1988). Interactive (R^2=24.5%) and diagnostic (R^2=18.2%) use of PMS, the organizational rationale for sustainability (R^2=36.9%), and individual green performance (R^2=23.4%) express median (R^2=13%) to large (R^2=26%) values, except for the organizational rationale for sustainability, which indicates

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a large explanation (R²≥26%). The Stone-Geisser value (Q²) was accessed by blindfolding. Interactive (Q²=16.1%) and diagnostic (Q²=14.5%) use of PMS, the organizational rationale for sustainability (Q²=25.8%), and individual green performance (Q²=16.4%) indicate acceptable (>0) predictive accuracy values (Hair et al., 2019).

FsQCA

Calibration

In the fsQCA analysis, all variables, whether antecedent conditions or outcomes, must initially be calibrated (Ragin, 2008). Due to the nature of the study variables (collected with multi-item, multipoint scales), the mean values of the items that make up each construct are computed (Woodside, Hsu, & Marshall, 2011). To transform the scale into fuzzy values (0 to 1), three calibration anchors are defined relating to the degree of membership, namely full-membership, crossover-point, and full non-membership (Ragin, 2008). Based on the theoretical and empirical knowledge of the variables (Ragin, 2008), the cutoff point of the variables consists of the 90th, 50th, and 10th percentiles, respectively (Jeronimo, Henriques et al., 2020).

Necessary and sufficient conditions

After calibration, Ragin (2008) suggests the occurrence of a certain outcome from analyzing the necessary and sufficient conditions. This analysis verifies whether the antecedent conditions (green training and involvement, interactive use of PMS, diagnostic use of PMS, organizational rationale for sustainability, and organizational identification) lead the individuals in the sample to achieve high or low outcome levels (individual green performance). A condition is required for a given outcome if its consistency is greater than 0.90 (Schneider & Wagemann, 2010). The highest consistency for high (low) individual green performance is the presence (absence) of green training and involvement (consistencies of 0.78 and 0.76, respectively). Thus, it is assumed that no condition is necessary for a high or low individual green performance. The fact that green training and involvement is the variable closest to being necessary for a high individual green performance is not surprising, since in Jeronimo, Henriques et al. (2020) it was the only one of the investigated green HRM practices that were necessary for a high organizational rationale for sustainability.

In analyzing the sufficient conditions, the combinations of conditions that lead to a certain outcome are verified, indicating equifinality by several configurations (Ragin, 2008). A truth table (2ᵏ rows) was prepared, in which *k* equals the number of conditions (Ragin, 2008) and to refine it a consistency threshold of 0.90 was applied (Chang & Cheng, 2014). After, two (four) intermediate solutions were highlighted (Table 4) that lead to a high (low) individual green performance. The presentation and arrangement of the elements in Table 4 are based on related literature (e.g., Muñoz-Pascual, Curado, & Galende, 2021).

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Table 4. Configurations that lead to high or low individual green performance

Panel A – High individual green performance								
Configurations	GTI	iPMS	dPMS	ORS	OI	Coverage		Consistency
						Raw	Unique	
Model: IGP = f (GTI, iPMS, dPMS, ORS, OI)								
1	●	●	●	●	○	0.297	0.151	0.917
2	●	●	○	●	●	0.218	0.071	0.928

Overall coverage: 0.368

Overall consistency: 0.921

Panel B – Low individual green performance								
Configurations	GTI	iPMS	dPMS	ORS	OI	Coverage		Consistency
						Raw	Unique	
Model: ~ IGP = f (GTI, iPMS, dPMS, ORS, OI)								
1	○	○	○		○	0.395	0.179	0.890
2	○	●	●	●	○	0.239	0.060	0.910
3		○	○	○	●	0.237	0.049	0.875
4	○	●	●	○	●	0.204	0.047	0.915

Overall coverage: 0.598

Overall consistency: 0.853

Note: black circles (●) indicate the presence of a condition; white circles (○) indicate the absence of a condition; blank spaces indicate that the condition is indifferent to the configuration.

The solutions are satisfactorily consistent (>0.80) and have an overall coverage level (0.25-0.90) (Ragin, 2008).

Discussion of results

There is a positive effect (β=0.172, p<0.10) between green training and involvement and an organizational rationale for sustainability, thus supporting H1. This result is consistent with Jeronimo, Henriques et al. (2020) and justifies the prominent position occupied by green training and involvement in HRM practices (Guerci et al., 2016) for increasing employees' perceptions of the organizational rationale for sustainability.
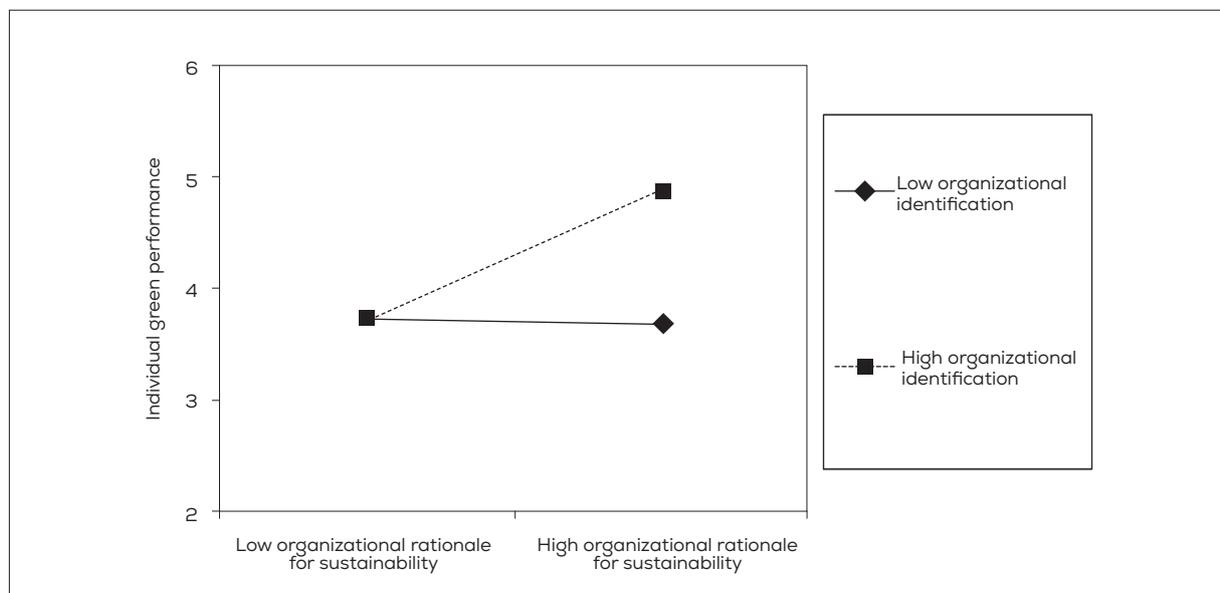
Although green training and involvement are positively related to the interactive use of PMS (β=0.503, p<0.01) and the latter to the organizational rationale for sustainability (β=0.139, p<0.10), the indirect effect is not significant (β=0.070, p>0.10), thus H2 is rejected. Green training and involvement, on the other hand, is related to the diagnostic use of PMS (β=0.437, p<0.01) and the latter to the organizational rationale for sustainability (β=0.424, p<0.01). The indirect effect is also positive and significant (β=0.424, p<0.01), which reveals partial mediation (Hair et al., 2017), thus H3 is supported. This suggests that the implementation, monitoring, and

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development of environmental skills and competencies, in addition to employee engagement with proactive behaviors in the green context (green training and involvement) (Guerci et al., 2016; Jeronimo, Henriques et al., 2020), are conveyed via traditional PMS feedback supporting strategy implementation (diagnostic use), but not via dialogue and the signals emitted for attracting attention for supporting new strategies (interactive use) (Henri, 2006; Simons, 1995). This relaying of green training and involvement via the use of performance monitoring measures (diagnostic use) (Henri, 2006; Simons, 1995) aimed at achieving greener behavior (Heggen & Sridharan, 2021) results in greater employee perception of the organizational rationale for sustainability (Tosti-Kharas et al., 2017).

H4 is supported (β=0.279, p<0.01), as there is a positive effect between the organizational rationale for sustainability and individual green performance. This result is anchored in the literature (Tosti-Kharas et al., 2017) and shows that sustaining an organizational rationale for sustainability has an influence on employee behavior and results in sustainable actions (Schneider et al., 2012; Tuan, 2021).

H5 proposes that organizational identification positively moderates the relationship between the perceived organizational rationale for sustainability and individual green performance and is supported (β=0.299, p<0.01). The individuals' sense of belonging in relation to their organization (Mael & Ashforth, 1992) strengthens the relationship between the perceived organizational rationale for sustainability and individual green performance. Figure 2 details this interaction. With weak identification with the organization, or a weak perceived organizational rationale for sustainability, individual green performance remains constant. With high organizational identification and a strongly-perceived organizational rationale for sustainability, the benefits of individual green performance are amplified.

Figure 2. Moderation effect

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There are also other indirect effects in the model. First, there is an indirect effect of the diagnostic use of PMS on individual green performance resulting from the organizational rationale for sustainability (β=0.118, p<0.05). Second, consistent with the existence of the more complex pathways of the benefits of HRM practices in relation to green behaviors (Jeronimo, Lacerda et al., 2020), green training and involvement has an influence on individual green performance by the serial mediation of the diagnostic use of PMS and the organizational rationale for sustainability (β=0.052, p<0.05). With regard to the control variables, longer associates positively (β=0.149, p<0.10) with individual green performance.

Two configurations of the conditions (green training and involvement, the interactive use of PMS, the diagnostic use of PMS, the organizational rationale for sustainability, and organizational identification) lead to a strong individual green performance. Green training and involvement, the interactive use of PMS, and the organizational rationale for sustainability are present in both solutions. In Configuration 1, in the absence of organizational identification/ belonging (Mael & Ashforth, 1992), the use of performance measures to monitor and track goals and behaviors is critical (Henri, 2006). In Configuration 2, in the presence of a sense of belonging to the organization (Mael & Ashforth, 1992), the diagnostic use of PMS should be absent. This suggests that individuals who feel an identify with the organization need greater freedom and fewer mechanistic controls (Henri, 2006), whereas employees who do not identify with the organization need this type of control to achieve high levels of individual green performance.

Four solutions lead to low levels of individual green performance. The most comprehensive solution, with the exception of the organizational rationale for sustainability, which is shown to be indifferent, is the absence of the other conditions. This finding underlines the fact that when green HRM practices (Guerci et al., 2016; Jeronimo, Henriques et al., 2020; Jeronimo, Lacerda et al., 2020), or organizational control and strategies (Heggen & Sridharan, 2021; Lisi, 2015) are not perceived by employees, sustainable outcomes are not achieved. The absence of or indifference to green training and involvement is one of the main factors for explaining these solutions, resulting in a low performance. This is consistent with Jeronimo, Henriques et al. (2020), who highlight low levels of the organizational rationale for sustainability when green training is absent or indifferent. This highlights the role of green training and involvement in order for employees and the organization to become greener and more sustainable (Guerci et al., 2020). In two of the solutions for low individual performance (Configurations 2 and 4), the interactive use and diagnosis of PMS are both present, but green training and involvement are absent. Inconsistencies in PMS have negative effects on employees (Cäker & Siverbo, 2018), because despite the use of performance measures, in the perception of employees training is not being passed on adequately, and the necessary involvement is not being generated.

CONCLUSIONS

The study examined the effects of green training and involvement on individual green performance with the intervening interactive and diagnostic use of PMS, organizational rationale

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for sustainability, and organizational identification. Like Jeronimo, Lacerda et al. (2020), it was revealed that the path from green HRM practices to employee performance is both complex and intertwined. The conclusion is that green training and involvement is translated into the organizational rationale for sustainability, primarily through the diagnostic use of PMS, leading employees to a higher individual green performance. The benefits of the organizational rationale for sustainability on individual green performance are amplified when employees identify strongly with the organization. The age and gender of employees are characteristics that have little bearing on individual green performance, but a longer time working in the company is positive for better green behavior.

The study also highlights the relevance of analyzing the causal configurations that potentially lead to sustainable behaviors (Jeronimo, Henriques et al., 2020). It was observed that there is no single pathway to achieving a high or low individual green performance, but rather equifinality, that is, more than one configuration leads to the same outcome. Two solutions were found in which employees achieve a high individual green performance: in both green training and involvement, the organizational rationale for sustainability, and the interactive use of PMS are present; and the presence (absence) of organizational identification is aligned with the absence (presence) of the diagnostic use of PMS. This suggests the role of mechanistic control vis-à-vis organizational identification: when the employee does not identify with the organization, the presence of this control is desired, and when they do identify with the organization, its absence is desired. Furthermore, four solutions lead to low individual green performance, all containing the absence or indifference to green training and involvement, which reinforces the role of this green HRM practice.

Theoretical implications

The study contributes to the literature of green HRM practices (Amrutha & Geetha, 2021; Guerci et al., 2016; Jeronimo, Henriques et al., 2020; Jeronimo, Lacerda et al., 2020; Pinzone et al., 2019) by exploring the effects of green training and involvement on employees. It also contributes by pointing out the intervening role of the use of PMS in disseminating green training and involvement and contributing to the organizational rationale for sustainability, as well as corroborating the call for studies that explore antecedents (Jeronimo, Henriques et al., 2020; Jeronimo, Lacerda et al., 2020) and the consequences of the latter (Tosti-Kharas, 2017). It also contributes by exploring the complex (Jeronimo, Lacerda et al., 2020) and asymmetric (Jeronimo, Henriques et al., 2020) pathways that lead employees to engage in sustainable behaviors.

Regarding the organizational identification literature, it contributes by assessing the latter's moderating effect on the relationship between the organizational rationale for sustainability and individual green performance. The combination of high organizational identification and high organizational rationale for sustainability is beneficial for amplifying individual employees' green performance. Furthermore, the results contribute to MCS literature by offering insights into the interactive and diagnostic use of PMS in sustainable behaviors.

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Managerial implications

One of the challenges faced by organizations that seek to improve their sustainable performance is ensuring that this orientation is perceived and embedded by their employees (Chaudhary, 2020). This study highlights that for the organization to achieve this purpose, there must be green training and involvement, a perceived organizational rationale for sustainability, and the interactive and/or diagnostic use of PMS. The provision of training and information sharing (e.g., internal reports, events, newsletters) ensures that the company's sustainability vision and mission (Mandip, 2012) are effectively conveyed to the employee, leading to a better individual green performance. One should also consider the level of organizational identification perceived by employees when defining strategies for using PMS.

Limitations and future research directions

Among the study's limitations is the sample of respondents, which was taken from a single survey entity, so validation of this research instrument using other samples would be appropriate. Another limitation stems from the investigation of a single green HRM practice (green training and involvement): further research could consider the role of other practices. Future research could examine the impact of other MCS on the achievement of individual green performance. Finally, individual green performance may also be influenced by the level of employee motivation or cultural factors in the organization, and future studies could also evaluate their impacts.

REFERENCES

Acquah, I. S. K., Agyabeng-Mensah, Y., & Afum, E. (2020). Examining the link among green human resource management practices, green supply chain management practices and performance. *Benchmarking: An International Journal*, 28(1), 267-290. doi:10.1108/BIJ-05-2020-0205

Amrutha, V. N., & Geetha, S. N. (2021). Linking organizational green training and voluntary workplace green behavior: Mediating role of green supporting climate and employees' green satisfaction. *Journal of Cleaner Production*, 290, 1-12. doi:10.1016/j.jclepro.2021.125876

Armstrong, J. S., & Overton, T. S. (1977). Estimating nonresponse bias in mail surveys. *Journal of Marketing Research*, 14(3), 396-402. doi:10.1177/002224377701400320

Ashforth, B. E., Harrison, S. H., & Corley, K. G. (2008). Identification in organizations: An examination of four fundamental questions. *Journal of Management*, 34(3), 325-374. doi:10.1177/0149206308316059

Ashforth, B. E., & Mael, F. (1989). Social identity theory and the organization. *Academy of Management Review*, 14(1), 20-39. doi:10.5465/amr.1989.4278999

Boiral O., & Paillé P. (2012). Organizational citizenship behaviour for the environment: Measurement and validation. *Journal of Business Ethics*, 109(4), 431-445. doi:10.1007/s10551-011-1138-9

FORUM | From green training and involvement to an organizational rationale for sustainability: does it improve individual green performance?

Valter Luís Barbieri Colombo | Anderson Betti Frare | Ilse Maria Beuren

Cäker, M., & Siverbo, S. (2018). Effects of performance measurement system inconsistency on managers' role clarity and well-being. *Scandinavian Journal of Management*, *34*(3), 256-266. doi:10.1016/j.scaman.2018.06.005

Chang, M. L., & Cheng, C. F. (2014). How balance theory explains high-tech professionals' solutions of enhancing job satisfaction. *Journal of Business Research*, *67*(9), 2008-2018. doi:10.1016/j.jbusres.2013.10.010

Chaudhary, R. (2020). Green human resource management and employee green behavior: An empirical analysis. *Corporate Social Responsibility and Environmental Management*, *27*(2), 630-641. doi:10.1002/csr.1827

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. New York, EUA: Psychology Press.

Crespo, N. F., Curado, C., Oliveira, M., & Muñoz-Pascual, L. (2021). Entrepreneurial capital leveraging innovation in micro firms: A mixed-methods perspective. *Journal of Business Research*, *123*, 333-342. doi:10.1016/j.jbusres.2020.10.001

Curado, C. (2018). Human resource management contribution to innovation in small and medium-sized enterprises: A mixed methods approach. *Creativity and Innovation Management*, *27*(1), 79-90. doi:10.1111/caim.12251

Fiss, P. C. (2011). Building better causal theories: A fuzzy set approach to typologies in organization research. *Academy of Management Journal*, *54*(2), 393-420. doi:10.5465/amj.2011.60263120

Frare, A. B., & Beuren, I. M. (2020). Effects of information on job insecurity and work engagement in times of pandemic. *RAE-Revista de Administração de Empresas*, *60*(6), 400-412. doi:10.1590/S0034-759020200604

Glavas, A., & Godwin, L. (2013). Is the perception of 'goodness' good enough? Exploring the relationship between perceived corporate social responsibility and employee organizational identification. *Journal of Business Ethics*, *114*, 15-27. doi:10.1007/s10551-012-1323-5

Guerci, M., Longoni, A., & Luzzini, D. (2016). Translating stakeholder pressures into environmental performance–the mediating role of green HRM practices. *The International Journal of Human Resource Management*, *27*(2), 262-289. doi:10.1080/09585192.2015.1065431

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). *A primer on partial least squares structural equation modeling (PLS-SEM)*. Thousand Oaks, USA: Sage.

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, *31*(1), 2-24. doi:10.1108/EBR-11-2018-0203

Heggen, C., & Sridharan, V. G. (2021). The effects of an enabling approach to eco-control on firms' environmental performance: a research note. *Management Accounting Research*, *50*, 1-9, 100724. doi:10.1016/j.mar.2020.100724

Henri, J. F. (2006). Management control systems and strategy: A resource-based perspective. *Accounting, Organizations and Society*, *31*(6), 529-558. doi:10.1016/j.aos.2005.07.001

FORUM | **From green training and involvement to an organizational rationale for sustainability: does it improve individual green performance?**

Valter Luís Barbieri Colombo | Anderson Betti Frare | Ilse Maria Beuren

Herington, C., McPhail, R., & Guilding, C. (2013). The evolving nature of hotel HR performance measurement systems and challenges arising: An exploratory study. *Journal of Hospitality and Tourism Management*, *20*, 68-75. doi:10.1016/j.jhtm.2013.06.002

Huselid, M. A. (1995). The impact of human resource management practices on turnover, productivity, and corporate financial performance. *Academy of Management Journal*, *38*(3), 635-672. doi:10.5465/256741

Jerónimo, H. M., Henriques, P. L., Lacerda, T. C., Silva, F. P., & Vieira, P. R. (2020). Going green and sustainable: The influence of green HR practices on the organizational rationale for sustainability. *Journal of Business Research*, *112*, 413-421. doi:10.1016/j.jbusres.2019.11.036

Jerónimo, H. M., Lacerda, T. C., & Henriques, P. L. (2020). From sustainable HRM to employee performance: A complex and intertwined road. *European Management Review*, *17*(4), 871-884. doi:10.1111/emre.12402

Johnson, R. B., & Onwuegbuzie, A. J. (2004). Mixed methods research: A research paradigm whose time has come. *Educational Researcher*, *33*(7), 14-26. doi:10.3102/0013189X033007014

Jollands, S., Akroyd, C., & Sawabe, N. (2015). Core values as a management control in the construction of "sustainable development". *Qualitative Research in Accounting and Management*, *12*(2), 127-152. doi:10.1108/QRAM-04-2015-0040

Lamm, E., Tosti-Kharas, J., & King, C. E. (2015). Empowering employee sustainability: Perceived organizational support toward the environment. *Journal of Business Ethics*, *128*(1), 207-220. doi:10.1007/s10551-014-2093-z

Lisi, I. E. (2015). Translating environmental motivations into performance: The role of environmental performance measurement systems. *Management Accounting Research*, *29*, 27-44. doi:10.1016/j.mar.2015.06.001

Mael, F., & Ashforth, B.E. (1992). Alumni and their alma mater: A partial test of the reformulated model of organizational identification. *Journal of Organizational Behavior*, *13*(2), 103-123. doi:10.1002/job.4030130202

Mandip, G. (2012). Green HRM: People management commitment to environmental sustainability. *Research Journal of Recent Sciences*, *1*, 244-252. Retrieved from http://www.isca.in/rjrs/archive/iscsi/38.ISCA-ISC-2011-18CLM-Com-03.pdf

Marescaux, E., Winne, S. De, & Forrier, A. (2019). Developmental HRM, employee well-being and performance: The moderating role of developing leadership. *European Management Review*, *16*(2), 317-331. doi:10.1111/emre.12168

Mousa, S. K., & Othman, M. (2020). The impact of green human resource management practices on sustainable performance in healthcare organisations: A conceptual framework. *Journal of Cleaner Production*, *243*, 1-14. doi:10.1016/j.jclepro.2019.118595

Muñoz-Pascual, L., Curado, C., & Galende, J. (2019). The triple bottom line on sustainable product innovation performance in SMEs: A mixed methods approach. *Sustainability*, *11*(6), 1-22. doi:10.3390/su11061689

FORUM | From green training and involvement to an organizational rationale for sustainability: does it improve individual green performance?

Valter Luís Barbieri Colombo | Anderson Betti Frare | Ilse Maria Beuren

Muñoz-Pascual, L., Curado, C., & Galende, J. (2021). How does the use of information technologies affect the adoption of environmental practices in SMEs? A mixed-methods approach. *Review of Managerial Science*, 15, 75-102. doi:10.1007/s11846-019-00371-2

Muñoz-Pascual, L., Galende, J., & Curado, C. (2021). Contributions to sustainability in SMEs: Human resources, sustainable product innovation performance and the mediating role of employee creativity. *Sustainability*, 13(4), 1-20. doi:10.3390/su13042008

Neely, A., Gregory, M., & Platts, K. (1995). Performance measurement system design: A literature review and research agenda. *International Journal of Operations & Production Management*, 15(4), 80-116. doi:10.1108/01443579510083622

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. doi:10.1016/j.jbusres.2015.02.021

Pinzone, M., Guerci, M., Lettieri, E., & Huisingh, D. (2019). Effects of 'green' training on pro-environmental behaviors and job satisfaction: Evidence from the Italian healthcare sector. *Journal of Cleaner Production*, 226, 221-232. doi:10.1016/j.jclepro.2019.04.048

Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879-903. doi:10.1037/0021-9010.88.5.879

Ragin, C. C. (2008). *Redesigning social inquiry: Fuzzy sets and beyond*. Chicago, USA: University of Chicago Press.

Renwick, D. W., Redman, T., & Maguire, S. (2013). Green human resource management: A review and research agenda. *International Journal of Management Reviews*, 15(1), 1-14. doi:10.1111/j.1468-2370.2011.00328.x

Schneider, B., Ehrhart, M. G., & Macey, W. H. (2012). Organizational climate and culture. *Annual Review of Psychology, 64, 361-388.* doi:10.1146/annurev-psych-113011-143809

Schneider, C. Q., & Wagemann, C. (2010). Standards of good practice in qualitative comparative analysis (QCA) and fuzzy-sets. *Comparative Sociology*, 9(3), 397-418. doi:10.1163/156913210X12493538729793

Seroka-Stolka, O., & Fijorek, K. (2020). Enhancing corporate sustainable development: Proactive environmental strategy, stakeholder pressure and the moderating effect of firm size. *Business Strategy and the Environment*, 29(6), 2338-2354. doi:10.1002/bse.2506

Simons, R. (1987). Accounting control systems and business strategy: An empirical analysis. *Accounting, Organizations and Society*, 12(4), 357-374. doi:10.1016/0361-3682(87)90024-9

Simons, R. (1995). *Levers of control: How managers use innovative control systems to drive strategic renewal.* Boston, USA: Harvard Business Press.

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. doi:10.2307/258960

FORUM | **From green training and involvement to an organizational rationale for sustainability: does it improve individual green performance?**

Valter Luís Barbieri Colombo | Anderson Betti Frare | Ilse Maria Beuren

Süßbauer, E., & Schäfer, M. (2018). Greening the workplace: conceptualising workplaces as settings for enabling sustainable consumption. *International Journal of Innovation and Sustainable Development, 12*(3), 327-349. doi:10.1504/IJISD.2018.091521

Tosti-Kharas, J., Lamm, E., & Thomas, T. E. (2017). Organization or environment? Disentangling employees' rationales behind organizational citizenship behavior for the environment. *Organization & Environment, 30*(3), 187-210. doi:10.1177/1086026616668381

Tuan, L. T. (2021). Effects of environmentally-specific servant leadership on green performance via green climate and green crafting. *Asia Pacific Journal of Management, 38*, 925-953. doi:10.1007/s10490-019-09687-9

Woodside, A. G., Hsu, S. Y., & Marshall, R. (2011). General theory of cultures' consequences on international tourism behavior. *Journal of Business Research, 64*(8), 785-799. doi:10.1016/j.jbusres.2010.10.008

AUTHOR'S CONTRIBUTION

Valter Luís Barbieri Colombo, Anderson Betti Frare and Ilse Maria Beuren declare that they also contributed to the development of the article, including its conceptualization and theoretical-methodological approach, theoretical review (literature survey), data collection and analysis, writing and the final review.